



Nursing Students' Perception of the Clinical Environment in a Metropolitan Area in Ghana

Odei-Opoku HD^{1*}, Bam V², Acheampong K³, Kusi-Amponsah DA², Lomotey A² and Odei O¹

¹Department of Nursing, SDA Nursing and Midwifery Training College, Kwadaso-Kumasi, Ghana

²Department of Nursing, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

³Finance and Administration, A-B Excellent Academic Consult, Kumasi, Ghana

*Corresponding Author: Odei-Opoku HD, Department of Nursing, SDA Nursing and Midwifery Training College, Kwadaso-Kumasi, Ghana.

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Abstract

Clinical learning experience in healthcare facilities is widely accepted as a significant part of nursing education, and has therefore been described in literature as the heart of nurses' professional training. The aim of the study was to determine student nurses' view of the clinical learning environment and its contribution to achieving clinical learning outcomes. A cross-sectional descriptive survey design was used, and a self-administered questionnaire was used to collect data from 317 respondents who were sampled using random sampling technique. Data was analysed using Statistical Package for Social Sciences (SPSS) Version 25. The study found that: clinical students were given opportunity to experience work at various units of the health facilities, they were not very satisfied with the learning environment, and thus perceived clinical learning not that effective. Clinical learning was challenged by students' anxiety and stress due to lack of orientation for students. Results indicate a positive correlation between clinical learning and students' self-efficacy and the integration of theory and practice, both with $p < 0.001$. However, preceptors' method of teaching has insignificant correlation with student clinical competence (0.137). Student nurses' clinical learning experience positively correlates with their learning outcomes. It is recommended that nursing training institutions and clinical learning facilities ensure students are given the opportunity to experience work at various units or departments, integrate theories learnt in the classroom into actual practice and modify teaching methods for student nurses in clinical practice so as to sustain effective clinical learning experiences.

Keywords: Clinical Learning; Clinical Learning Environment; Clinical Practice; Student Nurses; Learning Outcomes

Introduction

Nursing training comprises both theoretical teaching and clinical learning at a health facility [1]. Effective clinical learning process is widely seen as providing opportunities for students to apply the theory learned in the classroom to the real world of clinical nursing. Hall posits that a clinical practice setting rich in support systems may provide opportunities for student nurses

to examine new health needs and ways of addressing them, kills anxiety and fear that weakens capability and enhances performance [7].

In spite of the numerous benefits clinical learning settings provide student nurses, the clinical learning environments are sometimes characterised by some challenges. Inadequate supervision of clinical nursing, unfriendly preceptor-student

relationship, staff unaware of students' learning objectives, staff overload, lack of resources, and ineffective teaching strategies have been commonly cited in literature as challenges that hinder effective clinical learning [12] at different levels of intensity.

In a study on nursing students' perceptions of the clinical learning environment at health facilities, [3,9] student nurses indicated that purposeful organization of learning situations with variation in care tasks was a key factor in a good clinical learning environment and that enhanced clinical nurses performance in their practical tests. Opportunities for students to interact with preceptors and members of the nursing team have been reported as predicting positive correlation with students' learning outcomes as nurses overcome anxieties with high level of confidence and competence [10].

In spite of the studies [1,12] in developed nations on the clinical learning environment, a research gap exists in Ghana on how students perceive clinical learning environment to achieving their learning outcomes. This current study aimed at addressing this gap by exploring students' views from selected nursing training institution in Ashanti Region of Ghana.

Methods

A cross-sectional descriptive design was used with self-administered questionnaire, which sought to gather data from respondents on contributions of the clinical learning environment to nursing students' learning outcomes. The study was conducted in two tertiary institutions of learning that train nurses to obtain diploma and degree qualifications for professional practice. These institutions are duly accredited by the Ghana National Accreditation Board (GNAB) and together have staff strength of 66 lecturers.

The study population comprised all the nursing students in the nursing training institutions within Kumasi Metropolis which are recognised by the Nursing and Midwifery Council of Ghana. Only the final year students, with a target population of 453 students, from the selected institutions were included in the study. This was on the basis that they had at least two clinical learning sessions and had adequate experience regarding how clinical learning environment affect their learning outcomes.

The study adopted the Probability Proportionate to Size (PPS) sampling technique to obtain the sample size (317) for the various

clusters. In this approach, the class size in each cluster was used to divide the total population for the study for the respective percentage sample. Using the class lists (arranged in alphabetical order with student numbers by the Nursing institutions) 317 student nurses were systematically sampled by selecting every second student (every other student) on the list of each class for the study. Respondents were contacted at their respective health facilities where they had their clinical practice.

Key areas of clinical learning experiences included in the questionnaire were preceptors' methods of teaching, student-preceptor relationship, clinical students' participation or involvement in nursing activities and adequacy of equipment and other suppliers. Learning outcomes describe the significant and essential learning that nurses achieve and can reliably demonstrate as a result of their clinical learning placement, which in the current study assessed self-efficacy, competency and theory-practice integration. Self-efficacy explains students' confidence in their ability to execute learnt behaviours or control over their learning environment. Competence also explains the proven ability to use knowledge, skills and personal abilities in clinical learning situations whilst theory-practice integration demonstrates effective transfer of classroom learnt behaviours to the practice setting. Clinical learning environment is expected to enrich learning outcomes towards a complete nursing training process when effective human, material and other resources are experienced. Pre-test was conducted to allow for verification, clarity and consistency after which corrections were made to ensure reliability of data collection instrument (questionnaire). Cronbach's Alpha was determined and obtained an acceptable correlation co-efficient (>0.06) to indicate high reliability for the questionnaire used.

This study made use of quantitative data analysis technique after entering the data into Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics in the form of frequencies, percentages and mean values were generated. Additionally, Pearson correlation was done to determine the associations between the variables and the extent of their significance. A p-value of ≤ 0.05 was considered significant.

Ethical clearance was sought from the Committee on Human Research, Publication and Ethics (CHRPE) at Kwame Nkrumah University of Science and Technology (KNUST). Again,

questionnaires were only administered to respondents upon their approval by signing a consent form, assuring them of full anonymity and confidentiality of information given.

Results

Background characteristics of respondents

Out of the 317 student nurse respondents, 72.9% were females. respondents ranged from age 18 years to 35 years and 68.5% were aged 21-25 years. Whilst the third year students in the Diploma program represented a little above half (53.3%) of the respondents, 46.7% of them were fourth year students offering a degree program (Table 1).

Variables	Number of respondents	Percentage (%)
Gender:		
Males	86	27.1
Females	231	72.9
Total	317	100.0
Age categories:		
≤20 years	26	8.2
21-25 years	217	68.5
26-30 years	63	19.9
31-35 years	11	3.5
Total	317	100.0
Students' level at school:		
Level 300	169	53.3
Level 400	148	46.7
Total	317	100.0

Table 1: Demographic characteristics of respondents.

Perceived effectiveness of clinical learning

Upon students' assessment, factors that influenced clinical effectiveness have been summarized in (Figure 1).

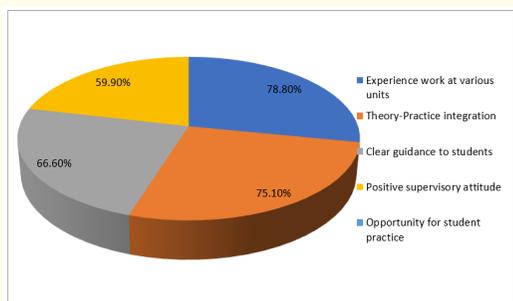


Figure 1: Factors influencing effective clinical learning.

Most of the respondents (78.8%) disclosed that they were given the opportunity to experience work at various units of the health facilities similar to integrating classroom theory into practice (75.1%). Similarly, 66.6% applauded preceptors for giving clear guidance to students during clinical practice. The extent of clinical learning effectiveness as influenced by preceptors' positive supervisory attitude and opportunity for students for practice were 59.9% and 54.9% respectively. However, preceptors organising evaluation sessions for students and using innovative teaching methods were 24.9% and 40% respectively. Also assessed was preceptors' method of teaching of which demonstration was a common practice but lacked roleplay and discussion.

Student nurses' satisfaction with clinical learning

Areas where respondents admitted satisfied have been presented in (Figure 2).

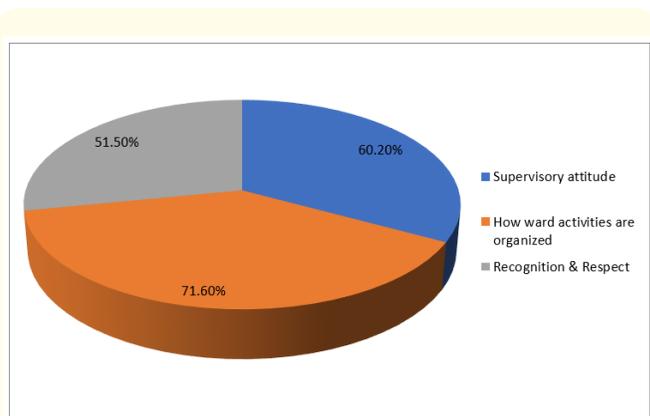


Figure 2: Student' satisfaction with clinical learning.

Students affirmed their satisfaction with preceptors' attitude to supervision (60.2%) and how activities of the wards were organized (71.6%). Though student nurses' involvement in actual patients' care (36.5%) was not satisfactory, they received appreciable level of recognition and respect (51.5%) as well as healthy interactions (51.5%) from nurses and other staff in the facilities where they had their clinical attachment. The general satisfaction level of the respondent was low (41.6%). This was particularly influenced by preceptors' methods of teaching which respondents did not see as innovative (38.5%).

Challenges experienced by Student nurses in Clinical learning

Almost all the factors assessed indicate some level of challenges except preceptor-student relationship that did not show much of a challenge. Experiences that sounded some level of challenge have been presented in (Figure 3).

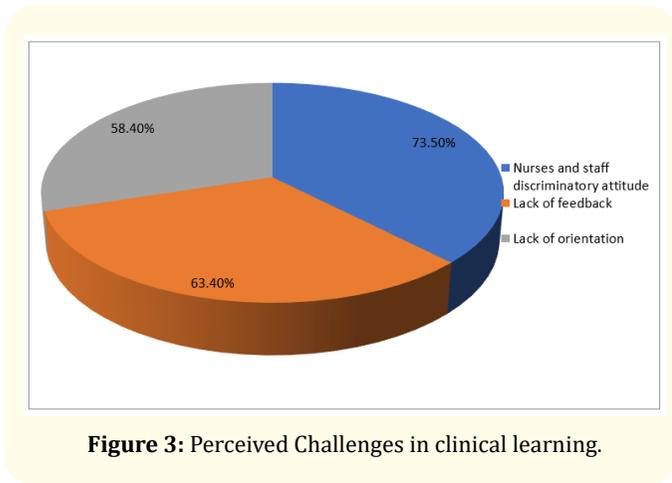


Figure 3: Perceived Challenges in clinical learning.

Major challenges student nurses face were reported as discriminatory nature of nurses (73.5%), lack of feedback from preceptors (63.4%) and how clinical learning activities were organized. Elaborating on stress and anxiety as challenging circumstances, 58.4% of student nurse respondents attributed the cause to lack of orientation. Further explanations given as regards their level of anxiety attributed the cause to the selective attitude of staff nurses and the fear of unknown practices.

Clinical learning's contribution to learning outcomes

The study assessed self-efficacy, competency and theory-practice integration. Self-efficacy explains students' confidence in their ability to execute learnt behaviours or control over their learning environment. Competence also explains the proven ability to use knowledge, skills and personal abilities in clinical learning situations whilst theory-practice integration demonstrate effective transfer of classroom learnt behaviours to the practice setting. Clinical learning environment is expected to enrich learning outcomes towards a complete nursing training process when effective human, material and other resources are experienced.

Clinical learning experiences and students' competence

Responses from study participants were guided by ratings of 3 for areas/outcomes where they experienced high impact, 2 for average impact and 1 for a rather low impact. It was therefore expected that the highest mean response be 3 and the least be 1. From the mean responses, student nurses' experience in respect of preceptor' teaching methods showed minimal contribution to building students' competence (2.08), self-efficacy (2.09) and

ensuring good integration of theories learnt in classroom and real clinical practice (2.14). Student-preceptor relationship had minimal impact on student nurses' competence, theory-practice integration as well as students' self-efficacy. Each of these learning outcomes was slightly impacted on (below average), similar to the situation on equipment and other supplies where very low impact was reported on competence, theory-practice integration and self-efficacy (each with mean response of less than 2). Student participation or involvement in client care was average. Respondents reported that they were given limited opportunity to actually give client care and thus could have average impact on their competence and theory-practice integration, affirmed with equal mean value of 2.10.

Regression analyses were run to establish the extent to which nursing students' clinical learning outcome (competence, self-efficacy and theory-practice integration) is influenced by their experiences (preceptors methods of teaching -PMT, student-preceptor relationship - SPR, students' participation or involvement in health care delivery - SPHD, adequacy of equipment and other supplies - AES). Regression results of learning experiences and student competence were as shown on (Table 2).

Models	R-square	Significance
Model summary	0.692	
ANOVA (Regression)	-	0.000
Individual item's Correlation Coefficients:	Unstandardized Coefficients (B-value)	
Experience in preceptors' methods of teaching	0.137	
Experience in student-preceptor relationship	0.037	
Experience in Students' participation in practice	0.020	
Experience in adequacy of equipment and other supplies	0.126	

Table 2: Clinical learning Experiences and Students' Competence.

The R-Square coefficient of 0.692 obtained from the summary of all the measured items of the dependent variable – Competence explains variations in the independent variables (preceptors' methods of teaching, student-preceptor relationship, students' participation or involvement in nursing activities, adequacy of

equipment and other supplies). This implies that 69.2% of changes in student nurses' clinical competence are caused by what they experience during clinical practice. It was observed that each of the study independent variables had positive B-values. This indicates that given improved clinical learning experiences, nurses' clinical competence will be improved. There was however an insignificant correlation ($p = 0.137$) between preceptors method of teaching and students' competence.

Clinical learning Experiences and Students' self-efficacy

Also assessed, as a component of clinical learning outcomes, was students' self-efficacy, measured from the variables on experiences presented in (Table 3).

Models	R-square	Significance
Model summary	0.204	
ANOVA (Regression)	-	0.000
Individual item's Correlation Coefficients:	Unstandardized Coefficients (B-value)	
Experience in preceptors' methods of teaching	0.010	
Experience in student-preceptor relationship	0.001	
Experience in Students participation in health care delivery	-0.557	
Experience in adequacy of equipment and other supplies	-0.234	

Table 3: Clinical learning Experiences and Students' self-efficacy.

The R-square value of 0.204 implies that there is 20.4% of correlation between students' clinical experiences and students' self-efficacy. That is, 20.4% of changes in student nurses' self-efficacy are caused by what they experience during clinical learning. Comparing the degree of the coefficients of the independent variables to determine which one had more effects on students' self-efficacy, it is observed that changes in students' participation in health care delivery (-.557) and adequate provision of equipment and other supplies (-.234) cause negative change in students' self-efficacy.

Clinical learning experiences and integration of theory and practice

Student-preceptor relationship and preceptors' method of teaching rather gave positive implications to students' self-

efficacy, also showing significant correlations, at 0.001 and 0.010 respectively. Students rated their relationship with preceptor and the teaching methods he/she adopts contributing significantly to their development of self-efficacy as compared to their participation in the service delivery and provision of equipment and supplies.

On the basis that clinical experiences integrate well with what is learnt in the classroom and at the clinical setting, regression analysis was once again run to establish the relationship between students' clinical experiences and theory-practice integration, and the results are presented in (Table 4).

Models	R-square	Significance
Model summary	0.644	
ANOVA (Regression)	-	0.000
Individual item's Correlation Coefficients:	Unstandardized Coefficients (B-value)	
Experience in preceptors' methods of teaching	0.208	
Experience in student-preceptor relationship	0.330	
Experience in Students participation in health care delivery	0.026	
Experience in adequacy of equipment and other supplies	-0.167	

Table 4: Clinical learning Experiences and Integration of theory and practice.

Respondents' ability to integrate theory and practice is 64.4% due to what they experience in clinical learning. Except for adequacy of equipment and other supplies, all the independent variables had positive B-values and correlated significantly with integrating theory and practice.

Discussion

The study found over three-quarters of the respondents affirming that they were given opportunity to experience work at various units of the health facilities, they experienced an integration of classroom theory in practice. These are indications of positive learning experiences that contribute to effective clinical learning and thus enhancing clinical learning outcomes as established [14]. Rather at variance with the current observation, respondents in

a study [5] reported having limited experience in clinical practice at few units of the health facilities where they had their clinical practice.

Also, an average of about 60% of the respondents confirmed that clinical learning effectiveness is influenced by preceptors' positive supervisory attitude and the opportunity offered students for actual practice. The result concurs with [3,6,15] in which student nurse respondents commended preceptors for giving adequate opportunity for student involvement in health care delivery. The reverse was found by other researchers [5,15] who indicated that supervisors were intimidating and not ready to appreciate students' concern for discussions to clarify certain issues students might want to understand better. The finding corroborates with [16] in which about 63% the student nurses on clinical learning appreciated effective coaching and mentorship they experienced in their clinical setting.

The study also established that a 55% preceptors in the study maintained cordial relationship with clinical nursing students, but minority of the respondents did not experience favourable relationship from their preceptors, which according to [14], does not augur well for effective clinical learning encounter. For the unfriendly relationship some preceptors and supervisors exhibited in the current study, they prove not to be role models as espoused in theory of adult learning [16,19]. Adequacy of equipment and supplies to support clinical learning was rated just above average (56.8%). This experience corroborates the finding by other researchers [12,20,21] in which nursing students reported of insufficient and inappropriate clinical equipment that negatively affected their acquisition of clinical competence.

Nursing students in the current study were generally not very satisfied with their clinical learning experiences. Typically influencing learners satisfaction with clinical learning experiences were preceptors' supervisory attitude and the organization of ward activities. The appreciable level of respect and recognition accorded clinical learners in this study proves to support the second principle of the theory of adult learning as explained by [14,21].

Major challenges student nurses faced as gathered in the current study were reported from the discriminatory nature of staff nurses and other staff of the hospitals, and insufficient clinical equipment,

but in [23] lack of feedback from preceptors and anxiety, were the major challenges. These challenging experiences, if not addressed, have the tendency to adversely affect the effectiveness of clinical learning and consequently learners' clinical learning outcomes [22].

As shown in this study, clinical nursing competence and theory-practice integration are moderated by preceptors' method of teaching as well as students' participation in health care delivery as supported by [5]. Students' minimal participation in healthcare delivery and inadequate provision of equipment and other supplies rather contributed negatively to enhancing self-efficacy, contrary to the findings in [6]. Given the negative impact of learning environment on students' self-efficacy, student motivation to learn is likely to be affected adversely.

Conclusion

The results from the current study indicate that students on practice were given clear guidance during their clinical practice, preceptors showed positive attitudes in their supervision, and students were given opportunities for practice. Again, students were given the opportunity to experience work at various units or departments and theories learnt in the classroom were integrated into actual practice. In general, it can be concluded that clinical learning had not been that effective.

Students were satisfied with the physical infrastructure, the respect and recognition accorded them and how ward activities were organized. Nonetheless, students were not satisfied with the methods of teaching adopted by the preceptors, for which they did not see much of role play and discussions.

Particularly, students' competence was enhanced by their exposure to clinical practice and the rapport between preceptors and student nurses which allowed for free exchange of opinion. Positive and minimal significant correlation was established between clinical learning and students' self-efficacy. The clinical practice well integrated theory into practice.

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