Nurse Media Journal of Nursing
e-ISSN: 2406-8799, p-ISSN: 2087-7811
https://ejournal.undip.ac.id/index.php/medianers
11(3):278-293, December 2021
https://doi.org/10.14710/nmjn.v11i3.39079

ORIGINAL RESEARCH

Nursing Students' Experiences on Clinical Competency Assessment in Ghana

Oboshie Anim-Boamah[1], Christmal Dela Christmals[1], Susan Jennifer Armstrong[1]

[1]*Department of Nursing Education, School of Therapeutic Sciences, Faculty of Health Sciences, University of Witwatersrand, South Africa*

Article Info

Article History:
Received: 10 June 2021
Revised: 9 September 2021
Accepted: 17 September 2021
Online: 27 December 2021

Keywords:
Clinical competency assessment; Ghana; licensing examination; nursing education

Corresponding Author:
Christmal Dela Christmals
Department of Nursing Education, School of Therapeutic Sciences, Faculty of Health Sciences, University of Witwatersrand, South Africa
Email: christmal.christmals@wits.ac.za

Abstract

Background: More countries are establishing licensing examination systems for nursing education, including clinical competency assessment. In Ghana, clinical competency assessment forms part of the nursing licensing examination and is perceived as the benchmark for nursing licensing examination in the sub-region. The nationalised assessment system is established with some ad hoc changes over the last decade which requires continual evaluation. It is essential to find out how students experience this assessment system.
Purpose: This study aimed to explore nursing students' experiences of the clinical competency assessment in Ghana.
Methods: An exploratory descriptive qualitative design was used in this study. Eight focus group discussions (FGDs) were conducted with 68 final year students purposively selected from eight nursing education programs. The FGDs lasted between 90 to 120 minutes. Content analysis was used to analyze the data.
Results: Although the pre-examination conference between students and examiners helped lessen students' anxiety, limited resources, incongruence in teaching, practice and assessment, inherent biases due to the unstandardised assessment system, and a financial burden compromised the quality of the assessment.
Conclusion: Clinical competency assessment is central to nursing licensing examinations; hence the ability of the system to discriminate competent and incompetent nurses otherwise cannot be overemphasised. Standardisation, training of the examiners and continuous evaluation of the assessment system are imperative for quality improvement in clinical competency assessment.

How to cite: Anim-Boamah, O., Christmals, C. D., & Armstrong, S. J. (2021). Nursing students' experiences on clinical competency assessment in Ghana. *Nurse Media Journal of Nursing, 11*(3), 278-293. https://doi.org/10.14710/nmjn.v11i3.39079

1. Introduction

Nurses are a critical component of the health workforce globally due to the proportion of the care they provide compared to other health professions (World Health Organization, 2020). All countries need to ensure that the nurses being trained and recruited into healthcare systems are competent to provide quality and safe healthcare to the population they serve (World Health Organization, 2020). The United States of America (USA), Canada, the United Kingdom, Australia, China, South Korea, the Philippines, Japan and Ghana conduct national nursing licensing examinations to ensure that only competent nurses are licensed to provide quality and safe healthcare for patients (Amilia & Nurmalia, 2020; Christmals & Gross, 2019; Hou et al., 2019; Kim et al., 2014; Park et al., 2016; Shin et al., 2017). Other countries, such as Brazil and South Africa, are introducing such forms of assessment (Silva & Cabral, 2018). Registration of nurses is varied in different countries in terms of fees, application processes and the examination (Silva & Cabral, 2018).

Countries that use examinations to license nurses need to ensure that the content of the examination meets the quality assessment criteria (Norcini et al., 2011; Oducado et al., 2020; Tsai & Kramer, 2014). Regular research on and reviews of the assessment system, process and outcomes are necessary to keep it consistent with current trends in nursing practice and in alignment with the curriculum of Nursing Education Institutions (NEIs) (Gorham et al., 2012; Nurakhir et al., 2020; Woo & Dragan, 2012). The National Council of State Boards of Nursing of the USA, which is used as a benchmark for many countries, regularly calls for institutions to research the National Council Licensure Examination (NCLEX) for quality improvement

(National Council of State Boards of Nursing, 2020). Many studies (Gorham et al., 2012; McGibbon et al., 2014; Shin et al., 2017; Woo et al., 2009; Woo & Dragan, 2012) have been conducted and published on the licensing examinations in the USA, Canada, United Kingdom, Australia China, North Korea, South Korea, Philippines and Japan. This is important in building public confidence in nursing councils. The Council on Licensure, Enforcement and Regulation (CLEAR), an organisation dedicated to supporting nursing councils globally in the performance of the regulatory function, has a bi-annual journal that publishes studies on licensing examinations globally (Council on Licensure Enforcement and Regulation, 2020). If processes are not interrogated through research and regular reviews, quality will be compromised. Additionally, lack of stakeholder consultation can also affect the outcomes of the examination. An example was a very low pass rate (69%) in Canada when the NCLEX was adopted from the United States of America without proper stakeholder consultation (McGillis Hall et al., 2018).

A major weakness in the NCLEX was the exclusion of a clinical competency assessment. A study conducted in Korea recommended the inclusion of a clinical competency assessment, which will, in turn, lead to quality clinical performance among licensed nurses. However, the participants in the study stated that a clinical competency assessment tends to cause more stress than knowledge-oriented examinations (Shin et al., 2017). A few studies conducted on clinical competency assessment in nursing cited training of examiners and mentors, availability of resources, access to assessment tool and criteria, appropriate and prompt feedback and support form nursing educators as important factor for effective clinical competency assessment (Bifftu et al., 2016; Bradshaw et al., 2012; Immonen et al., 2019; Levett-Jones et al., 2011). Immonen et al. (2019) stressed the need for a valid and reliable clinical assessment rubrics with a clear assessment criteria as critical in clinical competency assessment systems.

Registered Nurses (RN), synonymous with professional nurses, are either trained on a three-year Diploma in Nursing programme or a four-year Bachelor of Nursing programme at the study site. The examination is in three parts: a clinical examination, a viva (oral examination) on a patient and family care study and a paper and pen examination that covers three areas, namely surgical nursing, medical nursing and a general paper (covering nursing ethics, communication, psychiatric nursing, obstetric nursing, community health nursing) (Christmals & Gross, 2019). Successful candidates are required to complete a mandatory supervised one-year internship (national service) to be licensed as a nurse.

Candidates are assigned both basic and advanced nursing skills during the examination. Basic skills include checking vital signs, bed making, bed bath, washing patients' hair, documentation, and record-keeping. Advanced nursing procedures include care of wounds, blood transfusion, intravenous infusions and medications, preparing patients for laboratory and radiological tests. These procedures and others are included in the logbook for students. They are supposed to indicate when they are taught each procedure in class, demonstrate at the clinical laboratories, and perform it at the clinical facilities (Nursing and Midwifery Council of Ghana, 1971, 2016). Although the assessment system is nationalised and centralised, there has been some ad hoc changes that have been made over the last decade. As a result, students complained that they were not uniformly evaluated, resulting in an unfair and unreliable system. There is a high risk of competent students failing and vice versa.

Students are assigned to patients randomly by the examiners and have 30 minutes to do an assessment, identify the patient's health problems and plan care. Students are subsequently assigned two clinical competency skills identified in the care plan to perform and are graded by two examiners. The examiners assign live patients; therefore, the procedures performed can vary for each candidate. Students complain that they are not uniformly evaluated, resulting in an unfair and unreliable system. Complaints include biases in the allocation of patients, examiners and procedures/tasks during clinical examinations in Ghana; no determination of interrater reliability of examiners; selection of patients for the examination is based purely on convenience. The final grade is the summation of scores for the care plan prepared by the student and the two clinical competency skills assessed.

Nursing education institutions are expected to support the licensing examination by hosting the examiners, including accommodation, meals and transportation. Most of the schools are financially constrained, so nursing students are expected to contribute financially to support the examiners. The students also bear the cost of consumables used at the examination centres. A study conducted by the regulatory body in 2013 to investigate factors that contribute to nurse and

midwife trainees' poor performance in the licensing examination focused more on the written examinations (Wilmot et al., 2013). This current study focusses on issues with the clinical competency assessment component of the licensing examination from the perspective of nursing students. Accordingly, this study explored nursing students' experiences of clinical competency assessment that forms part of the nursing licensing examination in Ghana. The study indents to identify current issues with the assessment system and how some of these issues can be solved for quality improvement.

2. Methods

2.1 Research design

A qualitative, exploratory, descriptive design was used to explore final-year nursing students' views on the assessment of clinical competency in Ghana, a sub-Saharan African country. This method was selected for the study as it enabled the participants to express their views (Creswell, 2014).

2.2 Setting and participants

Final-year nursing students from public and private nursing colleges and universities registered for the licensing examination in the study site were included in the study. The study site is geographically divided into three zones (northern, middle and southern). Two regions from each zone were chosen from which eight Nursing Education Institutions (NEIs) were selected using a quota sampling technique. Only NEIs that had successfully enrolled students for the licensing examination for at least five years were included. Three public training colleges, three public universities, one private training college and one private university, participated in this study.

After the institutions granted permission, the researcher organised information sessions with the final year students who had registered for the licensing examination. Students who were willing were asked to see a student representative and gave their names. The student representative managed the consent process. On the day of the examination, the first 8-10 candidates who came to the venue selected were included in the study as explained to the students by the representative. A total of sixty-eight (68) candidates were included in this study. They were final year student nurses who had registered to write the licensing examination.

2.3 Data collection

Data were collected after students had completed the clinical competency examination. Data collection lasted from July 2019 to September 2019. Those who consented to participate in the study were organised and seated around a table in a classroom. Students were allowed to share their experiences on the clinical competence examination before the researcher asked questions from the semi-structured interview guide.

The guiding questions were designed from the World Health Organization (WHO) Framework for building an effective assessment system (Clarke, 2011) and considered the enabling context, system alignment and assessment quality. Some of the questions asked were: Please can you share your experience about the clinical competency examination? What recommendations can you give to improve the assessment? Participants were allocated numbers to ensure confidentiality. The eight focus group discussions lasted between 90 to 120 minutes. The focus group discussions were audio-recorded with prior consent from participants. Saturation was reached when new information was provided by participants after the eight discussion.

2.4 Data analysis

Thematic content analysis was used to analyse the collected data (Hsieh & Shannon, 2005). All the audio-recorded interviews were transcribed verbatim. The transcripts were read several times to familiarise the researcher with the scripts. Two transcripts were inductively coded by two of the authors independently. A meeting was organised with all three authors to review the initial codes. Consensus was reached on the codes, which were imported into MAXQDA version 20 to manage the other seven transcripts. Similar codes were categorised under a subtheme supported by verbatim quotes from participants. Related subthemes were then clustered under three themes as presented.

2.5 Trustworthiness

The principles of credibility, transferability, dependability, and confirmability were addressed (Lincoln & Guba, 1985). Two of the authors trained, practised and taught clinical practice programmes in both public and private nursing education institutions in the study setting. This ensured an accurate representation of the context in this study. Only students who had taken the clinical competency examination were included in the study to ensure the credibility of the data collected. To ensure dependability, a semi-structured discussion guide and probes were developed using the World Bank framework concepts for building an effective assessment system (Clarke, 2011). The questions elicited information about policies guiding the examination, planning for the examination, financial implications, sections of the examination, grading of the examination, the attitude of assessors, and then recommendations to improve the quality of the assessment system. Confirmability was ensured as focus group discussions were recorded and transcribed verbatim and were used in the analysis and presentation. The opportunity was given to all participants to confirm or disconfirm comments that they have made through member checking (Lincoln & Guba, 1985). Transferability was ensured by presenting a thick description of the setting, methodology and participants in the study to aid in replication of the study. To ensure that the study sample was as representative and diverse as possible, NEIs selected included both Diploma and Bachelor degree-awarding, private and public. All four categories of NEIs have peculiar issues with the assessment of clinical competency.

2.6 Ethical considerations

Ethical approval (M190433; GHS-ERC 008/04/19) was obtained for the study. Principles of confidentiality and anonymity were upheld. Only the research team had access to the audio recordings, the transcripts and the field notes. The research team ensured trustworthiness.

3. Results

3.1 Characteristics of the participants

Eight (8) NEIs were included in the study: three public universities, three public nursing colleges, one private university and one private nursing college. Sixty-eight (68) nursing students participated in the focus group discussion, of whom 38 were females and 30 were males. Their ages ranged from 21 to 30 years, with an average age of 24 years (Table 1).

Table 1. Demographic characteristics of the participants (n=68)

Characteristics	Mean±SD	f	%
Gender			
Male		30	44.12
Female		38	55.88
Age (year)	23.99±2.83		
Studentship			
University		32	47.06
College		36	52.94

3.2 Themes

Three themes emerged from the inductive content analysis (Figure 1): the examination systems, the clinical competency assessment process and outcomes and proposals for quality improvement of the clinical competency assessment system. The themes are described and supported by verbatim quotes in this section.

3.2.1 Examination system

This theme refers to the systemic issues that affect students' performance in the clinical competency assessment. Subthemes that constitute this theme include the relationship between teaching, practice and assessment, attitudes of the examiner and the effects of limited resources.

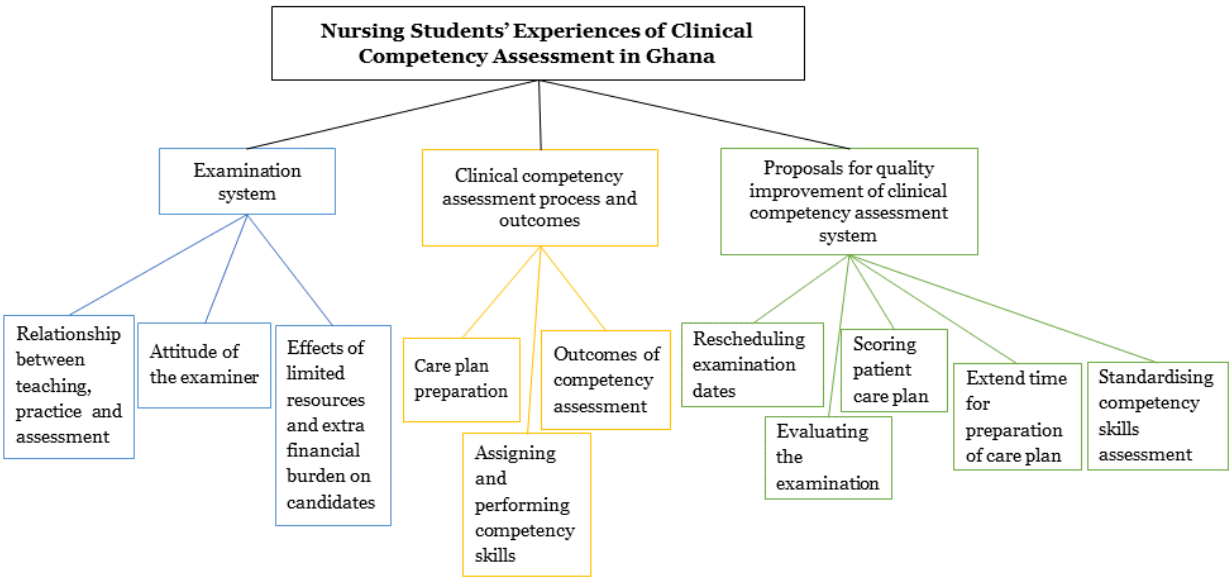

Figure 1. The major themes and sub-themes

3.2.1.1 Relationship between teaching, practice and assessment

Participants had knowledge of the policies guiding the clinical competency assessment system, which included the curriculum, number of procedures assigned to each student and the composition of the clinical examination team:

> "Clinical skills are indicated in the curriculum. Nurse educators also relay information on the competency skills that are examinable to the students so we are aware that we will be examined on both major and minor tasks."- P60

Sixteen participants mentioned the incongruence among teaching, practice and assessment. Four participants (P9, P10, P51, P67) stated that the nursing council developed the nursing procedure manual in 1995, which serves as the clinical education portfolio in the NEIs. This manual had not been updated since then. The participants stated that there was anecdotal information that the manual was being reviewed by the nursing council. The NEIs use the procedure manual in combination with other books, which makes the teaching of clinical competency skills varied from institution to institution.

> "Mostly what we have is online and then a lecturer brought a book on Basic Nursing which had some procedures, requirements and tasks. We have soft copies and some component tasks but do not know if it is revised or not. I don't have any book."- P41

> "We use manuals that were used maybe ten years ago when it is updated, we are not updated and so we continue to still use the old materials that might not be applicable now. So, what I advise we do is that, after coming out successfully with updates in the manual, students must be informed." - P10

> "I also think that the whole practical session went on well but one challenge I had was that I think we don't really practice what we are being taught so during exams we now have to look for component task and then start "chewing" the procedures and go and perform on the ward. P42

Nine participants asserted that the clinical assessment rubrics (tools) are classified documents of the regulatory body and are not available to the NEIs or the students. Students are aware that the assessment rubrics (tools) are updated by the regulatory body regularly. Still, they

only get to know some of these updates during the examination when assessors prompt them. This sometimes confuses the students. Therefore, the clinical instructors try to keep the student up to date with the expected changes in clinical procedures by sourcing information from other books and the internet to teach them so that they are able to cope with the updates in the assessment rubrics from the nursing council.

> "Frankly speaking I was found wanting because what the examiner had (assessment rubrics) was different from what was in the component task, so it was through God that I was able to do something."- P39

> "During our last period session, we heard that we had to add some things and change some things, so imagine within that short while you are supposed to forget all … you know already what you felt was right and have been doing that since first year…"- P57

There is a shortage of clinical staff, leading to a competition between teaching and actual health care duties of nurses, according to six participants (P2, P21, P38, P47, P51, P54). Also, the large number of students placed in the clinical facility makes it difficult for the clinical staff to cope with their clinical teaching roles. Much of the equipment used for the clinical competency assessment is not available in the clinical facility for students to practice with. Additionally, because of the workload, nurses do not follow the protocols as prescribed. Hence students in clinical practice get lost between what they are taught in the clinical simulation laboratories in the NEI and what is practised in the health facilities. Students believe that if the assessment tools are made accessible to the nurse educators and students, it would be helpful in their training, preparation for the competency assessment and practice:

> "… we do not have hands-on experience all the time, and even when it happens at the wards, we do not go by what is in the books they only teach us what they know or they do, they do not take us through the steps as it should be, then when you are given advance procedure sometimes you find yourself wanting."- P54

3.2.1.2 Attitudes of examiners

Fourteen participants contributed information on the challenges they experience in the examination environment. Participants were comfortable with the clinical facilities that were used for the examination because it was where they normally had their clinical placement. Eight participants stated that they had pre-examination meetings with the examination teams, which helped them relieve some of their anxiety due to fear of failure in the examination.

> "I like the that fact that we had a pre-conference, pre- exams conference with the examiners. It in a way brought us to establish some level of familiarity or relationship with them way before the exams, and in a way, for me, it reduces some tension as well." - P54

Six candidates, however, reported they were sometimes abused and traumatised by examiners when they made mistakes during the examination leading to confusion and sometimes a complete shutdown during the examination process.

> "Some of the examiners are quick-tempered so when a student is performing a task and omits something, they will just be screaming at the person causing more anxiety. Yes, and the student will become confused and when they assign another task the student cannot do it properly because he or she is totally confused." - P4

3.2.1.3 Effects of limited resources and extra financial burden on candidates

Although books and manuals were available for learning the competency skills, physical resources, equipment and the financial resources necessary for conducting a clinical competency assessment for nursing students were limited, and therefore the success of the examination was affected. Nineteen participants touched on the effects of limited resources and extra financial burden the examination exerts on candidates. According to seven participants, their preparation for the clinical competency assessment was challenging because some clinical facilities lacked the

necessary resources. Students had to contribute towards the purchase of consumables for the examination to have all the resources they needed. One participant (P64) stated: *"What I will say is that we were not having all the items we would need for the exams."*

> "The nature of the facility will determine the kind of procedures you will be given there. Regional hospitals have limited resources. There are some procedures there you need to know them but because of the nature of the hospital we abandon them because the resources are not there for us to undertake those procedures, so it limits our learning, it makes us lazier and lazier."- P2

> "Okay, when we were admitted into this school, we met books; that is procedures manual and that is what we go through or we when we go for practical session and then some say they don't understand we also go through the book and follow the procedures or the steps in carrying out such practice or procedures in the ward." -P9

Fifteen participants stated that they had numerous financial obligations during the clinical competency examination. Firstly, they paid the registration fees for the examination to the nursing council. Then they paid revision/preparation fees to the NEIs for the examination. Since the examination was organised when the NEI's students-in-training were on campus, candidates had to rent accommodation and feed themselves throughout the revision and examination period. Students also contributed to the purchase of consumables for the examination and were expected to accommodate and feed all the examiners assigned for the whole duration of the examination. One participant (P10) explained that sometimes they could not contribute enough to host the examiners due to their small class size. According to another participant (P62), some examiners complained about the quality of the accommodation and food provided for them, which, the students believed, might affect the outcome of the examination;

> "With everything you mentioned, accommodation, feeding and caring for their needs until they are done, the whole week the students have to take up, we are few in the class and we contributed a specific amount. We had to look for a good place they can stay for the week. We had to go and pay someone to feed them breakfast, snack, lunch and supper and also when they are going, they expect us also to give them something, so we also do that for them"- P62

> "Some people were making comments that the snacks take too much time. Meanwhile, we serve it at 9:30 in the morning, which is not far from breakfast, and their lunch goes at 12:30, and their supper goes at 5:00 and is like this is examination if you don't make them comfortable it will go against you." - P60

3.2.2 Clinical competency assessment process and outcomes

Process issues refer to activities that constitute the clinical competence assessment. Subthemes that emerged from the data were care plan preparation, competency skills assessment and outcomes of the clinical competency assessment.

3.2.2.1 Care plan preparation

Thirty-three participants explained their experiences of the care plan preparation. Twenty stated that some examiners welcomed them and then planned on the patients to use for the examination. However, some examiners allocated patients randomly without prior consent from the patients, which resulted in the patients not cooperating with the students during their assessment and preparation of individualised patient care plans. This affected the time students were assigned to elicit information from a patient. Seventeen participants said that, due to inadequate time allotted for the preparation of the care plan, they could not assess their assigned patients effectively and so they "cooked" (falsified) patient problems so they could finish on time and obtained the total marks for the care plan. Five participants (P2, P3, P5, P8, P9) concluded that falsifying patient problems meant that their health needs were not met:

> "During our practical examination, when we get to the ward in the morning, the examiners will come around and introduce themselves to us. After that, they will go inside the ward and then check the patients that they would want to give."- P30

> "The environment was friendly as the chief examiner herself came with a smile and treated us like a mother, so we felt so easy, and I think it was lovely (Laughs lightly)."- P12

> "Yesterday, at the male medical, the patient I was assigned to me woke him up several times, but this man won't mind me. I was being timed, 30minutes for my care plan. He wasn't talking, I would just open his eyes and sleep. I saw him having tubes and other things. I didn't know what to do so although he didn't tell me his problem, I was able to fish out some for him. So, looking at that, I will write my cooked diagnosis for the care plan."- P27

> "So in case you falsify something in order to pass the examination, without taking into consideration what the patient is facing, it will go against the patient because the person came to the hospital for his or her problem to be solved so if his or her needs are not attended to, then I don't think you are doing good to them."- P9

3.2.2.2 Assigning and performance of competency skills

Thirty-eight participants commented on the assigning of competency skills to perform. After the students have prepared the care plan, the examiners assigned a task based on the patient's problems and interventions in the care plan. Twenty-five participants stated that although they were assigned interventions they proposed, some were asked to perform the task on different patients. In contrast, others were assigned procedures they did not propose in the patient care plan. Other factors that determined the choice of competency skills that were assigned to students were favouritism (P5, P25, P38, P45), the gender of the student (P6, P10), the energy level of the examiners (P6, P9, P10, P30), assessment rubrics available (P4, P5, P11, P22, P36, P39, P41), sympathy from the examiner (P5, P38), limited facilities and time of the day (P4, P5, P11, P22, P36, P39, P41). Additionally, some students were only asked to verbally describe the competency skill and were awarded marks.

Sixteen participants asserted that some examiners shouted at students and showed their dislike for students pursuing degree programmes, while others received telephone calls during the examination process. Students also complained that they were not allowed to seek clarifications and were even compared with other students on various occasions during the competency assessment process:

> "A student had to manage patients with underwater sealed drainage and lumbar puncture. That day when the guy came out, he looked worried and when we enquired how the examination went, he was really hurt because of the choice of procedures that were assigned to him, because some of us had our normal routine procedures and we were very happy even though it was difficult." - P50

An example of the issue of the effect of the time of day on the examination was explained by P6, who said, "Assessors are always energetic at that moment in the morning, so they can examine you very well and that is the time they will be on you, they will be strict on everything but getting to the latter part, everything is comfortable and you will get it "falaa" (meaning very easy)."

The issue of oral explanations of a procedure was discussed by P67, who said, "..., but some of the procedures given to us were the examiners asked us to say it orally, so if you don't keep it in mind like how you write the written paper, you wouldn't be able to deliver... that is the aspect that I am not happy with."

P25 raised the issue of receiving calls during the examination, saying, "So they come there when you start the procedure, they receive a call, walk out and they expect you to pause when they return whatever you have done on the patient, they say they haven't seen it."

The discriminatory practices over the degree students were mentioned by P25, who said, "... one of the things they kept repeating is that "a degree nurse you've finished university, and you have come and you are a nursing officer, a diplomat has to work eight years before they achieve

this stand, so every mistake is not pardonable. You people must be sensible" I mean it moves into another form of insults."

3.2.2.3 Outcomes of the competency assessment

Five participants (P22, P23, P25, P29, P60) complained about the subjectivity of the grading of some aspects of the clinical assessment. They wondered why most examiners refuse to score the maximum mark even though they have performed a task that warrants total marks. A student (P22) stated that she overheard the examiners arguing over which mark to allocate to her on an item on the rubrics that demands privacy, which she did and was not sure why they would not have awarded total mark but instead argued about what to score. Another participant requested that the results of the clinical assessment be released as early as possible for students to know their performance:

> "I think that the subjectivity of the marking should be reduced. There should be a way to check it objectively. Most of us are victims of an examiner who gave a certain mark because of how he or she was feeling at a particular time."- P25

> "Sometimes, the examiners disagree with each other and sometimes argue inform of us." - P22

According to three participants (P22, P25, P32), they needed to provide feedback as early as possible to guide candidates who failed in their remedial examination. Additionally, one participant explained that although fabricating problems for the care plan may make the students pass, patients may be affected since their real problems may not be dealt with:

> "As for me, after our practical, I expect our examiners to communicate our results to us." - P32

> "What we tend to see is that whether you are doing it wrong or not, when you do it wrong, they will shout at you to discourage you, but when you do it right, they can't commend you for you to feel you are on the right track. … that also contributes to a poor outcome of the exams."- P23

3.2.3 Proposals for quality improvement of the clinical competency assessment system

The students proposed ways in which the quality of the clinical competence assessment system could be improved. These were clustered under six subthemes: rescheduling examination dates, evaluating the examiners, scoring patient care plan, extending the time for preparing the care plan and standardising competency skills assessment.

3.2.3.1 Rescheduling examination dates

Five participants (P22, P23, P25, P27, P60) stated that the examinations were conducted when the NEI's students-in-training were still in school. Hence, they struggled to find a place to stay during the examination. Rescheduling the licensing examination to a time when schools are on vacation could enable them to use the NEI's accommodation, thereby reducing the accommodation and financial challenges:

> "…I think they should reschedule so that the exams period will be within the normal academic calendar so that when we in the last semester for us to complete they can make or give us some time for us to write the exams together with the continuing students and just leave without the need for us to stay behind."- P22

> "In our situation right now, the first timetable that came out we are supposed to go for graduation before we come and write our written papers which is not fare. You are doing graduation and you don't know whether you will write well or not. So, I think that they should find a way to bring the licensing period in the school academic calendar so that we all fit and finish with our colleagues. Your friends have finished, and they are in their homes enjoying and you are here studying for licensure."-P23

3.2.3.2 Evaluating examination system

Eleven participants stated that the regulatory body needs to allow the students to evaluate their examiners to help the council in their appointment of examiners for subsequent examinations to improve the assessment system:

> ".. so there should be a post-examination forum where students will also voice out their problems and the challenges they went through and then with that they get to know that, okay so it is this side we are defaulting then we go according to that."- P61

> "Most often, that is what will help. You get feedback from us, we tell you what went wrong, we'll tell you the experiences we had with examiners, we will tell you each examiner per our experience she had with them and then from there probably you would know how to improve on them or avoid them."- P24

3.2.3.3 Scoring patient care plan

Nine participants noted that scoring students while planning care for patients could reduce the fabrication of patient's problems. Additionally, students could then be assessed on how they communicate with the patient and elicit information to plan care. Also, students would then be encouraged to do a systematic assessment of patients:

> "I think it is a good strategy (examiners assessing students during the patient assessment) that will go a long way to help students that are coming up and we the staffs on the ward because if that thing is brought in place (implemented), then nurses on the ward are going to learn how to assess patients and then when students come on the ward, they can do it like this, do it like that."- P38

> "I think observing the student is very okay. We have been doing it, yes, you have to assess the patient then you see some of the things between your eyes, then the patient will also have to tell you some of the things then you can write."- P1

3.2.3.4 Extend the time for preparing the patient care plan

Six participants stated that the time for preparing the patient care plan should be extended so they could assess patients properly and document their needs:

> "The 30 minutes timing for the care plan is too short, so I'm thinking it should be extended to maybe 45 minutes or something so that at least you can be able to formulate enough problems and interact with your patient well."- P37

> "So, if we get time for the assessment it will help. At least 5 or 10 minutes for the assessment and 25 minutes for the care plan. It will help us to know how to establish good rapport or good interpersonal relationship with the patient."- P50

3.2.3.5 Standardising competence assessment

Due to the challenges of assigning clinical competency skills of equal magnitude, twelve participants called for the standardisation of the competency skills to make the assessment consistent and fair. That may also increase the objectivity of the examination and result in students learning effectively. However, seven participants thought every patient has peculiar problems that need to be managed on an individual basis. Participants recommended that setting some skills such as 'intravenous cannulation and infusion', 'feeding of a patient', 'tepid sponging', 'catheter care', 'tracheostomy', 'handwashing', 'administration of medication', 'vital signs', 'wound dressing', 'oxygen therapy', 'blood transfusion', 'monitoring intake and output', 'bed making', 'admission of a patient', 'communication', 'bed bath', 'taking up and handing over', and 'educating a patient on condition' should be included in the standardised examination.

> "Let's say compulsory for that you are given 6 tasks, everybody is performing these six tasks so then we are all being rated according to that, then that one we can know that this one was able to do it, this one was not able to do it then we know it."- P60

"Someone in the medical ward who has not prepared her mind for preparing a patient to the theatre and you tell her to prepare a patient to the theatre meanwhile she has been to the surgical ward already."-P27

4. Discussion

The study sought to explored nursing students' experiences of the clinical competency assessment that forms part of the nursing licensing examination in Ghana. Eight focus group discussions were conducted with a total of 68 candidates from various nursing education institutions in Ghana. It was discovered that although the nursing regulator intended the clinical competency assessment to serve as a means of ensuring only competent nurses were registered to practice in Ghana, there were some inherent weaknesses in the assessment process that compromises the purpose (Fahy et al., 2011). First, there exist significant gap and variations between teaching and assessment which creates difficulties to students. Also, although some of the students are placed in health facilities where they are treated professionally, others had to cope with limited resources and bad behaviours of the examiners during the clinical assessment which may ultimately affect the outcomes of the assessment. Second, there are biases that exist in the management of the assessment process coupled with some technical issues such as the time available for patient assessment that the candidates think creates the complicates the validity and reliability of the assessment process. Last, the candidates recommend standardization of the teaching and assessment processes, rescheduling of the assessment period to a convenient time when some resources are available, an evaluation of the assessment system for quality improvement and apportioning enough time for patient assessment during the examination.

An assessment system is expected to possess certain quality criteria to achieve the purpose for which it was designed. Assessment is of good quality if it is valid, fair, transparent, reliable, feasible, discriminate, practicable and have an educational impact (Gulikers et al., 2004; Hudges & Quinn, 2013; Norcini et al., 2011; Tsai & Kramer, 2014). The unstandardised nature of the assessment and the biases reported by the students compromises the quality of the assessment system despite the contrary perspectives of the Nursing Council that the current assessment system has been a success and served as a benchmark for other countries within the sub-region; however, they will strengthen the gaps.

Regarding time assigned to students to perform their clinical assessment, our findings corroborate a mixed method study conducted by Fahy et al. (2011) to evaluate clinical competency assessment from the perspectives of students an preceptors. Fahy et al. (2011) reported that students find time available for their clinical assessment as opposed to what is reported by the preceptors.

We also found that although the curriculum is available for teaching and practice, educators and clinicians do not have access to the assessment rubrics, making it difficult for them to monitor continuous updates in the rubrics. Fahy et al. (2011) also reported that that students could not fully comprehend the language used in the assessment rubrics. Having the rubrics and not understanding the language is similar to not having it at all. Unfortunately for the students in our study, they currently use the outdated manual and augment it with books from other sources to guide the teaching of future nurses. Evidence-based practice demands that nursing practice protocols be updated regularly (at least five-yearly) as nursing practice and patient needs are continually changing (Committee on Patient Safety and Quality Improvement, 2015). Though the nursing council indicated that they are updating the clinical teaching manual, the current clinical protocols or the procedure manual which is the main source of clinical learning has outlived its usefulness (Burke et al., 2016; Meier et al., 2014; Oermann et al., 2016). Not making the clinical competency assessment rubrics available to guide teaching, learning and practice is not a good educational practice and may not be fair to teachers or students. Burke et al. (2016) found that being familiar with the assessment tool led to accuracy in the assessment. Educators and clinicians are well-positioned to identify gaps and strengthen the assessment rubrics to make them valid and reliable.

Certain practices implemented during the planning of the clinical competency assessment may introduce some form of bias during the examination process, which may affect the examination outcome. Students contributing money to buy consumables, host their examiners and give them gifts during the licensing examination may compromise the quality of the

examination as it provides an avenue for bias (Hughes et al., 2016; Millett, 2016). It is important for the council, as an accreditation body, to ensure that the necessary resources are available to facilitate teaching and learning. The nursing council stated that they have not permitted any NEIs to charge students any monies to host and provide gift for examiners. However, the Ministry of Health in consultation with heads of the NEIs have given approval for final year students to be billed for an amount which the NEIs use to support the examination.

Empirical evidence shows that biases (Daly et al., 2017; Numminen et al., 2014; Oermann et al., 2016) in the examination process through the allocation of the patient to students, inter-rater reliability issues, allocation of specific nursing procedures, leniency towards the female gender, time and performance of the procedures could be reduced through the introduction of a standardised method of assessment (Nyoni & Botma, 2017) to ensure the reliability of the assessment system. The Nursing Council was not in support of any standardised examination such as OSCE (Objective Structured Clinical Examination) but reiterated that students are expected to have been taught all the clinical competencies and therefore, they must be able to perform any clinical skills that is assigned to them.

The essence of feedback in the assessment of clinical competency skills in nursing has been researched extensively as it helps to develop practice, identifies areas for further development, notes patterns of performance, leads to improvement of skills, creates learning situations and supports the assessment system (Burke et al., 2016; Gurková et al., 2018; Imanipour & Jalili, 2016; Lai, 2016; Meier et al., 2014; Oermann et al., 2016; Solheim et al., 2017; Zasadny & Bull, 2015). Notwithstanding these advantages of providing feedback, the Nursing Council reiterated that providing feedback at the examination centre may be impossible since examiners are not mandated to release the examination outcome to students. Additionally, granting students the opportunity to evaluate the clinical competency assessment may help improve the assessment system (Farahani et al., 2015; Márquez-Hernández et al., 2019). Students, who are at the receiving end of the actions and inactions of the examiners and the examination process, must have the opportunity to assess the examination process/system or give feedback to the Nursing Council regarding the quality and challenges of the examination process. This is necessary for quality improvement and ensuring that the assessment system's educational impact is achieved.

5. Implication and limitations

The findings from the study outlines some implications for student nurses, examiners and the nursing council. The fact that student nurses are examined on varying clinical skills shows that some of the student may be luckier than others when it come to the allocation of clinical competency skills for licensing examination. Inadequate training of nurse educators and clinicians may decrease the confidence and expertise of examiners to assess student nurses effectively. Examiners who are lenient with students may overlook some mistake while those who are stringent will be very critical of students' performance. This therefore makes the examination unfair. Although the examination system is established, students use the challenges of the system to their benefit. This therefore affect the credibility of the assessment system.

Globally, there are many countries that are about introducing the licensing examination for nurses. Some of the new licensing examination systems include clinical competency assessment. The authors are of the view that nursing is practice-based, therefore, clinical competency assessment is essential for determining the competency levels of nursing graduates before registration.

This study has limitations. Even though the researchers selected institutions from all the geographical zones of the country under study, only eight out of 106 nursing education institutions were included in the study. The researchers cannot confirm if the results might differ when all the institutions were included. Although students outlined some positives about the assessment system, they focused more on the gaps in the assessment system that need to be addressed.

6. Conclusion

Thus study sought to describe the assessment of clinical competency of student nurses in in Ghana. The study illuminated the design, administration and assessment of clinical competency assessment. Although the intention of the regulatory body is to ensure that only competent nurses are licensed to practice, inherent challenges and weaknesses in the assessment systems

compromise the quality of the process. While some students experienced a congenial environment during the assessment process, others were vocal about the unprofessional behaviour of examiners, financial burden inflicted by the examination process, unstandardised nature of the examination and its associated biases. Students resolved that the assessment rubrics need to be made available to students, nurse educators and clinicians to guide teaching, formative assessment and preparation for the summative assessment. Continuous quality improvement studies should also be instituted to feed the council with data for evidence-based continuous improvement.

Acknowledgment

We would like to acknowledge Professor Gerda Reitsma and the centre for Health Professions Education, North-West University for their support during the manuscript writing phase. We would like to thank Ms. Rashida Muhammed for supporting us during the fieldwork in Ghana. Special thanks to Dr. Kwame Anim-Boamah for his support during the study.

Author's contribution

The first author (OAB) conducted the study under the guidance of the second author (CDC) and third author (SJA). All the authors (OAB, CDC, SJA) were involved in the conceptualisation, data collection, analysis and manuscript writing.

Conflict of interest

There is no conflict of interest to declare in this study.

References

Amilia, R., & Nurmalia, D. (2020). A comparison of patient safety competencies between clinical and classroom settings among nursing students. *Nurse Media Journal of Nursing*, *10*(1), 66–75. https://doi.org/10.14710/nmjn.v10i1.25231

Bifftu, B. B., Dachew, B. A., Tadesse Tiruneh, B., Mekonnen Kelkay, M., & Bayu, N. H. (2016). Perceived clinical competence among undergraduate nursing students in the University of Gondar and Bahir Dar University, Northwest Ethiopia: A cross-sectional institution based study. *Advances in Nursing*, *2016*, 1–7. https://doi.org/10.1155/2016/9294673

Bradshaw, C., O'Connor, M., Egan, G., Tierney, K., Butler, M. P., Fahy, A., Tuohy, D., Cassidy, I., Quillinan, B., & McNamara, M. C. (2012). Nursing students' views of clinical competence assessment. *British Journal of Nursing*, *21*(15), 923–927. https://doi.org/10.12968/BJON.2012.21.15.923

Burke, E., Kelly, M., Byrne, E., Ui Chiardha, T., Mc Nicholas, M., & Montgomery, A. (2016). Preceptors' experiences of using a competence assessment tool to assess undergraduate nursing students. *Nurse Education in Practice*, *17*, 8–14. https://www.sciencedirect.com/science/article/pii/S1471595316000056?via%3Dihub

Christmals, C. D., & Gross, J. J. (2019). An analysis of the introduction of digital nursing licensing examination in Ghana. *International Journal of Caring Sciences*, *12*(3), 1892–1897.

Clarke, M. (2011). *Framework for building an effective student assessment system*. https://files.eric.ed.gov/fulltext/ED553178.pdf

Committee on Patient Safety and Quality Improvement. (2015). *Clinical guidelines and standardization of practice to improve outcomes*. http://www.rand.org/content/

Council on Licensure Enforcement and Regulation. (2020). *CLEAR - CLEAR exam review*. council on licensure, enforcement and regulation (CLEAR). https://www.clearhq.org/cer

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

Daly, M., Salamonson, Y., Glew, P. J., & Everett, B. (2017). Hawks and doves: The influence of nurse assessor stringency and leniency on pass grades in clinical skills assessments. *Collegian*, *24*(5), 449–454. https://doi.org/10.1016/j.colegn.2016.09.009

Fahy, A., Tuohy, D., McNamara, M., Butler, M., Cassidy, I., & Bradshaw, C. (2011). Evaluating clinical competence assessment. *Nursing Standard (Royal College of Nursing (Great Britain) : 1987)*, *25*(50), 42–48. https://doi.org/10.7748/ns2011.08.25.50.42.c8656

Farahani, M. A., Emamzadeh Ghasemi, H. S., Nikpeyma, N., Fereidooni, Z., & Rasoli, M. (2015). Development and psychometric evaluation of the nursing instructors' clinical teaching performance inventory. *Global Journal of Health Science*, *7*(3), 30–36. https://doi.org/10.5539/gjhs.v7n3p30

Gorham, J., Woo, A., & Sutherland, K. (2012). What's in a score? Principles and properties of scoring. *CLEAR Exam Review*, *23*(2), 15–17.

Gulikers, J. T. M., Bastiaens, T. J., & Kirschner, P. A. (2004). A five dimensional framework for authentic assessmnt. *Educational Technology Research and Development*, *52*(3), 67–86.

Gurková, E., Žiaková, K., Zanovitová, M., Cibríkova, S., & Hudáková, A. (2018). Assessment of nursing student performance in clinical settings – Usefulness of rating scales for summative evaluation. *Central European Journal of Nursing and Midwifery*, *9*(1), 791–798. https://doi.org/10.15452/cejnm.2018.09.0006

Hou, J., Chen, S., Sabharwal, S., Fan, V., Yan, M., & Wang, W. (2019). Comparison of RN licensure examination: China and the United States. *International Journal of Nursing Sciences*, *6*(1), 111–116. https://doi.org/10.1016/j.ijnss.2018.11.002

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Hudges, S. J., & Quinn, F. M. (2013). *Quinn's principles and practice of nurse education* (6th ed.). Cengage learning EMEA.

Hughes, L. J., Mitchell, M., & Johnston, A. N. B. (2016). 'Failure to fail' in nursing – A catch phrase or a real issue? A systematic integrative literature review. *Nurse Education in Practice, 20,* 54–63. https://doi.org/10.1016/j.nepr.2016.06.009

Imanipour, M., & Jalili, M. (2016). Development of a comprehensive clinical performance assessment system for nursing students: A programmatic approach. *Japan Journal of Nursing Science*, *13*, 46–54. https://doi.org/10.1111/jjns.12085

Immonen, K., Oikarainen, A., Tomietto, M., Kääriäinen, M., Tuomikoski, A. M., Kaučič, B. M., Filej, B., Riklikiene, O., Flores Vizcaya-Moreno, M., Perez-Cañaveras, R. M., De Raeve, P., & Mikkonen, K. (2019). Assessment of nursing students' competence in clinical practice: A systematic review of reviews. *International Journal of Nursing Studies*, *100, 103414*. https://doi.org/10.1016/j.ijnurstu.2019.103414

Kim, K. K., Kjervik, D. K., & Foster, B. (2014). Quality indicators for initial licensure and discipline in nursing laws in South Korea and North Carolina. *International Nursing Review*, *61*(1), 35–43. https://doi.org/10.1111/inr.12069

Lai, C. Y. (2016). Training nursing students' communication skills with online video peer assessment. *Computers and Education*, *97*, 21–30. https://doi.org/10.1016/j.compedu.2016.02.017

Levett-Jones, T., Gersbach, J., Arthur, C., & Roche, J. (2011). Implementing a clinical competency assessment model that promotes critical reflection and ensures nursing graduates' readiness for professional practice. *Nurse Education in Practice*, *11*(1), 64–69. https://doi.org/10.1016/J.NEPR.2010.07.004

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Márquez-Hernández, V. V., Gutiérrez-Puertas, L., Granados-Gámez, G., Rodríguez-García, M. C., Gutiérrez-Puertas, V., & Aguilera-Manrique, G. (2019). Development of a web-based tool to evaluate competences of nursing students through the assessment of their clinical skills. *Nurse Education Today*, *73,* 1–6. https://doi.org/10.1016/j.nedt.2018.11.010

McGibbon, E., Mulaudzi, F. M., Didham, P., Barton, S., & Sochan, A. (2014). Toward decolonizing nursing: The colonization of nursing and strategies for increasing the counter-narrative. *Nursing Inquiry*, *21*(3), 179–191. https://doi.org/10.1111/nin.12042

McGillis Hall, L., Lalonde, M., Kashin, J., Yoo, C., & Moran, J. (2018). Changing nurse licensing examinations: Media analysis and implications of the Canadian experience. *International Nursing Review*, *65*(1), 13–23. https://doi.org/10.1111/inr.12367

Meier, K., Parker, P., & Freeth, D. (2014). Mechanisms that support the assessment of interpersonal skills: A realistic evaluation of the interpersonal skills profile of pre-registration nursing students. *The Journal of Practice Teaching and Learning*, *12*(3), 6–24. https://doi.org/10.1921/7701240205

Millett, C. M. (2016). Dollars and sense: The policy implications of financing an accelerated nursing degree. *Journal of Professional Nursing*, *32*(5), S14–S23. https://doi.org/10.1016/j.profnurs.2016.02.009

National Council of State Boards of Nursing. (2020). *NCLEX Research Opportunities*. National Council of State Boards of Nursing. https://www.ncsbn.org/nclex-research-opportunities.htm

Nursing and Midwifery Council of Ghana. (1971). *Practice of nurses LI 683*. Nursing and Midwifery Council of Ghana

Nursing and Midwifery Council of Ghana. (2016). *Training institution and clinical/field practice schedule for registered general nursing (RGN) students*. Nursing and Midwifery Council of Ghana

Norcini, J., Anderson, B., Bollela, V., Burch, V., Costa, M. J., Duvivier, R., Galbraith, R., Hays, R., Kent, A., Perrott, V., & Roberts, T. (2011). Criteria for good assessment: Consensus statement and recommendations from the Ottawa 2010 conference. *Medical Teacher*, *33*(3), 206–214. https://doi.org/10.3109/0142159X.2011.551559

Numminen, O., Laine, T., Isoaho, H., Hupli, M., Leino-Kilpi, H., & Meretoja, R. (2014). Do educational outcomes correspond with the requirements of nursing practice: educators' and managers' assessments of novice nurses' professional competence. *Scandinavian Journal of Caring Sciences*, *28*(4), 812–821. https://doi.org/10.1111/scs.12115

Nurakhir, A., Palupi, F. N., Langeveld, C., & Nurmalia, D. (2020). Students' Views of classroom debates as a strategy to enhance critical thinking and oral communication skills. *Nurse Media Journal of Nursing*, *10*(2), 130–145. https://doi.org/10.14710/nmjn.v10i2.29864

Nyoni, C. N., & Botma, Y. (2017). Aligning summative clinical examination with competence-based curriculum: Midwifery educators experiences in Lesotho. *International Journal of Africa Nursing Sciences*, *7*, 11–17. https://doi.org/10.1016/j.ijans.2017.05.003

Oducado, R. M. F., Sotelo, M., Ramirez, L. M., Habaña, M., & Belo-Delariarte, R. G. (2020). English language proficiency and its relationship with academic performance and the nurse licensure examination. *Nurse Media Journal of Nursing*, *10*(1), 46–56. https://doi.org/10.14710/nmjn.v10i1.28564

Oermann, M. H., Kardong-Edgren, S., & Rizzolo, M. A. (2016). Towards an evidence-based methodology for high-stakes evaluation of nursing students' clinical performance using simulation. *Teaching and Learning in Nursing*, *11*(4), 133–137. https://doi.org/10.1016/j.teln.2016.04.001

Park, I. S., Suh, Y. O., Park, H. S., Ahn, S. Y., Kang, S. Y., & Kim, K. S. (2016). Relevance of the test content of the Korean nursing licensing examination to nursing job. *Journal of Educational Evaluation for Health Professions*, *13*, 23. https://doi.org/10.3352/jeehp.2016.13.23

Shin, S. J., Kim, Y. K., Suh, S. R., Jung, D. Y., Kim, Y., & Yim, M. K. (2017). Perception survey on the introduction of clinical performance examination as part of the national nursing licensing examination in Korea. *Journal of Educational Evaluation for Health Professions*, *14*, 26. https://doi.org/10.3352/jeehp.2017.14.26

Silva, K. L. da, & Cabral, I. E. (2018). National licensure exam for Brazilian nurses: Why and for whom? *Revista Brasileira de Enfermagem*, *71*(suppl 4), 1692–1699. https://doi.org/10.1590/0034-7167-2017-0929

Solheim, E., Plathe, H. S., & Eide, H. (2017). Nursing students' evaluation of a new feedback and reflection tool for use in high-fidelity simulation – Formative assessment of clinical skills. A descriptive quantitative research design. *Nurse Education in Practice*, *27*, 114–120. https://doi.org/10.1016/j.nepr.2017.08.021

Tsai, T. H., & Kramer, G. A. (2014). Content validity of the national board dental hygiene examination. *Evaluation and the Health Professions*, *37*(4), 503–523. https://doi.org/10.1177/0163278713501073

Wilmot, E., Kumfo, J., Danso-Mensah, D., Antwi-Danso, S., Darko, V., & Nyante, F. (2013). *An investigation into the factors that contribute to nurse/midwife trainees' poor performance in the final licensing examination in Ghana*. Nursing and Midwifery Council of Ghana.

Woo, A., & Dragan, M. (2012). Ensuring validity of NCLEX® with differential item functioning analysis. *Journal of Nursing Regulation*, *2*(4), 29–31. https://doi.org/10.1016/S2155-8256(15)30252-0

Woo, A., Wendt, A., & Liu, W. (2009). NCLEX pass rates: An investigation into the effect of lag time and retake attempts. *JONA's Healthcare Law, Ethics, and Regulation*, *11*(1), 23–26. https://doi.org/10.1097/NHL.0b013e31819a78ce

World Health Organization. (2020). *State of the world's nursing 2020: Investing in education, jobs and leadership*. https://www.who.int/publications-detail/nursing-report-2020

Zasadny, M. F., & Bull, R. M. (2015). Assessing competence in undergraduate nursing students: The Amalgamated students assessment in practice model. *Nurse Education in Practice*, *15*(2), 126–133. https://doi.org/10.1016/j.nepr.2015.01.003