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Study Description of Student Nursing Barriers in Online Learning during the Covid-19 Pandemic

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Thank you to the Director of the Health Polytechnic of the Ministry of Health of Riau, the head of the study program, and all those who have assisted in the implementation of this research.

ABSTRACT The paradigm shift during the Covid-19 pandemic requires educational institutions to follow current technological developments. Online learning is the main choice to avoid the spread of the virus. The purpose of the study was to determine the inhibiting factors for online learning in nursing students. This type of research is descriptive study. The population is all nursing students with Total Sampling technique. The sample criteria are nursing students, willing to be respondents, in good health, not in clinical practice. The number of samples in this study was 209 people. Data collection through questionnaires using the Google Form application. The author sent an electronic survey via WhatsApp Group (WAG) students from April 1 to June 30, 2020. The questionnaire used a combination of multiple choice, Likert scale, and open-ended questions containing demographics (gender and level of education), barriers to online learning, and access to technology. The results of the univariate analysis through the frequency distribution are obtained that majority of respondents are female (94.3%), majority of respondents are DIII Nursing (92.3%), the inhibiting factors consisted of internet instability (54.5 %), power outages (89%), smartphones that were not supported (44%), Tech stuttering (58.9%), insufficient quota subsidies from campus (35.6 %) and parental support have not been maximized (43.1%). Conclusion: the most important inhibiting factor for online learning is power outages. The need for online application socialization and support for adequate facilities and infrastructure at home. For future research, it is recommended to study the effect of online learning in improving student competencies and attitudes. To improve optimal online learning at home, I hope that there will be family motivation so that students can follow the learning process to completion.

INDEX TERMS Covid-19 Pandemic, Inhibiting Factors, Online-Learning.

1. INTRODUCTION

Corona Virus Disease 2019 (Covid-19) is a pandemic infectious disease caused by the coronavirus [1]. Covid-19 was first discovered in Wuhan City, China in December 2019. Epidemiological data shows that 66% of patients are related or exposed to a seafood or *live market* in Wuhan, Hubei Province, China [2]. *The International Committee of Taxonomy of Viruses* (ICTV) named it *Severe Acute Respiratory Syndrome Coronavirus -2* (SARS-COV-2) and the name of the disease is Covid-19 [3]. So far, the whole country has been infected with the corona virus.

WHO has declared this outbreak a global pandemic since March 11, 2020 [4]. This has led to *lockdown policies* in several countries without carrying out activities outside the home to suppress the spread of the virus and reduce the impact of deaths. In Indonesia, large-scale social restrictions (PSBB) have been implemented [5]. PSBB aims to suppress

the rate of spread of the virus. The responses needed during PSBB are social isolation, advice to stay at home, community quarantine and closure of educational institutions that can suddenly change daily life [6].

Two weeks into the lockdown, 75% of students reported that their life had become more difficult and 50% felt that learning outcomes would be harder to achieve due to the sudden shift to online education[7]. The Covid-19 pandemic creates new changes to maintain social distance (*social distancing*), quarantine and isolation to avoid the risk of being exposed to the virus [8]. This habit change hinders face-to-face interactions and forces students/lecturers to improve their skills and keep up with technological developments.

The Circular Letter of the Minister of Education and Culture Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread

of *Corona Virus Diseases* (Covid-19), recommends that all activities in educational institutions must keep a distance and materials are provided *online* at home [9]. This also applies to higher education with the existence of an independent campus as a program of the Minister of Education and Culture regarding Independent Learning. Merdeka Learning is a policy to increase competence independently. This policy provides flexible learning opportunities according to student needs and the application of various learning models [10].

This Covid-19 pandemic has significantly changed the method in educational institutions from face-to-face to *online learning* [11]. Learning in the network (online / *online*) is learning using the internet network with accessibility, connectivity, flexibility and the ability to bring up various learning interactions [12]. The *online* learning system without face-to-face is carried out using the internet network and requires innovation from the teacher in determining the right learning method. Most of the preclinical students preferred online learning for the upcoming academic years because The online modality was well-received, and all students agreed that online sessions were time saving and their performance was improved due to enhanced utility of time [13].

Online learning has psychological impacts for both lecturers and students. Teachers and students are required to adapt with the online learning method to ensure it is carried out as usual even though they have difficulties in various ways. Some of them face depressions and anxiety[14]. During online learning process, 18 % did report having some physical and mental discomforts which include severe headache, strain, and irritation in the eyes, and lack of concentration[15].

Problems that are often experienced by students in the implementation of online learning can be in the form of internal factors or external obstacle factors. The most dominant one comes from external factors such as internet quota [16]. Poor internet connectivity was the biggest challenge faced by students during online learning[17]. Constraints can also be classified into technical difficulties, adaptation difficulties and teacher unpreparedness so that teachers need to change learning strategies to support the acceleration of student adaptation in online learning. [18].

There are eight groups of problems related to the transition from conventional learning (face-to-face) to online learning (e-learning), namely social problems, lecturer problems, accessibility problems, learner motivation, academic problems, general problems, learner intentions, and demographics. Multiple Regression Analysis found that the lecturer factor poses the most important challenge for online learning[19].

In addition to having obstacles or obstacles, it also has an impact. Online learning has an impact on students, namely confusion, passiveness, lack of creativity, productivity, stress and increasing student literacy skills. This impact needs to be evaluated so that learning is well received without reducing the essence of education itself [20]. The

higher the student's learning phase, the lower the student's satisfaction with online education [21].

The effects of online learning on students' Performance with major challenges being in communication, technological competency, access to hardware for taking online classes, absenteeism, and drop-outs. But some benefits online learning to student performance were identified as having access to recorded lectures, having more access to faculties through e-mail, and extended office hours[22]. Another research indicated that student-student interaction has a greater impact on student learning outcomes. The students who effectively interacted with learning activities in the course have better result[23]. Discussion Medical Student in the Philippines confronted several interrelated barriers as they tried to adapt to online learn. There are 41% students considered themselves physically and mentally capable of engaging in online learning. Barriers were classified under five categories: technological, individual, domestic, institutional, and community barriers [24].

Online learning process is influenced by various factors, both external and internal factors from the students themselves. It is necessary to evaluate the factors that can be used as improvements to anticipate the impacts that occur. This is the reason the author examines the inhibiting factors of the *online learning process*. This research aims to determine the inhibiting factors for the *online learning process* in nursing students at the Health Polytechnic of the Ministry of Health Riau. This research has been conducted before on college students but only discussed factors in general and there has been no specific discussion about inhibiting factors

II. METHODS

This type of research is descriptive research, which describes the factors that hinder the online learning process for nursing students. The population is all DIII Nursing students with Total Sampling technique. The sample criteria are nursing students, willing to be respondents, in good health, not in clinical practice. The number of samples in this study was 209 people. Data collection through questionnaires using the Google Form application. The author sent an electronic survey via WhatsApp Group (WAG) students from April 1 to June 30, 2020. The questionnaire used a combination of multiple choice, Likert scale, and open-ended questions containing demographics (gender and level of education), barriers to online learning, and access to technology. Univariate analysis through frequency distribution aims to determine the total frequency of each factor inhibiting the online learning process. Responses were compared between subgroups of students using nonparametric tests.

III. RESULTS

The research was conducted on nursing students. The number of students who filled out online questionnaires via *google form* was 209 respondents. The distribution of

respondents based on demographic status can be seen in the following TABLE 1 and TABLE 2:

TABLE 1
Frequency distribution of respondents based on nursing education level (n=209)

Category	Frequency (f)	Percentage (%)
1. DIII	193	92.3
2. DIV	16	7.7
Total	209	100

Based on TABLE 1, it is known that the majority of respondents are DIII Nursing (92.3 %).

TABLE 2
Frequency distribution of respondents based on gender (n=209)

Category	Frequency (f)	Percentage (%)
1. Female	197	94.3
2. Male	12	5.7
Total	209	100

Based on TABLE 2, it is known that the majority of respondents are female (94.3 %).

his shows that most of the respondents are DIII nursing students. *Online* learning barriers can be seen in the following TABLE 3:

TABLE 3
Frequency Distribution of Respondents based on Online Learning Barriers (n=209)

Factors Inhibiting	Frequency (f)	Percentage (%)
Internet access at residence is limited	109	52.2
Power outage	186	89.0
Smartphones Un-support	92	44.0
Technology Stutter	123	58.9
Quota subsidies from campus are not sufficient	134	64.4
Parental support is not maximal	90	43.1
Internet network is not stable	114	54.5

Based on Table 3, it is known that most of the respondents can't access learning because the internet access is limited (52,2%) and the internet network is unstable (54,5%). Table 3 showed that the inhibiting factors consisted of power outages (89%), smartphones that were not supported (44%), Tech stuttering (58.9%), insufficient quota subsidies from campus (35.6 %) and parental support has not been maximized (43.1%)

IV. DISCUSSION

Based on the Survey of the Directorate General of Disadvantaged Regions - Ministry of Villages, PDT and Transmigration which obtained data from the 2018 Village Potential, as many as 80 villages in Riau Province do not yet have internet [10]. In the table 2 it can be seen that most of the respondents (52.2%) cannot access learning because the network where they live is located in districts that have limited access.

One of problems about limited access is Inadequate bandwidth resulted in slow access to the Internet, was a major problem faced by participants. This problem has hindered the academic use E-Learning platform in teaching and learning[25]. This is a problem for the government in supporting the public's readiness to obtain public information. Nursing students were asked to stay in their respective areas during the Covid-19 pandemic. There are several residential areas that do not have internet access, causing students to look to the nearest area (out of the house) to participate in *online learning*. This is a concern for us that students who go in and out of the area every day must use strict health protocols and are vulnerable to being exposed to viruses.

This is also a consideration if the area where the student lives has internet but it is not stable. The results showed that 54.5 % of students said the internet network where they lived was unstable due to the geographical location far from the cellular network. In addition, this can also be influenced by natural factors such as rain or other non-natural. Based on Hutahuruk's research which was conducted on mathematics students, qualitatively, data showed that the internet network was not smooth as an inhibiting factor. At the time of streaming lectures, the internet network was cut off resulting in disrupted lectures [26].

Disconnected network connections can also occur due to power outages. The results showed that 89% of students said online lectures were disrupted due to a power cut at their residence during the learning process. Power outages are as a result of gross shortage of energy[27]. This power outage not only affects the power supply of electronic devices used when online, but also affects the use of wifi which requires electric current even at home. People in the regions often experience disconnected electricity [12]. This results in not only the loss of electricity but also the loss of the internet network. When learning is taking place, suddenly the electricity goes out, that's when online learning stops.

The results showed that less than half (44%) of respondents said that the smartphone used did not support learning because this type of cellphone did not have features (old school cellphones) so students had to replace smartphones and required a large amount of money. This is in line with Asrul's research that online learning applications that do not support HP applications affect online learning.

Not only lecturers who are famous for being technologically stuttering, it turns out that there are still students who also have limitations in using technology. There are half (58.9 %) of respondents agree that they have

limitations in technology. This can be influenced by various factors, one of which is the habit of using technology. Technological stuttering can occur in early-to-late students, this is influenced by the culture of wanting to change in a positive direction and geographical location as well as habitual factors [28]. During this pandemic technology is not only a means of communication but now the learning process has become easier and more flexible. The Covid-19 pandemic seems to force lecturers and students to be technology literate.

The Riau Ministry of Health's has provided a Quota subsidy as assistance to students in the learning process, but it turns out that the quota subsidy provided is still considered insufficient. The results showed that 35.6% of respondents said that the internet quota provided in the form of money from the campus and quota assistance from the Ministry of Education and Culture was not sufficient for internet needs to access materials and participate in the learning process. This can be caused by the high need for seeking literacy in various sources and the frequent use of applications that require large quotas.

Another aspect that hinders the online learning process is the lack of motivation/support from parents during online learning, which is 43.1 %. Parents still do not understand the online learning process so that during lectures there are still parents who ask for their children's help and accompany them to the market. This is not in line with the opinion of Ratiwi that one of the first supporting factors in education are parents who are someone who is responsible for their children from birth to adulthood. One of the roles of parents in online learning Learn from Home (LFH) is to encourage or motivate [29]. According to the researcher's analysis, without motivation from parents, children are less able to follow learning well, reduced interest and can even cause stress due to assignments which are considered a lecture burden.

Parental participation and home environment influence online learning. Family background is an important factor in children's activities in learning, living environment in urban areas and educated parents will be able to balance learning and playing time. On the other hand, children whose parents have low education and live in rural areas are more likely to spend time playing and have unclear learning schedules [30].

Parents have full responsibility for the success of learning process. Parents must accompany their children while doing assignments and to understand the learning material. Parental involvement can be influence their children in achieving maximum learning outcomes. Parents also participate in guiding and motivating children, both by encouraging them and by increasing learning needs[31]. Other support from parents is providing facilities that support learning such as adding quotas or installing wifi at home, assisting in supervising children during learning and giving children freedom to access information sources that will be used in learning.

This study has a weakness in the method of collecting data which is difficult because some of the student's

whatsapp numbers are not active. Students fill out the questionnaire takes a long time. This study only describes the barriers to online learning in theory but does not explain how laboratory practice learning is during the lockdown due to the Covid-19 pandemic.

The direct result of this research is an increase in the ability of the academic community to conduct online learning. Educational institutions can consider inhibiting factors during online learning and provide solutions such as reduced learning duration but given assignments outside the network.

CONCLUSION

Inhibiting factors consisted of internet instability (54.5 %), power outages (89%), smartphones that were not supported (44%), Tech stuttering (58.9%), insufficient quota subsidies from campus (35.6 %) and parental support has not been maximized (43.1%). The most inhibiting factor in online learning was an external factor, namely a power outage. Even though it has a lot of quotas, easy internet access, technology literacy and a smartphone that supports it, but if the electricity is cut off, all access and convenience in online learning will pause and hinder the online learning process. For this reason, it is necessary to have support from various parties for the readiness of the implementation of online learning in the provision of facilities and infrastructure.

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BIBLIOGRAPHY

- [1] A. Susilo *et al.*, "Coronavirus Disease 2019: Recent Literature Review," *J. Penyakit Dalam Indones.*, vol. 7, no. 1, p. 45, 2020, doi: 10.7454/jpdi.v7i1.415.
- [2] C. Huang *et al.*, "Clinical features of patients infected with 2019 novel coronavirus in Wuhan , China," pp. 497–506, 2020, doi: 10.1016/S0140-6736(20)30183-5.
- [3] WHO, "Tes Diagnostik untuk SARS-CoV-2," no. September, 2020.
- [4] Task Force for the Acceleration of Handling COVID-19, "Protocol for the Acceleration of Handling the Covid-19 Pandemic (Corona Virus Disease 2019)," *Task Force Accel. Handl. COVID-19*, vol. 19, p. 31, 2020.
- [5] Menteri Kesehatan RI, "Compass," *Permenkes No.9 Tahun 2020*, pp. 9–19, 2020, doi: 10.4324/9781003060918-2.
- [6] Livana, M. Fatkhul Mubia, and Y. Basthomi, "'Learning Tasks' cause student stress during the covid-19 pandemic," *J. Ilmu Keperawatan Jiwa*, vol. 3, no. 2, pp. 203–208, 2020.
- [7] K. Almendingen, M. S. Morseth, E. Gjølstad, A. Brevik, and C. Tørris, "Student's experiences with online teaching following COVID-19 lockdown: A mixed methods explorative study," *PLoS One*, vol. 16, no. 8, p. e0250378, 2021, doi: 10.1371/journal.pone.0250378.
- [8] A. Suprijono, "Kesiapan Dunia Pendidikan," *IAIN Parepare Nusan. Press*, pp. 20–22, 2020.
- [9] Minister of Education and Culture, "Implementation of Education Policies in the Emergency Period for the Spread of Coronavirus Disease (Covid-19)," *Circ. Lett. Number 4*, pp. 1–3, 2020.
- [10] Minister of Education and Culture, *Higher Education Learning and Implementation of Independent Learning in the Covid-19 Pandemic*

- Period. Direktorat Jenderal Pendidikan Tinggi Kemdikbud RI, 2020.
- [11] A. E. E. Sobaih, A. M. Hasanein, and A. E. A. Elnasr, "Responses to COVID-19 in higher education: Social media usage for sustaining formal academic communication in developing countries," *Sustain.*, vol. 12, no. 16, pp. 1–18, 2020, doi: 10.3390/su12166520.
 - [12] Asrul and E. Hardianto, "Constraints of Students in the Online Learning Process During the Covid-19 Pandemic at SMP N Satap 1 Ladongi," *Al asma J. Islam. Educ.*, vol. 2, no. 1, p. 1, 2020.
 - [13] R. Khalil *et al.*, "The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives," pp. 1–10, 2020.
 - [14] E. J. Thandavaraj, N. A. N. Gani, and M. K. M. Nasir, "A Review of Psychological Impact on Students Online Learning during Covid-19 in Malaysia," *Creat. Educ.*, vol. 12, no. 06, pp. 1296–1306, 2021, doi: 10.4236/ce.2021.126097.
 - [15] A. Selvaraj, V. Radhin, N. KA, N. Benson, and A. J. Mathew, "Effect of pandemic based online education on teaching and learning system," *Int. J. Educ. Dev.*, vol. 85, no. June, p. 102444, 2021, doi: 10.1016/j.ijedudev.2021.102444.
 - [16] D. Hariyanti, A. H. Mun'im, and N. Hidayat, "Identification of Student Barriers in the Implementation of Online Biology Learning During the Covid-19 Pandemic in Jember Regency," *ALVEOLI J. Pendidik. Biol.*, vol. 1, no. 1, pp. 11–21, 2020, doi: 10.35719/alveoli.v1i1.4.
 - [17] E. Chung, N. M. Noor, and Vloreen Nity Mathew, "Are You Ready? An Assessment of Online Learning Readiness among University Students," *Int. J. Acad. Res. Progress. Educ. Dev.*, vol. 9, no. 1, pp. 301–317, 2020, doi: 10.6007/IJARPED/v9-i1/7128.
 - [18] E. Ratnawati and A. P. Utama, "Kesulitan Mahasiswa dalam Pembelajaran Daring pada Masa Pandemi Covid-19," *Edueksos*, vol. X, no. 1, pp. 96–113, 2021.
 - [19] E. Aboagye, J. A. Yawson, and K. N. Appiah, "COVID-19 and E-Learning: the Challenges of Students in Tertiary Institutions," *Soc. Educ. Res.*, vol. 2, no. 1, pp. 1–8, 2020, doi: 10.37256/ser.212021422.
 - [20] N. B. Argaheni, "A Systematic Review: The Impact of Online Lectures during the COVID-19 Pandemic Against Indonesian Students," vol. 8, no. 2, 2020.
 - [21] C. Wang, A. Xie, W. Wang, H. Wu, and W. Wang, "Association between medical students' prior experiences and perceptions of formal online education developed in response to COVID-19: a cross-sectional study in China," pp. 1–10, 2020, doi: 10.1136/bmjopen-2020-041886.
 - [22] H. Yaseen, A. R. Alsoud, M. Nofal, O. Abdeljaber, and A. S. Al-Adwan, "The Effects of Online Learning on Students' Performance: A Comparison between UK and Jordanian Universities," *Int. J. Emerg. Technol. Learn.*, vol. 16, no. 20, pp. 4–18, 2021, doi: 10.3991/ijet.v16i20.24131.
 - [23] V. A. Nguyen, "The Impact of Online Learning Activities on Student Learning Outcome in Blended Learning Course," *J. Inf. Knowl. Manag.*, vol. 16, no. 4, 2017, doi: 10.1142/S021964921750040X.
 - [24] R. E. Baticulon *et al.*, "Barriers to Online Learning in the Time of COVID - 19: A National Survey of Medical Students in the Philippines," *Med. Sci. Educ.*, pp. 615–626, 2021, doi: 10.1007/s40670-021-01231-z.
 - [25] M. K. P. Rahayu, "Barriers to Use E-Learning Platform in Indonesia Higher Education: Factors Related to People and Organization," vol. 100, no. Icoi, pp. 475–479, 2019, doi: 10.2991/icoi-19.2019.83.
 - [26] A. Hutaaruk and R. Sidabutar, "Constraints of Online Learning During a Pandemic Among Mathematics Education Students: A Descriptive Qualitative Study," vol. 02, no. 01, pp. 45–51.
 - [27] H. N. Amadi, "Impact of Power Outages on Developing Countries: Evidence from Rural Households in Niger Delta, Nigeria," *J. Energy Technol. Policy*, vol. 5, no. March, 2015.
 - [28] K. G. Al-Shdifat, M. Maayah, R. Mayo, and K. St. Louis, "Attitudes of communication sciences and disorders students at Jordan university of science and technology toward stuttering and people who stutter," *Commun. Sci. Disord.*, vol. 23, no. 4, pp. 1005–1016, 2018, doi: 10.12963/CSD.18532.
 - [29] R. D. Ratiwi and W. Sumarni, "The Role of Parents in Online Learning Assistance," *Cetta J. Ilmu Pendidik.*, vol. 3, no. ISSN: 2686 6404, pp. 304–309, 2020.
 - [30] U. Alifia, A. R. Barasa, L. Bima, R. P. Pramana, S. Revina, and F. A. Tresnatri, "Learning from Home: Portrait of Teaching and Learning Inequalities in Times of The Covid-19 Pandemic," *Smeru Res. Inst.*, vol. 1, no. 1, pp. 1–8, 2020.
 - [31] H. Dwi Puspita, "The role of parents in educating children during online classes," *ETUDE J. Educ. Res.*, vol. 1, no. 2, pp. 69–75, 2021.