

Stress, motivation, satisfaction, and learning achievement: A case study



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ABSTRACT

Introduction: Currently, the coronavirus (Covid-19) is still a global problem that is felt by various countries in the world, including Indonesia. The occurrence of this epidemic greatly affected all sectors of human life, one of which was in the education sector where there was a changing the learning process from face-to-face to an online learning system. The implementation of online learning turned out to have a considerable impact on students, especially nursing students, one of which was the emergence of academic stress that was felt during the learning process. This study aimed to determine the correlation between academic stress due to online learning and the motivation, satisfaction and learning achievement of nursing students during the Covid-19 pandemic.

Methods: This study uses a descriptive correlative method with a cross-sectional approach. Researchers distributed online questionnaires to 259 respondents, namely active nursing students who carried out online learning. Then the data obtained were analyzed by researchers univariately to determine the distribution and frequency distribution and bivariate test using somersd and lambda to determine the correlation of each variable with academic stress.

Results: The results showed that there was a significant correlation between age ($p=0.001$), gender ($p=0.005$), grade education ($p=0.048$), learning understanding ($p=0.000$), and academic stress while the variable of media use did not correlate with academic stress ($p=.$). In addition, academic stress is also correlated with variable satisfaction ($p=0.041$), and motivation ($p=0.002$) and is not correlated with learning achievement ($p=0.388$).

Conclusions: The current Covid-19 pandemic situation has greatly impacted the teaching and learning process, especially the emergence of academic stress, and decreased motivation and learning satisfaction of nursing students. This condition will become serious if each variable that is correlated with academic stress is not handled properly.

Keywords: Covid 19, Online Learning, Nursing Students, Academic Stress.

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INTRODUCTION

Today, the corona virus outbreak (Covid-19) is still a global problem from various countries in the world. The latest data on June 11, 2021, showed that the number of cases confirmed positive for Covid-19 was 174,502,686 with the number of death was 3,770,361 cases.¹ In Indonesia, based on data from the Indonesian Ministry of Health mention that the incidence of Covid-19 reached 1,901,490 cases with 52,730 deaths as of June 12, 2021.² The number of Covid-19 cases continues to increase significantly over time. Meanwhile data on the number of Covid-19 cases in Probolinggo, East Java as of June 12, from the Probolinggo Health Service it was found that the number of positive confirmed cases was 3,223 cases with 193 death cases.³ From the data on the number of cases that have

been mentioned, it shows that Covid-19 is still high, both globally and nationally, even in several regions in Indonesia.

The occurrence of this outbreak of course has had an impact on all sectors of human life, such as health, economy, socio-culture and education. One of the impacts that can be felt the most today is on the education sector.⁴ Due to the current Covid-19 pandemic, schools and universities almost all over the world must temporarily shift face-to-face teaching and learning activities to online learning, including in Indonesia. The Indonesian government through the Ministry of Education and Culture has made regulations for the implementation of teaching and learning processes that are carried out at home by online learning through official decree number 4 of 2020, 24 of March 2020, regarding the implementation of education policies

during the emergency period of the spread of Covid-19.⁵ Since the existence of this policy, the teaching and learning process in primary, secondary and tertiary education has been carried out by online until now for an undetermined time in accordance with the conditions of the Covid-19 pandemic in Indonesia.

The online learning process turns out to be still not optimal at all levels of education, including nursing colleges.⁶ This is because from the results of previous studies that has been stated there are many obstacles faced by nursing students when carrying out the online teaching and learning process. Some of the obstacles encountered by students can be in the form of technical constraints such as limited bandwidth, internet access, other infrastructure facilities such as the availability of laptops, smartphones and weak mentoring and supervision from

educators so that this becomes a challenge that must be considered by government.^{7,8} The existence of limitations and various obstacles in the learning process encountered by nursing students will cause stress during Covid-19 pandemic.⁹

Academic stress experienced by nursing students during the online teaching and learning process may be caused by several things such as lack of facilities for online learning, online learning is more difficult to understand than conventional face-to-face learning and more tasks given during online learning without clear explanation.¹⁰ Another study conducted by Majrashi et al., (2021) stated that academic stress that happens to nursing students is generally caused by heavy tasks, exams and learning burdens. From these two opinions, the transition of learning from offline to online can have an impact on academic stress that occurs in nursing students.¹¹ This situation of course requires an effort to evaluate the educational curriculum because it will have an impact on student achievement, motivation to attend lectures and learning satisfaction.⁹ Previous research on the impact of nursing student learning processes during the Covid-19 pandemic is still rarely done, so based on the phenomena and problems above, this study will focus on assessing the stress level, motivation, satisfaction and learning achievement of nursing students during the online learning process in Covid-19 pandemic.

METHODS

Study Design

This study uses a descriptive cross-sectional approach design by assessing all variables once. This research was conducted in Bachelor of Nursing and Diploma of Nursing at Hafshaway Institute of Health Science Zainul Hasan Islamic boarding school, Probolinggo, East Java, Indonesia.

Data Collection

The sample in this study was 259 nursing students, 83 are from diploma nursing students from 1st to 3rd years and 176 are bachelor nursing students from 1st to 4th years. This study used a purposive sampling technique where the students who became the sample had been

determined in advance according to the inclusion criteria.

The instrument of this study used academic stress instrument developed through Zajacova's Educational Stress Questionnaire.¹² This stress instrument consists of 4 main indicators that have been modified from the results of research by Sharififard et al., (2019) namely: the difficulty of doing homework in the classroom, the difficulty of doing homework outside of classes, the difficulty of interacting with others, and the difficulty of managing work, family and university. Respondents filled out a questionnaire with a scale of 0 "not stressful" to 10 "very stressful".

The Academic motivation assessment was measured by academic motivation scale (AMS) questionnaire that was found by Vallerand et al. This instrument consists of 3 main indicators, internal motivation, external motivation, and no motivation which are modified from the results of previous research.¹⁴ Respondents filled out a questionnaire with a Likert scale of 1-5 ranging from "strongly disagree" to "strongly agree". The satisfaction variable was measured using the Student Satisfaction Scale Development which was developed from the research results.¹⁵ The instrument has 7 main indicators: teaching and learning, student management and guidance, logistics services, academic and cultural life, learning and scientific research environment, school reputation and development, internship and career. Respondents filled out a questionnaire with a Likert scale of 1-5 ranging from "strongly disagree" to "strongly agree". The measurement of learning achievement in the present study was evaluated by the student's total mean score of whole semesters or cumulative GPA (Grade Point Average) is measured on a 4-point scale with a maximum of 4.0, which was recorded based on individual statements.

All instruments were distributed online using google forms via WhatsApp groups to all sample students. The instructions for filling out the questionnaire and a privacy statement in the context of clarifying informed consent are presented on the top page of the questionnaire. The survey was conducted on June to July 2021

Data Analysis

The data obtained were then tabulated and bivariate analysis was carried out using the lambda statistical test to identify the relationship between variables: age, gender, education level, media use with academic stress variables, while the Somers'd test was used to see the correlation of each variable: satisfaction, motivation and learning achievement with academic stress. The application carried out in this study uses the Statistical Package for the Social Sciences (SPSS 21).

RESULTS

Based on table 1 below, it can be seen that the age of respondents is dominated by the age of over 20 years with a percentage (76.1%), women are the dominant respondents with a total of 218 (84.2%), the level educational of respondents are mostly bachelor of nursing with a total of 176 respondents (68%) with the average length of study is the 3rd years with a total of 77 people (29.7%). Meanwhile, according to respondents, the media most often used by lecturers to teach was Zoom Meeting with 142 respondents (54.8%).

Based on table 2, it was found that the average respondent's understanding of the lectures was sufficient 114 (44%), respondent satisfaction at the moderate level 113 (43.6%), the motivation of the respondents at the weak level 108 (41.7%), the learning achievement of the respondents was at the satisfied level 140 (54.1%) and academic stress showed a mild stress level of 138 (53.3%).

Based on table 3 below, we can see that there are 2 variables that do not have a correlation with the academic stress of nursing students including the variable learning media with ρ value = 0.388 (OR = 0.074) and learning achievement variable with ρ value = 0.147 (OR = 0.084). In addition to these two variables, all variables have a significant relationship with academic stress with (ρ value \leq 0.05).

DISCUSSION

Academic Stress Correlation with Learning Motivation

Based on the data in table 2, it can be seen that the average respondent has a weak motivation score (41.7%) and

mild academic stress (53.3%). From the description of this data, it can be seen that student motivation becomes weak during the implementation of online learning during the Covid-19 pandemic. There are so many factors related to motivation both internal and external of the individual. Weak motivation in the results of the study indicates the possibility that students are not stimulated to learn in an online system, the desire to know about new things has decreased the students, and there is no increase in learning achievement is also one cause. This is similar to what has been explained by Utvaer dan Haugan (2016) that motivation is influenced by the following factors: knowledge, accomplishment, stimulation, identified regulation, introjected regulation, external regulation, and motivation where the seven factors are predictors of individual motivation in learning.¹⁴

Furthermore, based on the results of the bivariate test in table 3 was reached a significance ρ value of 0.002 means that there is a correlation between academic stress and nursing students' learning motivation. Good self-motivation can increase the individual's desire to join learning well, such as the growth of student attitudes and be more creative, and productive in undergoing the teaching and learning process so that individuals feel happy when they carry out all learning activities that lead to the basis of a student's success. The results of this research that have been carried out are similar with the results of previous research conducted by Shariffard et al., (2019) stating that learning motivation, self-efficacy, and academic stress are closely related to student burnout.¹⁶

The existence of prolonged academic stress will trigger burnout where students are unable to continue the learning process following the demands. Just like during the current Covid-19 pandemic, academic stress can arise through a shift in the learning process from face-to-face to online learning. The existence of high stress can reduce student learning motivation. Therefore, efforts are needed to reduce academic stress so they can overcome the pressure felt by students during the online learning process in Covid-19 pandemic where it makes stress

Table 1. Demographic and Respondents Characteristics of Nursing Students in Institute of Health Science Hafshawaty Pesantren Zainul Hasan, Probolinggo.

Variable	Frequency	Percentage (%)
Age		
< 20 years	62	23.9
≥ 20 years	197	76.1
Gender		
Male	41	15.8
Female	218	84.2
Grade of Education		
Bachelor Nursing	176	68
Diploma Nursing	83	32
Online Media Use		
Zoom Meeting	142	54.8
E-learning	103	39.8
Whatsapp dan Others	14	5.40
Years of Education		
1 st	67	25.9
2 nd	72	27.8
3 rd	77	29.7
4 th	43	16.6

Table 2. Dependent and Independent Variable Frequency Distribution of Nursing Students in Institute of Health Science Hafshawaty Pesantren Zainul Hasan, Probolinggo.

Variable	Frequency	Percentage (%)
Learning Understanding		
Good	92	35.5
Enough	114	44.0
Poor	53	20.5
Satisfaction		
High	63	24.3
Moderate	113	43.6
Low	83	32.0
Motivation		
Strong	59	22.8
Moderate	92	35.5
Weak	108	41.7
Learning Achievement/GPA		
Cumlaude	12	4.60
Very Satisfied	107	41.3
Satisfied	140	54.1
Academic Stress		
Moderate	67	25.9
Mild	138	53.3
No Stress	54	20.8

Table 3. Bivariate Test of Respondent Characteristics and Related Variables: Satisfaction, Motivation and Learning Achievement with Academic Stress in Nursing Students.

Variable	Academic Stress						p Value	OR
	Moderate		Mild		No Stress			
	f	%	f	%	f	%		
Age								
< 20 years	6	9	16	26	40	65	0.001*	0.198
≥ 20 years	61	31	122	62	14	7		
Gender								
Male	4	10	10	24	27	66	0.005*	0.140
Female	63	29	128	59	27	12		
Grade of Education								
Bachelor Nursing	59	27	109	62	8	11	0.048*	0.140
Diploma Nursing	8	10	29	35	46	55		
Online Media Use								
Zoom Meeting	8	6	88	62	46	32	0.388	0.074
E-learning	50	49	47	46	6	5		
Whatsapp dan Others	9	58	3	21	3	21		
Learning Understanding								
Good	8	9	38	41	46	50	0.000*	0.552
Enough	17	15	94	82	3	3		
Poor	42	79	6	11	5	10		
Satisfaction (dep)								
High	12	19	40	63	11	18	0.041*	0.111
Moderate	22	19	63	56	28	25		
Low	33	40	35	42	15	18		
Motivation (dep)								
Strong	8	14	35	59	16	27	0.002*	0.165
Moderate	19	21	55	60	18	19		
Weak	40	37	48	44	20	19		
Learning Achievement (dep)								
Cumlaude	1	8	6	50	5	42	0.147	0.084
Very Satisfied	39	36	31	29	37	35		
Satisfied	27	19	101	72	12	9		

and is even considered to be very tense.⁹

Academic Stress Correlation with Learning Satisfaction

Based on the research data in table 2, it can be seen that the majority of students' learning satisfaction level is moderate (43.6%). Learning satisfaction can also be influenced by many factors that make students feel satisfied in carrying out learning activities on campus. From the results of the study, satisfaction may be formed from the teaching and learning process carried out during this pandemic such as the use of different media and learning facilities, material delivery techniques via a virtual, learning atmosphere, and a slightly changed academic atmosphere which tends to be boring for students so that the level of

satisfaction has not shown an increase with the conditions of the learning process today. These results are following previous research conducted by Liu et al., (2017) that student satisfaction is formed can be seen from several indicators: satisfaction with teaching and learning, student management and guidance, logistics services, academic and cultural life, learning and scientific research environment, school reputation and development as well as internship and career.¹⁵ These indicators are closely related to the formation of satisfaction in each individual.

Based on table 3, the results of the bivariate statistical test to see the correlation of stress with satisfaction obtained a significance p value of 0.041 which indicates there is a correlation

between academic stress and nursing student learning satisfaction. The results of the analysis are similar to previous research which states that academic stress can harm the attitudes of each student so that satisfaction with the learning process will also decrease.⁹ In addition, the high level of stress experienced by individuals who did online learning will also have the effect of decreasing motivation in the learning process. In fact, according to Fawaz dan Samaha (2021) online learning can cause depression among students.¹⁷

Not all components of nursing education can be done in online learning, like the case with some courses that have practical learning aspects. A previous study stated that most health science students agree that e-learning is not effective in acquiring their clinical and

technical skills because these skills are best learned in clinical laboratories, so when online learning is carried out under these conditions students must struggle to learn clinical laboratory practice heavier than usual that leads to individual dissatisfaction.¹⁸ It can be seen from the results of this study that only 35.5% of students have a good learning understanding level, the rest is enough poor level of 64.5% and almost half of the students who experience the impact of online learning stress are not satisfied with the learning process.

Academic Stress Correlation with Learning Achievement

Based on [table 2](#) it can be seen that the respondent's learning achievement is at a satisfactory level (54.1%) this can be interpreted as a student's learning achievement during online learning since Covid-19 which is indicated by the student's total mean score of whole semesters or cumulative GPA (Grade Point Average) did not increase significantly. Only 4.6% of students got a very satisfactory score. The results of this study can occur because the possibility of academic stress has a large enough impact on student motivation and learning satisfaction so student achievement is also one of the variables that are also affected. However, in [table 3](#), it can be seen that based on the bivariate test, a significance ρ value of 0.147 is obtained, which means that there is no significant correlation between academic stress and nursing student learning achievement. The results of this study are supported by previous research conducted by Panma (2021) that there is no significant correlation between academic stress and learning achievement.¹⁹ This is probably because learning achievement is influenced by several other factors that play a role in achieving learning achievement including student abilities, availability of good information and learning resources, understanding of teaching materials, and support from the environment, and parents.²⁰

In line with the results of this study, Mahdy (2020) stated that the Covid-19 pandemic that online learning had

a major impact on the decline in learning achievement. Although it is not significantly correlated, online learning stress has quite an impact on student achievement, which has not been maximally obtained by more than half of the respondents.²¹ Therefore, the magnitude of the impact of academic stress greatly affects the online learning process so that nursing students are expected to be able to implement strategies for managing stress during the Covid-19 pandemic. In addition, the role of nursing academic institutions, curriculum planners, and educators is very important in overcoming the challenges of the current Covid-19 pandemic.

Academic Stress Correlation with and Respondents Characteristics

Based on the research data in [table 3](#), several demographic data correlated with academic stress experienced by nursing students including age (0.001), gender (0.005), grade of education (0.048) and learning understanding (0.000). The results of this study are in accordance with research conducted by Subedi et al., (2020) which states that there is a significant correlation of demographic factors and respondent characteristics in the implementation of online learning.²² From the data in [table 1](#) above, it can be seen that more than half of the respondents are over 20 years old, female, and almost half of the respondents have enough learning understanding. According to Panma (2021) every year nursing students will have different academic stress and tend to increase. This happens due to the demands of the task and the complexity of the lectures where nursing students do not only learn in class but also do clinical practice learning in hospitals or health clinics.¹⁹ Of course, this condition causes academic stress, especially the majority of nursing students are women with the age of 20 years where they have to face the Covid-19 pandemic condition that happens today.

In addition, online learning is not optimal, so the level of student learning understanding in this study is also one of the factors causing academic stress if it is not addressed properly. Therefore,

an improvement from various systems in online learning is needed to reduce the academic stress that occurs in nursing students. While the variable of online media used does not have a significant correlation with academic stress (0.388). In contrast to the results of previous research conducted by Fawaz dan Samaha (2021) stated that the use of online media such as e-learning can cause anxiety and symptomatological stress for most students during the Covid-19 pandemic.¹⁷ The difference between the results in this study and previous research is that most students are very familiar with the media used in online learning, both using zoom meetings, e-learning, Whatsapp and other media so that they can participate in online learning fully.

CONCLUSION

This study describes that academic stress has a very negative impact on student motivation and satisfaction in learning during the Covid-19 pandemic. However, academic stress has no significant impact on nursing student learning achievement. In addition, academic stress is also significantly related to respondent characteristics such as age, gender, and grade of education. Therefore, from this study, it can be seen that the Covid-19 pandemic generally had a significant impact on the learning of nursing students and caused academic stress. Academic stress will not only occur today but will have a lasting impact if it is not handled properly. This condition happens because not all lessons in nursing science can be implemented by an online system, but require laboratory and clinical learning that run in synergy together so steps are needed to improve the quality of learning methods that can reduce academic stress for nursing students.

DISCLOSURE

Author Contribution

All authors have contributed to this research process, including conception and design, analysis and interpretation of the data, drafting of the article, critical revision of the article for important intellectual content, final approval of the article, collection and assembly of data.

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Conflict of Interest

There is no conflict of interest for this manuscript.

Ethical Consideration

This research was approved by the Health Research Ethics Committee of Institute of Health Science Hafshawaty Pesantren Zainul Hasan. Letter of exemption No.178/EC/KEPK/ZH/2021.

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