

ORIGINAL RESEARCH

# Quality of Clinical Nursing Education Programme in Ghana: Preceptors' Perspectives



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## Abstract

**Background:** Clinical education is an important component of the training of nursing students. Preceptors play a key role in the clinical education of nursing students by providing support for the students during clinical placement. There is dearth of studies in the Ghanaian context that has assessed preceptors' perception of clinical nursing.

**Purpose:** The purpose of this study was to assess preceptors' perceptions of the quality of clinical nursing education in Northern Ghana.

**Methods:** This study was a cross-sectional survey conducted using an already existing questionnaire. Three hundred and nineteen (319) preceptors recruited from three hospitals participated in the study. A proportional quota sampling technique was used to allocate the sample size to the three hospitals and a simple random sampling technique was used to select the participants. The data were analysed using Stata version 15 and the results were presented using descriptive and inferential statistics.

**Results:** The study findings indicate that the preceptors' generally perceived that the quality of clinical placement area and clinical assessment were slightly above average as they scored each of them 2.30 on a scale of 0-4 (95% CI:2.21-2.39). The preceptors also perceived that the quality of clinical teaching and learning was average as they scored it 2.04 on a scale of 0-4 (95% CI:1.95-2.13). Also, the preceptors had a lower level of agreement, 1.75 on a scale of 0-4 (95% CI:1.25-2.45) regarding teaching and development of the students being the responsibility of only the university.

**Conclusion:** Preceptors perceived that nursing education institutions and clinical facilities need to work together to improve clinical nursing education. This calls for the need for an effective collaboration between clinical facilities and nursing education institutions to develop training programmes for preceptors to improve their skills in clinical teaching and clinical assessment of students.

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## 1. Introduction

There is a need to ensure that the training of nurses meets international standards, which in turn requires the use of preceptors to guide students in the learning of clinical skills (Giroto et al., 2019). Preceptorship helps students transition to professional nurses through the acquisition of clinical competence and confidence (Madhavanpraphakaran et al., 2013; Panzavecchia & Pearce, 2014). The introduction of the concept of preceptorship has led to increased collaboration between nursing education institutions and clinical facilities with preceptors being at the forefront of clinical teaching during clinical placement.

Preceptors are professionals with adequate knowledge and skills to support students during clinical placement. Preceptors are often employed by academic institutions in part-time or full-time positions to serve as teachers in the clinical setting (Botma et al., 2012). In Ghana, preceptors are often full-time employees of the clinical facilities which may affect their availability to interact with and support students due to conflicting responsibilities. Ryan and McAllister (2019) indicated that spending time interacting with students and getting to know them was deemed necessary in enhancing the relationship between clinical staff and students.

Adequate preparation, which includes an in-depth understanding of the role of preceptorship, is necessary to efficiently facilitate the clinical teaching of students (Bengtsson & Carlson, 2015). This will be realized through a collaborative effort between academics and

clinicians to design a training programme for clinical nurses to assist them to develop pedagogical competence in preceptorship (Wu et al., 2017; Atakro et al., 2019). Aspects that need to be included in such a programme are teaching and learning strategies, reflective and critical thinking, communication skills and the role of the preceptor (Bengtsson & Carlson, 2015). In addition, preceptors need to enhance their assessment skills which should include the art of giving constructive feedback (Wu et al., 2017).

Apart from training, some factors that will increase the effectiveness of preceptorship include having a protected time to guide students, scheduling the students to work the same shift as the preceptor, motivation of the students to learn skills and the need for students to show interest in direct patient care (Madhavanpraphakaran et al., 2013). When preceptors devote time to students and ensure a good preceptor-student relationship, the students' clinical learning is enhanced (McSharry & Lathlean, 2017). While working in the same shift facilitates a positive and useful preceptor-student relationship, the preceptor can provide one-on-one support. In Ghana, preceptors are not given a protected time to support students during clinical placement (Asirifi et al., 2017).

The use of learning strategies which ensure that students are actively involved is necessary for improving the learning of clinical skills (Giroto et al., 2019). Clinical conferences with students are an important strategy that allows students to clarify their placement objectives to guide the clinical learning process (Henderson et al., 2018). Preceptors who use dialogue and appropriate questioning techniques promote critical thinking and problem-solving skills among students (McSharry & Lathlean, 2017).

Clinical teaching and learning is driven by effective communication (Moonaghi et al., 2015; Needham et al., 2016; Cândida et al., 2017). Preceptors and students need to discuss the barriers to learning that students face during clinical placement and identify possible strategies that could be used to resolve such barriers (Cândida et al., 2017). Clinical instructors' communication with students should be based on fairness, openness, justice and respect (Moonaghi et al., 2015). Clinical facilitators agree that to have a successful clinical placement, the interaction between nurses, students and patients has to be effective (Needham et al., 2016). Clinical facilitators explain that effective communication will help unravel the individual needs of students so that clinical teaching can be tailored to meet such needs (Needham et al., 2016).

In Ghana, key informants such as nurse managers, lecturers and clinical placement coordinators are of the view that lack of resources, inadequate staffing and students' attitudes are major factors negatively affecting clinical nursing education (Nachinab & Armstrong, 2022). Aside lack of resources, the effectiveness of clinical assessment of students is affected by inadequate training of examiners and lack of standardization of assessment processes in Ghana (Anim-Boamah et al., 2022). Also, students in Ghana are of the view that incongruence in clinical teaching, practice and assessment were major factors affecting the development of clinical competencies (Anim-Boamah et al., 2021).

There is dearth of studies on perspective of preceptors on the quality of clinical nursing education in the Ghanaian context. The preceptors' perspectives on how best the clinical placement area is conducive for learning of clinical skills have not been adequately assessed. The quality of teaching and learning of clinical skills, and clinical assessment of nursing students have also not been adequately researched into in the Ghanaian. This study was, therefore, conducted to assess preceptors' perceptions of clinical placement area, clinical teaching and learning, and clinical assessment in the Ghanaian context.

## **2. Methods**

### **2.1 Research design**

A cross-sectional survey was employed to assess the preceptors' perceptions of clinical nursing education. Cross-sectional designs are used to describe the status of a phenomenon and the relationship among phenomena at a point (Polit & Beck, 2010). This design allows the researchers to collect sufficient original data to describe the preceptors' perceptions of the current state of clinical nursing education in Ghana.

### **2.2 Setting and samples**

The survey was done at three hospitals in Northern Ghana which include one each of the district, regional and tertiary hospitals, all of which serve as clinical sites for undergraduate

nursing students. The district and regional hospitals serve as referral facilities for clinics and health centers in the region. The tertiary level facility serves as a referral facility for all health facilities within the northern part of Ghana.

The participants for this study were preceptors in hospitals that serve as clinical sites for undergraduate nursing students. Preceptors were registered general nurses with a minimum academic qualification of a diploma in nursing and at least three years of working experience. They were permanent staff of the selected hospitals engaged by Nursing Education Institutions (NEIs) to support students during clinical placement. Preceptors who were on leave or working in units where undergraduate nursing students were not frequently placed were excluded from the study. Preceptors who met the inclusion criteria but did not voluntarily consent to participate in the study were also excluded.

Using the total number of preceptors in the three hospitals as the accessible population and an alpha level of 0.05, Yamane's (1967) formula for sample size calculation was applied. In all, 319 questionnaires were administered but only 307 preceptors completed and returned the questionnaire, representing a 96.2% response rate. The data were collected between November, 2019 and February, 2020.

A multistage sampling technique was used to recruit the respondents. The hospitals were purposively selected because they serve as clinical placement sites for undergraduate nursing students. A proportional quota sampling technique was used to allocate the 319 questionnaires to the three selected hospitals. At each hospital, the clinical coordinator helped in purposively selecting units in which undergraduate nursing students are frequently placed when they come for clinical placement. The sample size for the hospital was divided among the selected wards. In each ward, a simple random sampling technique was applied to give all respondents an equal chance to participate.

### *2.3 Measurement and data collection*

The questionnaire used for the study was originally developed by Peter (2008) but was adapted and validated in a previous study by Xaba (2015). The questionnaire is publicly available but the researcher obtained permission to use the questionnaire. The questionnaire was in English language and no significant changes were made. The questionnaire had four sections. Section A had questions on demographic data. Section B, C and D had questions on perceptions of clinical placement area, clinical teaching and learning, and clinical assessment respectively. Section B had 13 items, section C had 10 items and section D had 9 items. The internal consistency of the instrument was checked in a previous study using Cronbach alpha. The overall Cronbach alpha was 0.750, and this made the instrument reliable because the minimum desired Cronbach alpha is 0.7 (Bujang et al., 2018). The questionnaire was also presented to the research supervisors who are all nursing education experts and two local clinical nursing education experts to check for face and content validity. The original questionnaire was measured on a scale of 1-5. In the present study, the scoring of the tool was reordered where Neither Agree nor Disagree=0, Strongly Disagree=1, Disagree=2, Agree=3 and Strongly Agree=4. With the reordering of the scale of the original questionnaire, a pre-test was conducted where Cronbach alpha reliability test was performed to ascertain if the scale was still consistent with the reliability score reported in the original questionnaire. Thirty (30) preceptors were recruited from a hospital within the northern region of Ghana for the pretesting. The hospital where the pretesting was done was excluded from the main study. In this study, the reordered questionnaire yielded an overall Cronbach alpha of 0.925. The Cronbach alpha for the clinical placement area subscale was 0.868, clinical teaching and learning was 0.811 and clinical assessment was 0.806 .

The principal researcher obtained formal permission from the authorities of the hospitals. The first visit to each unit in the hospital was done by the researcher and a trained research assistant who met with the respective unit managers for a preliminary discussion on the data collection process. At each selected unit, the study was explained to respondents and the information sheet was given to them. Respondents who voluntarily consented to participate were selected. A trained research assistant assigned to each unit continued visiting the unit at the beginning of each shift until all the required questionnaires were administered. A sealed box was placed in each unit to allow the respondents to return the questionnaire anonymously.

## 2.4 Data analysis

The questionnaires were coded and entered into Epidata. The data were then exported and analysed using Stata version 15. All the analyses were performed at a 95% level of confidence interval. Descriptive statistics including frequencies and percentages were used to present the background characteristics of respondents. Perception of the quality of clinical nursing education nursing was assessed on a scale of 0-4. Three main components of clinical nursing education consisting of clinical placement area, clinical teaching and learning, and clinical assessment were assessed. The ratings were averaged to yield a perception score for each of these components of clinical nursing education.

To make inferential statements, linear regression analysis was conducted to examine the extent to which perceptions of clinical placement area were explained by the other variables. The linear regression analysis consisted of two models; model 1 and model 2. In model 1, the background characteristics were examined to determine their contribution to the perception of the clinical placement area. In model 2, background characteristics, perception of clinical teaching and learning, and perception of clinical assessment of respondents were examined to determine their influence on the perception of clinical placement area.

## 2.5 Ethical considerations

Ethical clearance was obtained from the Human Research Ethics Committee (Medical) of University of the Witwatersrand (M190807) and the Ghana Health Service Ethics Committee (GHS-ERC 007/09/19). Participation in the study was voluntary and respondents could decide to withdraw from the study at any stage without any negative repercussions. No identifying information was collected from the participants and information collected was reported as aggregate data. The respondents gave their consent prior to answering the questionnaire.

## 3. Results

### 3.1 Demographic characteristics of preceptors

Table 1 indicates that 52.4% (n=161) of the preceptors were females and 47.6% (n=146) were males. Most (42.4%, n=130) were within the age range 30-39 years, and 37.8% (n=116) were within 20-29 years. Of the 307 preceptors, 74.3% (n=228) worked in the tertiary hospital, 14.0% (n=43) worked at the regional hospital and 11.7% (n=36) worked in a district hospital.

**Table 1.** Demographic characteristics of preceptors

Characteristics	Frequency	Percent
Gender		
Female	161	52.4
Male	146	47.6
Age (year)		
20-29	116	37.8
30-39	130	42.4
40-49	52	16.9
50-59	8	2.6
60+	1	0.3
Facility Type		
Tertiary Hospital	228	74.3
Regional Hospital	43	14.0
District Hospital	36	11.7
Academic qualification		
Diploma	188	61.2
Bachelor	115	37.5
Masters	4	1.3

### 3.2 Perceptions of quality of clinical nursing education amongst preceptors

Table 2 shows a descriptive summary of preceptors' perceptions of the quality of clinical nursing education which was rated on a scale of 0-4. Three main components of clinical nursing

education (clinical placement area, clinical teaching and learning, clinical assessment) were assessed. The ratings were averaged to yield a perception score for each of these clinical nursing education components and an overall score was obtained.

Perception of the Clinical Placement Area (CPA), which was assessed with 13 items, yielded a composite score of 2.30 on a scale of 0-4 (95% CI:2.21-2.39). This translates into 57.5% level of agreement with the statements assessing perceptions on the quality of CPA. With the individual items, the highest score on the quality of CPA was on the question: "Placement dates are pre-published before the placement of students to the clinical facilities" The preceptors rated this question 2.66 on a scale of 0-4 (95% CI:2.52-2.80). In contrast, the lowest level of quality on CPA related to the question that sought to find out if the development and teaching of student nurses is only the responsibility of the university. The preceptors rated this question 1.75 on a scale of 0-4 (95% CI:1.62-1.88).

Preceptors' Clinical Teaching and Learning (CTL) composite score was 2.04 on a scale of 0-4 (95% CI:1.95-2.13) translating into a 51.0% level of agreement with statements assessing perceptions on quality of CTL. Of 11 items that were used to assess perception on CTL, the highest score was on the question: "Clinical accompaniment does benefit students". The preceptors rated this question 2.69 on a scale of 0-4 (95% CI:2.54-2.84). The lowest score of quality of CTL was on the question "The university has enough equipment and material resources for demonstration and feedback of clinical skills", which was rated 1.75 on a scale of 0-4 (95% CI:1.61-1.89).

Nine items were used to assess the perception on quality of Clinical Assessment (CA). The composite score of preceptors' perceptions of the quality of CA was 2.30 on a scale of 0-4 (95% CI:2.21-2.39), indicating a 58% level of agreement with statements assessing the perception of the quality of CA. The highest score on the perception of quality of CA was on the question "As preceptors, we are involved in clinical assessments of students" which was rated 2.64 on a scale of 0-4 (95% CI:2.48-2.80). The lowest score on CA was on the question "Student and the facilitator discuss and evaluate performance against each competency thereby identifying areas of strength and areas needing improvement". The preceptors rated this question 2.01 on a scale of 0-4 (95% CI: 1.85-2.17).

### *3.3 Predictors of clinical nursing education perceptions*

To examine the extent to which clinical placement area perception is explained by the other variables, linear regression analysis was conducted. Table 3 below indicates that the background characteristics of preceptors were examined in an initial model (Model 1) to determine their influence on the perception of preceptors in the Clinical Placement Area. The preceptors' background characteristics (gender, age, years of service and academic qualification) all together explained only 1.9% of the variations in perception of the clinical placement area (Adjusted  $R^2=0.019$ ,  $p=0.22$ ). In assessing the individual contribution of background characteristics, the contribution of academic qualifications to the perception of the Clinical Placement Area was statistically significant ( $\beta=0.202$ ,  $p=0.042$ ). Gender, age and years of service did not make a statistically significant contribution to the perceptions on Clinical Placement Area. However, being a female and increasing age are associated with a decreasing perception score for the clinical placement area. Thus, all this being equal, being a female is associated with a .098 decrease in the perception score ( $\beta=-0.098$ ,  $p=0.312$ ) and moving from one age bracket to the next higher one is associated with a decrease of 0.02 in the perception score ( $\beta=-0.02$ ,  $p=0.783$ ).

Table 3 shows that in Model 2, all the background characteristics of preceptors together with perception on clinical teaching and learning, and clinical assessment accounted for nearly 59% of the differences in their clinical placement area perception (Adjusted  $R^2=0.592$ ,  $p<0.001$ ). Gender, age and years of service did not make a statistically significant contribution to the perceptions on the Clinical Placement Area. However, similar to Model 1, being a female and increasing age was associated with a decrease in the perception score. Academic qualification had a statistically significant relationship with the perceptions on the Clinical Placement Area ( $\beta=0.147$ ,  $p=0.023$ ). Also, holding all other factors constant, a unit increase in the Clinical Teaching and Learning score is associated with a 0.042 increase in the perception score of the Clinical Placement Area and this was statistically significant ( $\beta=0.421$ ,  $p<0.001$ ). Similarly, a unit increase in the Clinical Assessment score is associated with a 0.43 increase in the perception score of the Clinical Placement Area which was statistically significant ( $\beta=0.429$ ,  $p<0.001$ ).

**Table 2.** Descriptive summary of the perception of preceptors on clinical nursing education

Components of Clinical Nursing Education	Mean	Std. Error	Std. Deviation	95% CI		% score on a 4-point scale
				Lower	Upper	
<i>Clinical Placement Area Score</i>	2.30	0.05	0.84	2.21	2.39	57.5%
Placement dates are pre-published before the placement of students to the clinical facilities.	2.66	0.07	1.25	2.52	2.80	66.5%
Students get enough clinical exposure in the clinical placements	2.51	0.08	1.32	2.36	2.66	62.8%
There is sufficient clinical accompaniment by clinical instructors in the placement area	2.13	0.08	1.41	1.97	2.29	53.3%
There is an effective communication between clinical facilitators and staff in the clinical facilities.	2.30	0.08	1.37	2.15	2.45	57.5%
Students and clinical facilitators have effective communication	2.30	0.08	1.41	2.14	2.46	57.5%
There is effective communication between clinical facilitators and clinical staff	2.42	0.07	1.25	2.28	2.56	60.5%
Lecturers also visit the clinical area for accompaniment of students.	2.33	0.08	1.39	2.18	2.48	58.3%
The learning needs of students are clarified to the students.	1.96	0.08	1.46	1.80	2.12	49.0%
There is a joint responsibility between the lecturers and the clinical staff to develop the student nurses.	2.54	0.08	1.39	2.38	2.70	63.5%
The development and teaching of the student nurses is only the responsibility of the university.	1.75	0.07	1.18	1.62	1.88	43.8%
The clinical facilities are supportive of professional growth, skills development and practice of students.	2.61	0.08	1.32	2.46	2.76	65.3%
There is a good relationship between clinical facilitators and the clinical staff in clinical placements.	2.07	0.08	1.44	1.91	2.23	51.8%
There are enough clinical placement facilities to place students for clinical practice.	2.30	0.08	1.33	2.15	2.45	57.5%
<i>Clinical Teaching and Learning Score</i>	2.04	0.05	0.81	1.95	2.13	51.0%
The university has enough space for clinical teaching and learning activities.	1.81	0.07	1.20	1.68	1.94	45.3%
The university has enough equipment and material resources for demonstration and feedback of clinical skills.	1.75	0.07	1.21	1.61	1.89	43.8%
The clinical placement areas have enough equipment and material resources for demonstration and feedback of clinical skills.	1.86	0.07	1.29	1.72	2.00	46.5%
Students are theoretically prepared before they are sent to clinical facilities	2.07	0.08	1.40	1.91	2.23	51.8%
Nursing students are willing to learn.	2.28	0.08	1.42	2.12	2.44	57.0%
Students accept constructive criticism.	1.99	0.08	1.45	1.83	2.15	49.8%
All students know the limitations of clinical teaching and learning process.	1.93	0.08	1.37	1.78	2.08	48.3%
A remedial plan is implemented if a student fails to master a skill	1.95	0.07	1.26	1.81	2.09	48.8%
Clinical facilitators get full support from the lecturers.	2.07	0.08	1.38	1.92	2.22	51.8%
Clinical accompaniment does benefit students.	2.69	0.08	1.38	2.54	2.84	67.3%

**Table 2.** Continued

Components of Clinical Nursing Education	Mean	Std. Error	Std. Deviation	95% CI		% score on a 4-point scale
				Lower	Upper	
<i>Clinical Assessment</i>	2.30	0.05	0.85	2.21	2.39	57.5%
Students are informed of the specific criteria and standards for each clinical placement against which they will be assessed.	2.24	0.08	1.31	2.09	2.39	56.0%
All students sign an assessment contract before being assessed.	2.10	0.08	1.31	1.95	2.25	52.5%
Students are informed in time before clinical assessments start.	2.39	0.07	1.28	2.25	2.53	59.8%
Students avail themselves for clinical practice before they are assessed.	2.26	0.08	1.35	2.11	2.41	56.5%
The assessment tools facilitate the integration of theory and practice.	2.39	0.08	1.34	2.24	2.54	59.8%
There is confidentiality of the assessment outcome for each student.	2.14	0.08	1.32	1.99	2.29	53.5%
Student and the facilitator discuss and evaluate performance against each competency thereby identifying areas of strength and areas needing improvement.	2.01	0.08	1.40	1.85	2.17	50.3%
Preceptors have an input in the development of assessment tools.	2.52	0.08	1.44	2.36	2.68	63.0%
As preceptors we are involved in clinical assessments of students.	2.64	0.08	1.41	2.48	2.80	66.0%
<i>Clinical Nursing Education Perception Score</i>	2.21	0.04	0.74	2.13	2.29	55.3%

**Table 3.** Predictors of perception of clinical placement area

Model	Predictors	Coefficients	Std. Error	t-statistic	p-value	
1	(Constant)	2.088	0.175	11.916	0.000	
	Gender	-0.098	0.097	-1.014	0.312	
	Age	-0.02	0.074	-0.275	0.783	
	Years of service	0.013	0.104	0.123	0.902	
	Academic qualification	0.202	0.099	2.039	0.042	
	Model summary: <i>Adjusted R</i> <sup>2</sup> =0.019, <i>F</i> <sub>(4, 302)</sub> =1.46, <i>p</i> =0.22					
	2	(Constant)	0.292	0.144	2.032	0.043
Gender		-0.066	0.063	-1.056	0.292	
Age		-0.051	0.048	-1.064	0.288	
Years of service		0.062	0.067	0.92	0.359	
Academic qualification		0.147	0.064	2.285	0.023	
Clinical teaching and learning Score		0.421	0.049	8.628	0.000	
Clinical assessment		0.429	0.047	9.137	0.000	
Model summary: <i>Adjusted R</i> <sup>2</sup> =0.592, <i>F</i> <sub>(2, 300)</sub> =210.72, <i>p</i> <0.001						

Notes: Outcome variable: Clinical Placement Area Score

#### 4. Discussion

The study aimed at assessing preceptors' perceptions of the quality of clinical nursing education in Ghanaian context. The quality of clinical nursing education was assessed under three main components, which include clinical placement area, clinical teaching and learning, and clinical assessment. The preceptors generally perceived that the quality of clinical placement area and clinical assessment were slightly above average as they score each of them 2.30 on a scale of 0-4 (95% CI:2.21-2.39). The preceptors also perceived that the quality of clinical teaching and

learning was average as they scored it 2.04 on a scale of 0-4 (95% CI:1.95-2.13). Despite the above average ratings on the quality of the three component of clinical nursing education, the findings point out specific areas that require improvement.

#### *4.1 Clinical placement area*

The clinical placement area plays an important role in the clinical skills training of nursing students. The study established that the preceptors generally expressed a 57.5% level of agreement with statements assessing the perceptions of the clinical placement area. Thus, the preceptors' ratings indicate a more than average favourable view of the clinical placement area. That notwithstanding, the general finding indicates that they believe there is room for improvement in the clinical placement area. The findings of the present study agree with a study among students in Iran which revealed a positive perception of the clinical learning environment (Rokhafrooz et al., 2022). The preceptors in the present study are employees of the clinical facilities hence this could influence how positive they perceived the clinical placement area. Other studies have indicated the need to improve the clinical placement area (Kananu et al., 2020; Mbakaya et al., 2020; Rajeswaran, 2017). It can therefore be suggested that the clinical placement area should be assessed at the beginning of every academic year to ensure that students get optimal clinical placement experiences.

In the present study, the academic qualification of participants was found to have a significant influence on their perceptions of the clinical placement area. The participants in the present study with higher qualifications held more negative perceptions of the clinical placement area which may have been more realistic, and this could be because they had more exposure or understanding of the facilities required in a clinical placement area to enhance clinical education. Similarly, a study in Malawi revealed that preceptors with at least a BSc in Nursing were more suitable for facilitation of clinical teaching and learning (Mhango et al., 2021). However, Nursing Educations Institutions (NEIs) could also collaborate with clinical facilities to organize continuous professional development programmes for experienced nurses who have the desire to be preceptors but have comparatively lower academic qualifications. Also, it can be suggested that NEIs could consider assigning nurse educators to clinical facilities to support and collaborate with preceptors in the clinical teaching of students.

The present study established that the preceptors' level of agreement regarding whether clinical placement dates are pre-published was 2.66 on a scale of 0-4 translating to 66.5%. The finding in the present study, although above average, shows a need for improvement in communication from the academic faculty responsible for publishing clinical placement dates. The findings in the present study is consistent with other studies which have reported that communication is an essential driving force of clinical nursing education (Moonaghi et al., 2015; Needham et al., 2016; Cândida et al., 2017). In the present study setting, the clinical facilities have to receive students from various NEIs, hence pre-publishing clinical placement dates will allow the clinical facilities to make a schedule for the various NEIs to avoid overcrowding during clinical placement. Pre-publishing clinical placement dates early is also necessary in ensuring that preceptors prepare to receive students.

The study findings revealed that there was an above average level of agreement that communication between students and clinical staff was effective. This study finding differs from an earlier study in Ghana which cited communication as a major challenge in preceptorship (Asirifi et al., 2017). Also, Ryan and McAllister (2019) indicated that spending time interacting with students and getting to know them was necessary for enhancing the relationship between clinical staff and students. The results of the present study suggest that clinical staff spend some amount of time interacting with students during clinical placement. However, preceptors in the present study are employees of the clinical facilities who combine their duties as nurses with the teaching of students during clinical placement. The lack of protected time to support students may negatively affect effectiveness of the communication. Considering the key role communication plays in making clinical placement successful, there is the need to put in place strategies such as pre-briefing and debriefing sessions to enhance communication between students and preceptors.

The study findings also indicate that the preceptors were of the view that the teaching and development of students is a joint responsibility of the university and the clinical facilities. This finding is consistent with that of other studies which also emphasised the collaborative role that

should be played by NEIs and clinical facilities in the clinical education of nursing students (Direko & Davhana-Maselesele, 2017; Maguire et al., 2012). Clinical nursing education consists of students acquiring theoretical knowledge and translating it into skills acquisition in the clinical placement area. It can be suggested that stronger collaboration will therefore play an essential role in coming up with strategies to support students to acquire professional skills. The development of a memorandum of understanding between NEIs and clinical facilities could be an important step towards stronger stakeholder collaboration.

#### *4.2 Clinical teaching and learning*

Clinical teaching and learning are core components of clinical nursing education. Overall, the findings indicate that the preceptors had a favourable stance towards the present state of clinical teaching and learning. The preceptors are the main group of clinical staff expected to assist students with the learning of clinical skills hence they could have scored themselves favourably to indicate that they were doing well. Also, clinical teaching and learning take place in the clinical facilities where the preceptors are employed so they could have been attempting to present the clinical environment in a favourable light.

The preceptors scored the clinical facilities 1.86 on a scale of 0-4 regarding the ability of the clinical facilities to provide adequate equipment and material resources for demonstration. This finding indicates that the clinical facilities may not be in the best position to support students to learn clinical skills. The finding agrees with an earlier study in Ghana in which the lack of material resources in the clinical area was reported as a major cause of the theory-practice gap (Salifu et al., 2019). In Ghana, though the clinical facilities provide the opportunity for clinical training of students, they are not obliged to provide equipment and material resources for clinical training. However, the NEIs could collaborate with clinical facilities to ensure the provision of adequate material resources for clinical skills teaching and learning. Where possible, NEIs may need to ensure that students are placed in clinical facilities that have adequate equipment and material resources. Aside, the NEIs should consider having pre-clinical placement meetings with preceptors to discuss how clinical placement objectives could be achieved in the face of the available equipment and material resources.

Students learn clinical skills at different rates and some may struggle to reach level of competency within the stipulated clinical placement duration. The development of a remedial plan that would assist students to gain mastery of clinical skills is an important factor in clinical teaching. The study established that the preceptors scored below average on the utilisation of a remedial plan to enable students to gain competence during clinical placement. The lower score may indicate that there is no utilisation of remedial plan or the preceptors have too many clinical responsibilities to ensure that remedial plans are implemented. In Ghana, the curriculum for training nursing students is competency-based hence there is a need for increased efforts directed at supporting students to achieve clinical placement objectives.

The preceptors also scored the students' acceptance of constructive criticism as less than average. To improve the learning of clinical skills, there is the need for preceptors to identify and criticise students on areas of the clinical skills learning that require improvement. Preceptors require some training on proper questioning techniques, giving cues and giving feedback to students during skills learning (Botma et al., 2012). However, it may be difficult to determine if the criticisms given by preceptors in this study were actually constructive or not. This is because preceptors in the present study are not trained in preceptorship and this could account for an inability to give constructive criticism.

#### *4.3 Clinical assessment*

The need for assessment and the fairness of assessments is an essential component of clinical education. The results of the present study indicate that while the preceptors had a more favourable view of the current method of clinical assessment, there was a general perception that improvement was needed. The finding concurs with another study in Ghana which identified the need to train assessors, standardise the assessment process and provide adequate resources for clinical competency assessment (Anim-Boamah et al., 2022). Also, specific areas of clinical assessment that were identified as requiring improvement include the need for signing a performance contract by students before the assessment, involving preceptors in development of

the assessment tools, and preceptors discussing and evaluating performance against each competency.

Clinical learning contracts have demonstrated a positive impact on students' clinical learning (Sajadi et al., 2017). The present study revealed that the preceptors scored a less than average on the signing of learning performance contracts to enhance the achievement of clinical placement objectives. This finding is consistent with a study conducted in China which revealed that there was poor knowledge regarding the signing a performance contract (Chan & Wai-Tong, 2000). By signing a performance contract, students and preceptors are able to understand their responsibilities in ensuring that students achieve their clinical placement objectives. To ensure effective application of performance contracts, NEIs should organise continuous professional development for preceptors to enhance their understanding of the concept.

The level of agreement regarding whether the student and the facilitator discuss and evaluate performance against each competency was scored as average by the preceptors. Receiving feedback has been identified as an important strategy in making clinical assessment more effective (Bani-issa et al., 2019). Students are expected to achieve specific competencies at every level of their study. One of the main reasons for the clinical assessment of students is to evaluate their performance against the expected competencies. A discussion after the clinical assessment will serve as feedback that will enable students to know the areas in which they need to put more effort. Preceptors should therefore endeavour to hold feedback sessions for students after clinical assessment.

## **5. Implications and limitations**

The study revealed that preceptors indicated that clinical nursing education is a joint responsibility between NEIs and clinical facilities. This calls for effective collaboration to ensure that clinical nursing education is well structured and supported by both NEIs and clinical facilities. The study also identified the need to develop and implement remedial plans for students who are unable to achieve clinical placement objectives within the clinical placement schedule. This will require NEIs ensuring that preparation of students includes clarifying the importance of instituting remedial plans to enhance the development of clinical competencies. Also, the signing of performance during clinical placement was identified as a way of improving the clinical nursing education. This strategy should be given the required attention by first teaching students the importance of signing the performance contracts.

The study had some limitations. The recruitment of preceptors from facilities in northern Ghana did not allow for the assessment of views in the southern part of Ghana. One will, therefore, not be able to tell if the views here represent that of southern Ghana. Also, the use of a quantitative approach did not allow the preceptors to express their views beyond what the questionnaire provided.

## **6. Conclusion**

The study findings suggest that though the preceptors generally perceived the quality of clinical nursing education to be slightly above average; there is the need to take steps to ensure that it improves. The study findings indicate that preceptors viewed clinical nursing education as a shared responsibility between NEIs and the clinical facilities. This calls for the need to for collaboration and effective communication between NEIs and the clinical facilities. The collaboration could involve developing training programmes for preceptors to improve their skills in clinical teaching and clinical assessment of students. There is the need to have scheduled assessment of the quality of clinical nursing education to inform strategies for improvement. Also, further studies should be done using qualitative approach to gain in-depth understanding of the issues that require redress to improve clinical nursing education.

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### Author contribution

The first author (GTN) conducted the study under the guidance of the second author (SJA). Both authors (GTN and SJA) were involved in the conceptualization, data collections, analysis and manuscript writing.

### Conflict of interest

The authors declare that there is no conflict of interest.

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