

Original Article

# Student Nurses' Perceptions of Clinical Skills Laboratory as a Learning Space in South Africa

Luke Laari (PhD, MN, Hons Nursing Education, BSc Nursing, RGN) <sup>1</sup>  
Barbara M. Dube (PhD, MN, RN) <sup>1</sup>

## Abstract

The acquisition of quality clinical experience within a supportive and pedagogically regulated clinical learning environment is a major concern for both nurse educators and educational institutions. In nursing, the mastery of clinical skills is required to become a trained nurse. This study explored the undergraduate nursing students' perceptions of clinical skills laboratory as a learning space in higher education in South Africa. A qualitative exploratory descriptive design was used. Thirty-two (32) undergraduate nursing students, eight from each year group, were recruited from a selected university in South Africa for four focus group discussions. Data collection happened between June and November 2016. A thematic content analysis was used to give a narrative account of the findings. Four themes emerged from the data which include privacy on feedback, knowledgeable and accessible personnel, scheduling for access, and time limitation. Most students indicated that the learning environment was technologically competent in assisting them to link theory to practice before going to the ward to work on real patients. Some students, however, noted that access to the clinical skills laboratory needed improvement. Adequately retooling the clinical skills laboratory with regards to human resource will facilitate learning in that environment and will improve the quality of practical training nursing students receive.

## Keywords:

**clinical skills laboratory; learning environment; nursing students**

1. *Presbyterian Nurses Training College, Bawku, Ghana,  
School of Nursing and Public Health,  
University of KwaZulu-Natal, Durban, South Africa*
2. *School of Nursing and Public Health,  
University of KwaZulu-Natal,  
Howard College Campus Durban, South Africa*

1. **Corresponding Author:**  
*Presbyterian Nursing and Midwifery Training College,  
P. O. Box 45 Bawku, Ghana,  
aariluke@yahoo.com  
Tel: +233244756126*

## Introduction

The link between theory and practice during education is a central topic in a debate that takes a position in various disciplines. The notable contribution is by Arreciado Maranon and Isla Pera (2015) who contend that the education of university students is based on a pyramid of knowledge in which basic sciences take pride of place and clinical placements are relegated to the last stage of the ladder. Available literature (Rochmawati, Rahayu, & Kumara, 2014) in nursing suggests that this hierarchical distinction between theoretical knowledge and its practical application is evident, as clinical placements occur after knowledge has been acquired resulting from the assumption that it is in this setting that nursing students will learn to apply their acquired knowledge (Arreciado Maranon & Isla Pera, 2015). However, it is the combination of what is taught to students, what they will do or see in clinical placements, and what they will experience throughout their university education at the clinical sites that will create their idea of a professional nurse in their future practice (Bjork, Berntsen, Brynildsen, & Hestetun, 2014; Ellard et al., 2014; Flott & Linden, 2016).

Nursing education is a process that demands theoretical and practical learning and requires the acquisition of theoretical knowledge and skill (Hooven, 2015). However, literature search indicates few studies on students' perceptions of the clinical skills laboratory as a learning environment (Wells & Dellinger, 2011).

A study by Serçekuş and Başkale (2016) on Nursing students' perceptions about clinical learning environment with a purpose to research factors that affect the clinical learning environment was conducted. A qualitative approach was used with 36 nursing students recruited from a School of Nursing in Turkey. The findings indicate that students are negatively affected by communication errors and feedbacks given in the presence of their colleagues by clinical facilitators and that the constant presence of clinical facilitators may be the source of stress for some students in their practice environment. The finding revealed that peer support and favourable communication with peers have a positive impact on student clinical learning. Communication with hospital staff and clinical facilitators were found to be important. The study further revealed that student learning is affected by

the level of confidence and support displayed by clinical facilitators.

The authors concluded that, in order to ensure the most favourable learning environment for students in the clinical area, it is essential that cooperation is increased between lecturers and clinical facilitators, instructor skills are developed, and students are supported in the clinical learning environment (Serçekuş & Başkale, 2016). This study gave a good conclusion. However, it failed to indicate what students' views were regarding their clinical environment, equipment and availability of facilitators. This consequently leaves a gap requiring a study that will determine perceptions of students of the clinical skills laboratory learning environment.

Another study by Aktaş and Karabulut (2016) with the aim to explore nursing students' perception of the clinical learning environment and its association with academic motivation and clinical decision making was conducted. The authors used a descriptive survey design with second-, third- and fourth-year undergraduate students ( $n = 222$ ) in the Bachelor of Nursing Science degree.

The results indicate a statistically significant positive correlation between the clinical learning environment and the nursing students' academic motivation ( $r = 0.182$ ,  $p < .05$ ). However, there was no correlation between the clinical learning environment and clinical decision-making ( $r = 0.082$ ,  $p > .05$ ). They found that nursing students' academic motivation increased as the quality of their clinical learning environment improved. The study concluded that provision of a qualified clinical environment is prerequisite for the training of qualified nurses (Aktaş & Karabulut, 2016). This study looked at students' perception but in association with the clinical motivation in Turkey. Therefore, a similar study in Africa on students' views regarding their clinical practice environment was needed, which was the purpose of this study.

In Nepal, a study by Nepal et al. (2016) to assess Nepalese nursing students' perceptions regarding the clinical learning environment and supervision was conducted. The study used the cross-sectional questionnaire design of both government and private hospitals in Nepal where the undergraduate nursing

college students undertook their clinical practice. Students with clinical practice experience were recruited from second to fourth years of the bachelors nursing program (n = 350). The result indicated that students' practicum satisfaction level at government hospitals was significantly higher than those at private hospitals. Students undertaking their practicum in private hospitals evaluated their clinical placements significantly more negative than those in government hospitals (Nepal et al., 2016). They concluded that clinical learning environment is an important environment in nursing. Exploring and describing the students' perceptions are imperative. Nurse educators ought to bridge the gap between theory and practice. However, the literature search indicates a paucity of literature on undergraduate nurses' perception of the clinical learning environment as a learning space (Hickey, 2010, p. 35; Salamonson et al., 2015; Yeh, Huang, Chan, & Chang, 2016). There is, at least, evidence by Haraldseid, Friberg, and Aase (2015) that suggests that students are not satisfied with the type of practical training they receive from nurse educators. Haraldseid et al. (2015, p. 1) established that students perceived a discrepancy in the information that they received from clinical facilitators during training, giving them the impression that the faculty was unprepared. According to the participants in their study, the faculty was difficult to access and that although students desired more time to practice in the clinical skills laboratory, there was little opportunity for them to do so (Haraldseid et al., 2015).

Similarly, a study by Wellard, Solvoll, and Heggen (2009) revealed that students valued the ability to train in surroundings that resembled the environment of their future workplace, to depend on the knowledge that the settings will not differ substantially. Not being able to train in such surroundings often led to frustration and diminished satisfaction among the students (Wellard et al., 2009). The authors noted that students and staff emphasise the importance of creating an environment that resembles the practical nursing setting. In addition, Ringel et al. (2015) argued that students felt uncertain in the clinical skills laboratory when equipment was old, reused or unavailable (Ringel et al., 2015).

Literature searched revealed that, although there are

studies on students' perception of their learning in the clinical environment globally, there is a dearth of evidence in Africa regarding this phenomenon. To investigate the views of nursing students is, therefore, important in order to generate knowledge and make necessary recommendations to improve practice in the clinical skills laboratories which is a key area in the training of nurses. What this study did differently was to add the first-year students so that data gathered on their perceptions will throw more light on the findings which were not the case in the sampling of Nepal et al. (2016) and Aktaş and Karabulut's (2016) studies.

## Design and Methods

The study used the qualitative exploratory descriptive design. According to Grove, Burns, and Gray (2013, p. 237), a descriptive design is narrower in scope and can be complemented with an exploratory design that is able to provide a detailed and accurate picture of a phenomenon under study. An exploratory design was used to increase the knowledge of the field of study and was not intended for generalisation to large populations (Grove et al., 2013, p. 700). This was aimed at exploring the undergraduate nursing student perceptions of the clinical skills laboratory environment as a learning space as basis for confirmatory studies.

## Setting

The study was conducted in the clinical skills laboratory of the College of Health Sciences, University of KwaZulu-Natal (UKZN), at the Howard College Campus. Howard College is one of the five campuses of the University of KwaZulu-Natal in Durban, South Africa.

## Population and Sampling Technique

The population of the study was the undergraduate nursing students registered in UKZN. The UKZN accepts students from across South Africa as well as from other countries. When this study was conducted in 2016, 240 undergraduate nursing students were registered, which consisted of 78 first years, 62 second years, 63 third years, and 37 fourth year students.

Purposive sampling was used to select eight students from each year group to participate in the focus group discussions. Each year group (eight students) formed a focus group. The reason for selecting a sample was to attain a description that would pre-

cisely depict the features being studied and to have the opportunity to access detailed information from the population (Cohen, Manion, & Morrison, 2011). Purposive sampling was suitable for identifying and selecting information-rich cases related to the students' perceptions of clinical skills laboratory environment as a learning space. It involved choosing the individuals with particular characteristics to serve as participants based on their continuous and regular presence in the clinical skills laboratory, and continuing that process until the required number for a focus group had been obtained (Cohen et al., 2011, p. 133). The purposive sampling was used because of its simplicity and popularity with qualitative studies (Creswell, 2013, p. 269).

### Data collection tool and process

After ethical Clearance from the University, a written permission was sought and granted from the registrar and the academic leader to sample the undergraduate nursing students for the study. Four focus groups were formed, one from each year group. A total of 32 students were recruited, eight in each year to form a separated group.

The Focus Group Discussion (FGD) took place in a cubicle at the clinical skills laboratory with the principal investigator and the research assistant. After signing the consent form and self-completion of their demographic data, the discussions were started. A semi-structured interview guide was used to guide the FGD with probes such as tell me more, what else can you add, in addition to how, why and what in order to make the answers clearer.

The discussions were audio recorded, which lasted between 60 and 90 minutes each, with each group arranging the time of the meeting at their convenience. The data collection process started from 15th June to 25th November 2016.

### Data analysis

The analysis was done using thematic analysis principles. The first author transcribed the audio recording verbatim and saved it in the word document format. To avoid inaccuracies, the audio recordings were listened to repeatedly during transcription to facilitate completeness of the transcripts. After the transcription, the transcripts were coded, organised and

integrated into emerging themes. This was done systematically and objectively with the assistance of NVIVO version 11.

These themes were discussed with the second author to ensure that each participant's ideas were well captured without being biased.

### Trustworthiness

Trustworthiness such as credibility, transferability, dependability, and confirmability were ensured (Cohen et al., 2011). Credibility was ensured by establishing and maintaining good rapport with the participants and building a trusting relationship. Participants were given adequate time for rich narration of the phenomenon. Transferability was ensured by providing thick description of the context, selection and characteristics of participants, data collection methods and analysis. Dependability was achieved by reading and scrutinizing the data to be sure they are just exactly what the participants narrated. Confirmability was ensured by member checking, audit trail and inter-coder processes.

### Ethical considerations

Permission to conduct this study was given by the HSSREC of UKZN with reference number HSS/1383/016M. Full disclosure of the study was given to the participants and they all volunteered to participate through signing a consent form.

### Results

Out of the 32 students, four were males and 28 were females. Five students were between the ages 21 and 25 years, while 27 were between the ages of 18 and 20 years. Participants were all single and had never been married. In addition, these participants were all Christians by religious affiliation.

The study findings revealed four themes namely privacy on feedback, knowledgeable and accessible personnel, scheduling for access, and time limitation. The findings under these themes indicated that participants believed the clinical skills laboratory is clean and conducive to learning. The participants mentioned items such as availability of computers to watch clinical videos which explain the procedures to them before practice. They considered it a good environment for learning as it is kept quiet and up to stan-

dards. They held that learning is efficiently progressing because the setting is not different from the hospital wards. It makes changing from the clinical skills laboratory to the hospital easy. Some stated that:

'It's beautiful, clean, student-friendly. It makes you want to learn...It is colourful, conducive' (SYNS).

Few participants, however, thought otherwise, stating that the environment needs some rearrangement to provide privacy and reduce the noise and interruptions that are experienced by other students during practice. They believed that the current situation where some students practise while others watch procedures on YouTube is intrusive especially if a student is being assessed. One participant noted:

'For me, I don't think the environment is good for learning because, if I'm doing a competence and someone else is doing a competence or watching a video, it distracts me' (FINALS).

### **Privacy on feedback**

The analysis indicated that participants perceived the clinical skills laboratory as a set-up to facilitate clinical practice, as there are beds with mannequins and screens around for privacy. Participants indicated that every procedure at the clinical skills laboratory should maintain the basic principles of the profession for them to learn but that was not the case in some procedures. Some felt that when a student does competence or performs a procedure, there should be some degree of privacy, which is not allowed in the current layout. Three of the groups also contend that the learning space is not conducive with regard to allowing for privacy for facilitators to feel free to give feedback and for the student to accept the feedback without being embarrassed.

'Even with the screen, the student will screen for privacy but that doesn't allow privacy of the student and there is no privacy for a facilitator to be able to feel free to give a feedback to us (the student)' (SYNS). Participants also noted that the learning space might not be of good use if they continue to come in and regurgitate the tool as it is, without prior knowledge and without knowing the theoretical basis regarding the physiology that underpins the procedure they are performing on the mannequins.

### **Knowledgeable and accessible personnel**

The respondents indicated that as a self-directed learning space, which requires them to research for information about what they want to do before coming, the facilitators are available during practice to guide them. The students believe the facilitators are very knowledgeable;

'The personnel here are great, they do help us but they torment us sometimes, ...I get happy when I am here because I learn' (FYNS).

'Knowledge-wise the facilitators are good...I think the facilitators are good and I have not seen any issues' (FINALS)

The majority of the participants indicated that they were happy with the way the facilitators treat them because they are able to access any help in relation to their practice from the clinical skills facilitators.

### **Access and scheduling**

Another theme that emerged was access and scheduling. Regarding access, the participants stated that there is access to the skills laboratory, as students are able to practise on their own and when they feel confident to be able to perform a procedure on their own, they ask to be assessed on that competency. The available equipment is accessible to the students, except where some equipment is in short supply because of the numbers of students.

'The equipment is well-arranged and that makes it easier for students since they are labelled according to the procedures' (FYNS).

'With the accessibility of the equipment, I saw some issues there, some of the equipment is not readily available for us' (SYNS).

Concerning scheduling, the findings revealed that students prefer to walk in to practise instead of booking. Participants noted that the online booking system was difficult and posed a challenge to students who stay at a location without internet connectivity. They blamed the channels of communication used in the skills laboratory, stating it makes the process cumbersome. A participant stated:



'We understand this is not a hospital, but the booking, sometimes you book, and you do not get the response and you have to wait until the confirmation comes' (TYNS).

Another issue that the analysis revealed was the disparity between the clinical skills laboratory environment and the hospital environment. The participants noted that the clinical skills laboratory environment lacked some logistics and that the interaction with patients, which is available in the hospitals, is absent in the clinical skills laboratory.

The participants also noted that apart from the aforementioned, disparities also existed in the way they access material for their practice. According to the students, all materials needed in clinical skills laboratory are arranged already and brought to them in a basket, whereas in the hospital they must go and look for it, based on what procedure they want to perform and their client's needs. They believe the arrangement of items in baskets for the students hampers their learning ability regarding how fast they can link the equipment needed in each procedure and this makes it difficult for them to identify instruments in the hospitals when they are sent to pick instruments during procedures. A final year student stated:

'If we request, they bring what we want in a basket and I think it's wrong. We must be allowed to go there to look for what we want because at the hospital, I was told to take some instrument I didn't know what it was because I was always given a basket to practise... they should allow us to take the things ourselves so that we know what we need and not to be given to us' (FINALS).

An interesting revelation was that as the first-year students were happy that items are arranged and given to them upon request, the final year students saw that as thwarting their ability to locate items on their own.

### Time limitations

One key limitation all participants observed was the duration students were allowed to stay in the clinical skills laboratory to practise. They indicated that there is a 2-hour allocation for each student per day, which they considered as being inadequate, as there are not enough facilitators to attend to them on time.

## Discussion

The findings show that participants had a positive perception regarding the learning environment of the clinical skills laboratory. They indicated that the environment is one of the best places for learning clinical skills. In addition, they felt that it was neat, well ventilated, friendly, conducive to learning and well arranged in such a way that it simulated the real clinical areas. They noted that the arrangement of beds and mannequins resembled the real hospital environment where real sick patients seek treatment. This finding confirms the study by Abdallah, Irani, Sailian, Gebran, and Rizk (2014) that clinical skills laboratory is designed to resemble a hospital ward to optimise the simulation of clinical learning situations. Besides the ordinary interior and layout of a patient's room, toilets, medical supply room, etc., an auditorium in the clinical skills laboratory seats a good number of students for demonstration and reflection. They considered the clinical skills laboratory to be equipped with all necessary reusable, stationary and medical equipment. Single supplies, such as nasal cannulas, wound dressings and syringes, are distributed to each student in a free equipment kit at the beginning of the course. All these are made to simulate the hospital as much as possible (Abdallah et al., 2014).

The findings also indicate that most of the students agreed that clinical skills laboratory learning environment is relaxed during practice and that the atmosphere is conducive for teaching. According to some participants, the atmosphere in the clinical skills laboratory motivates them to learn. This finding suggests that students appreciated learning in the clinical skills laboratory and preferred to practice than to go for lectures because they believe it gives them the opportunity to develop their interpersonal skills in nursing. This is in line with another study that reported creating an authentic environment, facilitating motivation, and providing resources for multiple methods and repetitions within clinical skills training which are all important for improving clinical skills laboratory learning environment from the student's perspective (Haraldseid et al., 2015).

Participants in this study noted that the learning environment is technologically competent and that the items students need are provided. They noted the availability of computers with internet connectivity

that aid students to watch procedures on YouTube videos to assist in their practice. This finding is relevant, as it is in line with Aktaş and Karabulut (2016) study, which indicated that nursing students need a good clinical practice environment to apply their knowledge and skills, as the clinical practice settings play an important role in the nursing profession. Similarly, according to Hooven (2015), the clinical learning environment makes an important impression on students' learning, and a positive learning space increases undergraduate students' learning.

However, some students noted they were not satisfied with the inadequacy of the supplies of some logistics for learning in the clinical skills laboratory. Those students saw it as a limitation to their progress of practical knowledge acquisition in the clinical skills laboratory. This is noted as significant as inadequate environments affect students achieving their learning outcomes, their preparation for practice and their satisfaction with the nursing profession (Haraldseid et al., 2015).

Providing clarity of clinical learning space for nursing education will assist in identifying antecedents, attributes and consequences affecting nursing students' transition to practice (Flott & Linden, 2016). This is relevant because a study in Taiwan revealed that learning outcomes were significantly better when students' perceptions of their instructional activities were congruent with their preferred learning space (Yeh et al., 2016). Therefore, the clinical learning space is a key component to training nurses, with technology not replacing its role in training (Salamonson et al., 2015).

Some few students indicated that the learning space was disappointing, due to issues related to noise and congestion in the clinical skills laboratory. They noted that for the current arrangement, the computers are kept by the beds, and while one student may be performing a procedure, another may be watching YouTube as a means of instruction. According to them, this is a nuisance. The findings indicated that this affects the students' concentration during the procedures. While this was not in the majority, there is some evidence to suggest that the perceived educational environment is significantly associated with approaches to learning, and this is linked to the need to maintain a conducive learning space and hence a need to improve the management of learning activi-

ties that reflect the use of student-centered learning (Rochmawati et al., 2014). Similarly, Haraldseid et al (2015) noted that the space in the clinical skills laboratory is designed to simulate the real clinical learning space and is defined as a practicum environment where students apply a theory to practice. Harmonising the clinical learning environment is therefore important for students to be able to achieve desired learning outcomes (Wells & Dellinger, 2011).

The findings suggested that there should be opportunities for the clinical facilitators, clinicians and other nurse educators to discuss matters relating to students' practice, specifically to reduce the discrepancies between practices taught in the clinical skills laboratory and what happens in the clinical settings. Each year group should be treated differently to accommodate each year group and their learning needs. However, recruiting only students is a limitation since clinical facilitators could have spoken regarding their views of the environment. Clinical facilitators were not interviewed; views from their perspective could have given a better understanding of the learning space.

## **Conclusion**

While most students found the clinical skills laboratory to be a useful learning environment, its use would be improved by providing adequate human and material resources and ensuring that what is taught is in line with clinical practices in hospitals. To reduce the nuisance and embracement students might experience, equipment in the clinical skills laboratory should be based on current equipment in the hospitals as some equipment in the clinical skills laboratory is either very current or out of date, making a transition from clinical skills laboratory to the hospital difficult. For the learning space to simulate hospital environment, cell phones should be restricted in the environment since cell phones are restricted in the hospitals.

## **Conflict of Interest**

The authors declare no conflict of interest.

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