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Analysis of Factors Influencing Student Anxiety in Facing the OSCE Exam: A Study on Diploma Among Nursing Students at STIKES Kamus Arunika

[C]Hairuddin Safaat[1], Hardin[2], Hardianto Dg. Salimung[3]
[1,2,3] Diploma Nursing Program, Arunika Kamus College of Health Sciences, Palopo, Indonesia
Email Corresponding Author([C]): hai.safaat73@gmail.com
hai.safaat73@gmail.com[1], hardin.nunung@gmail.com[2], hardianto.salimung@gmail.com

ABSTRACT

Anxiety in facing the Objective Structured Clinical Examination (OSCE) remains a significant challenge for nursing students. Recent studies show that anxiety among nursing students facing the OSCE is high. The report shows that 75.5% of students experienced moderate anxiety when facing the OSCE. This study aimed to analyze the influence of self-efficacy, academic readiness, academic motivation, and social support on students' anxiety. A cross-sectional correlational design was used, involving 94 Diploma in Nursing students at STIKES Kamus Arunika. Data were collected using structured questionnaires and analyzed using Pearson correlation and multiple linear regression. The results showed that anxiety levels were categorized as moderate in 62 students (66.0%), high in 27 students (28.7%), and low in 5 students (5.3%). All independent variables were significantly negatively correlated with anxiety, with self-efficacy showing the strongest relationship ($r = -0.345$, $p < 0.01$). Regression analysis revealed that self-efficacy ($\beta = -0.312$; $p = 0.001$), academic readiness ($\beta = -0.224$; $p = 0.024$), academic motivation ($\beta = -0.215$; $p = 0.032$), and social support ($\beta = -0.162$; $p = 0.045$) were significant predictors, explaining 37.4% of the variance in anxiety ($R^2 = 0.374$). These findings highlight the integrated role of psychological, academic, and social factors in shaping student anxiety, with self-efficacy as the most influential determinant. This study contributes an integrative perspective and suggests that targeted interventions, including self-efficacy enhancement, structured OSCE preparation, and supportive learning environments, are essential to reducing anxiety and improving student performance.

Keywords: Anxiety; OSCE; Self Efficacy; Academic Readiness; Academic motivation

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Address :
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Makassar, Sulawesi Selatan.
Email :
jurnalwoh.fkm@umi.ac.id
Phone :
+62 82188474722

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INTRODUCTION

The Objective Structured Clinical Examination (OSCE) is an assessment method in nursing education used to objectively evaluate students' clinical competencies. Despite its validity and reliability, the OSCE is considered a high-stakes examination that can induce anxiety. This anxiety may impair cognitive function and student performance, potentially affecting competency achievement.[1] Anxiety in the OSCE is influenced by internal factors such as self-efficacy and academic readiness. According to Albert Bandura, self-efficacy is an individual's belief in their ability to perform tasks and regulate emotional responses under pressure.[2] Students with higher self-efficacy tend to use more adaptive coping strategies and exhibit lower anxiety, as supported by previous studies among nursing students, enabling them to perform clinical tasks more effectively even in high-pressure situations such as the OSCE. [3,4] Conversely, academic readiness reflects students' preparedness in terms of knowledge mastery, clinical skills, and learning strategies, which directly influence their confidence in facing examinations. [5] Adequate readiness reduces uncertainty and supports the effective application of theoretical knowledge and practical skills during clinical assessments. [6] Anxiety before the OSCE may hinder students' ability to perform optimally. Although self-efficacy and academic readiness are known predictors, they are often studied separately, highlighting the need for an integrated approach.[5]

External factors such as academic motivation and social support also influence students' anxiety. Higher intrinsic motivation promotes better preparation, enhances academic performance, and helps students cope with stress.[7,8] Motivated students demonstrate greater engagement and persistence, enabling them to manage academic demands effectively. Meanwhile, support from lecturers, peers, and family enhances confidence and reduces emotional distress before the OSCE.[9,10] Such support provides emotional reinforcement that can buffer stress responses in high-pressure academic situations.[11] However, previous studies have examined these factors separately, resulting in a limited understanding of their combined effects on student anxiety.

Recent studies show that anxiety among nursing students facing the OSCE is high. A 2025 study found that most students experienced varying levels of anxiety,[12] while a 2024 study reported that 75.5% had moderate anxiety.[13] However, previous studies have generally examined contributing factors separately, indicating a gap in understanding the combined effects of psychological, academic, and social determinants. Therefore, this study offers novelty by applying an integrative approach to analyze multiple factors simultaneously in explaining student anxiety during the OSCE.

A preliminary survey conducted among final-year Diploma Nursing students at STIKES Kamus Arunika indicated that most students experienced anxiety prior to the OSCE, which was associated with low self-confidence, inadequate preparation, and limited support. However, this finding was based on a small sample (n = 7) and should be considered exploratory rather than generalizable. Nevertheless, it underscores the need for a more rigorous investigation involving a larger sample to better understand the determinants of student anxiety in this context.

Based on these considerations, this study aims to analyze the influence of self-efficacy, academic

readiness, academic motivation, and social support on students' anxiety in facing the OSCE. Unlike previous studies that examine these variables separately, this study proposes an integrated model that simultaneously examines psychological, academic, and social determinants of anxiety among diploma nursing students. This approach is expected to provide a more comprehensive understanding and contribute to the development of targeted, evidence-based interventions to reduce anxiety and improve student performance in clinical examinations.

METHOD

1. Study Design and Setting

This study used a cross-sectional correlational design and was conducted at STIKES Kamus Arunika from August to September 2024.

2. Population and Sample

The population consisted of all final-year students of the Diploma III Nursing Program who were scheduled to take the Objective Structured Clinical Examination (OSCE) in the 2023/2024 academic year, totaling 94 students. A total sampling technique was applied, in which all eligible students were included as the study sample.

3. Instruments

Data were collected using structured questionnaires with a 5-point Likert scale. Anxiety was measured using the Hamilton Anxiety Rating Scale (HARS) consisting of 14 items. Self-efficacy was assessed using the General Self-Efficacy Scale (GSE) with 10 items, while social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS), which includes three dimensions (family, friends, and significant others) with a total of 12 items. Academic readiness was measured using a researcher-developed instrument consisting of 8 items based on indicators of knowledge mastery, learning strategies, and mental preparedness. Academic motivation was assessed using Keller's ARCS model (Attention, Relevance, Confidence, Satisfaction) with 16 items.

4. Validity and Reliability

All instruments were tested for validity and reliability prior to data collection. All items met the validity criteria ($r > 0.30$), and reliability testing showed good internal consistency, with Cronbach's alpha coefficients ranging from 0.74 to 0.81 across all variables.

5. Data Collection Procedure

Data were collected one week prior to the OSCE to capture students' anxiety during a critical period when anxiety levels are expected to peak. Participants were asked to complete the questionnaires independently based on their current condition.

6. Bias Control

To minimize potential bias, standardized instructions were provided to all participants, and questionnaires were completed independently to reduce response bias. Participation was voluntary, and anonymity was ensured to minimize social desirability bias. In addition, several control variables, including students' prior OSCE experience and academic performance (GPA), were considered to

reduce potential confounding effects on anxiety levels.

7. Data Analysis

The collected data were analyzed using statistical software. The analysis process included data editing, coding, and entry into SPSS. Descriptive statistics were used to present the frequency distribution of each variable. Prior to inferential analysis, classical assumption tests, including normality, multicollinearity, and heteroscedasticity, were conducted. Pearson correlation tests were used to examine relationships among variables, and multiple linear regression was used to determine the influence of self-efficacy, academic readiness, academic motivation, and social support on students' anxiety levels.

This study received ethical approval from the Ethics Committee of STIKES Kamus Arunika (No. 105/KEPK-STIKES/2024). All participants provided informed consent prior to data collection, and confidentiality as well as anonymity were strictly maintained throughout the study.

RESULTS

Table 1. Characteristics of Diploma Nursing Students at STIKES Kamus Arunika Prior to OSCE in 2024 (n = 94)

Participant Characteristic	N	%
Gender		
Male	16	17.1
Female	78	82.9
Age		
21 years old	10	10.6
22 years old	76	80.9
23 years old	8	8.5
Self-Efficacy		
Low	10	10.6
Moderate	40	42.5
High	44	46.8
Academic readiness		
Low	5	5.3
Moderate	55	58.5
High	34	36.2
Academic Motivation		
Low	6	6.4
Moderate	50	53.2
High	38	40.4
Social Support		
Low	8	8.5
Moderate	46	48.9
High	40	42.5
Anxiety		
Low	5	5.3
Moderate	62	66.0
High	27	28.7

Table 1 presents the characteristics of Diploma Nursing students at STIKES Kamus Arunika prior

to the OSCE in 2024. Based on gender, 78 students (82.9%) were female and 16 students (17.1%) were male. Most respondents were 22 years old (76 students; 80.9%), followed by 21 years old (10 students; 10.6%) and 23 years old (8 students; 8.5%). Self-efficacy was categorized as high in 44 students (46.8%), moderate in 40 students (42.5%), and low in 10 students (10.6%). Academic readiness was moderate in 55 students (58.5%), high in 34 students (36.2%), and low in 5 students (5.3%). Academic motivation was moderate in 50 students (53.2%), high in 38 students (40.4%), and low in 6 students (6.4%). Social support was moderate in 46 students (48.9%), high in 40 students (42.5%), and low in 8 students (8.5%). Anxiety levels were categorized as moderate in 62 students (66.0%), high in 27 students (28.7%), and low in 5 students (5.3%).

Table 2. Pearson Correlation between Self-Efficacy, Academic Readiness, Academic Motivation, Social Support, and Anxiety among Diploma Nursing Students at STIKES Kamus Arunika Prior to OSCE in 2024 (n = 94)

Variable	Self-Efficacy	Academic Readiness	Academic Motivation	Social Support	Anxiety
Self-Efficacy	1	0.462**	0.326**	0.349**	-0.345**
Academic Readiness	0.462**	1	0.514**	0.431**	-0.296**
Academic Motivation	0.326**	0.514**	1	0.518**	-0.302**
Social Support	0.349**	0.431**	0.518**	1	-0.258**
Anxiety	-0.345**	-0.296**	-0.302**	-0.258**	1

Table 2 presents the results of Pearson correlation analysis between self-efficacy, academic readiness, academic motivation, social support, and anxiety among Diploma Nursing students at STIKES Kamus Arunika prior to the OSCE in 2024. All independent variables were found to have statistically significant negative correlations with anxiety ($p < 0.05$). The correlation coefficients were -0.345 for self-efficacy, -0.296 for academic readiness, -0.302 for academic motivation, and -0.258 for social support.

Table 3. Multiple Linear Regression Analysis of Factors Influencing Anxiety among Diploma Nursing Students at STIKES Kamus Arunika Prior to OSCE in 2024 (n = 94)

Model	Unstandardized Coefficients (B)	Std. Error	Beta (β)	t-value	Sig. (p)
Constant (Intercept)	47,812	4,126	—	11,59	0,000
Self-Efficacy	-0,426	0,121	-0,312	-3,52	0,001**
Academic Readiness	-0,318	0,139	-0,224	-2,29	0,024*
Academic Motivation	-0,294	0,135	-0,215	-2,18	0,032*
Social Support	-0,205	0,101	-0,162	-2,03	0,045*

Table 3 presents the results of multiple linear regression analysis examining the factors influencing anxiety among Diploma Nursing students at STIKES Kamus Arunika prior to the OSCE in 2024. The analysis showed that self-efficacy ($\beta = -0.312$; $p = 0.001$), academic readiness ($\beta = -0.224$; $p = 0.024$), academic motivation ($\beta = -0.215$; $p = 0.032$), and social support ($\beta = -0.162$; $p = 0.045$) were statistically significant predictors of anxiety.

Table 4. Model Summary of Multiple Linear Regression Analysis of Anxiety among Diploma Nursing Students at STIKES Kamus Arunika Prior to OSCE in 2024 (n = 94)

Model Summary	R	R Square	Adjusted R-Square	Std. Error of the Estimate
Model	0,612	0,374	0,347	5,221

Table 4 shows the model summary of the regression analysis. Overall, the regression model demonstrates a moderate and stable explanatory capacity in predicting students' anxiety. The coefficient of determination (R^2 = 0.374) and adjusted R^2 (0.347) indicate that approximately one-third of the variance in anxiety is explained by self-efficacy, academic readiness, academic motivation, and social support, with only a small difference between the two values suggesting that the model is not overfitted. The R value of 0.612 reflects a moderate to strong relationship between the predictors and anxiety, while the standard error of the estimate (5.221) indicates an acceptable level of prediction accuracy.

DISCUSSION

The findings of this study confirm that anxiety in facing the OSCE remains a significant issue among nursing students. As a high-stakes clinical examination, the OSCE can negatively affect cognitive processing, clinical reasoning, and overall performance.[14,15] Previous studies also indicate that anxiety tends to increase as the examination approaches, leading to reduced concentration and efficiency.[16] This suggests that anxiety is not merely an emotional response but a critical factor influencing students' competency achievement in clinical education.

Building on this issue, internal factors play a crucial role in shaping students' anxiety levels. This study identified self-efficacy as the strongest predictor, indicating that confidence in clinical abilities significantly influences emotional responses. Previous evidence also shows that higher self-efficacy is associated with better stress management and lower academic anxiety.[17,18] In addition, academic readiness and motivation contribute to reducing anxiety through different pathways: readiness minimizes uncertainty, while motivation sustains engagement in learning.[19,20] However, their effects may be limited without sufficient self-efficacy, highlighting its mediating role in translating preparedness into effective emotional regulation.

Social support contributes to reducing anxiety by enhancing psychological security and emotional regulation. Support from peers, faculty, and family provides emotional reinforcement that helps students cope with academic stress, as supported by previous studies showing improved adaptability and reduced perceived stress.[21,22] Consistent with these findings, this study identified a negative correlation between social support and anxiety. However, its contribution was weaker compared to internal factors, likely reflecting the individual nature of OSCE performance, where personal competence and confidence are more directly assessed. This is supported by evidence indicating that internal psychological factors have a stronger influence on performance-based assessments.[23] In this study, self-efficacy showed the greatest contribution to anxiety reduction, followed by academic readiness, academic motivation, and social

support, with the model explaining 37.4% of the variance ($R^2 = 0.374$). These results suggest that while social support is important, its effectiveness depends on its interaction with internal factors, particularly self-efficacy.[9]

Taken together, these findings suggest that anxiety among nursing students is a multidimensional phenomenon shaped by the interaction of psychological, academic, and social factors. This is consistent with educational psychology frameworks that emphasize the interplay between personal beliefs, learning behaviors, and environmental influences in shaping academic outcomes.[24,25] These results support a comprehensive model in which both internal and external determinants jointly influence students' responses to academic stress, highlighting the need for a holistic approach to understanding and managing anxiety.

Based on this perspective, practical implications can be drawn for nursing education. Interventions to reduce anxiety should focus not only on academic preparation but also on strengthening psychological resilience, particularly self-efficacy. Evidence suggests that simulation-based learning and supportive environments can enhance both confidence and performance.[26,27] These strategies may help reduce anxiety while improving students' readiness and competence in high-stakes assessments such as the OSCE.

CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that students' anxiety in facing the OSCE is influenced by a combination of psychological, academic, and social factors, with self-efficacy emerging as the most significant predictor. These findings indicate that anxiety is not solely determined by academic preparedness but is strongly shaped by students' confidence in performing clinical tasks. From a practical perspective, this study provides clear implications for nursing education. Nursing educators are encouraged to implement structured, evidence-based interventions such as regular simulation-based training, scheduled mock OSCE sessions, and structured formative feedback to enhance students' self-efficacy. In addition, integrating stress management training and confidence-building exercises into the curriculum may further support students' emotional readiness. Academic institutions should also develop comprehensive preparation programs that combine skills laboratory training with progressive OSCE exposure, ensuring that students are familiar with examination formats and expectations. Furthermore, academic motivation can be strengthened through active learning strategies, such as case-based learning and reflective practice, while social support can be optimized through formal peer-mentoring programs and faculty-guided support systems. These targeted interventions are expected to reduce anxiety more effectively by addressing both internal and external determinants. Future research should explore additional contributing factors, including prior clinical experience, coping strategies, and learning environments, as well as test the effectiveness of intervention-based models in reducing anxiety among nursing students.

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