

Higher National Diploma Nursing Students' Knowledge on their Responsibilities and Challenges Faced on Internship in the Buea Health District, Cameroon

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ABSTRACT

Background: Clinical education is one of the fundamental areas in developing the nursing profession. It allows nursing students to transform conceptual knowledge into psychomotor skills and apply them to patient care. However, students need to understand their responsibilities regarding clinical learning in order to acquire the expected practical skills.

Objective: This study sought to assess Higher National Diploma (HND) nursing students' knowledge on their responsibilities during clinical learning and challenges faced in health facilities in the Buea Health District (BHD).

Methods: This study adopted a cross-sectional study design. Purposive and simple random sampling techniques were used to select the study sites and enroll participants respectively. The study was conducted in four health facilities within the BHD, which had nursing students on internship. The participants were HND nursing students on internship, who gave their consent to participate in the study. Data was collected using a well-structured, self-administered questionnaire made up of both open and closed-ended questions. Data was collected on nursing students' knowledge regarding their responsibilities during clinical learning and challenges faced. Data collected was coded, entered into an Excel 2010 spreadsheet and analysed using SPSS version 25.0. The Chi squared test was used to test for association between variables at 95% confidence interval. A p-value of less than or equal to 0.005 was deemed statistically significant. Results were presented using tables, charts and bar charts.

Results: A total of 198 respondents participated in this study. Most [170 (85.9%)] of the participants were females and 120 (60.6%) were in the age range 18-25 years. The results showed that 146 (73.7%) students had adequate (good) knowledge on their responsibilities in the clinical setting and the difference was statistically significant with $p < 0.001$. Also, 139 (70%) of the participants had adequate knowledge on their expectations on acquisition of skills. Again, they faced challenges such as limited time management, limited hospital resources, and maltreatment from the nurses.

Conclusion: A high proportion of HND nursing students had good knowledge on their responsibilities during internship. Majority of the students had adequate knowledge on the clinical skills expected to be acquired at each level. However, the HND nursing students faced challenges such as limited time, limited hospital resources and maltreatment from the nurses, which is a cause for concern.

Keywords: Knowledge, HND Nursing Students, Responsibilities, Clinical Skills Acquisition, Challenges

Introduction

Hospital wards have always been a traditional clinical placement setting for nursing students. Depending on the country and the healthcare system, students have also practiced in communities, mental health care and nursing homes as well as non-traditional settings such as parishes, prisons or children day care [1].

Hospital ward is a place where student nurses practice in order to gain experience and skills. Clinical placements for nursing students are important in many aspects and consider as an irreplaceable component of nursing education [2]. From the legal perspective, practice in the clinical setting is a requirement to ensure fitness to practice as a nurse. From the educational standpoint, the clinical placement is the venue where skills, knowledge and attitudes acquired in the theoretical part of the curriculum are applied, develop and integrated [3].

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The nurse is expected to perform several different practical skills daily while on duty; in order to provide adequate care, maintain patient safety and feel comfortable in the profession, nurses need to be equipped with the necessary skills [4]. This is in order to enable them work appropriately in the care of patients. In like manner, nursing students are required to learn such skills in preparation to work as nurses. Performing practical skills is a complex action that requires adequate theoretical knowledge and a critical attitude adapted for each unique patient in a specific context [5]. Hence, clinical learning in nursing education is a vital component of Nursing Education. Nursing training is the combination of the theoretical and practical learning experiences that enable students to acquire the necessary knowledge, skills and attitude for providing optimum nursing care [6].

Clinical education is one of the fundamental domains in developing nursing profession, as it provides the opportunity for nursing students to transform conceptual knowledge into psychomotor skills and apply them to patient care [7,8]. A large part of nursing education is carried out in the clinical learning environment [9]. Students' clinical experience is an influential element in the quality of nursing education and has a major effect on their learning outcomes and cultural adjustment in this profession [10]. Clinical placements where students learn how to apply theory to practice are expected to provide a conducive atmosphere for students to acquire nursing skills including clinical reasoning skill in order to become professional nurses. Unlike classroom education, clinical training in nursing occurs in a complex clinical environment, which is influenced by many factors [11].

This environment provides an opportunity for nursing students to learn experimentally and to acquire a variety of mental, psychological and psychomotor skills, which are of importance to patient care. It is worth noting that a conducive clinical learning environment has a positive impact on the students' professional development, while a poor or stressful learning environment can have a negative effect on their professional development process [12]. Students' preparation to enter the clinical setting is one of the important factors affecting the quality of clinical education [13]. In addition, to providing an enabling environment for students to learn effectively and acquire nursing skills, students on their part need to be prepared and understand their responsibilities during clinical learning.

Despite the importance of clinical teaching and learning in the nursing profession, little is documented on students' responsibilities in the clinical learning environment, especially in the Buea Health District (BHD). If students do not perform their duties during clinical learning as expected, they might face challenges as a consequence. This prompted the researchers to conduct this study to assess HND nursing students' knowledge on their responsibilities and the challenges they faced during internship at the BHD. Specifically, we sought to assess HND nursing students' knowledge on their responsibilities during clinical learning, assess HND nursing students' knowledge on the expected clinical skills to be acquired and identify the challenges they face in the clinical environment at the BHD. Exploring the responsibilities and challenges students face is essential, as the findings from this study could provide a framework which might guide the development of educational interventions to upgrade clinical teaching and learning. This will in turn improve on the

training of student nurses and facilitate their transformation from novices to competent professionals.

Materials and Methods

A hospital-based cross-sectional descriptive study was conducted from January to July 2022 to assess HND nursing students' knowledge on their responsibility and challenges faced during clinical learning. Both quantitative and qualitative approaches were used to collect and process data. A self-administered semi-structured questionnaire was used to collect data. The target population comprised all HND nursing students on internship at the hospitals in the Buea Health District, South West Region, Cameroon. It has a Regional Hospital (secondary level) which serves as the region's referral and teaching hospital, seven primary care facilities, and a few private hospitals.

A purposive sampling technique was used to select four health facilities in the Buea Health District, which were Buea Town Integrated Health Center (BuIHC), Molyko Integrated Health Centre (MIHC), Subdivisional Hospital Muea (CMA Muea), and Bokwango Integrated Health Centre (BoIHC). These healthcare facilities were chosen for this study because they serve as entering points into the health pyramid with several resources for patient care and medical education. In addition, they remain the main sites for clinical training of nurses, midwives and laboratory technicians from different higher training institutions within Buea Health District.

The target population of this study was composed of all HND nursing students on internship from the various nursing institutions who were on internship in the four selected health facilities. The sample size was calculated using the Cochran's formula with the minimum sample size for this study being 198 students. Probability proportionate to size sampling method was used to get the number of participants required per school as shown in Table 1.

Table 1: Proportionate Samples for Each Health Institution

Category	Population size	Proportion (%)	Sample size
Buea Town Health Center	54	25.2	50
Molyko Health Centre	37	17.1	34
CMA Muea	70	35.3	66
Bokwango Health Centre	49	22.4	48
Total	210	100	198

Data was collected on participants' knowledge regarding their responsibilities in the clinical environment, knowledge on expected clinical skills and the challenges HND nursing students face in the clinical environment. Participants' knowledge on their responsibility in the clinical environment was assessed using nine questions. Each question giving a point, making a total of nine points. A score of 1-3 on 9 (25%) was referred to as not knowledgeable (poor knowledge) while a score of 4-9 on 9 (50-100%) was referred to as knowledgeable (good knowledge). On the knowledge of participants regarding expected clinical skills, seven questions were used; each question giving a point,

making a total of seven points. A four point-Likert Scale was used to determine the participants' responses; participants who disagree and /or strongly disagree with a score of 1-3 on 7 (25%) were referred to as not knowledgeable (had poor knoweldege) while those who agreed and/or strongly agreed with a score of 4-7 on 7 (50-100%) were referred to as knowledgeable (had good knowledge). Close and open ended questions were used to identify the challenges faced by HND nursing students during clinical learning. The questionnaire was pretested to check its validity among nursing students on internship in two health facilities within Buea Health District. Copies of the questionnaires were then administreted to the participants who completed the various sections of the questionnaire.

Data was analysed using inferential and descriptive statistics. The descriptive statistics included the use of tables, frequencies, percentages and charts to explain the results. For inferential statistics, the Chi-squared test for independent variable was used where appropriate to test for association, a p-value <0.005 was considered statistically significant. The results were expressed in frequencies and percentages.

Ethical Approval

This study was authorised by the Department of Nursing, Faculty of Health Sciences, University of Buea, Cameroon. Administrative authorisation (ethical approval) was first obtained from the Institutional Review Board (IRB) of the Faculty of Health Sciences, University of Buea, Cameroon. Also, permission was sought from the authorities of each Hospital. All participants provided written consent before participating in the study by signing the consent form; assent was sought accordingly.

Results

A total of 198 HND nursing students participated in this study; 120(60.6%) were between 18-25years, 170(85.9%) were female and 113(57.1%) of the students were from st. David (Table 2).

Table 2: Distribution of Students by their Demographic Characteristics

Variable		n (%)
Age Range	18-25	120 (60.6)
	26-30	49 (24.7)
	31-40	28 (14.1)
	41<	1(0.5)
	Total	198 (100)
Gender	Female	170 (85.9)
	Male	28 (14.1)
	Total	198 (100)
Religion	Christian	187 (94.4)
	Muslim	9 (4.5)
	Others	2 (1)
	Total	198 (100)
School Attending	Biaka University	39 (19.7)
	St David institute	113 (57.1)
	Redemption Institute	46 (23)
	Total	198 (100)

Based on students' knowledge on their responsibilities in the clinical learning, only 71 (35.9%) of the students admitted they accompanied their clinical supervisors in designing their daily activities while the rest 49(24.7%) did so themselves. This difference was statistically significant (P<0.001). The students were knowledgeable about the right thing to do in case the clinical teacher assigned them to perform a procedure. Majority 155 (78.3%), of the students indicated they asked questions on how to perform a task or procedure while their instructor or supervisor performs it. There was a statistically significant difference between the students who asked questions and those who felt ashamed to ask questions(P<0.001) (Table 3).

Table 3: HND Student Nurses' Knowledge on their Responsibilities in Clinical Learning Environment

	Options	n (%)	X ² (p)
Designed your activities of the day in the ward	The clinical teacher	70 (35.4)	52.626 P<.0001
	Myself	49 (24.7)	
	Me and my clinical teacher	71 (35.9)	
	Nobody	8 (4.0)	
The right reaction when the clinical teacher sends students to perform a clinical task	Get angry sit down and stay moody	3 (1.5)	304.707 P<.0001
	I feel ashamed to tell her I can't perform the task	15 (7.6)	
	Ask questions on how to perform the procedure or do observation while he/she performs	155 (78.3)	
	I do nothing	25 (12.6)	
Collaborates with the nurses available in the unit	Agree	120 (60.6)	P<0.0001
	Disagree	9 (4.5)	
	Strongly Disagree	7 (3.5)	
	Always	124 (62.6)	

With regards to the knowledge on practical skills acquisition in the Clinical Setting. Most students, 191 (96.46%) affirmed that they communicated with patients and other nurses. Almost all, 193(97.5%) agreed that what was taught in school was effectively applied during clinical practice, and 94.4% performed their activities with confidence. More than half,141(71%) of the students' nurses reported to have acquired critical thinking skills and problem-solving skills to handle complex situations in the workplace, 125(63.1%) indicated they possessed organizational skills, and 101(51.0%) of participants agreed were able to manage the time given for a particular procedure (Table 4).

Table 4: Respondents’ Opinions on their Practical Skills in the Clinical Setting

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
I often communicate with the patient and other nurses	93 (47.0%)	98 (49.5%)	6 (3.0%)	1 (.5%)
As a student nurse, I can effectively apply what was taught in school to a real-life situation	74 (37.4%)	111 (56.1%)	13 (6.6%)	0 (00.0)
I perform my nursing task with confidence and assurance	68 (34.3%)	119 (60.1%)	10 (5.1%)	1 (.5%)
I take decisions on patient care based on the priority of the patient needs	39 (19.7%)	110 (55.6%)	44 (22.2%)	5 (2.5%)
I have acquired critical thinking skills and problem-solving skill which involves the ability to handle complex situations in the work place	46 (23.2%)	95 (48.0%)	48 (24.2%)	9 (4.5%)
I possess the organizational skills	42 (21.2%)	125 (63.1%)	27 (13.6%)	4 (2.0%)
As a student nurse I am able to maximize the time given for a particular procedure	47 (23.7%)	101 (51.0%)	43 (21.7%)	7 (3.5%)

In sum, 141(71%) of the students have acquired and exercised different skills such as application of theory, confidence and assurance, decision Making, Critical Thinking, Problem Solving, Organisational and Time Management (Figure 1).

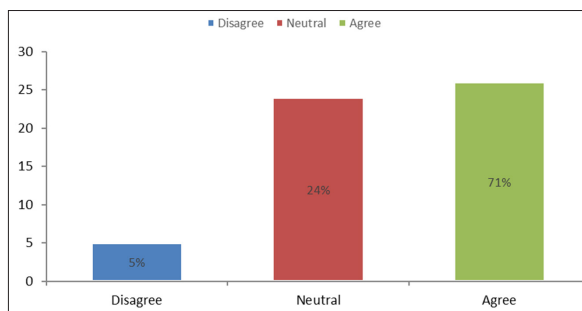


Figure 1: The Overall Skills Identification

Based on the association between demographics and student nurses’ knowledge on practical skills in the clinical setting, the study revealed that student nurses from 26-30 years were more skillful in the clinical setting compared to those of ages below. However, age was not statistically significant in the effectiveness of student nurses’ practices. Students from the Biaka University Institute were more knowledgeable about the practical skills in the clinical settings. The findings imply that demographic factors impact the skills acquisition of HND students in the clinical settings at the Buea Health District. However, the influence of the demographic factors was not statistically significant. Qualitatively, we found out that 47% of the findings indicate that student nurses have acquired and exercised different skills such as application of theory to practice, confidentiality skills, decision-making skills. On the contrary, there was not enough evidence to show that students have acquired problem-solving skills, organizational and time management skills (Table 5).

Table 5: Association Between Demographics and Student Nurses’ Knowledge on Practical Skills Acquisition in the Clinical Setting

		Inadequate Knowledge on Responsibility	Adequate Knowledge on Responsibility	Chi Square p-Value
Age range	18-25	12	107	X ² =.558
		10.1%	89.9%	P=.906
	26-30	5	44	
		10.2%	89.8%	
	31-40	4	24	
		14.3%	85.7%	
Gender	>41 years	0	1	
		0.0%	100.0%	
	Female	17	152	X ² =.451
	10.1%	89.9%	P=.502	
	Male	4	24	
		14.3%	85.7%	

Religious affiliation	Christian	18	168	X2 =4.702
		9.7%	90.3%	P = .095**
	Muslim	2	7	
		22.2%	77.8%	
	Others	1	1	
		50.0%	50.0%	
School attending	Biaka University	3	35	X2 =9.043
		7.9%	92.1%	P=.029*.
	St David institute	11	101	
		9.8%	90.2%	
	St David institute	1	0	
		100.0%	0.0%	
	Redemption Institute	6	40	
	13.0%	87.0%		

* Statistically significant at P < 0.005, ** Statistically significant at P < 0.001, *** Statistically significant at P < 0.001

Regarding the challenges HND student nurses faced in the clinical settings in the Buea Health District. The findings as captured from respondents are presented in table 6 below. Based on the findings, about 20% of the students faced orientation challenges during their clinical practice, a minority of the student nurses, 32(16.1%) indicated that they faced challenges performing basic clinical procedures and were not guided on how to perform certain basic clinical procedures. About three-quarters, 161(81.3%) of the students stated limited resources to facilitate their learning, and 113(57%) reported they were sometimes stressed up because of the work they had to do which ought to have been done by nurses (Table 6).

Table 6: Challenges Faced by HND Student Nurses on an Internship in the Buea Health District

Challenges	Strongly Agree	Agree	Disagree	Strongly Disagree
I was oriented on clinical skills related to my level of practice	48 (24.2%)	114 (57.6%)	33 (16.7%)	3 (1.5%)
I was guided by the clinical nurse on how to perform certain basic procedures	72 (36.4%)	94 (47.5%)	29 (14.6%)	3 (1.5%)
Do you face difficulties in the hospital setting or one of the units you worked in	49 (24.7%)	112 (56.6%)	33 (16.7%)	4 (2.0%)
The hospital has available resources to facilitate my learning	31 (15.7%)	104 (52.5%)	51 (25.8%)	12 (6.1%)
I think I am sometimes used by other nurses to do their work and I end up been stressed up	46 (23.2%)	67 (33.8%)	78 (39.4%)	7 (3.5%)
The period I was allocated in different wards is enough for me to promote learning in relation to my level of training	39 (19.7%)	91 (46.0%)	55 (27.8%)	13 (6.6%)
The nurses I work with have good knowledge and are motivated in working with for they help me achieve my learning goals	55(27.8%)	94(47.5%)	39(19.7%)	10(5.1%)
I am being insulted by nurses and I am not treated as a nurse undergoing training because I do not have the skills, they require of me	42(21.2%)	61(30.8%)	86(43.4%)	8(4.0%)

Discussion

This study aimed at assessing Higher National Diploma (HND) nursing students’ knowledge on their responsibilities and challenges faced on intenship in the Buea Health District.The findings from this study will help health facilities to provide an effective clinical learning environment to nursing students in order to ensure practical skills acquisition and promote the students’ satisfaction with the clinical experience, which can result in production of highly trained and clinically competent nursing workforce. Also, exploring the responsibilities and

challenges student nurses face is essential in developing interventions in the clinical learning environment to upgrade teaching and learning. This could help improve training and enhance problem solving skills. This can go as far as increasing student nurses satisfaction during their internship period.

According to the findings of this study, a few of the students admitted they worked together with their clinical supervisors in designing their activities, majority of the students did it by themselves or did not plan activities during clinical internship.

This difference was statistically significant ($P < 0.001$). This finding contradicts that of a previous study conducted by Al-Niarat et al. where a majority of the participants received supervision from the staff and nurse educators [15]. Lack of supervision affects students' learning and skills acquisition as they are supposed to work with the supervisors or clinical teachers in designing activities to facilitate learning. Angela in Tanzania found that students were not supervised during clinical rotations, which negatively affected their learning and competencies [16]. However, our study revealed that student nurses asked questions on how to perform tasks or procedures. In contrast, their instructors or supervisors performs it as most participants indicated. We further found that the nursing students were knowledgeable about their responsibility to show interest to work with the clinical teacher or supervisor. They collaborate, asked questions, and showed interest in learning, which portrayed a positive attitude. In other words, we found a positive attitude and willingness to learn from the students. This require the students to be proactive in gaining experience related to their level of practice and competence with the support of the mentors. Overall, the study found that more than half of the students were willing to learn from their supervisors or mentors and were proactive in their search for knowledge. They equally reflected on what they learned daily to increase their self-awareness after their shift was over for the day. These findings align with the study by Bas et al, where most student nurses clearly understood their role as nursing students during their first placement, as supervisors often asked questions to empower students or increase students' understanding [17].

Again, our findings revealed that, almost all the students affirmed that they communicated with patients, nurses and other student nurses. Communication is important for student nurses because it helps build relationships with patients and strengthens the relationship with nurses, other staff members, and among student nurses. The findings of this study is in line with the previous study conducted by Shafakhah et al. on clinical skills acquisition, whereby 58% of student nurses had good communication skills [18]. In addition, most of our participants agreed that what they were taught in school was effectively applied during clinical practice; they performed their activities confidently. This finding is similar to that of a study conducted in Northern Tanzania, in which 84.4% of students agreed that clinical placement offers them opportunities for clinical learning [19].

This is suggestive of the fact that the nursing students perceived the clinical environments within the Buea Health District as opportunities for them to translate their classroom theory to practice. However, the influence of the demographic factors was not statistically significant. Qualitatively, we found out that 47% of the student nurses have acquired and exercised different skills such as application of theory to practice, confidentiality skills and decision-making skills. However, there was not enough evidence to show that students have acquired problem-solving skills, organizational and time management skills.

Regarding challenges, majority of the students revealed that they faced difficulties in the hospital setting where they worked as interns, which is in line with Eta et al [20]. The HND nursing students mentioned challenges in terms of limited orientation and related difficulties in the course of their clinical learning

(internships) within the clinical setting of the Buea Health District. This can negatively affect their learning and acquisition of skills. Orientation is a very important first step for students moving to the clinical learning environment, as it facilitates the appropriate integration of theory and practice. Our findings concurs with that of a previous study by Siri et al, where eventhough majority of the student nurses reported to have clear understanding of their role as student nurses during their first placement, they were however unclear about the role of their mentors in achieving their learning outcome [21].

In addition, a significant proportion of our participants indicated they faced the challenge of limited resources to facilitate their learning. It is worth noting that the lack of necessary resources hinders clinical learning. Resources like equipments and other learning materials are vital to enable nursing students (HND students) learn effectively [22]. Students need different resources in the course of their practical experience in clinical settings, and a lack of these resources has a negative impact on their learning and skills acquisition. It can hugely affect their performance as students may miss out on important practical areas due to lack of essential resources. Our study further revealed that about half of the participants reported to have been insulted by nurses and mistreated. These findings agree with that of Eta et al, whose participants reported improper treatment of student nurses by clinical instructors [23]. It has been reported that student nurses' practical learning in sub-Saharan Africa is challenged by many factors that adversely affect learning. Some factors reported affecting students learning in clinical settings act at different levels, which are individual level (student factors), hospital environment, social-economic factors, and nurse tutor's factors [24].

Conclusion

From our findings, it can be concluded that majority of the students are knowledgeable on their responsibilities in the clinical learning environment. However, most of the student nurses did not plan their daily activities with their ward supervisors. Also, the demographic factors had an impact on students' knowledge in the clinical settings at the Buea Health District. The HND nursing students exhibited adequate knowledge on some of the clinical skills required in the clinical setting. The most prevailing skills were communication skills, critical thinking skills and problem-solving skills. Nevertheless, nursing students face variety of challenges that might hinder adequate exploitation of their clinical learning experiences such as the inability to work with other nurses and lack of equipment to facilitate learning.

Findings from this study will help Health Institutions to regulate the number of interns taken in per period and the number of intake per unit and equally give all the interns' adequate placement time for the acquisition of clinical skills.

Limitation of the study

The main limitation of this study was the use of only four hospitals within the Buea Health District. However, the four hospitals serve as teaching hospitals for nursing students at different levels of training. Hence, the findings presented a general picture of the situation on ground.

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Authors' Contribution

The first three authors participated in different steps of the study from its commencement to writing. That is, conception and design, acquisition of data, analysis and interpretation of data as well as drafting and or revising, editing and approving the final manuscript. Tingom F assisted in analysing the data while Kome RN contributed in preparing the manuscript.

Conflicts of interest

The authors declare that they have no conflicts of interest

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