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### RESEARCH ARTICLE

#### REGULATORY BODY CHARACTERISTICS INFLUENCING PERFORMANCE IN THE NCK EXAMINATIONS.

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#### **Abstract**

Quality education is crucial to the development of any profession. The need to produce nurses capable of functioning as safe practitioners in the health care is key. This has been necessitated by the increasing cost of health care. It therefore demands that nurses should possess recognized qualification before they can be registered and practice legally in any country. This study examined regulatory body characteristics that influence performance in the Nursing Council of Kenya examinations. The poor performance reported in the recent past years has warranted the need to conduct an investigation to unravel the possible factors with the regulatory body that could be associated with poor performance. The study may be used by NCK to address gaps identified in examination process to enhance validity in the NCK examinations. The study design was qualitative study. Data was collected retrospectively for a period of three years. Study site was the NCK and schools of nursing country wide. Study population comprised the heads of schools of nursing and the head of department concerned with examination at the NCK. Cluster and purposive sampling were done for key informants interviewed from nursing schools. Qualitative data was recorded and transcribed for content analysis. The study found the NCK examination to be susceptible to reduced validity resulting from format of examination, invigilation, marking and moderation procedures used and examination malpractices likely to occur. In conclusion the study reported reduced validity of the NCK examinations. The study recommended the NCK to consider revising format of examination in order to increase examination validity and to benchmark with other examinations such as N-CLEX and adopt other means of processing the examination.

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#### **Introduction:-**

Performance in any examination can be influenced by several factors including methods and techniques used in the conduct of the examination (Alleyamma *et al.*, 2012). Since licensure examinations are set and conducted by the Nursing Councils or State Boards, the characteristics examined included the validity of examination, which was

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expressed through the management of the examination, the format of the examination and the examination malpractices relating to NCK examinations.

#### **Validity of the Nursing Council examinations:-**

Validity of an examination determines how well examination questions capture the concept (Nadine, 2009). On subjective tests, such as essay tests, measurement errors are often caused by fluctuations in standards by the individual grader and by the differences in standards of different graders (Drost, 2011). Validity of a test can be compromised if that test item is not used for performing the reason it was intended to do (Coons, 2014) citing (Spurlock, 2006).

#### **Examination setting, moderation and marking:-**

Setters develop and set examination basing on the NCK curriculum in Kenya. Examination setters ensure that the examination meet the entire domain of nursing practice achieved by involving panels of identified tutors from all over the country representing the spectrum of nursing specialties and practice (Nadine, 2009). The same standards are upheld for markers of the examination and moderators (Alupo, 2013). Performance in the examination can be affected by style or pattern of question paper, sequencing of question, strictness in marking and student hand writing among many other factors that are involved during the period of processing (Rasul & Bukhsh, 2011). Comparing the NCK examination with the NCLEX-RN, the NCLEX-RN utilizes a Test Plan that provides a concise summary of the content and scope of the licensing examination and guides the process of examination development (NCLEX-RN TEST PLAN, 2013). The Examination is administered to candidates by computerized adaptive testing (CAT) thus using computer technology and measurement. This makes every candidates examination unique because it is assembled interactively as the examination continues.

#### **Examination malpractices:-**

Examination malpractices take various forms to include leakage, impersonation, smuggling of foreign materials, copying and collusion (Oko & Adie, 2016). Examination leakage is one of the biggest threat to validity and can lead to bad consequences (King, 2012). It is usually driven by desire to pass at all cost, anxiety and lack of confidence (Aderogba, 2011). Other causes of examination malpractices identified include lack of modern invigilation and ill preparation of students (Nnam & Inah, 2015).

The specific objectives for the study included

1. To examine the management of nursing council of Kenya examination
2. To explore relationship of the format of examination with validity of the examination.
3. To investigate the malpractices relating to the nursing council of Kenya examinations

#### **Methods:-**

The study design was retrospective, qualitative study with the researcher utilizing key informant interviews to get data from institutional heads of sampled schools of nursing and education department of NCK. Target population included heads of schools of nursing and staff in the department that handles examination matters at the NCK. Only institutions offering BScN education and had enrolled their students for NCK examinations during the reference period were included in the study. The study also included the institutions presenting their students for NCK examinations at least twice in a year. Sampling design included cluster sampling where the units were categorized into three clusters; private, public and faith based followed by simple random sampling of schools. Purposive sampling was done where all heads of schools of nursing were interviewed and the department dealing with examination at the NCK. Five Public, one private and two faith based institutions were sampled. Research tool was adopted from one used by the Task Force report from the nursing education institutions and faculty (RENRE, 2014). Key informant interviews were conducted. Content analysis was done. The researcher sought approval to conduct the study from Masinde Muliro university school of graduate studies, and ethical clearance from the Research Ethics Committee of Masinde Muliro University and permit from NACOSTI. The researcher also sought informed consent from the participants.

#### **Results:-**

##### **Examination management:-**

Reporting on the validity of the NCK examination, the key informants at the NCK reported that...

*“Nursing council of Kenya examination is developed basing on the curriculum of the NCK in collaboration with nursing schools. Examination content is selected on wide area of content to ensure that varied range of important*

aspects are considered. Current trends and events both nationally and internationally also inform the choice of areas to be examined. However, individual examination setters have liberty on exact question choices, but are given areas the question need to come from, how many questions and the type of question as either MCQ, SAQ, LAQ or combined These are further subjected to panels of review to fine tune and bring out the objectivity in the examinations tools. A paper is passed by the panel after a series of reviews and moderation and the reviewers speaking in one mind that actually the paper is worth the level of the student. Previous performance in the examination also forms a guide on content selection as analysis of poorly and well performed areas are always explored”

When asked to comment on their views on the validity of the NCK examination majority of the participants’ comments were related to NCK examination itself. Their feelings were that the NCK examination did not really measure the theoretical concept a licensure examination for nursing is employed to do “fitness to practice test”.

One of the participants responded...

*“The Nursing council of Kenya should adopt changes in the way they set their examination. Validity of the exam cannot be elicited. It is so difficult for two of us or three of us to agree on a specific answer especially the long answer and short answer questions. This subjects the examination to a lot of subjectivity and not objectivity. Secondly what is in my mind when I am setting a particular question may not be what is in your mind and so if the two of us are to score a learner in essay and short answer questions, the variation will be there. Let them benchmark with other countries that have adopted different strategies”*

Another participant said...

*“The nursing council should change their style of setting examinations and set application questions relevant to the depth of learning experience expected of the students. Imagine after taking the student too deep during the training as critical thinkers, then come to examination you have to reorient the student again. If you happen to sample any NCK paper and cluster the questions into those addressing knowledge, those addressing attitude and those addressing practice, you will be surprised that the exam that purports to test the “fitness to practice” still has majority of the questions addressing knowledge. When will they be tested on the practice they are being licensed to do?*

Another participant said...

*“Nursing council should consider the examination to be an ongoing process and not an end in itself. I see the examination to be a norm for theNCKwith no value being added to the end product who is the student. No wonder the students will engage in all manner of crafts just to pass the examination regardless of the consequences. What makes it different from the university examination...? Nothing. In fact, in my view the NCK examinations should not be there at all.*

The other participant said...

*“I see no variation between the NCKexaminationsfor the BScN and the KRCHNs, in fact it appears more basic compared to institutional examination. Why can’tNCKbench mark with examinations such as N-CLEX and adopt a system that can examine the competency that is required from the candidate in the job market where they are going to practice. In fact the NCK needs to do job market analysis then purely set application based questions so that as they give the license, they are not worried of the candidates’ performance in the practice area at all”*

The message denoted from the key informants was clear that the NCK examination had a threat to its validity in regards to setting of the examination. Majority of the areas and concerns of the key informants pointed to a weakly valid examination all together which highly affects performance of the students in the NCK examination.

On answering the question “who are the examination setters, makers and moderators,” the key respondent explained...

*“Examination setters, moderators and markers are experienced members of faculty in various institutions with different areas of subject specialty and regarded of high integrity by the institutions. The selection of examination setters, markers and moderators followed rigorous exercise and collaboration between the NCK and schools of nursing. During the process of examinationtight controls are put in place to ensure security of the examination to include restriction of any material entering or leaving the preparation room. All resources required for examination preparation are contained and maintained within the confines of the examination custody.*

Concerning examination marking, one respondent said...

*Each individual marker marks a section of an individual's paper basing on the marking key, individual judgment and if in conflict within self-concerning a particular performance, then they subject the question answer of the student to another examiner who independently passes their own judgment on the performance of the candidate. If two or three markers have an issue with a particular candidate performance, then a collective review of the candidate's paper is done"*

Another respondent said...

*"Imagine that I can't read your hand writing, how do you expect me to mark that examination objectively yet I have limited time to do the marking. The volume of work to be done during the marking also influences the individual markers way of scoring especially essays thus making the process subjective"*.

#### **Examination format:-**

When asked to respond on the format of the NCK examinations, the respondent stated that...

*"All questions are set using the model of 20 multiple choice questions drawn from the whole spectrum of what is to be covered in that particular paper. This questions take several forms including true/ false question, matching of two or so categories, or choosing the correct answer from available four choices labelled A, B, C, D. Part two contains at most eight short answer questions also drawn from the whole content spectrum while part three consist of two long answer questions which could be single or broken into smaller parts. The total number of question items for one NCK paper is usually averagely thirty (30) items and a total of four papers are done this makes the items to be averagely one hundred and twenty (120) test items"*.

One participants in the institutional key informant interview reported that...

*"Allocating MCQ twenty (20) marks and the rest eighty (80) marks made the examination less valid since it is easier to achieve construct validity with MCQ, than with short answer and long answer questions. Short and long answer questions are prone to examination marker bias resulting from lack of experience, burnout and illegible handwriting among many others. It is no wonder that the best only a handful students can achieve in these examinations is a credit yet the selection brings into the system among the brightest of the students in the country"*.

Another respondent said...

*"The format of the examination made it highly prone to examination malpractices especially examination cheating"*.

#### **Examination malpractices:-**

On inquiring concerning examination malpractices, one of the key informant indicated that...

*"Examination malpractices is not a new vocabulary to the NCK examinations and neither is it to the schools of nursing. Various aspects of malpractices are experienced all through the examination periods. However, the NCK has not experienced high level malpractices to the BScN examinations in the recent past to warrant being a threat to validity. In addition, the NCK has clearly stipulated examination guidelines and penalties that ensure that examination conduct is held with the esteem it warrants by all the relevant parties. Tight controls put up by the NCK ensures the sealing of any loopholes that could encourage examination leakage. NCK retains the responsibility of ensuring high integrity standards are upheld during the entire examination process"*.

Most participants claimed of having had of examination leakage as a complaint in most of the examination. One participant said...

*"It remains unclear on reality of this vice because few incidences are ever brought on board. However going by the national trends in other national examinations like the KCSE and KCPE, it would be like burying our heads in sand to assume the same can't happen for nursing"* another participant said *"basing on the way our examinations are set, chances of malpractices are quite high unless rearrangements take place to make cheating in examination an impossible activity"*.

Another participant reported...

*"I have seen strange things happen during the process of students doing the NCK examination. If invigilators can make corrections on an examination paper during the process of the examination, I ask myself are all other invigilators doing the same in their centers?, is this correction what was in the mind of the setter, is the marking key capturing the corrected information for this particular center and what about other centers?. Secondly invigilators are deemed super humans that can't collaborate with students to steal examination. They are allowed to move*

*around in the examination room with their phones on...probably browsing and also move in and out of the examination rooms even with question papers. Thirdly the one meter square distance is too small for some hawks eyes of students. They keep peeping left right and showing each other. For me, the process should be made smatter”.*

The other participant said

*“As long as the same type and method of examination continues, examination stealing may never end. This is a vice perpetuated by greedy staffs right from the NCK, to the poorly mentored faculty in the schools of nursing who want to be seen as performing when they are not, to parents corruptly willing to part with anything to have their children pass and finally to the less enthusiastic student who learn just for the sake of it”.*

### **Discussion:-**

Reasonably, the message denoted from the key informants was clear that the NCK examination had a threat to its validity. Majority of the areas and concerns of the key informants pointed to a weakly valid examination all together which highly affects performance of the students in the NCK examination. It was also felt by one participant that the format of the examination made it highly prone to examination malpractices especially examination cheating. This finding is similar to findings by Drost (2011) who in her study pointed out that in subjective tests, such as essay tests, measurement errors are often caused by fluctuations in standards by the individual grader and by the differences in standards of different graders.

Comparing this with the NCLEX-RN, It is clear that the process used by the two examinations is quite different. Nadine (2009) reported that to ensure that the NCLEX examination is valid with respect to content, face, construct, predictive, and scoring validity, the examining body follows strict examination conduct procedures. This conquers with the key informant reports received from our examining body but negated by other informants. However, weighing by domains of nursing and accorded a percentage per each domain and by Blooms taxonomy levels as is the case for NCLEX and RENRE, (RENRE, 2014) the same could not be elicited for this NCK examination posing the question” how well do questions capture the concept of assessing the candidates for the competence and declaring them “fit to practice”.

Basing on the reports of the key informants, the researcher does agree with other researchers that performance in the examination may well be affected by style or pattern of question paper, sequencing of question, strictness in marking and student hand writing, marker understanding of question and surrounding circumstances among many other factors that are involved during the period of processing (Rasul & Bukhsh, 2011).

Comparing the NCK examination with the NCLEX-RN, the latter utilizes a Test Plan that provides a concise summary of the content and scope of the licensing examination and guides the process of examination development (NCLEX-RNTEST PLAN, 2013). “The Examination is administered to candidates by computerized adaptive testing. This makes every candidates’ examination unique because it is assembled interactively as the examination continues. Computer technology selects items to administer that match the candidate’s ability. After the candidate answers an item, the computer calculates an ability estimate based on all of the previous answers the candidate selected. The next item administered is chosen to measure the candidate’s ability in the appropriate test plan category. This process is repeated for each item, creating an examination tailored to the candidate’s knowledge and skills while fulfilling all NCLEX-RN Test Plan requirements. This makes it quite difficulty for the student to pre determine the kind of questions they are likely to be exposed to. Examining the question items of the three examining institutions, NCLEX-RN had 265 items, RENRE had 240 while NCK had 120-140 items making the former two liable to high content validity as compared to the later. However on examining the student training manual provided to the students and the schools from the nursing council of Kenya (NCK student training file, 2014), the researcher found out that though the NCK examination validity is questioned by many, the concept of validity may not altogether be lost if explored further. This is because the passing of practical assessments, coupled with the final licensure exam itself increases the content coverage. Never the less, even the practical examinations themselves have a questioned objectivity in the manner in which they are conducted thus still questioning the validity.

This study findings agrees with the results of (Oko& Adie, 2016) that found out various forms of examination malpractices as being deep rooted in the systems and ( Nnam& Inah,2015) that reported lack of modern invigilation and ill preparation as some of the causes to malpractices. (King, 2012) identified these malpractices as a threat to validity. Aderogba (2011) reported that this malpractices is usually driven by desire to pass at all cost, anxiety and

lack of confidence. This study agrees with Aderogba because the informants reported that “*all the learner is concerned with is passing whether through crook and thin or not*” as student try all forms of malpractices as identified by (Achio, 2012) especially when the examination provides the loopholes for such and therefore the key informants concerns that the vice can affect the results we see poses a strong relationship between examination leakage and the performance in the NCK examination. Royal (2012) in her study also identified malpractices as one of the leading reasons of an examination lacking validity thus the reason to question “*did the students who passed the NCK examinations really pass? And did those that failed really fail*”.

The key informants expressed their feelings that the lack of validity of the NCK examination had both direct and indirect effects on the performance of the students in the NCK examinations. With right structures and right process validity of the examination could be enhanced.

**Recommendations:-**

1. Nursing council to consider revising format of examination in order to increase examination validity.
2. Nursing council to benchmark with other examinations such as N-CLEX and RENRE and adopt other means of managing the examination.