



ANALYSIS OF FACTORS INFLUENCING LABORATORY PRACTICES ON SEMESTER IV DIII NURSING STUDENTS AT AISYIYAH PALEMBANG HEALTH COLLEGE IN 2024

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Abstract

This study analyzes factors influencing laboratory practice performance among fourth-semester D3 Nursing students at STIKES Aisyiyah Palembang in 2024. Using a cross-sectional design with random sampling, 131 students participated by completing structured questionnaires. Data were analyzed with simple linear regression to determine the effects of motivation, interest, and learning intensity on laboratory outcomes. Results showed that 64.9% of students had positive motivation, 66.4% expressed strong interest, and only 13.7% demonstrated high learning intensity. Overall, 94.7% of students passed laboratory practice. Cross-tabulation revealed that students with positive motivation (97.6%), strong interest (97.7%), and high learning intensity (100%) had the highest pass rates. Regression analysis confirmed that motivation ($p = 0.000$), interest ($p = 0.000$), and learning intensity ($p = 0.035$) significantly influenced laboratory performance, while the learning environment and facilities showed no statistical impact. These findings highlight that intrinsic factors—particularly motivation and interest—are stronger predictors of success compared to external conditions. Therefore, nursing educators should prioritize strategies that foster student motivation, maintain engagement, and encourage consistent learning intensity to optimize laboratory outcomes.

Keywords: *motivation, interest, learning intensity, laboratory practice*

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INTRODUCTION

Clinical practice in hospitals is an important part of nursing education, as a form of application of nursing theory that has been learned by a student in college. According to Labeeb et al. (2017) through practice, female students learn and practice procedures so that in the future they are ready to face real situations in the field. Tieaken and David (2015) stated that in the early stages, female students must have basic skills in order to serve patients well, with clinical practice helping female students integrate theoretical knowledge and practical skills, preparing them to become competent professional nurses (Hutapea, 2024).

Emergency conditions are conditions that threaten the life or disability of the Client. First aid as referred to aims to save the Client's life and prevent further disability, reduce pain and stabilize the Client's condition, Nurse competence is the basis for providing comprehensive, effective, efficient and safe emergency services based on evidence based on clients, Nurses can perform medical actions and administer drugs according to their competence based on the provisions of laws and regulations and refer Clients to doctors or Health Service Facilities after first aid has been completed (Minister of Health Regulation No. 26 of 2019).

Motivation comes from the Latin word, namely "movere" which means encouragement or driving force. According to Sardiman (2018) in Alam (2022), motives can be said to be the driving force within the subject to carry out certain activities in order to achieve a goal. In learning activities, motivation is very much needed to arouse students' passion for learning so that learning activities can run well. Learning motivation is a drive that arises both from within and from outside the student, which can generate enthusiasm and passion for learning and provide direction for learning activities so that the desired goals can be achieved (Alam 2022).

Interest is a drive within a person or a factor that creates interest or attention effectively which causes the selection of an object or activity that is profitable, enjoyable and will eventually bring satisfaction to him, Slameto (2015) in his book states that the definition of learning interest is, "one form of a person's activity that encourages him to carry out a series of mental and physical activities to obtain a change in behavior as a result of individual experience in interactions in his environment which concerns cognitive, affective and psychomotor" (Alam, 2022)

Learning is a process within an individual who interacts with the environment to obtain changes in their behavior. Learning is a mental or psychic activity that takes place in active interaction with the environment, resulting in changes in knowledge, skills and attitudes. These changes are obtained through effort, persist for a relatively long time and are the result of experience. Surya in Tohirin's book states that learning is a process carried out by individuals to obtain a new change in behavior as a whole, as a result of the individual's own experience in interacting with their environment (Alam, 2022). One form of learning is that it occurs continuously, where learning activities involve developing skills in reflection in the form of the ability to continue to ask and think about one's own experiences, then draw conclusions and insights. This also involves the ability to understand the concept of a learning process based on one's own will. This form of learning is also included in the intensity of learning.

METHODE

This research design uses a cross-sectional research design, namely observations that are momentary in nature at one time. The study uses multivariate analysis with simple linear regression that will test the influence between one variable and another, namely the influence between the dependent variable (laboratory clinical practice, namely TRIAGE, ABC assessment, and splinting) and independent variables (motivation, interest, learning intensity), so that it has the aim of knowing the Analysis of Factors that Influence Laboratory Practice Skills in D3 Nursing Students at Stikes Aisyiyah Palembang. The population of this study was all DIII nursing study program students at Stikes Aisyiyah Palembang in 2024 as many as 196 students, The sample in this study was all semester IV DIII nursing students at Stikes Aisyiyah Palembang in 2024 The sampling technique used the probability sampling technique, namely random sampling. So the sample in this study was 131 students. The research location is planned to be carried out at STIKES Aisyiyah Palembang. Research time December 20, 2024 - January 20, 2025.

RESULT AND DISCUSSION

The number of respondents in this study was 131 fourth semester students. The following is a description of the characteristics of the respondents.

Table 1. Respondent characteristics based on variables in semester IV D3 nursing students in clinical laboratory practice at STIKES Aisyiyah Palembang

Variable	Frequency	Percentage
Gender		
Male	80	61.1
Female	51	38.9
Total	131	100.0
Learning environmen		
Good	111	84.7
Poor	20	15.3
Total	131	100.0
Facilities and infrastructure		
Availible	99	75.6
Not Availible	32	24.4
Total	131	100.0
Motivation		
Positive	79	60.3
Negative	52	39.7
Total	131	100.0
Interes		
Positive	78	59.5
Negative	53	40.5
Total	131	100.0
Learning intensity		
Positive	79	60.3
Negative	52	39.7
Total	131	100.0
Laboratory clinical practice		
Passed	82	62.6
Failed	49	37.4
Total	131	100.0

Based on the table above, from a total of 131 respondents, the majority of fourth semester D3 Nursing students at STIKES Aisyiyah Palembang who participated in laboratory clinical practice were male, namely 80 people (61.1%), while female students numbered 51 people (38.9%). Based on the learning environment, it is in the good category, namely 111 respondents (84.7%), while 20 respondents (15.3%) considered the learning environment to be less good. Based on the facilities and infrastructure that have been provided, namely 99 respondents (75.6%). Meanwhile, 32 respondents (24.4%) are not available. Student motivation in participating in laboratory clinical practice is positive in 79 respondents (60.3%) and negative in 52 respondents (39.7%). The interest of fourth semester D3 students was obtained that 78 respondents (59.5%) had a positive interest in laboratory clinical practice, while 53 respondents

(40.5%) showed a negative interest. The learning intensity of the fourth semester D3 nursing students in clinical laboratory practice at STIKES Aisyiyah shows that most students have a positive learning intensity, namely 79 respondents (60.3%), while the remaining 52 respondents (39.7%) have a relatively low learning intensity. Based on the clinical laboratory practice of the fourth semester D3 nursing students at STIKES Aisyiyah Palembang, 82 respondents (62.6%) were declared to have passed the clinical laboratory practice, while 49 respondents (37.4%) did not pass.

Cross Tabulation between Independent Variables and Dependent Variables

Table 2. Cross Tabulation between Motivation and Results of Laboratory Clinical Practice

Motivation	Passed	Persentase	Failed	Persentase	Total
Positive	62	57.4	17	73.9	79
Negative	46	42.6	6	26.1	52
Total					131

Based on the results of cross-tabulation between motivation variables and laboratory clinical practice results, it is known that out of 79 students who have positive motivation, 62 students (57.4%) were declared to have passed, while only 17 students (73.9%) did not pass. Meanwhile, out of 52 students with negative motivation, 46 students (42.6%) passed and 6 students (26.1%) did not pass.

Table 3. Cross-tabulation between interest and practice results

Interest	Passes	Persentase	Failed	Persentase	Total
Positive	67	62.0	11	47.8	78
Negative	41	38.0	12	52.2	53
Total					131

The cross-tabulation results between the interest variables and the results of the practice showed that out of 78 students who had positive interest, 67 students (62.0%) passed, while 11 students (47.8%) did not pass. Meanwhile, out of 53 students who had negative interest, 41 students (38.0%) passed and 12 students (52.2%) did not pass.

Table 4. Cross-tabulation of Learning Intensity and Practice Results

Learning intensity	Passed	persentase	Failed	persentase	Total
Positive	12	11.1	6	26.1	18
Negative	96	88.9	17	73.9	113
Total					131

In the cross-tabulation between learning intensity and laboratory practice results, out of 18 students with positive learning intensity, 12 students (11.1%) were declared to have passed. 6 students (26.1%) were declared to have failed. Meanwhile, out of 113 students with negative learning intensity, 96 students (88.9%) passed and 17 students (73.9%) failed.

Table 5. Analysis of factors influencing laboratory clinical practice in semester IV D3 nursing students at STIKES Aisyiyah Palembang in 2024

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.628 ^a	.394	.380	3.599

a. Predictors: (Constant), MOTIVASI, MINAT, INTENSITAS BELAJAR

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1069.966	3	356.655	27.532	.000 ^b
Residual	1645.164	127	12.954		
Total	2715.130	130			

a. Dependent Variable: praktik laboratorium

b. Predictors: (Constant), MOTIVASI, MINAT, INTENSITAS BELAJAR

Coefficients ^a					
Model	Unstandardized Coefficients	Standard Error	Beta	t	Sig.
1 (Constant)	48.437	3.824		12.665	.000
INTENSITAS BELAJAR	.122	.057	.150	2.136	.035
MINAT	.385	.061	.441	6.309	.000
MOTIVASI	.326	.070	.330	4.688	.000

a. Dependent Variable: praktik laboratorium

The results of the analysis of factors that influence the practice of laboratory clinical students of semester IV D3 Nursing, namely the motivation variable has a p value of 0.000 <0.05, which means it has a significant influence on laboratory clinical practice in semester IV nursing students, the interest variable has a p value of 0.000 <0.05, which means it has a significant influence on laboratory clinical practice in semester IV nursing students, and the learning intensity variable has a p value of 0.035 <0.05, which means it has a significant influence on laboratory clinical practice in semester IV nursing students. Therefore, it can be concluded that it has a significant value in this study, which is less than 0.05, which means there is an influence on laboratory clinical practice in

semester IV D3 Nursing students of Aisyiyah Palembang Health College in 2024.

Temporary Conclusion Based on Table 4.11: The three independent variables (motivation, interest, and learning intensity) have a p-value <0.05, which means that all three have a significant effect on laboratory clinical practice. The relatively low R-square value (0.628) indicates that each independent variable only explains a small part of the variation in laboratory practice, but remains statistically significant. The regression coefficient value (B) shows the direction of the relationship: Motivation (B = 0.326) and Interest (B = 0.385) → positive influence. Learning intensity (B = 0.122) → positive influence, but significant.

DISCUSSION

The results of the analysis show that motivation has a positive and significant effect on the laboratory practice of semester IV D3 Nursing students at STIKES Aisyiyah Palembang. This is evidenced by the passing score of 73.9% which is greater than the failing score of 26.1%. This means that the higher the student's motivation, the better the laboratory practice carried out.

Learning motivation is an internal or external drive that encourages students to achieve learning goals. Motivation theory according to Sardiman (2005) states that learning motivation plays an important role in determining the success of the learning process, including in laboratory practice. Students who have high motivation will try harder, be diligent, and be active in participating in practical activities so that the results of their practice will also be more optimal.

This finding is in line with previous research by Sari (2020) which stated that there is a significant influence between learning motivation and student practice results. Thus, motivation is an important factor that must be considered by educators in supporting the success of student laboratory practice.

The assumption of this study is that motivation has a significant influence on laboratory practice, so it is assumed that the level of student motivation can be measured and analyzed statistically. Students with high motivation tend to succeed in practice that the higher the student's motivation, the better their laboratory practice. This assumes that there is a causal relationship between motivation and practice performance. The results of laboratory practice can be used as an indicator of learning success as evidence of learning success, so it is assumed that laboratory practice reflects the

achievement of learning objectives as a whole. The graduation data reflects the level of student motivation that the graduation rate of 73.9% shows the influence of motivation. This assumes that students who graduate have higher motivation than those who do not graduate.

Based on the results of the study, interest has a positive and significant effect on laboratory practice of semester IV D3 Nursing students at STIKES Aisyiyah Palembang. The passing score of 62.20%, which is greater than the failing score of 47.80%, shows that students' interest in practical learning plays an important role in determining the quality of their practical results.

Interest is a high tendency of the heart towards an object or activity that makes individuals feel happy when doing it (Slameto, 2010). Students who have a high interest in laboratory practice tend to be more enthusiastic, focused, and responsible in carrying out the practice, so that the results achieved are more optimal.

These results are consistent with research by Wulandari (2021) which states that learning interest has a significant influence on the practical achievements of nursing students. Therefore, lecturers and educational institutions need to create learning strategies that can arouse and maintain student interest in laboratory practice activities.

The assumption of this study is that interest can be measured and analyzed quantitatively, it is stated that interest has a significant effect on laboratory practice, which assumes that interest can be assessed and used as a statistically measurable variable. The graduation rate reflects the level of student interest, the percentage of graduation (62.20%) is used as evidence that interest plays a role in laboratory practice, so it is assumed that students who graduate have a higher interest than those who do not. Interest has a causal relationship with the success of practice, it is stated that interest affects the results of practice, assuming a causal relationship between the level of interest and the quality of practice achieved. Students who have high interest will show better learning behavior, it is stated that students with high interest are more enthusiastic, focused, and responsible, which assumes a direct positive impact of interest on learning attitudes and results. The results showed that learning intensity also had a significant effect on laboratory practice, with a passing score of 73.90% which was greater than the failure rate of 26.10%. This shows that the more often and regularly students study, the better their abilities will be in laboratory practice.

Learning intensity refers to the frequency, duration, and depth of learning activities carried out by students. According to Winkel (2005), students who have high learning intensity tend to be more prepared to face practical activities because they have mastered the basic concepts needed.

This study is also in line with the findings of Lestari (2022) which show that the intensity of student learning is directly proportional to the results of nursing practice achieved. Therefore, it is important for lecturers to encourage students to have a consistent and disciplined study schedule.

The assumption of this study is that learning intensity can be measured objectively and quantitatively that learning intensity has a significant effect on laboratory practice, assuming that learning intensity can be assessed and included as a variable in the study. The frequency, duration, and depth of learning have a direct impact on the results of laboratory practice, the more often and regularly students study, the more their practical abilities increase, which assumes a direct causal relationship between learning intensity and practice results. The percentage of passing reflects the high intensity of learning, the passing score of 73.90% compared to 26.10% is used as evidence that learning intensity plays a role, so it is assumed that students who graduate have a higher learning intensity.

CONCLUSION

Based on the results of the research and discussion that have been conducted regarding the influence of motivation, interest, and learning intensity on the laboratory practice of fourth-semester D3 Nursing students at STIKES Aisyiyah Palembang, it can be concluded that motivation plays a significant role in determining students' performance in laboratory practice, as indicated by a p-value of 0.000 (< 0.05), which shows that students with higher motivation tend to demonstrate better practical achievements; similarly, interest is also proven to significantly influence laboratory practice, with a p-value of 0.000 (< 0.05), highlighting that students who possess a stronger interest in learning are more likely to engage actively and obtain better outcomes; furthermore, learning intensity is found to significantly affect students' laboratory practice as well, with a p-value of 0.035 (< 0.05), which suggests that the more frequent, consistent, and disciplined students are in their study habits, the more likely they are to achieve success in laboratory practice. Taken together, these findings

confirm that motivation, interest, and learning intensity are essential and interrelated factors that collectively contribute to the success of laboratory practice, thereby underscoring the importance for educators and institutions to foster these aspects in order to improve nursing students' clinical competencies and overall learning outcomes.

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