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Research Article

Student Radiographers' Perceptions of Clinical Placement: a Survey in Ghana

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Keywords

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- Students' experiences
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Abstract

Aim: To investigate final year undergraduate radiography students' perceptions of clinical placements, in relation to the clinical learning environment (CLE) and their learning achievements.

Methods: A 19-item pre-coded questionnaire with five point Likert-scale responses was administered face-to-face to 24 of the 27 final year radiography students who undertook mandatory clinical placements. Purposive sampling method was used to recruit participants. The Statistical Package for the Social Sciences (SPSS) version 21.0 was used to process the descriptive statistics data for analyses.

Results: The clinical placement enhanced students' skills in patient-centred care, interpersonal and clinical competence. Placement afforded students opportunity to put theoretical knowledge acquired in the class- room into real practice. Students' rated the assistance of practising radiographers as appropriate for achieving learning outcomes and satisfaction. Radiographers gave adequate supervision and actively included students in clinical activities as team members. Also, there were adequate learning resources at placement sites. However, the students reported that they received inadequate feedback on their clinical performances and seminars organized were not enough.

Conclusion: The students rated their clinical learning environment as positive and supportive, and achieved various clinical skills with satisfaction from clinical placements. Nevertheless, the students' articulated of been denied performance feedback by supervisors, of which the students were unhappy about.

INTRODUCTION

Several terms including clinical practicum, clinical practice experience, clinical rotation, practice education and clinical placement are used interchangeably in the literature, to describe the placements of students within a real clinical environment, such as clinics, hospitals and care centres to acquire practical skills [1-6]. Broadly, the clinical learning environment (CLE) encompass all that surrounds the student(s) in a clinic-context; the clinical venue, conditions, equipment, staff, supervisors, patients and learning resources that influence learning and experience [1,5].

The healthcare professionals' work is highly 'hands on' and skill based. Therefore, students must learn and master practical skills to ensure successful integration into the clinical setting post-graduation [7]. In Europe, Australia and several other countries, practice-based learning is an integral component of the pre-registration healthcare curriculum, and thus constitutes 50% or more of the time spent in training to become a nurse, midwife, occupational therapist and radiographer [4,6, 8-10,13]. Through clinical practice, students translate theory into real-life experiences thereby allowing them to develop professional clinical attributes, such as professional identity, interpersonal skills, expertise in patient care, practice competence and confidence [1,4-5,13]. However, previous studies about outcomes of clinical placements reveal that students' experiences are not always positive, but at times negative or mixed, depending on the clinical learning environment [5,10,14,15].

A Canadian [14] study reported that qualified staffs were unwelcoming and unwilling to assist student learning to achieve placement objectives. In Nigeria, Ogbu [16] assessed radiography students' perceptions of their clinical placement using questionnaires and interviews. The study concluded that the students enjoyed their practice experiences but placement venues lacked adequate learning resources such as a library, information technology facilities and study rooms. Henderson et al., [17] examined the level and factors contributing to undergraduate nursing students' satisfaction with clinical experiences in Australia. The authors reported that not all nursing students met their placement learning goals. Students blamed their failure(s) on lack of staff support and not being involved in patient care. A Hong Kong [1] study explored nursing students'

perception of the social climate of CLE after undertaking clinical placement, to examine the differences in students actual and perceived clinical experiences. The study observed significant difference between students` perception of the actual and perceived CLE. The researchers recommended the need for a supportive CLE. In Hakojarvi et al., `s [18] study, Finnish student nurses experienced both verbal and non-verbal bullying from qualified staff while on clinical training. This decreased the student learning, study motivation and professional engagement. Timmins et al., [19] surveyed 110 third year Irish nursing students to examine the components of their nursing programme that caused the students most stresses. The authors reported student placement experiences as the main stressor, and the stress was linked to students' relationships with qualified staff. Additionally, Longworth [7] explored the perceived factors that affect learning and skill transfer in preparation of United Kingdom midwifery students for an Objective Structured Clinical Examination (OSCE). The finding indicated that clinical practice provided the student a better opportunity to learn clinical skills than laboratory-based approach (using stimulators/manikins to learn clinical skills). The author added that positive attitudes of students to skill acquisition, assistance and feedback from qualified staff facilitated the successful skill transfer in the practice environment.

These variations in the findings about clinical placements highlight the need for evaluation of what prevails in Ghana. This paper intends to assess final year radiography students' perception of clinical placement, focusing on the CLE and the students' learning achievements.

Radiography education & clinical placements in Ghana

Ghana`s radiography program is provided by only one university, and takes four years to complete for the award of a Bachelor`s degree. The program is structured for theoretical and practice-based learning. Primarily, the first three years are dedicated to theoretical (preclinical) teaching and learning, with simulation practice sessions. In the fourth (final) year, students undertake only clinical practice at hospitals and research project writing. Prior to clinical placement, the university clinical coordinators brief students and radiography clinical staff about the learning goals to be achieved. Qualified radiographers at placement venues who have sufficient clinical knowledge, experience and teaching skills are usually tasked to act as supervisors to provide coaching, guidance, feedback and to ensure students are actively involved in clinical activities as team members. The university clinical coordinators visit the placement sites to assess students' progress and receive reports from radiographers about the students' performances.

MATERIALS AND METHODS

In conformity with the aim of this current study, some questions (in English) previously used by Ogbu [16] were adopted. A further set of questions were developed and added (Appendix 1). The questionnaire was answered in English. The initial questionnaire was piloted with three final year students, and those students were exempted in the final study, as their awareness of the questions might have rendered the research findings less reliable [20]. The piloting was useful to remove repeated questions, correct spelling mistakes, check clarity and questionnaire layout. The questionnaire was closed ended with pre-coded responses purposely to collect quantitative data. Apart from questions on demographic information, the rest of the questions were scored on a Likert scale with 5 optional responses ranging from strongly agree to strongly disagree. In scoring of the results, a strong agreement scored 1 and a strong disagreement scored 5. A score of 3 indicated neither agreement nor disagreement with the statement. The questionnaire was administered face to face to the remaining 24 of the 27 final year radiography students of the University of Ghana, following completion of mandatory clinical placements. Two of the participants did not return their questionnaires. One of the students who had participated in the pilot study was randomly chosen to administer the questionnaire, and was oriented by the author about the study aim and its related ethical issues. This enhanced blinding between the researcher/author (also a practising radiographer) and participants, to eliminate any tendencies of bias that could undermine the trust of the data. The Statistical Package for the Social Sciences (SPSS) version 21.0 was used to analyze the data. Spearman's rank correlation coefficient-(rs) was used to test associations between some variables [students satisfaction and aspects of CLE (clinical supervision, feedback, team membership, learning resources, radiographers assisting with learning); achieved skills (interpersonal, clinical competence, patient care expertise and integration of theory with practice) and aspects of CLE] at a 0.05 level of significance. First, second and third year students were excluded from the study because they were largely involved in preclinical learning. The University of Ghana Ethics committee granted ethical approval. Informed consent was obtained from all participants, and they were assured of anonymity and confidentiality of data.

RESULTS

All remaining 24 students of the final year cohort class (after excluding 3 students who took part in the pilot study) were given the questionnaire, however, 22 returned the questionnaire, giving a response rate of 91.6%. Of the 22 respondents, 68.2% were males and 27.3% were females. Furthermore, 68.2% of the respondents' age ranged between 18-24 years, with 18.2% and 13.6% within 25-28 years and 29 years plus respectively. 81.8% of the students had their placement at teaching hospitals, whereas 9.1% and 4.5% undertook their placements in regional and district hospitals respectively.

Regarding skills achieved by students, patient-centred care expertise, clinical competence and integration of theory with practice each contributed 72.7% to the learning experience while development of interpersonal skills accounted for 86.4% (Table 1). With respect to the various aspects of CLE, 90.9% and 72.7% of the students indicated that radiographers were approachable and willing to assist with learning, respectively. Furthermore, 54.5% reported that supervision was appropriate to achieving learning outcomes (Table 2). Availability of learning resources at placement venues was identified by 59.1% of the respondents. However, 72.7% indicated that not many seminars were organized, and only 36.4% admitted to receiving feedback about their clinical performance (Table 2).

Table 1: Skills achieved by respondents from clinical placements.

Skills from clinical placements	Frequency	Percentage (%)
Enhanced interpersonal skill	19	86.4
Enhanced patient-centred care	16	72.7
Enables theory into practice	16	72.7
Enhanced clinical competence	16	72.7

*Enhancing various skills and helping to integrate theory with practice (n= 16, 72.7%).

Table 2: Respondent ratings of some aspects of CLE.

Components of CLE	Frequency	Percentage (%)
Supervision for meeting learning goals	12	54.5
Radiographers being approachable	20	90.9
Radiographers assisting learning	16	72.7
Not enough seminar organized	16	72.7
Feedback was provided	8	36.4
Involved as team members	12	54.5
Adequate learning resources	13	59.1

*Radiographers were approachable ($n_=$20, 90.9%) but only 36.4% ($n_=$ 8) were provided performance feedback.

On the other hand, the correlation analyses results indicated a poor but proportional (positive) association between clinical supervision and achieved skill (interpersonal communication). This association was statistically significant correlation coefficient (rs) = 0.41, (p=0.05*), see (Tables 3 & 4).

Similarly, the correlation analyzes results indicated a good and proportional (positive) association between students' satisfaction with placement and two aspects of CLE (radiographers assisting learning and clinical supervision). The associations were statistically significant [correlation coefficients (rs) = 0.65, (p=0.01*), (Table 5).

Furthermore, the correlation analysis result indicated an association of no correlation between students inclusion as team members and satisfaction with placement, with the correlation coefficient (rs) of 0.22, (p=0.032), see (Tables 3 & 5).

DISCUSSION

Of the 24 questionnaires administered, 22 were completed and returned, giving 91.6% outcome. This high response rate contradicts Gawugah et al., [22] assertion, that questionnaire surveys traditionally have low responses.

The current study observed that female graduating radiographers were fewer than males. The observation correlates with previous demographic reports [23]. Furthermore, the study observed that most of the respondents (81.8% and 9.1%) were placed in teaching and regional hospitals respectively, compared to district hospitals (4.5%).

The aim of this study was to investigate the students' perceptions of clinical placements, relating their CLE and learning achievements.

The findings show that, the students during the placement encountered a positive and supportive CLE, and achieved tremendous skills that are important for post-graduation practice (Table 1). These skills ranged from patient focussed care (providing care with patient at the centre of decision making) and, interpersonal communication (effective way of communicating with patients, colleagues and other professionals), to clinical competence (confidently perform clinical task).

The placement venues had adequate learning resources to support students' development and independent learning. This finding contradicts previous research [16]. Furthermore, the qualified radiographers at the placement settings demonstrated good, professional and positive attitude towards the students. They assisted students' with learning, included the students in active clinical activities, and they were approachable. However, inclusion of students as team members 54.5%; (Table 2) in clinical activities did not have contribution or influence on the students' feeling of fulfilment of satisfaction with their placement, compared to radiographers assisting with learning (Table 5). This outcome deviates from reports indicating that students' involvement in ward practice or their relationship with clinical staff is a predictor of satisfaction with the CLE during clinical practice [1].

Again, radiographers also provided effective clinical supervision to ensure that students were guided, directed and coached to practice safely to ensure fulfilment of placement satisfaction and achievement of interpersonal skill (Tables 4 & 5). This demonstrates the positive role of supervision during clinical placement. The finding is similar to previous studies [9,10,12,24] but differs from other findings [14, 25, 26, 27] that suggested clinical supervisors were unsupportive, unfriendly and unwilling to assist learning, and thus contributed to failure of some students not achieving their learning objectives, placement satisfaction and feeling intimated in the clinical area.

It is interesting to note that per the correlation analyzes of this study, the clinical supervision and radiographers assisting student learning are the only components of CLE (Table 5) that must have made the students in this current study more satisfied than students in other studies [7,14, 17-19].

Despite that participants were satisfied with the radiographers' supervision, significant majority of the students' bemoaned not receiving performance feedback. It is likely that feedback was given, but probably in an informal manner, and perhaps making it unpopular for majority of the students to identify [28, 29]. Perhaps, the significant number of the participants may have envisaged the feedback to be provided mainly through a formalized meeting such as at placement seminars. Unfortunately, not many seminars were organized during the placement period.

Table 3: Reference for interpreting relationship of variables [21].

Values	Remarks
0 to 0.25, 0 to -0.25	Association of no correlation
0.25 to 0.50, -0.25 to -0.50	Poor correlation between variables
0.50 to 0.75, -0.50 to -0.75	Moderate to good correlation
0.75 to 1, -0.75 to -1	Very good to excellent correlation

*Nb: The sign preceding the correlation value (+ or -) indicates the direction of association. Thus, (-) or (+) means inverse or proportional growth of values in data sets respectively

Table 4: Association between achieved skills and aspects of CLE.

	Team membership	Radiographers assisting learning	Clinical supervision	Feedback	Learning resource availability
Interpersonal skill	$r_{s=}$ 0.29 $p_{=}$ 0.11	$r_{s=}$ 0.00 $p_{=}$ 1.00	$r_{s=}$ 0.41 $p_{=}$ 0.05*	$r_{s=}$ 0.30 $p_{=}$ 0.22	$r_{s=}$ 0.29 $p_{=}$ 0.19
Clinical competence	$r_{s=}$ -0.02 $p_{=}$ 0.95	$r_{s=}$ -0.23 $p_{=}$ 0.30	$r_{s=}$ -0.10 $p_{=}$ 0.85	$r_{s=}$ 0.13 $p_{=}$ 0.576	$r_{s=}$ 0.10 $p_{=}$ 0.66
Theory with practice	$r_{s=}$ -0.02 $p_{=}$ 0.95	$r_{s=}$ 0.36 $p_{=}$ 0.10	$r_{s=}$ -0.16 $p_{=}$ 0.49	$r_{s=}$ -0.11 $p_{=}$ 0.62	$r_{s=}$ 0.12 $p_{=}$ 0.59
Patient care	$r_{s=}$ 0.19 $p_{=}$ 0.39	$r_{s=}$ -0.18 $p_{=}$ 0.60	$r_{s=}$ 0.20 $p_{=}$ 0.38	$r_{s=}$ 0.27 $p_{=}$ 0.22	$r_{s=}$ -0.04 $p_{=}$ 0.88

Any association of variables examined which was statistically significant ($\mathbf{p \leq 0.05}$) is marked by an asterisks (*).

Table 5: Association between student placement satisfaction and aspects of CLE.

	Team membership	Radiographers assisting learning	Clinical supervision	Feedback	Learning resource availability
Students satisfaction	$r_{s=}$ 0.22 $p_{=}$ 0.32	$r_{s=}$ 0.65 $p_{=}$ 0.01*	$r_{s=}$ 0.65 $p_{=}$ 0.01*	$r_{s=}$ -0.18 $p_{=}$ 0.42	$r_{s=}$ 0.23 $p_{=}$ 0.30

Any association of variables examined which was statistically significant ($\mathbf{p \leq 0.05}$) is marked by an asterisks (*****).

In another argument, student of this study enjoyed cordial relationship with the supervising radiographers, which in a way might have interfered with the feedback process. It is noted that supervisors value their relationship with learners and may do everything to avoid upsetting and disappointing students, especially if negative feedback is to be provided [28,30].

Meanwhile, the complaints of not receiving enough feedback from clinical supervisors is not unique to this current work [28], and several other hindrances have been cited [28,31].

CONCLUSION

A supportive CLE is of paramount importance in securing the required teaching and learning process. The placement sites provided the students with an environment where they received learning opportunities and achieved skills. It is evident that, the overall student placements experience was enjoyable and satisfactory.

The collaboration between the University and hospitals must be maintained to ensure clinical placement best meet the needs of students.

On the other hand, more seminars should be organized during the clinical placement to deliver performance feedback and address other issues of concern to students. The University of Ghana should also consider incorporating mandatory clinical placements at all class levels and not only in the fourth year.

Using only closed ended questions limited participants from sharing their personal views and might affect the richness of the data. Furthermore, findings from this study should be interpreted and generalized with caution as the study was conducted with only final year cohort group and one institution.

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