Influence of Clinical Supervision on The Acquisition of Practical Nursing Skills Among Student Nurses of Adamawa State College of Nursing Sciences Yola

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Abstract
Clinical supervision constitutes a fundamental pillar of nursing education, serving as the critical bridge between theoretical knowledge and competent clinical practice. This study examined the influence of clinical supervision on the acquisition of practical nursing skills among student nurses at Adamawa State College of Nursing Sciences, Yola. A cross-sectional survey research design was adopted, and data were collected from a sample of 267 student nurses using a structured questionnaire. Descriptive statistics (mean and standard deviation) and Pearson Product-Moment Correlation were used to analyze the data and test the null hypotheses at 0.05 level of significance. The findings revealed that student nurses demonstrated high levels of clinical supervision effectiveness across all dimensions; general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms. The level of practical nursing skill acquisition was also high. Correlation results revealed a strong, positive, and statistically significant relationship between clinical supervision effectiveness and practical nursing skills acquisition ($r = 0.82$, $p < .05$). Multiple regression analysis further indicated that clinical supervision variables jointly accounted for 67% of the variance in practical nursing skills acquisition ($R^2 = 0.67$; $F = 133.54$, $p < .05$). Individually, preceptor-student relationship ($\beta = 0.31$, $p < .05$), supervisory strategies ($\beta = 0.28$, $p < .05$), feedback mechanisms ($\beta = 0.24$, $p < .05$), and general supervision ($\beta = 0.19$, $p < .05$) were significant predictors. The study concludes that clinical supervision is a critical driver of practical nursing skills acquisition among student nurses.

Keywords: *Clinical supervision, nursing education, practical skills, student nurses*

1. Introduction

The transition from theoretical classroom learning to competent clinical practice represents one of the most critical phases in nursing education. Student nurses must develop not only cognitive knowledge but also psychomotor skills, clinical judgment, and professional attitudes essential for safe and effective patient care. Clinical supervision, the structured guidance, support, and assessment provided to students during their clinical placements, plays an indispensable role in this developmental process (Antonsen *et al*., 2023). As noted by Shahzeydi *et al*. (2024), clinical practice is one of the most important parts of nursing education, and the nurse supervisor plays a pivotal role in the education of nursing students.

Globally, nursing students face challenges in clinical education, including inadequate supervision, which can compromise their learning outcomes and professional development (Robert *al*., 2025). Research conducted in the Nigerian context has revealed that while students generally perceive their clinical learning experiences positively, the majority (91.7%) express a strong desire for direct supervision, and inadequate support is frequently reported due to low preceptor-to-student ratios (Akpor *et al*., 2023). This underscores the critical importance of examining how clinical supervision influences practical skill acquisition among nursing students. The quality of nursing education is significantly influenced by the caliber of clinical supervision provided to students, as supervision directly impacts students' clinical competence and professional development. In the context of nursing education, clinical supervision involves guiding, supporting, and evaluating students to enhance their professional competencies and clinical effectiveness. Effective clinical supervision directly influences students' practical skill acquisition by clarifying expectations, providing professional development opportunities, and fostering accountability (Zhang et al., 2023; Silva *et al*., 2023). When supervision is strategic rather than bureaucratic, it creates a conducive environment for clinical learning, thereby improving patient care outcomes.

Adamawa State College of Nursing Sciences, Yola, established in 1975 as a School of Midwifery and subsequently evolving into a comprehensive College of Nursing Sciences, trains nurses and midwives to serve communities across Adamawa State and beyond. The institution's mission emphasizes training practitioners capable of rendering quality services through techniques that modify knowledge, attitudes, and skills. However, the extent to which clinical supervision facilitates the acquisition of practical nursing skills within this context warrants systematic investigation. Despite the crucial role of effective clinical supervision, there is pervasive evidence of challenges in the application of essential supervisory skills. A core component of this problem is inadequate supervision practices. As observed in similar contexts, clinical supervisors often fail to provide timely feedback, lack structured supervisory strategies, and disregard students' learning needs, leading to misunderstandings, a hostile clinical environment, and instructional misalignment. This supervision deficit undermines the collaborative foundation necessary for clinical skill development (Akpor *et al*., 2023; Robert *et al*., 2025). Compounding these issues is the lack of consistent and supportive supervisory relationships. Clinical supervisors appear to lack the consistent and supportive approach required to motivate students and hold them accountable for their learning. This is manifested in irregular supervision of clinical practice, inadequate feedback, and overall poor student support. Research shows that weak clinical supervision negatively affects student commitment and clinical effectiveness (Zhang *et al*., 2022; Antonsen *et al*., 2023). The consequence of these supervisory failures is a decline in students' practical skill acquisition, evidenced in many Nigerian nursing institutions by poor clinical performance and inadequate patient care skills (Akpor *et al*., 2023). Therefore, the problem this study investigates is the perceived inadequacy of clinical supervision and its detrimental relationship with practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences, Yola.

2. Statement of the Problem

Despite the critical importance of clinical supervision in enhancing student nurses' practical skill acquisition, there is pervasive evidence of challenges in the application of effective supervisory practices in clinical settings in Adamawa State. Clinical supervisors often fail to provide structured guidance, lack adequate supervisory strategies, provide insufficient feedback, and fail to establish supportive relationships with students, leading to student demotivation, poor clinical performance, and ultimately, inadequate practical skill acquisition. Therefore, this study investigates the influence of clinical supervision on the acquisition of practical nursing skills among student nurses at Adamawa State College of Nursing Sciences.

3. Purpose of the Study

The main purpose of this study is to investigate the influence of clinical supervision on the acquisition of practical nursing skills among student nurses at Adamawa State College of Nursing Sciences, Yola. Specifically, the study examined the:

i. Level of clinical supervision effectiveness among student nurses at Adamawa State College of Nursing Sciences.
ii. Level of practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences.
iii. Relationship between clinical supervision variables (general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms) and practical nursing skills acquisition.

4. Research Questions

The following research questions were formulated to guide the study:

i. What is the level of clinical supervision effectiveness among student nurses at Adamawa State College of Nursing Sciences?
ii. What is the level of practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences?
iii. What is the relationship between clinical supervision variables (general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms) and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences?

5. Research Hypotheses

The following null hypotheses were formulated to guide the study and were tested at 0.05 level of significance:

H_o1: There is no significant relationship between clinical supervision effectiveness and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences.

H_o2: There is no significant relationship between clinical supervision variables (general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms) and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences.

6. Literature Review

6.1 Concept of Clinical Supervision

Clinical supervision in nursing education refers to the structured guidance, support, and assessment provided to nursing students during their clinical placements. It encompasses a range of activities designed to facilitate student learning, ensure patient safety, and develop professional competencies. According to Shahzeydi *et al*. (2024), the clinical supervision model is a method of clinical education that bridges the gap between theory and practice. Clinical supervision is essential for ensuring that nursing students develop the competencies required for safe, effective nursing care. Antonsen *et al*. (2023) emphasized that clinical nurses are the most competent to supervise and assess nursing students in clinical practice, and that peer learning provides safety in a learning situation. Their study demonstrated that the supervisor and their supervision competence are important for the student's learning, and that cooperation with the lecturer in common meetings is important to ensure supervisors have quality guidance and assessment skills.

6.2 Dimensions of Clinical Supervision

General Supervision

General supervision refers to the overall oversight and guidance provided to nursing students during their clinical placements. This includes ensuring students understand their learning objectives, providing orientation to the clinical environment, monitoring student progress, and ensuring patient safety. Research has demonstrated that general supervision is essential for student learning outcomes. Zhang *et al*. (2022) emphasized the importance of effective supervision in building a good clinical teaching atmosphere and promoting opportunities for theoretical and practical connections among students.

Preceptor-Student Relationship

The preceptor-student relationship is a critical dimension of clinical supervision. A supportive, trusting, and collaborative relationship between preceptor and student facilitates effective learning and skill acquisition. Antonsen *et al*. (2023) found that empowering supervision experiences characterized by supervisors who are willing, patient, and work hand-in-hand with students enhance students' clinical learning. Conversely, disempowering supervision reduces students' motivation and negatively impacts their self-confidence.

Zhang et al. (2023) found that students supported by a personal supervisor during clinical training had a more positive experience and rated the quality of tutorial strategies, learning opportunities, safety and nursing care, leadership style, and overall clinical learning environment more highly. This finding suggests that individualized supervision contributes not only to skill acquisition but also to students' overall professional development.

Supervisory Strategies

Supervisory strategies refer to the specific methods and approaches used by clinical supervisors to facilitate student learning. Effective supervisory strategies include demonstration, guided practice, questioning, reflection, and constructive feedback. Silva *et al*. (2023) identified supervisory strategies that nursing students consider facilitators of the development of critical thinking skills in clinical teaching. Their study revealed that participants recognized the indispensability of critical thinking for professional responsibility and quality of care, emphasizing the importance of using supervisory strategies adapted to their needs, learning objectives, and the context of clinical practice. Gheisari *et al*. (2025) investigated the impact of an ISBAR-based clinical supervision model on clinical decision-making and self-efficacy in nursing internship students. Their study revealed that the ISBAR framework-based clinical supervision model improved clinical decision-making skills and clinical self-efficacy, demonstrating that structured supervision models can significantly enhance students' cognitive and decision-making capabilities.

Feedback Mechanisms

Feedback is an essential component of clinical supervision, enabling students to understand their strengths, identify areas for improvement, and develop their clinical competencies. Effective feedback is timely, constructive, specific, and focused on behavior rather than personal attributes. Zhang *et al*. (2022) emphasized that effective feedback mechanisms enable students to experience better clinical learning environments and build their professional roles and competencies. Shahzeydi *et al*. (2024) found that the implementation of the clinical supervision model led to improved utilization of the nursing process by nursing internship students. The researchers recommended that nurse educators utilize the clinical supervision model by providing feedback on errors in action during supervision sessions to enhance the quality of nursing care and improve patient safety.

6.3 Practical Nursing Skills Acquisition

Practical nursing skills acquisition refers to the process by which nursing students develop the psychomotor, cognitive, and affective competencies required for safe and effective nursing practice. These skills include patient assessment, medication administration, wound care, vital signs measurement, infection control, communication, critical thinking, and clinical decision-making. Research has demonstrated that clinical supervision significantly influences practical skills acquisition. Mugwari (2024) explored nursing students' appreciation of clinical supervision during work-integrated learning. The study emphasized that a conducive clinical learning environment should be established to enable proper guidance of nursing students to acquire professional knowledge and skills.Robert *et al*. (2025) identified supportive preceptorship as fostering confidence and skills among nursing students, while inadequate supervision was cited as a significant challenge. Similarly, research on nursing and midwifery students highlighted that clinical supervisors play crucial roles in the development of students' clinical competence and confidence, guaranteeing safe and patient-centered care.

6.4 Nigerian Context of Clinical Nursing Education

Nursing education in Nigeria has evolved from an informal apprenticeship model introduced by early missionaries to a more formalized system regulated by the Nursing and Midwifery Council of Nigeria (NMCN). Despite this evolution, challenges persist in the delivery of clinical education. Akpor *et al*. (2023) conducted a comprehensive study of nursing preceptorship in Ekiti State, Southwest Nigeria, providing valuable insights into the Nigerian context.The study revealed that while overall students' perceptions of the clinical learning experience were good (92%), 91.7% of the students wanted direct supervision, and inadequate support was reported due to the low preceptor-to-student ratio. Preceptors acknowledged that clinical accompaniment is one of their roles; however, challenges mentioned included the few number of preceptors, lack of policy requirements to guide their duties, and limited equipment. The researchers concluded that there is a need to provide adequate preceptors in clinical settings, as they are vital to the training of nurses, and recommended a unified policy and standardized procedure manual developed by the Nursing and Midwifery Council of Nigeria to aid uniformity in teaching clinical skills to nursing students.

6.5 Empirical Studies on Clinical Supervision and Skill Acquisition

Gheisari *et al*. (2025) conducted a quasi-experimental study investigating the effect of an ISBAR-based clinical supervision model during handover on clinical decision-making and self-efficacy in nursing internship students. The results demonstrated that the ISBAR framework-based clinical supervision model improved clinical decision-making skills and clinical self-efficacy, providing evidence for the effectiveness of structured supervision models. Zhang *et al*. (2023) conducted a comparative study examining nursing students' perceptions of clinical learning environments under different supervision models. Their findings revealed that students supported by a personal supervisor during clinical training had a more positive experience and rated the quality of tutorial strategies, learning opportunities, safety and nursing care, leadership style, and overall clinical learning environment more highly. Shahzeydi *et al*. (2024) investigated the impact of the clinical supervision model on the performance of nursing internship students in each of the five stages of the nursing process. Their results indicated that the implementation of the clinical supervision model led to improved utilization of the nursing process by nursing internship students at all stages.

Zhang *et al*. (2022) examined the clinical learning environment, supervision, and future intention to work as a nurse among nursing students. Their findings emphasized that to enhance students' willingness to pursue nursing careers, ward managers need to build a good clinical teaching atmosphere and promote opportunities for theoretical and practical connections.

Akpor *et al*. (2023) investigated nursing preceptorship in Ekiti State, Southwest Nigeria, revealing significant challenges in clinical supervision. The study found that 91.7% of nursing students wanted direct supervision, and inadequate support was reported due to the low preceptor-to-student ratio. The researchers recommended providing adequate preceptors in clinical settings and developing a unified policy and standardized procedure manual.
Robert *et al*. (2025) assessed factors influencing clinical learning among diploma nursing students at Moi Teaching and Referral Hospital in Kenya. The study identified supportive preceptorship as fostering confidence and skills among nursing students, while inadequate supervision was cited as a significant challenge.
Mugwari (2024) explored nursing students' appreciation of clinical supervision during work-integrated learning. The study emphasized that a conducive clinical learning environment should be established to enable proper guidance of nursing students to acquire professional knowledge and skills.

7. Methodology

This study adopted a cross-sectional survey research design to facilitate the systematic collection of data from a relatively large population of student nurses at a single point in time. The choice of this design was considered appropriate due to its effectiveness in describing existing relationships among variables without manipulation and its suitability for collecting data on perceptions, attitudes, and behaviors. The study was conducted at Adamawa State College of Nursing Sciences, Yola, Adamawa State, Nigeria, which was established in 1975 as a School of Midwifery and has since evolved into a comprehensive College of Nursing Sciences serving as a major training institution for nurses and midwives in the region. The target population for the study comprised all student nurses at the College, totaling 1,343 students across all levels of training. Using Taro Yamane's (1967) formula for sample size determination at 95% confidence level and 5% margin of error, a total sample of 309 student nurses was obtained through a combination of stratified random sampling and proportionate sampling techniques, where students were stratified according to their year of study and proportionate sampling was used to select the appropriate number of respondents from each stratum to ensure adequate representation. Data were collected using a structured questionnaire titled "Clinical Supervision and Practical Nursing Skills Acquisition Questionnaire (CSPNSAQ)" divided into three sections: demographic information (gender, year of study, age), Clinical Supervision Effectiveness Scale (CSES) measuring four dimensions—General Supervision (5 items), Preceptor-Student Relationship (5 items), Supervisory Strategies (5 items), and Feedback Mechanisms (5 items)—and Practical Nursing Skills Acquisition Scale (PNSAS) measuring students' acquisition of practical nursing skills (10 items). Responses were measured on a 4-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1).
The instrument was subjected to both face and content validity testing, where three experts in nursing education and research methodology reviewed the instrument for clarity, relevance, and comprehensiveness, and their suggestions were incorporated into the final version. To establish reliability, a pilot study was conducted with 30 student nurses at College of Nursing Sciences, Maiduguri, Borno State and the data were analyzed using Cronbach's alpha coefficient, yielding reliability coefficients of 0.81 for General Supervision, 0.84 for Preceptor-Student Relationship, 0.79 for Supervisory Strategies, 0.82 for Feedback Mechanisms, and 0.85 for Practical Nursing Skills Acquisition, indicating that the instrument was reliable for the study. The questionnaire was administered to respondents by the researcher with the assistance of two trained research assistants, where the purpose of the study was explained and consent obtained prior to participation. Questionnaires were distributed during lecture breaks and collected on the same day to ensure a high response rate, resulting in 267 properly completed and returned questionnaires out of 309 distributed, representing a response rate of 90.8%. For

data analysis, both descriptive and inferential statistical techniques were employed. Descriptive statistics, including mean and standard deviation, were used to answer the research questions, while Pearson Product-Moment Correlation (PPMC) was utilized to test hypothesis one and Multiple Regression Analysis was conducted to test hypothesis two. A benchmark mean of 2.50 was used for decision-making, where mean scores ≥ 2.50 indicated agreement or high level, and scores < 2.50 indicated disagreement or low level. All hypotheses were tested at a 0.05 level of significance.

8. Results

Descriptive Results

Research Question 1: What is the level of clinical supervision effectiveness among student nurses at Adamawa State College of Nursing Sciences?

Table 2: Mean Responses on Clinical Supervision Effectiveness

Dimension/Items	Mean	Std. Dev	Remark
General Supervision			
1. Clinical supervisors are readily available during clinical placements	3.48	0.62	Agreed
2. Supervisors provide clear orientation to the clinical environment	3.52	0.58	Agreed
3. Supervisors monitor students' progress regularly	3.50	0.60	Agreed
4. Supervisors ensure patient safety during clinical practice	3.55	0.56	Agreed
5. Supervisors help students understand learning objectives	3.52	0.59	Agreed
Grand Mean	**3.51**	**0.59**	**Agreed**
Preceptor-Student Relationship			
1. Preceptors create a supportive learning environment	3.55	0.57	Agreed
2. I feel comfortable discussing concerns with my preceptor	3.50	0.61	Agreed
3. Preceptors show respect for students	3.56	0.55	Agreed
4. Preceptors provide encouragement and motivation	3.53	0.58	Agreed
5. There is trust between preceptors and students	3.52	0.60	Agreed
Grand Mean	**3.53**	**0.58**	**Agreed**
Supervisory Strategies			
1. Supervisors demonstrate clinical procedures effectively	3.54	0.57	Agreed
2. Supervisors guide students through clinical procedures	3.50	0.60	Agreed
3. Supervisors use questioning to enhance critical thinking	3.48	0.62	Agreed
4. Supervisors encourage reflection on clinical practice	3.55	0.56	Agreed
5. Supervisors adapt strategies to students' learning needs	3.52	0.59	Agreed
Grand Mean	**3.52**	**0.59**	**Agreed**
Feedback Mechanisms			
1. Supervisors provide timely feedback on performance	3.50	0.61	Agreed
2. Feedback is constructive and specific	3.48	0.62	Agreed
3. Feedback helps me improve my clinical skills	3.54	0.57	Agreed
4. Supervisors provide feedback on both strengths and weaknesses	3.48	0.63	Agreed
5. I receive regular feedback on my clinical performance	3.50	0.60	Agreed
Grand Mean	**3.50**	**0.61**	**Agreed**

Overall Clinical Supervision Effectiveness	**3.52**	**0.59**	**Agreed**

Table 2 presents the mean responses on clinical supervision effectiveness across four dimensions. The overall grand mean of 3.52 (SD = 0.59) indicates that student nurses perceived a high level of clinical supervision effectiveness. The preceptor-student relationship dimension had the highest grand mean (3.53), followed by supervisory strategies (3.52), general supervision (3.51), and feedback mechanisms (3.50). These findings suggest that clinical supervision in the College is generally effective across all dimensions, with the preceptor-student relationship being particularly strong.

Research Question 2: What is the level of practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences?

Table 3: Mean Responses on Practical Nursing Skills Acquisition

S/N	Item	Mean	Std. Dev	Remark
1	I am able to perform patient assessment accurately	3.42	0.65	Agreed
2	I can measure vital signs correctly	3.48	0.60	Agreed
3	I am competent in medication administration	3.40	0.67	Agreed
4	I can perform wound care procedures effectively	3.38	0.69	Agreed
5	I am confident in infection control practices	3.45	0.63	Agreed
6	I can communicate effectively with patients	3.46	0.62	Agreed
7	I demonstrate critical thinking in clinical situations	3.40	0.66	Agreed
8	I am able to prioritize patient care needs	3.44	0.64	Agreed
9	I can document nursing care accurately	3.42	0.65	Agreed
10	I feel confident in my overall clinical competence	3.40	0.68	Agreed
Grand Mean		**3.43**	**0.65**	**Agreed**

Table 3 presents the mean responses on practical nursing skills acquisition. The overall grand mean of 3.43 (SD = 0.65) indicates that student nurses reported a high level of practical nursing skills acquisition. The highest-rated item was "I can measure vital signs correctly" (Mean = 3.48), while the lowest-rated items were "I am competent in medication administration" (Mean = 3.40) and "I can perform wound care procedures effectively" (Mean = 3.38). These findings suggest that while students generally feel competent in practical nursing skills, there are specific areas requiring additional attention.

Research Question 3: What is the relationship between clinical supervision variables (general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms) and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences?

Table 4: Pearson Correlation Matrix between Clinical Supervision Variables and Practical Nursing Skills Acquisition

Variables	1	2	3	4	5
1. General Supervision	1.00				
2. Preceptor-Student Relationship	0.72*	1.00			
3. Supervisory Strategies	0.68*	0.74*	1.00		
4. Feedback Mechanisms	0.65*	0.70*	0.71*	1.00	
5. Practical Nursing Skills Acquisition	0.68*	0.76*	0.73*	0.70*	1.00

*Correlation is significant at the 0.05 level (2-tailed).

Table 4 presents the Pearson correlation matrix showing the inter-correlations among clinical supervision variables and practical nursing skills acquisition. All correlations were positive and statistically significant ($p < .05$). The strongest correlation was between preceptor-student relationship and practical nursing skills acquisition ($r = 0.76$), followed by supervisory strategies ($r = 0.73$), feedback mechanisms ($r = 0.70$), and general supervision ($r = 0.68$). The correlation between preceptor-student relationship and supervisory strategies was also strong ($r = 0.74$), indicating that these dimensions are closely interrelated.

8.2 Hypothesis test

Hypothesis 1: There is no significant relationship between clinical supervision effectiveness and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences.

Table 5: Pearson Correlation between Clinical Supervision Effectiveness (Composite) and Practical Nursing Skills Acquisition

Variable	Mean	SD	r	p-value	Decision
Clinical Supervision Effectiveness (Composite)	3.52	0.59			
Practical Nursing Skills Acquisition	3.43	0.65	0.82	<.001	Reject H_0

Table 5 presents the Pearson correlation results between clinical supervision effectiveness (composite of all four dimensions) and practical nursing skills acquisition. The correlation coefficient ($r = 0.82$) indicates a strong, positive, and statistically significant relationship between the two variables ($p < .001$). This means that as clinical supervision effectiveness increases, practical nursing skills acquisition also increases. The null hypothesis is therefore rejected.

Hypothesis 2: There is no significant relationship between clinical supervision variables (general supervision, preceptor-student relationship, supervisory strategies, and feedback mechanisms) and practical nursing skills acquisition among student nurses at Adamawa State College of Nursing Sciences.

Table 6: Multiple Regression Analysis of Clinical Supervision Variables and Practical Nursing Skills Acquisition

Predictor	β	Std. Error	t	Sig. (2-tailed)	Decision
(Constant)		0.12	5.67	<.001	
General Supervision	0.19	0.06	3.45	.001	Significant
Preceptor-Student Relationship	0.31	0.05	5.67	<.001	Significant
Supervisory Strategies	0.28	0.06	4.98	<.001	Significant
Feedback Mechanisms	0.24	0.06	4.12	<.001	Significant

Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of Estimate	F	p	Decision
Clinical Supervision Variables → Practical Skills	0.82	0.67	0.67	0.37	133.54	<.001	Reject H_0

Table 6 presents the multiple regression analysis results. The model summary shows that clinical supervision variables jointly accounted for 67% of the variance in practical nursing skills acquisition ($R^2 = 0.67$; Adjusted $R^2 = 0.67$; $F = 133.54$, $p < .001$), indicating that the null hypothesis is rejected.

individually, all four clinical supervision variables were significant predictors of practical nursing skills acquisition. The preceptor-student relationship emerged as the strongest predictor ($\beta = 0.31$, $p < .001$), followed by supervisory strategies ($\beta = 0.28$, $p < .001$), feedback mechanisms ($\beta = 0.24$, $p < .001$), and general supervision ($\beta = 0.19$, $p = .001$). This indicates that while all dimensions of clinical supervision contribute meaningfully to students' practical skill development, the quality of the relationship between preceptors and students exerts the most substantial influence, underscoring the critical importance of fostering supportive, trusting, and collaborative supervisory relationships in nursing education.

9. Discussion of Findings

The findings from Table 2 revealed that student nurses at Adamawa State College of Nursing Sciences perceived a high level of clinical supervision effectiveness across all four dimensions. The overall grand mean of 3.52 (SD = 0.59) indicates that clinical supervision in the College is generally effective. This finding is consistent with international research that has demonstrated the importance of effective clinical supervision in nursing education.

The high rating of the preceptor-student relationship dimension (Mean = 3.53) aligns with the findings of Zhang *et al*. (2023), who found that students supported by a personal supervisor during clinical training had a more positive experience and rated the quality of tutorial strategies, learning opportunities, safety and nursing care, leadership style, and overall clinical learning environment more highly. The individualized supervision model was rated significantly higher by students than the staff supervision model.

The strong rating of supervisory strategies (Mean = 3.52) supports the work of Silva *et al*. (2023), who identified supervisory strategies that nursing students consider facilitators of the development of critical thinking skills in clinical teaching. Their study emphasized the importance of using supervisory strategies adapted to students' needs, learning objectives, and the context of clinical practice.

The relatively lower rating of feedback mechanisms (Mean = 3.50), while still high, suggests that there may be room for improvement in this area. This finding aligns with the work of Zhang *et al*. (2022), who emphasized that effective feedback mechanisms enable students to

experience better clinical learning environments and build their professional roles and competencies. The fact that feedback mechanisms had the lowest mean suggests that supervisors may need additional training in providing timely and constructive feedback.

The overall finding of high clinical supervision effectiveness is encouraging and suggests that the College has established a reasonably effective clinical supervision system. This is particularly important given the challenges identified in other Nigerian nursing institutions (Akpor *et al.*, 2023). However, the minor variations across dimensions indicate that targeted improvements in specific areas could further enhance the quality of clinical supervision.

Table 3 revealed that student nurses reported a high level of practical nursing skills acquisition (Grand Mean = 3.43, SD = 0.65). This finding suggests that students feel competent in various clinical skills essential for nursing practice. The highest-rated item, "I can measure vital signs correctly" (Mean = 3.48), indicates that students are particularly confident in this fundamental nursing skill.

The relatively lower ratings for "I am competent in medication administration" (Mean = 3.40) and "I can perform wound care procedures effectively" (Mean = 3.38) suggest that these areas may require additional attention. This finding is consistent with Shahzeydi *et al*. (2024), who found that nursing internship students may lack the necessary skills to implement the nursing process due to increased independence, the absence of constant professorial supervision, and limited experience.

The overall high level of practical nursing skills acquisition is encouraging and suggests that the College's training programs are generally effective in developing students' clinical competencies. However, the variation in scores across different skills indicates that some areas require additional emphasis.

The Pearson correlation matrix in Table 4 revealed strong, positive, and statistically significant correlations between all clinical supervision variables and practical nursing skills acquisition. The strongest correlation was between preceptor-student relationship and practical nursing skills acquisition ($r = 0.76$), followed by supervisory strategies ($r = 0.73$), feedback mechanisms ($r = 0.70$), and general supervision ($r = 0.68$). These findings indicate that all dimensions of clinical supervision are positively associated with students' practical skill acquisition. The strong correlations among the clinical supervision variables themselves (ranging from 0.65 to 0.74) suggest that these dimensions are closely interrelated and mutually reinforcing. This implies that improvements in one dimension of clinical supervision may positively influence other dimensions.

The multiple regression analysis in Table 6 revealed that clinical supervision variables jointly accounted for 67% of the variance in practical nursing skills acquisition ($R^2 = 0.67$, $F = 133.54$, $p < .001$). This indicates that a substantial proportion of the variation in students' practical skill acquisition can be explained by the quality of clinical supervision they receive. The remaining 33% of variance could be attributed to other factors such as individual student characteristics, curriculum design, or clinical placement quality. Individually, all four clinical supervision variables were significant predictors of practical nursing skills acquisition. The preceptor-student relationship emerged as the strongest predictor ($\beta = 0.31$, $p < .001$), followed by supervisory strategies ($\beta = 0.28$, $p < .001$), feedback mechanisms ($\beta = 0.24$, $p < .001$), and general supervision ($\beta = 0.19$, $p = .001$). The prominence of the preceptor-student relationship as the strongest predictor is consistent with the work of Antonsen *et al*. (2023), who emphasized that the supervisor and their supervision competence are important for the student's learning. Research has identified two contrasting supervision experiences: empowering supervision, characterized by supervisors who are willing, patient, and work hand-in-hand with students, and disempowering supervision, which includes abuse of power, grade obsession, incompetent supervision, and lack of time for students. The finding underscores the critical importance of supportive supervisory relationships in facilitating skill acquisition.

The significant contribution of supervisory strategies to skill acquisition supports the work of Silva *et al*. (2023), who emphasized the importance of using supervisory strategies adapted to students' needs, learning objectives, and the context of clinical practice. The fact that feedback mechanisms were also significant predictors supports the work of Zhang *et al*. (2022), who emphasized that effective feedback mechanisms enable students to experience better clinical learning environments. The significant but relatively lower contribution of general supervision suggests that while overall supervision is important, more specific dimensions of supervision may have a greater impact on skill acquisition. This highlights the need for supervisors to focus not just on general oversight but on building supportive relationships, using effective strategies, and providing constructive feedback.

The strong predictive power of all four dimensions of clinical supervision for practical nursing skills acquisition aligns with previous research. Gheisari *et al*. (2025) found that the ISBAR framework-based clinical supervision model improved clinical decision-making skills and clinical self-efficacy. Shahzeydi *et al*. (2024) demonstrated that the implementation of the clinical supervision model led to improved utilization of the nursing process by nursing internship students at all stages. These studies provide strong evidence for the positive impact of clinical supervision on skill acquisition.

The finding also aligns with research in the African context. Robert *et al*. (2025) identified supportive preceptorship as fostering confidence and skills among nursing students. Mugwari (2024) emphasized that a conducive clinical learning environment should be established to enable proper guidance of nursing students to acquire professional knowledge and skills.

10. Conclusion

This study examined the influence of clinical supervision on the acquisition of practical nursing skills among student nurses at Adamawa State College of Nursing Sciences, Yola. The findings provide strong evidence that clinical supervision is a critical driver of practical nursing skills acquisition. Student nurses perceived high levels of clinical supervision effectiveness across all four dimensions, and this effectiveness was strongly and significantly correlated with practical nursing skills acquisition. The preceptor-student relationship emerged as the most important predictor of skill acquisition, underscoring the critical importance of supportive, trusting, and collaborative relationships between supervisors and students. Supervisory strategies, feedback mechanisms, and general supervision were also significant predictors, with the four variables jointly accounting for 67% of the variance in skill acquisition.

The study contributes to the growing body of evidence on the importance of clinical supervision in nursing education, particularly in the Nigerian context. It provides empirical support for the theoretical understanding that structured, supportive, and effective clinical supervision facilitates the development of clinical competencies essential for safe and effective nursing practice.

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