ORIGINAL ARTICLE

The Correlation of Self-Efficacy with Anxiety Level among Nursing Students During Online Learning

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ABSTRACT

Introduction: The covid-19 pandemic impacts the change of learning methods from face-to-face to online learning, which then causes anxiety among students. It can be affected by a variety of factors, one of which is self-efficacy. The aim of the research is to determine the correlation between self-efficacy and anxiety levels in nursing students during learning system. **Methods:** The research design used was observational with a cross-sectional design. The population was 326 nursing students with the sample of 298 nursing students which was taken using the consecutive sampling. The data was collected through a google form, which contains two types of questionnaires, the General Self Efficacy questionnaire for self-efficacy and the Hamilton Anxiety Rating Scale (HARS) questionnaire for anxiety level. The data was examined by univariate and bivariate with Rank Spearman's correlation test. **Results:** The results presented that 46% of respondents have moderate self-efficacy, and 40.9% of respondents did not experience anxiety. Statistical test results showed that there is a correlation between self-efficacy and anxiety level in nursing students during online learning system (p = 0.040). **Conclusion:** Self-efficacy and level of anxiety have a relationship. Educational institutions are expected to pay more attention to the psychological aspects of students in following online learning systems through the pandemic.

Keywords: Self-efficacy, Anxiety, Nursing students, Learning online system

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INTRODUCTION

Coronavirus disease 19 (COVID 19) is an infectious respiratory system disease caused by the coronavirus and first discovered in Wuhan, China. It has now been designated a pandemic occurring in various countries around the world (1). One of the efforts to prevent this pandemic in Indonesia is conducting the online learning by following the Letter of the Minister of Education number 36962/MPK. A/HK/2020 refers to the Joint Decree of the Four Ministers on Guidelines for The Implementation of Learning in the Academic Year 2020/2021 and Academic Year 2020/2021 during the Corona Virus Disease Pandemic (COVID-19). The change of the leaning method will consider affecting the students psychological aspect (2,3).

Based on the research on the psychological impact of e-learning that conducted by Fawaz & Samaha (2021) at the University of Lebanon, the unexpected replacement of learning methods into online learning system causes anxiety symptoms in most students (4). Another research shows that nursing students experience severe, anxiety,

psychological problems due to the online learning (5). Anxiety also happened in junior and senior high school students who conduct the online learning (3). Anxiety is an unexplained fear in response to internal and external stimuli that cause signs of behavioral, cognitive, and physical symptoms (6). According to the theory, anxiety has a positive effect; it can develop the aspect of individuals (7).

The level of anxiety of each individual is dissimilar. It is depending on a personal assessment of their abilities or so-called self-efficacy. According to Bandura and Woods, self-efficacy is the belief in a person's ability to drive the motivation, cognitive skills, and actions necessary to meet the demands of the situation. A person with high self-efficacy believes that they can do something to change the circumstances around him and vice versa (8).

According to the research, there is an association of self-efficacy with student's anxiety in English learning with negative correlation values. The higher self-efficacy, the lower the stress (9). Another research stated that respondents with high self-efficacy showed lower anxiety scores in finishing final tasks during the Covid-19 pandemic and vice versa (10).

During the pandemic situation, STIKes Dharma

Husada Bandung is one of the private university that organize education in health that implement an online learning. The preliminary study results obtained that most students are in the undergraduate nursing program and still conduct online learning systems in the semester 2020/2021 and implement block system. The implementation of block system learning makes students more tiring of mind and energy. The process of accelerating learning time between theory, deadline, lecture assignments, and practicum must be achieved by competence but without considering the differences of students comprehension (11). Nursing students are prepared to be professional nurses in the next future. They need to learn directly to improve the skills they must achieve, but with the current circumstances make drastic changes in learning methods that can cause anxiety's psychological impacts.

Based on the previous research, self-efficacy has a strong relationship with anxiety. However, the novelty of this research is from the population, nursing students, that implement the block system, and has a denser time and various learning methods that demand creativity and activeness, as well as nursing skills that must be mastered. The aims of the research is to identify the relationship between self-efficacy with the level of anxiety of nursing students of STIKes Dharma Husada Bandung in following an online learning system during the pandemic.

MATERIALS AND METHODS

Study design
The research design used was a quantitative descriptive correlation with a cross-sectional design.

Participant and setting
STIKes Dharma Husada Bandung is a health education institution that organizes undergraduate nursing programs, with the most significant number of students as much as 326 students. The program orginizes the learning process with a block system and is completed in 4 years. The population in this research was a regular student of STIKes Dharma Husada Bandung Nursing Undergraduate Program who participated in e-learning with sampling techniques using Consecutive Sampling within three weeks obtained by 298 respondents.

Ethical considerations
This activity has been declared to pass the research ethics test at the Health Research Ethics Commission of STIKes Dharma Husada Bandung with the registration number No.31/KEPK/SDHB/B/VI/2021.

Data collection
The data collected in this research use a google form containing informed consent and demographic data and two questionnaires; General Self-Efficacy questionnaire for self efficacy (12, 13) and the Hamilton Anxiety

Rating Scale (HARS) (14) questionnaire for anxiety levels conducted on June 17-July 7, 2021. The self-efficacy questionnaire consists of 10 statement items with four answer options then categorized into five; very low (≤26), low (27-30), medium (31-34), high (35-38), and very high (>38). The anxiety questionnaire consisted of 14 statement items with five answer options categorizing anxiety into 5; No anxiety (<14), Mild anxiety (14-20), Moderate anxiety (21-27), Severe anxiety (28-41), and Severe anxiety once/ panic (42-56). Researchers spread links to each class through WhatsApp group class leaders to be redistributed to their respective categories.

Data analysis
Respondent characteristics data, self-efficacy, and anxiety levels were analyzed univariately by percentage, then conducted normality testing using Kolmogorov-Smirnov. It was found that the data was not normally distributed to perform bivariate analysis with Spearman's Rho correlation test

RESULTS

Respondent Characteristic
Respondent characteristics of this research were obtained from the results of the distribution of questionnaires to nursing students consisting of age, gender, level of study, and living arrangement. These respondent characteristics were only representative of the condition of students, which can affect the results of the level of anxiety. Respondents of this research were studied in the Bachelor Nursing Program at School of Health Sciences Dharma Husada Bandung.

Based on Table I, most respondents (74.2%) are women, which means that women are more interested in choosing nursing program. This result is the same with research that most students of PPN (Nurse Profession) are women (11,12). Based on the majority aged 20 years (30.5%), most respondents were at levels II and III (28.2%). Based on where most respondents live, as many as (70.8%) and currently the majority of respondents are as many as (59.7%) staying with family in following e-learning during the pandemic.

Based on Table II, majority of 137 respondents (46%) have moderate self-efficacy, and mostly 122 respondents (40.9%) did not experience anxiety. Table III Spearman rank test results show p = 0.040 < 0.05 and correlation coefficient value of -0.119. This means a shallow and indirect significant correlation between self-efficacy and anxiety level in nursing students during e-learning.

DISCUSSION

Self Efficacy In Nursing Students during Online Learning
The result of the research showed that most students has moderate self-efficacy. They believe that they can live and pass through any challenges or situations to be able

Table I: Demographic Characteristics of the Nursing Students who Participated in the Study (N=298)

Variable	n	%
Gender		
Men	77	25.8
Woman	221	74.2%
Age		
18 -19	73	24.5 %
20 - 25	225	75.5%
Level of study		
I	74	24.8%
II	84	28.2%
III	84	28.2%
IV	56	18.8%
Living arrangement		
With family	178	59.7%
Without family	120	40.3%

Table II: Self Efficacy and Level of Anxiety in Nursing Students during Online Learning (N=298)

Variable	Frequency (n)	Percentage (%)
Self Efficacy		
Verry Low	20	6.7%
Low	69	23.2%
Moderate	137	46.0%
High	54	18.1%
Very High	18	6.0%
Anxiety		
No anxiety	122	40.9%
Mild Anxiety	72	24.2%
Moderate anxiety	44	14.8%
Severe anxiety	48	16.1%
Panic	12	4.0%

to carry out e-learning to the maximum.

In line with another research that more students who have moderate self-efficacy and self-efficacy have a dynamic nature, meaning that the level of self-efficacy can increase or decrease during a learning process (15) . Self-efficacy is defined as an individual's beliefs about his ability to produce a certain level of performance that affects events that affect their life. Self-confidence determines how people feel, think, motivate themselves, and behave (8). According to Bandura, self-efficacy of each individual differ from one to another based on the dimension level (the difficulty level of the task performed by the individual), dimension of strength (individual confidence with their competence), and dimension of generality (broad area of an individuals of confidence in performing a particular task) (16).

Furthermore, according to Bandura, self-efficacy can be

obtained, improved, or reduced by one or a combination of four sources; the experience of success, the experience of others, social persuasion, and physiological and emotional (8). Based on this research, most students are in the 2 and 3 grade, so they have enough experience in studying at STIKes Dharma Husada Bandung. They have known what should and shouldn't when facing problems in the learning process. Furthermore, in Table I, most students live with family. Their efficacy can also be due to the social persuasion they get from the family because self-efficacy can improve by the support system (17).

Anxiety Level in Nursing Students during Online Learning

The result showed that most of the students did not experience anxiety because they have started to adapt to e-learning due to the covid-19 pandemic condition which has been going on for 16 months. However, many respondents still experienced anxiety. It shows that students experienced significant changes in the method from offline to online or known as E-Learning. It affects the psychological aspect of anxiety where the levels of anxiety of students in participating online learning following are different (18).

The study was in line with the research that the most psychological problems encountered due to e-learning are anxiety (5,19). Anxiety is an unexplained feeling of fear and responds to an internal and external stimulus with behavioral, cognitive, and physical signs and symptoms (6). The students can reduce their anxiety with nonpharmacological therapy such as music therapy (20).

Relationship of Self-Efficacy With Anxiety Level during Online Learning

Based on these results, the higher the level of self-efficacy, the lower anxiety of students in the following e-learning during the pandemic, and contrarywise, the lower the level of self-efficacy, the higher the anxiety of students in following e-learning during the pandemic.
The results supported by previous research that showed a negative relationship between self-efficacy and anxiety of composing a thesis in nursing students (21). Other related research indicates a negative relationship between self-efficacy and anxiety level of the first-year PSPD FK students at the University of Lampung, which means lower self-efficacy the lower the level of anxiety

Table III. Correlation of Self Efficacy and Level of Anxiety in Nursing Students during Online Learning

Self efficacy	Anxiety					Total		P value	r
	No anxiety	Mild anxiety	Moderate anxiety	Severe anxiety	Panic	n	%		
Verry Low	6	7	4	3	0	20	6.7	0.040	-0.119
Low	26	18	10	11	4	69	23.1		
Moderate	53	31	19	26	8	137	46.0		
High	23	14	10	7	0	54	18.1		
Very High	14	2	1	1	0	18	6.1		

(15).

Self-efficacy plays a significant role in the appearance of anxiety (7,22). In this research, self-efficacy has a vital role for students in following e-learning during the pandemic. This is necessary because there is a change in learning methods from offline to online learning and the problems faced by students. Self-efficacy demonstrate a person's ability to increase motivation, cognitive ability and follow-up in the face of a condition . In difficult cases, individuals with low efficacy tend to give up easily and depressed so easily, while individuals with high self-efficacy are not easily anxious because they will try harder to overcome the challenges

Therefore, this research can be a novelty by proving a link between self-efficacy and anxiety level in nursing students of STIKes Dharma Husada Bandung during e-learning. Thus, this research contributes in strengthening existing theories based on theories and previous relevant research.

The limitation of this research was a relatively small study group and the fact that it was not representative of the population of nursing students. Another limitation is that the results may be biased towards the collecting data by google form.

This research has an implications for nursing, especially in nursing education, as an evaluation material in implementing online learning system. Education institutions get an overview of student's anxiety and self-efficacy in carrying out online learning system to develop more appropriate strategies in managing learning.

CONCLUSION

The results showed that there was a correlation between self-efficacy and anxiety level in nursing students during online learning system. Based on these results, the higher the level of self-efficacy, the lower the anxiety of students in following online learning systems during the pandemic and the other way around. Educational institutions are expected to pay more attention to the psychological aspects of students during the online learning system.

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