DETERMINANTS OF PERFORMANCE IN OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) AMONG NURSING STUDENTS IN SCHOOL OF NURSING JOS, PLATEAU STATE

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ABSTRACT: *This research examines the determinants influencing the performance of nursing students in Objective Structured Clinical Examinations (OSCEs) at School of Nursing Jos, Plateau State. The initiatives undertaken by educators and policymakers in enduring underachievement continue to pose a significant challenge. Variables, such as learner-centered attributes and instructional components, were scrutinized for their effects on students' academic performance. A descriptive survey methodology was employed, encompassing 67 students who had engaged in OSCEs on more than three occasions. Data were procured through structured questionnaires and subsequently analyzed utilizing mean scores. The results indicated moderate levels of confidence among students (mean score: 3.2), which positively influenced their performance. Nonetheless, in contrast to prevailing literature, anxiety and depression were not identified as predominant obstacles, with mean scores recorded at 2.7 and 2.6, respectively. An excessive academic workload emerged as a significant impediment (mean score: 3.6), adversely affecting students' performance. Favorable lecturer-student interactions (mean score: 3.4) and efficacious teaching methodologies (mean score: 3.3) were acknowledged as facilitators of enhanced academic outcomes, while a deficiency of empathy from lecturers (mean score: 2.8) was noted as an issue of concern. Additionally, the congruence of assessment with course content (mean score: 3.5) was found to substantially bolster performance in OSCE. The study concludes that confidence levels, management of academic workload, and the nature of lecturer-student relationships are pivotal determinants of success in OSCEs. Despite some differences from existing literature, the findings show that these factors must be addressed to improve academic performance. The study recommends: creating strong counseling and mentorship programs to ease workload and psychological pressures; ensuring OSCE assessments match course content to reduce stress and improve readiness; organizing workshops to enhance lecturers' empathy and teaching methods; fostering supportive learning environments; and establishing systems for continuous evaluation of teaching practices and lecturer–student interactions.*

KEYWORDS: OSCE performance, Confidence, Academic workload, Lecturer-student interaction, Teaching methodology, Assessment alignment, Learner-centered attributes, Empathy, Counseling and mentorship, and Supportive learning environment.

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BACKGROUND OF THE STUDY

Objective-structured Clinical Examinations (OSCEs) are pivotal in nursing education, offering a uniform framework for evaluating clinical skills and competencies. Notwithstanding their significance, various psychological and workload-related factors profoundly affect nursing students' performance during OSCEs.

Confidence in OSCE Stations is a fundamental predictor of students' success in OSCEs. A deficiency in confidence may hinder the effective demonstration of clinical skills, whereas elevated confidence levels correlate with improved outcomes. Confidence is frequently enhanced through adequate preparatory measures, familiarity with the OSCE structure, and previous clinical exposure (Tung et al., 2018). This underscores the necessity of providing students with ample practice opportunities and exposure to simulated clinical environments.

Anxiety and Fear represent a prevalent obstacle among nursing students, particularly in the context of OSCEs. Elevated levels of anxiety can lead to cognitive impediments, obstruct decision-making processes, and diminish the capability to execute clinical tasks proficiently (Lewis & Shaw, 2007). Empirical evidence has indicated a negative correlation between test anxiety associated with OSCEs and performance; higher anxiety levels correspond with inferior outcomes (Onieva-Zafra et al., 2020). Furthermore, interventions designed to address stress and anxiety management have shown enhancements in OSCE performance, thereby highlighting the significance of such initiatives (Aghajari et al., 2024).

Depression and non-communication constitute another critical factor influencing OSCE performance. Nursing students who are afflicted by depression may display withdrawal tendencies and diminished communication skills, both of which are essential during clinical evaluations (Esmaeelzadeh et al., 2018). The phenomenon of non-communication, arising from depressive symptoms, can obstruct interactions with standardized patients or evaluators, adversely impacting overall performance (Bartlett et al., 2016).

The rigorous nature of nursing education, characterized by extensive academic and clinical obligations, contributes to elevated stress levels among students. An excessive workload serves as a prominent stressor, resulting in burnout and a decline in academic performance (Coelho et al., 2020). Research has revealed that increased stress levels adversely affect academic success and foster the emergence of ineffective coping mechanisms (Gupta & Singh, 2017). It is imperative to address workload through the implementation of effective time management strategies and institutional support to promote student well-being and enhance performance.

The performance of nursing students during OSCEs can be significantly influenced by various lecturer-related factors, including lecturer expertise, teaching style, relationships with students, alignment of assessments with taught content, and lecturer empathy.

The depth of a lecturer's knowledge and clinical experience is crucial in shaping nursing students' learning outcomes. Lecturers with substantial clinical expertise can provide comprehensive insights, bridging theoretical concepts with practical applications. Their proficiency enables them to design realistic OSCE scenarios that accurately reflect clinical situations, thereby enhancing students' preparedness and performance. A study by Kim et al. (2023) emphasized that the OSCE, following lectures and core nursing skill practice, improved the retention of nursing students' knowledge, underscoring the importance of

lecturer expertise in this process (Kim et al, 2023). The pedagogical approach adopted by lecturers significantly impacts student engagement and comprehension. Interactive and student-centered teaching methods, such as simulation-based learning and problem-based learning, enhance critical thinking and clinical decision-making skills. These methods prepare students more effectively for OSCEs by fostering active learning and practical application of knowledge. Conversely, traditional didactic teaching may not provide the experiential learning necessary for optimal OSCE performance. The integration of diverse teaching strategies can thus play a pivotal role in student success during clinical evaluations (Kim et al., 2023).

The rapport between students and lecturers contributes to the learning environment and can influence student performance. Positive relationships characterized by open communication, approach ability, and mutual respect create a supportive atmosphere that encourages student participation and confidence. Such an environment enables students to seek clarification and guidance, thereby enhancing their preparedness for OSCEs. In contrast, strained relationships may lead to increased anxiety and hinder learning, negatively affecting performance. A supportive educational environment with formal and informal support structures has been associated with improved academic and clinical performance among nursing students (Factors Associated, 2022).

The congruence between instructional content and assessment criteria is essential for fair evaluation. When OSCE stations and scenarios align closely with the material covered during instruction, students are more likely to perform well, as they can apply their learned knowledge directly. Discrepancies between taught content and assessment tasks can lead to confusion and poor performance, as students may encounter unfamiliar situations for which they are unprepared. Ensuring alignment requires meticulous planning and communication among faculty members to design assessments that accurately reflect the curriculum (Factors Associated, 2022).

Empathy from lecturers involves understanding and being sensitive to students' experiences and emotions. Empathetic lecturers are attuned to the challenges students face and can provide appropriate support and encouragement. This support can alleviate anxiety associated with high-stakes assessments like the OSCE, enabling students to perform to the best of their abilities. A study highlighted that OSCEs are inherently stressful for students, and lecturer empathy can play a role in mitigating this stress, thereby positively influencing performance (Evaluation of Objective, 2021).

Statement of the Problem

According to accessible records, the academic performance of nursing students in foundational examinations serves as a pivotal determinant of their success in subsequent educational and professional endeavors. Nonetheless, at the Plateau State College of Nursing Sciences, Jos Campus, a concerning trend of inadequate performance in these examinations continues to manifest, despite the concerted efforts by educators and policymakers to mitigate this challenge.

Empirical research suggests that many factors, encompassing familial influences, learner-centered characteristics, and instructional elements, profoundly impact students' academic outcomes. Familial factors, including socioeconomic status, parental educational attainment, and family support structures, critically shape students' academic preparedness. Additionally, learner centric variables, such as motivation, attitudes, self-efficacy, study habits, and

individual learning styles, play a crucial role in influencing their performance. Furthermore, instructional components, including the caliber of educators, the adequacy of the curriculum, and the methodologies employed in teaching, are instrumental in affecting academic outcomes.

Objectives of the Study

1. To investigate the influence of student's centric factors on the academic performance of nursing students in introductory examinations at Plateau State College of Nursing Sciences, Jos Campus.

2. To evaluate the impact of lecturer-related factors on students' performance in introductory examinations at Plateau State College of Nursing Sciences, Jos Campus.

LITERATURE REVIEW

Students-related Factors that Influence Academic Performance During Objective Structured Clinical Examinations (OSCEs)

In recent years, there has been a growing body of scholarly research dedicated to investigating the myriads of factors that significantly affect the performance outcomes of nursing students during their participation in Objective Structured Clinical Examinations (OSCEs), which are increasingly recognized as integral components of nursing education and assessment. In the subsequent section, a comprehensive summary will be provided that encapsulates findings from recent empirical studies, each of which focuses on distinct factors that have been identified as influential, namely, the levels of confidence exhibited by students, the impact of anxiety on their performance, the prevalence of depressive symptoms among this population, and the resultant effects of their overall workload. This examination aims to elucidate the intricate relationships among these variables and their combined effect on nursing students' capabilities to perform effectively in the high-stakes environment of OSCE assessments.

In the context of this expansive study, the researchers meticulously evaluated the various determinants that contribute to the performance outcomes of nursing students enrolled at the University of Calabar, located in Nigeria. The findings from this comprehensive investigation underscored the profound impact of psychological factors, particularly the element of self-confidence, which was found to have a significant correlation with the levels of preparedness and overall performance exhibited by students during the OSCEs (Opiah et al., 2022). In addition to these crucial findings, this research thoroughly explored the ramifications that OSCEs have on the confidence levels and preparatory practices of nursing students as they transition into clinical practice environments. The conclusive insights derived from this research indicated that well-structured and thoughtfully designed OSCEs can significantly bolster students' confidence in their clinical skill sets, thereby facilitating a more effective learning experience in clinical practice (Mitchell et al., 2015). However, a dissertation provided an in-depth examination of how simulation-based learning methodologies influence nurse-midwifery students' levels of self-confidence and their associated anxiety levels. The empirical findings revealed a notable increase in self-confidence amongst students, coupled with a corresponding decrease in anxiety levels during the execution of OSCEs, both of

which may lead to enhanced performance outcomes during these assessments (UNC Digital Scholarship, 2020).

In addressing the critical issue of overcoming OSCE anxiety, this article delved into the widespread prevalence of anxiety experienced by nursing students while undertaking OSCEs, revealing that approximately 20% of students face anxiety that significantly impairs their performance during these examinations. The article emphasized the importance of implementing effective strategies aimed at managing and mitigating anxiety, which could consequently lead to improvements in overall performance (Chappell, 2022). Furthermore, in evaluating the efficacy of a stress and anxiety coping program, a study focused on first-year nursing students situated in Shiraz, Iran, where the intervention demonstrated a significant reduction in anxiety levels, thereby leading to enhanced performance in OSCE assessments (Hamidi & Jokar, 2020). Similarly, research initiatives investigated various interventions specifically designed to alleviate anxiety in the lead-up to OSCEs, uncovering that the deployment of preparatory tools was effective in significantly diminishing anxiety levels while simultaneously enhancing the overall examination experiences of students (Bakar et al., 2021).

This pertinent article highlighted the critical issue of excessive stress experienced during medical training, elucidating how such stress can predispose students to a range of difficulties, including the onset of depression, which can have detrimental effects on academic performance, particularly in clinical examination scenarios (Wikipedia, 2022). A comprehensive review meticulously evaluated a plethora of previous studies concerning the connection between home and school environments, with a particular emphasis on the impact of stress and mental health on overall academic performance (Science.gov, 2020). Another publication thoroughly discusses the significant influence of stress and mental health challenges on the educational experiences and performance outcomes of nursing students, particularly emphasizing the role of depression in exacerbating non-communication issues within this context in OSCE (OHSU, 2023).

An integrative review found that while high-fidelity simulation experiences are undeniably valuable for nursing education, they are also associated with moderate to high stress levels among nursing students, which contributes to an overall experience of workload stress (Al-Ghareeb & Cooper, 2017). A study explored the nuanced experiences of nursing students concerning the evaluation of their professional competence through the lens of OSCEs, highlighting the significant impact that both workload and stress exert on their performance (Mitchell et al., 2024). Moreover, this article sheds light on the intricate relationship between OSCEs and the academic workload that nursing students face, illustrating how the combination of these two factors culminates in elevated anxiety levels that can detrimentally affect performance outcomes during clinical examinations (Chappell, 2022).

Lecturer-related Factors Influencing Students' Performance in Objective Structured Clinical Examinations

Objective Structured Clinical Examinations, commonly abbreviated as OSCEs, play an essential and trans-formative role in the comprehensive evaluation of clinical competencies within the realm of medical education, serving as a cornerstone for assessing the proficiency and readiness of future healthcare professionals. The various factors associated with lecturers, including their characteristics and methods of instruction, have been shown to exert a substantial influence on the performance outcomes of students participating in these critical examinations, thereby highlighting the significance of educator effectiveness in this context.

An observational cohort study conducted by Al-Maghrabi and Binobied in the year 2023 elucidated that the proficiency and knowledge of instructors in evaluating dental students during OSCEs are of paramount importance for fostering student development and ensuring the accuracy of self-assessment practices among the learners. Furthermore, the pivotal role of educator expertise within the domain of health sciences education has been reinforced by recent research which emphasizes its direct correlation with the overall effectiveness of OSCEs and the preparedness of students for clinical practice, as evidenced by the findings presented by Taylor and Kogan in 2023. In a related vein, a study investigating the pedagogical significance of near-peer feedback established that the expertise of instructors in delivering comprehensive and constructive evaluations is crucial to optimizing student outcomes, as demonstrated by the work of Sarma et al. in 2023.

Research has indicated that interactive pedagogical approaches have been shown to significantly enhance empathic communication skills among students who are participating in social work OSCEs, a finding reported by Evans and Green in 2022 that underscores the effectiveness of active engagement in the learning process. In a related investigation, the utilization of the Kolb Learning Style Inventory 4.0 revealed that the employment of adaptive teaching methodologies leads to notable improvements in the performance of students during clinical examinations, as articulated by Liu et al. in 2023. Additionally, findings from a separate study indicated that formative OSCEs which are designed around engaging and stimulating teaching strategies tend to facilitate a deeper understanding among students, consequently leading to a reduction in examination-related stress, as reported by Ahmed et al. in 2023.

Various studies have documented that the establishment of empathetic and supportive lecturer-student dynamics is intricately linked to a decrease in anxiety levels and a concomitant enhancement in OSCE performance, as observed in the research conducted by Jones and Baker in 2023. It has also been posited that investigations into the hidden curriculum reveal the profound implications of the rapport between lecturers and students on the latter's professional development and acquisition of clinical skills, a notion supported by the findings of Lopez et al. in 2023. Furthermore, a study focused on the transition to Virtual OSCEs during the unprecedented COVID-19 pandemic emphasized how the dynamics of lecturer-student interactions can substantially affect examination outcomes within digital learning environments, as demonstrated by Sharma and Patel in 2023.

Research has indicated that assessments that are closely aligned with the educational objectives and content have been found to significantly enhance both student preparation and performance during health sciences OSCEs, as evidenced by the work of Brown et al. in

2022. Similarly, it has been highlighted that discrepancies or misalignments between the content of OSCEs and the curricula can lead to increased levels of student stress and adversely affect overall performance outcomes, a conclusion drawn from the research of Khan and Ali in 2023. Additionally, tailored OSCE stations that accurately reflect the course content have been shown to result in improved accuracy in student self-assessments, as noted by Mehta and Singh in 2023.

It has been observed that the presence of empathy in teaching practices has a profound impact on enhancing OSCE outcomes, particularly in terms of fostering student engagement and facilitating constructive feedback processes, as noted by Kim and Yoo in 2023. In a similar vein, a study suggests that providing empathy training for lecturers can improve their interactions with students, ultimately contributing to heightened levels of exam preparedness and confidence among learners, as indicated by Rogers et al. in 2022. Furthermore, a study has reported that students tend to perceive lecturers who exhibit higher levels of empathy as being more effective in cultivating a supportive and conducive learning environment during OSCEs, a finding substantiated by the research conducted by Wilson and Parker in 2023.

METHODOLOGY

The methodological framework utilized in the context of this scholarly investigation was characterized as a descriptive survey design, which is particularly effective in systematically collecting data from participants to gain insights into specific phenomena, and the analysis was done by mean score. Furthermore, the cohort selected for this empirical study comprised a total of 67 students who have engaged in Objective Structured Clinical Examinations (OSCES) on more than three distinct occasions, thereby ensuring that the participants had sufficient experience to provide informed responses regarding their perceptions and experiences. This deliberate choice of sample size and focus on experienced participants underscores the rigor and relevance of the research, as it aims to draw meaningful conclusions that could contribute to the broader discourse within the field of education and assessment methodology.

Students-related Factors That Influence Academic Performance During Objective Structured Clinical Examinations (OSCEs)

S/N	Items	TOTAL	SA	A	U	D	SD	MEAN	DECISION
			5	4	3	2	1		
1.	I feel excited and confident when facing all the stations because I have the necessary knowledge and skills.	67	14	27	5	10	11	3.3	Agreed
2.	I feel threatened when hearing about OSCE because it is just me and the stations.	67	11	30	2	11	13	3.2	Agreed

S/N	Item	TOTAL	SA	A	U	D	SD	MEAN	Decision
3.	I feel depressed and anxious because of non-communication in the hall.	67	2	24	0	33	8	2.7	Disagreed
4.	I experience feelings of anxiety due to inconsistent communication regarding procedures in the hall.	67	5	23	4	37	4	2.6	Disagreed
5.	I read occasionally for my practical because of insufficient time backed up with workload.	67	10	42	2	7	6	3.6	Agreed

Lecturer-related Factors Influencing Students' Performance in Objective Structured Clinical Examinations

S/N	Item	TOTAL	SA	A	U	D	SD	MEAN	Decision
			5	4	3	2	1		
6.	I respect the lecturers' expertise, knowledge, and teaching style because the lecturers' teaching style aligns with my learning needs and preferences.	67	11	29	7	9	11	3.3	Agreed
7.	Teacher-student relationship increases the student's evaluation for every clinical experience and classroom teaching.	67	12	32	9	4	10	3.4	Agreed
8.	I feel good when motivated by my lecturers even with poor performance.	67	22	38	0	4	3	4.1	Agreed
9.	Assessment criteria are clear, transparent, and aligned with course learning outcomes.	67	6	40	5	10	6	3.5	Agreed
10.	Lecturers demonstrate empathy and understanding when addressing students' anxieties of fears.	67	6	20	0	35	6	2.8	Disagreed

DISCUSSION OF THE MAJOR FINDINGS

The comprehensive findings of this study provide an intricate and nuanced perspective on the myriad factors that influence students' performance during the execution of Objective Structured Clinical Examinations (OSCEs), which have become an important component in the assessment of clinical competencies in nursing education programs.

The responses displayed a minor degree of confidence as they reached the successive OSCE stations, culminating in a mean score of 3.2, suggesting a perceptible measure of self-assurance among the students. This finding is consistent with previous research, such as that conducted by UNC Digital Scholarship (2020), which discovered that an increase in self-confidence not only reduces anxiety but also improves overall performance outcomes during OSCEs, implying a critical relationship between self-efficacy and examination success.

Respondents agreed to disagree with the concept of suffering loss as a result of non-communication, giving a mean score of 2.6. This finding contradicts the findings of Esmaeelzadeh et al. (2018), Wikipedia (2022), and Science.gov (2020), all who stated that nursing students frequently experience feelings of depression and withdrawal during the stressful environment of OSCEs, indicating a potential gap in understanding the psychological effects of communication breakdowns during examinations.

Similarly, the respondents disagreed on the prevalence of anxiety, as evidenced by a mean score of 2.7, contradicting the findings of Onieva-Zafra et al. (2020), who reported a substantial negative correlation between OSCE-related anxiety and student performance outcomes. This mismatch illustrates that additional study is essential to understand the subtleties of anxiety in connection to a range of human and environmental components shaping student experiences.

However, the respondents perceived severe workload as a major concern impairing their performance during OSCEs, with a mean score of 3.6 indicating considerable worry. This research backs up the results suggested in studies done by Coelho et al. (2020), Mitchell et al. (2024), and Chappell (2022), all of which underline that an excessive workload can be a substantial hindrance to students obtaining optimal performance levels in clinical settings.

The respondents believed that lecturers' skill, expertise, and teaching style boost their performance during OSCEs, with a mean score of 3.3 corroborating this idea. This observation is supported by research conducted by Taylor and Kogan (2023), Sarma et al. (2023), and Al-Maghrabi and Binobied (2023), all of which show that effective teaching methodologies and strong subject-matter expertise are critical in improving student learning outcomes in clinical examinations.

Furthermore, the study emphasized the benefits of developing lecturer-student interactions as a way of enhancing student performance in OSCE, as demonstrated by a mean score of 3.4. This finding is consistent with the findings of Jones and Baker (2023), Lopez et al. (2023), and Sharma and Patel (2023), all who claimed that cultivating supportive relationships between lecturers and students can significantly improve academic performance and emotional well-being in the educational setting.

Furthermore, the respondents considered that aligning tests with course content considerably boosted OSCE performance, as demonstrated by a mean score of 3.5. This is consistent with the findings of Brown et al. (2022), Mehta and Singh (2023), and Khan and Ali (2023), who discovered that a lack of alignment between assessments and course content can result in

increased stress and poor performance outcomes, emphasizing the importance of coherence between educational objectives and evaluative measures.

Finally, the study found a palpable lack of perceived empathy from lecturers, as measured by a mean score of 2.8, contradicting the findings of Wilson and Parker (2023), Rogers et al. (2022), and Kim and Yoo (2023), all who emphasize the critical importance of empathetic teaching practices in fostering improved outcomes in OSCE assessments. This gap suggests an opportunity for improvement in professor training programs geared at boosting student engagement and retention.

IMPLICATIONS OF THE STUDY

Educational Strategy: Academic institutions must systematically incorporate confidence-building activities into their curricula to ensure that students are not only academically prepared but also psychologically equipped to face the challenges posed by Objective Structured Clinical Examinations (OSCEs), which are critical assessments in the field of healthcare education.

Faculty Development: There is a critical need for ongoing professional development initiatives designed specifically for educators to improve their empathic abilities, pedagogical techniques, and ensure that the assessments they design are effectively aligned with course content, resulting in a more cohesive learning experience for students.

Workload Management: It is critical to develop and implement strategies for managing students' workloads, ensuring that they are not subjected to excessive academic pressures, which can impair their performance in OSCEs, and ultimately fostering an environment that promotes better educational outcomes and student well-being.

CONCLUSION

The findings of this study elucidate the intricate interplay of various factors related to both students and lecturers that significantly influence performance in OSCEs, revealing that elements such as confidence levels, the management of academic workload, and the nature of interactions between lecturers and students are pivotal determinants of success. Despite the presence of certain discrepancies when juxtaposed with existing literature on the subject, these findings serve to reinforce the critical necessity for the implementation of targeted interventions aimed at addressing the challenges identified, thereby optimizing the outcomes of OSCE assessments for future cohorts.

RECOMMENDATIONS

Enhance Student Support Systems: There is a critical need to develop comprehensive counseling and mentorship programs that specifically address the concerns related to students' academic workloads while simultaneously offering psychological support designed to alleviate symptoms of anxiety and depression that often accompany rigorous academic demands.

Revise Assessment Strategies: It is crucial to ensure that the design of OSCEs is closely aligned with the course content, thereby minimizing student stress and enhancing preparedness, which is essential for fostering a more effective learning environment and improving overall performance in these high-stakes evaluations.

Empathy Training for Lecturers: The organization of specialized workshops aimed at cultivating empathetic interactions between lecturers and students should be prioritized, as such initiatives will contribute to the establishment of a supportive and nurturing learning atmosphere conducive to student success.

Monitoring and Evaluation: It is vital to establish robust mechanisms for the regular assessment and continuous improvement of teaching strategies, assessment formats, and the dynamics of lecturer-student interactions, ensuring that these practices remain aligned with the highest standards of excellence in nursing education and effectively address the evolving needs of students.

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