

Doctorate Studies

Challenges nurse educators experience with development of student nurses' clinical reasoning skills

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ABSTRACT

Traditional teacher-centred teaching strategies do not always facilitate the development of desired clinical reasoning skills required for nursing practice. A multiphase study was conducted to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills. The study was conducted at a military nursing education institution. This paper reflects on Phase 1, where a descriptive, qualitative study was conducted to explore the challenges nurse educators experienced in utilizing teaching and learning strategies that could promote the development of clinical reasoning skills in undergraduate student nurses.

Unstructured interviews were conducted with 16 nurse educators who were selected purposively. Interviews were recorded, transcribed and data were analysed for content. The findings indicate that the clinical learning environment, the military environment, and various role players in the environment are instrumental in nurse educators not utilizing educational practices that promote the development of clinical reasoning skills in undergraduate student nurses.

Addressing nurse educator challenges and empowering them with the means, opportunity and skills to utilize student-centred teaching and learning strategies may contribute to the development of undergraduate student nurses' clinical reasoning skills. Raising awareness of challenges nurse educators experience in implementing student-centred facilitation of learning can assist in developing strategies to ensure nurse educators become more student-centred in their teaching.

1. Introduction

Due to increasingly complex clinical settings, nurses worldwide are required to provide safe, reliable patient care and as a result must be able to reason clinically (Kavanagh and Szweda, 2017). Clinical reasoning is an essential component of competence in clinical practice. However, some traditional teaching and learning strategies do not always facilitate the development of desired clinical reasoning skills (Levett-Jones et al., 2010). Clinical reasoning is fundamental to nursing practice but is challenging to teach and learn because it is complex, tacit and invisible to students (Delaney and Golding, 2014) and according to Levett-Jones et al. (2010), requires different teaching and learning strategies.

Nursing education in the classroom has traditionally focused on teacher-centred strategies consisting mostly of the lecture method of information transfer (Ellis, 2016). Thus, learning is merely the memorization of indisputable facts and standard problems (Mthembu et al., 2014) and students become passive receivers. Nursing education must

move away from teacher-centred, content laden classrooms and include student-centred strategies that promote clinical reasoning (Shellenbarger and Robb, 2015). Various authors (e.g. Ellis, 2016; Mthembu et al., 2014; Schweisfurth, 2011; Shellenbarger and Robb, 2015) advocate a move towards student-centred teaching and learning strategies. Nurse educators play a crucial role in the development of student nurses' clinical reasoning skills and should therefore identify and implement student-centred teaching and learning strategies (Chilemba and Bruce, 2015; Ellis, 2016).

2. Background

Traditionally, clinical reasoning skills have been facilitated in clinical practice during student nurses' exposure to several learning opportunities. However, to provide student nurses with more opportunities to be exposed to clinical reasoning, nurse educators should identify and utilize teaching and learning strategies that introduce clinical reasoning (Gierach and Evenson, 2010; Shellenbarger and

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Robb, 2015). Nurse educators ought to refrain from only utilizing teacher-centred teaching and learning strategies and engage students in authentic clinical learning experiences (Benner et al., 2010). The traditional approach to teaching encourages rote learning, where students are passive receivers of content. This approach to learning does not encourage clinical reasoning and students are not able to apply the knowledge learnt in different situations (Chabeli, 2010). Furthermore, Shellenbarger and Robb (2015) state that teacher-centred strategies lead to disinterested and unstimulated students and encourages the use of innovative teaching strategies.

McKee and Billman (2011) advocate for the use of more interactive, student-centred, adult methods of teaching as the focus of today's educational theories is on student learning instead of teaching (Haraldseid et al., 2015). However, many nurse educators still do not have the necessary knowledge or skills to implement these teaching strategies effectively (McKee and Billman, 2011). Nurse educators must develop new teaching skills such as team building, facilitation skills, group facilitation, group management and strategies on how to address students' complex questions (Fahlberg et al., 2014). The role of educators should be that of a facilitator utilizing various student-centred teaching strategies to encourage students to play an active role in their learning (Slavich and Zimbardo, 2012). The adult education literature suggests that adult students are self-directed, problem-centred and need to learn useful information (Applin et al., 2011). Adult learning principles are becoming more popular in the education of healthcare professionals (Cadorin et al., 2012).

According to Shellenbarger and Robb (2015), student nurses are just beginning their work as health care professionals and are seen as novice thinkers. Hence, student nurses need assistance with applying theoretical knowledge to specific clinical situations, and nurse educators have a responsibility to facilitate the development of clinical reasoning skills in the classroom environment. Regardless of the extensive amount of literature available on student-centred teaching, many nurse educators continue to teach as they were taught simply by rearranging the same content-laden material they have traditionally presented to students (Rischer, 2013).

Nurse educators at the military nursing education institution where the study was conducted, realised that their teaching and learning strategies should be transformed from being predominantly teacher focused to a more student-centred approach. A multiphase study with the aim to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills was conducted. In Phase 1, the challenges nurse educators experienced regarding the facilitating of clinical reasoning skills were explored and described. During Phase 2, a core group of nurse educators co-constructed an action plan to address the identified challenges from Phase 1, by means of four action research cycles. In Phase 3, the outcomes of the action research process were evaluated by means of the World Café data collection method. View Fig. 1 for a schematic representation of the multiphase study.

The focus of this article is to report on the findings of Phase 1, the Baseline Phase. The action research process, Phase 2 will be described in a future article, while Phase 3 findings were recently published (view Van Wyngaarden et al., 2018). Although the context of the study is unique, the findings may contribute significantly to the current body of knowledge on clinical reasoning and the co-constructed action plan may address similar challenges experienced by nurse educators worldwide.

3. Methods

3.1. Design

As part of Phase 1, a qualitative descriptive research design was used to uncover the meaning of the challenges nurse educators' experience. It allowed a rich, straight description of the challenges

experienced. The Research Ethics Committee of the University of Pretoria approved the study, and permission to conduct the study was obtained from the relevant authorities. Participants signed informed consent after full disclosure about the study. Participation was voluntary, the privacy of participants was respected, and confidentiality was maintained.

3.2. Participants

All nurse educators who were involved in the specific undergraduate program at the nursing education institution were eligible to participate in Phase 1 of the study. Data saturation guided the sample size and sixteen nurse educators were interviewed.

3.3. Data collection

Individual unstructured interviews were used to collect data. One main question, "Describe the challenges that you are experiencing in utilizing educational practices to promote clinical reasoning amongst the students?" was asked. The interviews were audio taped with the permission of the participants and transcribed verbatim.

3.4. Data analysis

The data was analysed for content according to the steps outlined in Saldaña (2013). The supervisors verified the data analysis process and inter-coder reliability was ensured throughout the analysis by conducting first and second cycle coding. In order to assess the rigor of the coding process a summary of the themes, categories and subcategories were submitted to the participants for member checking to confirm the findings.

4. Findings

Four main themes emerged, namely: educational practices, clinical learning environment, military learning environment, and role players in the teaching and learning environment. Under each of these themes, two to four categories are discussed.

4.1. Challenges with educational practices

One of the major themes that emerged from the data was the challenges with educational practices. Subsumed within this theme were four categories: assessment strategies, teaching and learning strategies, the curriculum, and scarce resources.

Nurse educators utilize lower cognitive level assessment strategies that require students to memorize and regurgitate facts. There is little need to demonstrate their ability to think and apply knowledge: "Most of the lecturers [nurse educators NE], especially when they assess students, they give them precisely what they are going to ask ... I see our students not going to be that competent. ... they [NE] don't use application ..." (NE 13). Resistance to change was identified as a challenge in utilizing innovative, student-centred teaching and assessment strategies as explained by one nurse educator who was compiling application questions and her supervisor was questioning her technique: "My HOD [head of department] is rather, close minded. She is not open to these different strategies I try to ... because as she said ... this is how I asked it ten years ago. You must ask the questions like that" (NE 7).

Nurse educators admitted that teaching and learning strategies utilized are teacher-centred, "I still blame us [NE] because we are using a traditional way of teaching" (NE 10), which does not encourage active student involvement. The participants indicated that nurse educators utilize lecturing by means of PowerPoint as the only teaching and learning strategy. "There is this stereotype of lecturing [referring to PowerPoint] in our institution ..." (NE 1), which focuses on content with limited use of scenarios, case studies and clinical examples.

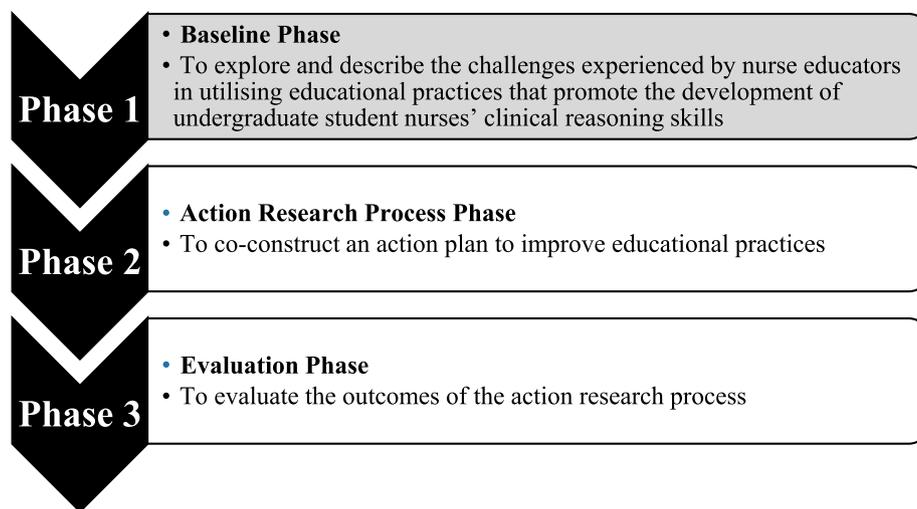


Fig. 1. Schematic representation of the multiphase study.

Participants were of the opinion that the curriculum currently employed, influences the teaching and learning environment. The current curriculum is content-laden and does not encourage higher cognitive learning: "We just want to push the information and finish with our content. So, they [students] end up memorizing what we teach them" (NE 10), another nurse educator added the following: "I think our program is so congested" (NE 12).

Participants agreed that scarce resources influence the teaching and learning environment and their ability to make use of educational practices that will promote students' clinical reasoning skills. A participant explains how inadequate infrastructure influences her facilitation of clinical reasoning skills, "I do have challenges in terms of trying to facilitate the clinical reasoning skills in the classroom. I think we do not have the required infrastructure" (NE 2). They elaborated on limited human resource (nurse educators, support staff, clinical preceptors), limited infrastructure (simulation laboratory, classrooms, library) and limited material resources (internet, teaching aids).

4.2. Challenges within the clinical learning environment

A second theme that emerged was the challenges within the clinical learning environment. Within this theme, two categories emerged, the clinical teaching department and the clinical setting.

The clinical teaching department was described as inadequate and unsupportive to students learning needs, "... getting the clinical department which will be fully supportive to student. I think that could ... settle some problems" (NE 6). Students are exposed to limited practice time in the simulation laboratory and as such, students do not get opportunities to practice their clinical skills in a safe, non-threatening environment. Furthermore, nurse educators are of the opinion that the simulation laboratory is inaccessible and inadequate for training purposes. This perceived absence of an authentic clinical learning environment is detrimental to the students' development of clinical reasoning skills. Participants highlighted the integration of theory and clinical as a hindrance to students learning "So I think that collaboration [referring to theory and clinical integration] is not there" (NE 2) and application of theoretical knowledge within different clinical situations according to one participant "is actually almost non-existent ..." (NE 2). The participants also reported that students require more supervision and that nurse educators are not fulfilling their clinical accompaniment role. One nurse educator explained: "... I have realised that accompaniment is very much important whereby these students should be followed on every day basis" (NE 4).

The participants stated that the clinical setting plays a pivotal role in the development of the students' clinical reasoning skills. One

participant said, "I do not see that manifesting in the practice, you know, the clinical reasoning skills" (NE 2). In addition, participants reported that short clinical placements are affecting the students' learning as well as fragmented nursing care models used by professional nurses where students do not get opportunities to render comprehensive nursing care: "... I am concerned because we are fragmenting a patient into different tasks which is assigned to different people. They do not get the holistic picture of the patient" (NE 3).

Nurse educators from this study believe that collaboration with the South African National Department of Health for networking and benchmarking purposes would assist them with staying abreast with current trends in nursing and nursing education.

4.3. Challenges within the military learning environment

Two categories, military environment and military activities, emerged within this theme. In the opinion of nurse educators, the military environment with its power and rank orientated culture is posing a problem in the implementation of student-centred teaching and learning strategies. According to the participants, the autocratic organizational structure characterized by micromanagement and red tape is not making matters any easier for nurse educators in planning for active teaching and learning strategies. "You know, you come to work, you plan, you are going to do one, two, three, but because we are in the Military there are other activities [parades, military functions] which are involved in the Military that will even disturb your program" (NE 16).

Students are missing experiential learning opportunities due to unplanned interruptions attributed to the attendance of compulsory military activities. "... the interruptions. The Military things that must be done and all those things, it plays a big role at times when you have to do things" (NE 15).

4.4. Challenges experienced with role players in the teaching and learning environment

The participants identified four different role players within the teaching and learning environment, namely the nursing education institution management, nurse educators, professional nurses and students. Nursing education institution management is hindering the utilization of student-centred teaching and assessment strategies. According to one nurse educator, "you get criticized for using the other methods" (NE 10). In addition, nurse educators shared their frustration with the nursing education institution management's inadequate expertise, leadership skills and lack of support and guidance: "Sometimes you will find that not only a lecturer [NE] can lack educational experience,

even the HOD [head of department]" (NE 1). Furthermore, management's lack of acknowledging achievement and creating an environment that encourages innovation and change was seen as an obstacle to the teaching and learning environment: "they [NE] are so productive and bring so many things. When they do their work, it is up to standard. Why don't we acknowledge them?" (NE 14).

The participants indicated that nurse educators lack expertise in using student-centred strategies in teaching. They are also of the opinion that nurse educators require recent clinical experience to encourage the use of case-based teaching and learning: "How are you actually going to teach the student if you do not have yourself a very deep understanding of this subject, the subject content and of the patient?" (NE 3). The findings revealed that professional nurses are not committed to teaching and their behaviour is not exemplary: "They [professional nurses] don't do their educational function of follow up" (NE 11).

In addition, students were portrayed as irresponsible, making themselves guilty of tardiness and uncivil behaviour. "... students, they are very much playful; with a lot of absenteeism. So our challenges ... are the students themselves" (NE 4). Nurse educators expressed their concern with students' inability to reason and making sound decisions and identified a lack of knowledge, self-directedness and responsibility for their studies as possible causes: "Our students, but most of them ... they are not so competent ... so ours they don't have that self-confidence" (NE 9).

Career choice was highlighted as a challenge under the categories nurse educators, professional nurses and the students, where participants pointed out that nursing as well as nursing education should be a calling. Passion for nursing and teaching as well as caring were the two main attributes consistently referred to by the participants as essential for the development of clinical reasoning. A significant finding was that participants are of the opinion that caring is encompassed in clinical reasoning. Participants indicated that nurse educators should place greater emphasis on teaching caring and should do so throughout the curriculum. "I think clinical reasoning skills are encompassed in caring" (NE 2).

5. Discussion

Findings from the present study demonstrate that nurse educators utilize low cognitive traditional assessment strategies which may encourage students to use 'rote learning' to memorize and 'regurgitate' the content. Kim et al. (2018) who indicate that nursing education in South Korea relies on rote learning for test preparation, support these findings. Gul et al. (2014) also found that nurse educators use factual and lower level questioning which does not promote critical thinking or clinical reasoning, while Kantar (2014) mentions that nurse educators rarely assess past the analysis level. The findings from the present study are similar to that of Wu et al. (2015), who state that traditional assessments do not provide clear indicators of students' problem-solving, reasoning and critical thinking skills. Participants in this study reported resistance to change as a hindrance to adopting more innovative forms of assessment. Deneen and Boud (2014) also found that the greatest hindrance to achieving a change in assessment within the higher education context is resistance among nurse educators. Similarly, the findings from a study conducted by Kunnari and Ilomäki (2016) revealed that resistance to change hinders innovation highlighting the unwillingness to change as well as the attitudes of the "older generation" as major hindrances.

The predominant use of traditional teacher-centred teaching strategies as described by participants in the present study and its subsequent disadvantages are also reflected in several studies (e.g. Allen, 2013; Chilemba and Bruce, 2015; Gaba, 2015; Benner et al., 2010). The findings from these studies as well as the present study demonstrate the need for student-centred teaching, learning and assessment strategies, because of its documented advantages such as enhanced student engagement and active participation which promotes the development of critical thinking, clinical reasoning, clinical judgment, decision making,

problem solving and self-awareness necessary in practice settings (Chilemba and Bruce, 2015; Gaba, 2015).

Participants in this study identified the current curriculum as content-laden and consequently nurse educators' resort to lecturing to cover the content instead of time-consuming student-centred teaching strategies. Earlier studies, e.g. Allen (2013) and Benner et al. (2010) indicate that nurse educators cover too much theory content, which is unfortunate because it is not contextualized to practice. The participants emphasized the lack of revision of the current curriculum as a concern in incorporating current health trends. These findings correspond with Armstrong and Rispel (2015) who indicated that nursing curricula are unresponsive to changes in disease burden and in the health system. Hence, the authors' stance is that revision is required to ensure that curricula are more appropriate for the population and health system needs of South Africa.

Scarce resources remain a concern especially in developing countries. However, despite the scarcity of resources it is important that educators utilize student-centred teaching, as it would be beneficial to students. Participants' from the present study explained that they were compelled to revert to teacher-centred strategies due to the classroom layout and unavailable of resources. The present findings echo that of Ellis (2016) who pointed out that having access to resources has an influence on the use of innovative teaching strategies among nurse educators.

Within the clinical learning environment, the nurse educators voiced their concern about the absence of an authentic clinical learning environment. A study conducted by Kujan et al. (2015) found a lack of authenticity within the simulation laboratory as a learning barrier and adds that a realistic environment enhances opportunities for optimal learning. The majority of nurse educators from the present study voiced their concern with theory and clinical integration. They are of the opinion that the students have difficulty applying theory within the clinical settings. Similarly, in the opinion of Holland (2015) there continues to be a gap between theory and practice. The findings from both the present study and Holland's study reveal that there is a continued need for strong clinical placements to support the application of theoretical knowledge into practice.

Participants in the present study revealed that fragmented nursing care models implemented at the clinical settings are detrimental to the students' ability to develop clinical reasoning skills. For this reason, students are unable to nurse patients holistically and see a comprehensive picture of the patient. De Swardt (2013) found that professional nurses assign fragmented tasks to students, which result in students not understanding comprehensive patient care.

Participants in this study are of the opinion that the military environment, which is autocratic and perceived as power and rank oriented, has an effect on their choice of teaching strategies. Caka and Lekalakala-Mokgele (2013) also reported on how rank insignia denote that orders are given according to military hierarchical structure and not necessarily according to nursing ranks. Long cumbersome processes within the military prevent nurse educators from utilizing student-centred teaching strategies. The majority of the participants voiced their concern with military unique activities causing unplanned interruptions to their educational program. As a result, students are missing important experiential learning opportunities as well as clinical exposure. Caka et al. (2015) found that military student nurses do not have adequate placement opportunities due to being constantly removed from the allocated clinical areas in order to fulfil military duties. El-Aziz and Ahmed's (2009) study revealed high levels of stress among military nurse educators regarding work shifts and sharing in military training for parades and ceremonies.

Challenges with the role players within the teaching and learning environment were identified. A significant finding was that the nursing education institution's management hinders innovation and the use of student-centred teaching. The findings from the current study support Kunnari and Ilomäki (2016) who state that educators need support from

colleagues and supervisors as well as a stimulating environment that encourages innovation. In the military context, the management has higher ranks than the nurse educators and this perceived power relationship could be problematic within a higher education context. Schweisfurth (2011) points out that in some cultures, student-centred teaching implementation is problematic due to the culturally appropriate distance between authorities and educators as well as between educators and students.

Participants from this study were worried about nurse educators' expertise and experience. They believe the "calibre" of the nurse educator has an influence on the students' development of clinical reasoning. Similarly, Armstrong and Rispel (2015) state that nurse educator preparedness is one of the major educational issues in South Africa that needs urgent attention. The findings from the present study also support the reasoning of Gul et al. (2014) that developing the students' ability to think critically is influenced by the nurse educators' competence and approach to teaching. The data presented here and that of Chilemba and Bruce (2015) demonstrate the need to advocate for staff development in student-centred teaching so that nurse educators can implement and promote active learning with confidence, competence and self-efficacy.

The present study's participants perceived professional nurses as unsupportive and not committed to their teaching role. De Swardt (2013) and Kgafela (2013) indicate similar findings, as they found that some professional nurses lack commitment in teaching and in supporting students. Professional nurses have an ethical obligation to support students in the clinical setting (Killam and Heerschap, 2013) and this obligation was demonstrated by the data presented here and by De Swardt (2013) and Kgafela (2013).

The participants described students as lacking in clinical reasoning skills because of the students' perceived lack of knowledge, which in turn could be contributed to teacher-centred teaching and learning strategies utilized by nurse educators. Student participants from the study conducted by Killam and Heerschap (2013) strongly agreed that students' knowledge gaps related to core sciences and their consequent inability to think critically is detrimental to patient care. According to the participants, in the present study, students are irresponsible which is apparent from their tardiness, unwillingness to take responsibility for their own learning as well as their obvious disinterest in nursing which has a grave influence on their learning and consequent competence. De Swardt (2013) found that professional nurses blame students for poor time management and absenteeism from the clinical setting.

It is evident that caring and passion were important attributes for all role players in the learning environment. The participants indicated that if a nurse does not care, it could not be expected of them to have clinical reasoning skills. However, van Graan et al. (2016) are of the opinion that participants confused personal characteristics of the nurse, such as 'doing the best for the patient' (caring) and 'love and passion' with clinical judgement (reasoning) as concept.

6. Conclusion

Despite the advantages of utilizing student-centred teaching and learning strategies and the vast amount of information available, nurse educators from the present study are utilizing teacher-centred strategies. According to the nurse educators, they are faced with various challenges within the theoretical, clinical and military environment. Addressing nurse educator challenges and empowering them with the means, opportunity and skill to utilize student-centred teaching and learning strategies may contribute to the development of student nurses' clinical reasoning skills.

Conflicts of interest

No conflict of interest has been declared by the authors.

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Ethical approval details

The study was approved by the university – Ethics reference number: 84/2015.

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