FACTORS INFLUENCING SUCCESS OF BACHELOR OF SCIENCE IN NURSING GRADUATES IN NURSING COUNCIL OF KENYA LICENSURE EXAMINATIONS

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Abstract

Passing the licensure examination is an important milestone in the professional life of new nursing graduates. This study investigated the factors that influence the performance of Bachelor of Science in Nursing (BScN) graduates in the licensure examination in Kenya. A descriptive survey design was used in this ex post facto research study. A postal questionnaire s and record review methods were used for data collection. The sample comprised 157 BScN graduates of whom 94.8% had done the licensure examination and were undergoing internship. The results indicate that the overall national pass rate was 73% and the failure rate 23%. A combination of school, candidate and examination factors played an important role in the candidate success in the examination. Studying in groups seemed to increase the candidates change for passing. It was recommended that candidates preparing to take the examination should revise in proximity to their training institution for support by nursing faculty and library resources. The study was conducted in November 2011 to March 2012.

Keywords: Success, examination, licensure, nursing, undergraduate

Introduction

The Nursing Council of Kenya (NCK) licensure examination is of critical importance for nursing graduates, their sponsors, the nursing program and university. The main purpose of the examination is to determine the Bachelor of Science in Nursing (BScN) graduates minimum competence and preparedness to provide safe and effective nursing care (McDowell, 2008). To an extent, the exam may be an indicator of how well curriculum objectives are achieved (Lauchner, Newman & Britt, 2008). It can be argued therefore, that while the licensure examination is not a curriculum evaluation instrument, it may serve as a useful tool for evaluating the performance of respective nursing programs in Kenya.

Currently, the licensure examination is held biannually; in January and July. The examination has four papers: paper one comprise medical-surgical, pediatric and gynecology nursing; paper two has midwifery/reproductive health; paper three comprise community health nursing; and paper four covers mental health nursing, nursing education, research,

and management. Previously, one examination paper was done daily but since January 2011, two papers are done per day. The candidate must pass each of the four examination papers with a minimum of 50% to be eligible for professional registration by the Nursing Council of Kenya. Failing in any paper means that the candidate must pay the full fees again to retake the examination when next offered. This is usually after an interval of about six months.

Apparently, there is inadequate documentation on the performance trend by the BScN graduates in the licensure examination. However, the performance has been notably variable and unpredictable. This variability is thought to be dependent on the training institution factors, candidate or the examination factors. Therefore, there is need to establish the trend and success rate in the licensure examination in Kenya. In comparison with the USA, about 15% of nursing graduates taking the licensure examination for the first time fail while the national average success rate is 83.4% (Poorman & Webb, 2000).

Various factors are thought to affect the performance of the nursing graduates in the licensure

examinations. Although it is not a Nursing Council of Kenya requirement, it is common practice for BScN graduates to take the licensure examination immediately after graduating from their respective universities. Depending on the timing of graduation by the universities, there may be broad variations in time available for revision before taking the examination which would impact on performance. Furthermore, the graduates take the licensure examination after leaving the university. This means that they have minimal or no support from their nursing faculty as they prepare for the examination.

On the other hand, some universities previously served as an examination center but this changed with the introduction of centralized examination centers in the year 2011. However, the impact of the changes on the psychology and performance of the graduates taking the examination away from the familiar university environment is yet to be known. Therefore, it is important for the nursing faculty to identify students who are at risk of failing based on the performance and provide interventions that promote their success while they are still in college. Furthermore strategies for reaching out to those graduates who have failed to assist them in retaking the examination to pass should be developed.

Research Problem

Licensure examinations are a vital stage in the professional progression of degree graduate nurses in Kenya. However, the performance of the BScN graduates in the licensure examination is variable and often unpredictable since its inception. The unpredictable performance by the nursing graduates is a cause for serious concern and indicates the need for determining the contributing factors. Besides, there is need to document the trend in the performance. The study objectives were twofold. First, to determine factors influencing the nursing graduates' performance in the Nursing Council of Kenya licensure examination. Secondly, to identify the trend of the BScN graduates performance in the licensure examination

Literature Review

The licensure examination is increasingly becoming a high stakes event in which passing is an important milestone in the graduates' professional development. The success of BScN graduates in the licensure examination is influenced by a complex interplay of diverse academic and non-academic factors. A study by Arathuzik and Aber (1998) found that grades obtained in basic sciences and specific clinical nursing courses, quality of clinical practice, and "O" level mean grade as key academic factors. Non-academic factors included test anxiety, self confidence to pass the exam, self-esteem, age, self-efficacy, existence of a life crisis, financial difficulties, and having young children demanding ones time.

Studies have shown that it is possible to predict failure in the licensure examination. Predictive indicators include age, parents education level, grades obtained in basic sciences, grades in reproductive health nursing, psychiatry, pediatrics, pathophysiology and critical care nursing. Grades of C, D, or F in nursing courses predicted failing in the licensure examination while grades A and B predicted passing(Beeson & Kisslings, 2001; Crow et al., 2004; Roncoli, Lisanti & Falcone, 2000; Lauchner, Newman & Britt, 2008; Seldomridge & DiBartolo, 2004). Students who failed more than two nursing courses were at higher risk of failing the licensure examination (Siktberg & Dillard, 2001).

Significant non-academic factors that predicted failing were increased family responsibilities and demands, inadequate finances, high stress level, situational crisis, anxiety and loneliness (Beeson & Kisslings, 2001). However, the studies mainly focus on academic and intellectual factors while non-academic factors have been given inadequate attention. The inability to adequately address the challenges encountered by students who fail and providing effective measures to support them is the main weakness of the studies.

Beeman and Waterhouse (2003) argue that the amount of time spent in revising the week before examination was related to success. Graduates who revised less than 26 hours the week prior to examination were less likely to succeed. However, length of the interval between graduating and taking the examination did not influence examination success (Kathleen et al, 2000). Similarly, reading new nursing literature prior to examination may lead to failing. However, having a job did not contribute to failing the licensure examination (Arathuzik & Aber, 1998).

In recent years, there has been a tremendous increase in the diversity of students enrolled in the BScN program in Kenya. Apart from the traditional young school leavers, the number of older students with previous nursing diploma registration has increased. The diversity of contemporary nursing students poses a significant challenge to the academic institutions

and the regulatory bodies. The current demographics include older students, more males, and married students with children, financial obligations, cultural diversity, varied educational backgrounds and life experiences, social responsibilities and employment (Arathuzik & Aber, 1998). The social responsibilities place an extra strain on the older students which may affect their performance. This implies the need for innovative, interactive and a variety teaching/learning methods to meet the adult learners needs effectively in clinical practice and the classroom. A study by Beeson & Kissling (2001) however, found that that older students performed better than the pre-service young students but the reasons are yet to be determined. Moreover, no studies have been done in Kenya on the success rate of the this category of students in the licensure examination compared to pre-service students

The consequences of failing in the licensure examination are diverse including low self-esteem, self-doubt, mental conflict, confusion, emotional pain, stigmatization, financial loss, and shame (Poorman & Webb, 2000; Daley et al, 2003). Consequently, adequate psychological preparation for candidates who fail is crucial in order to pass the next time they sit for the examination. Interventions should focus at boosting confidence of the candidate and should include tutoring, test taking skills, reviewing past papers, developing a positive mindset, counseling, stress reduction skills as well as quality clinical attachment (Poorman & Webb, 2000; Wright & Henzi, 2007). However, it is recognized that graduates who fail often avoid contacting nursing faculty for support due to bad relationship and feelings of isolation which worsen the chance of passing when repeating the examination (Griffiths, Papastrat & Csekanski, 2004).

Graduates who fail do not receive any support from their training institutions nursing faculty. The role of the nursing faculty therefore, should extend beyond graduation to transform failure to passing and ensure graduates become licensed professionals (Griffiths, Papastrat & Csekanski, 2004). In Kenya, the Nursing Council often seeks explanation from the training institutions when a high number of students fail. This approach is of little help in identifying the causes of failure since no research has been done on the subject. It must be appreciated that while the Nursing Council provides a core syllabus for the BScN program to guide academic institutions, the realities of implementation may be different.

Griffiths, Papastrat and Csekanski (2004)

argue that failure in the licensure examination should be considered against the institutional teaching/learning environment including academic policies, course sequencing, admission criteria, innovative teaching strategies, adequacy of theoretical learning, adequacy of clinical training, and examination preparation process. In that regard, the nursing faculty needs to undertake wholistic interventions that may involve curriculum review to eliminate consistently low passing rates among program graduates.

High failure rates among the nursing graduates may cause the nursing faculty to feel that they have failed. This mainly occurs when testing becomes equivalent to learning in which students and faculty focus on what is needed to pass (Poorman & Webb, 2000; Crow et al., 2004). Such a perspective leads to narrow focus, insecurity, a competitive and uncaring environment in which graduates pass the examination but fail to meet professional performance expectations. Rather than the licensure examination being an end in itself, it must be viewed as one of the steps towards becoming a safe and effective nursing professional.

Various interventions have been suggested in attempt to mitigate the potential for failing the licensure examination by the nursing graduates. These include tutoring by nursing faculty, review of past papers, more study time the week prior to examinations, test taking skills, time management, joining study groups, counseling on stress reduction measures, easy access to library, and support by faculty (Arathuzik & Aber, 1998; Daley et al., 2003). It must be observed however, that the candidates often graduate and leave university before taking the nursing council examination. This makes it hard for the university to provide the needed support. The support of nursing faculty for candidates who have graduated and left the university has financial and time implications that must be considered.

Research Methodology

Design and Method

A descriptive survey design was used in this ex post facto research study. A questionnaire was administered and records reviewed during the data collection. The respondents were contacted at their place of work and requested to participate in the study. The questionnaires were posted to the respondents and returned to the principal investigator once they were filled. Relevant records at the Nursing Council of Kenya were accessed and analyzed to elicit the trend of performance in the licensure examinations.

Sample

A purposive sample, comprising 157 recent BScN graduates, was recruited to the study based on applications received at NCK for internship. Most (94.8%) of these graduates had already taken the Nursing Council of Kenya licensure examination and were currently deployed at level 5 hospitals for internship experience. These hospitals were New Nyanza Provincial General Hospital, Kakamega Provincial General Hospital, Kisii Level 5, Nakuru Provincial General Hospital, Nyeri Provincial General Hospital, Embu Provincial General Hospital, and Machakos Level 5.

Research Instrument

A questionnaire was developed for the study and was designed to collect demographic data as well as school, candidate and examinations factors that may influence success of the nursing graduates in the licensure examination. To ascertain validity of the instrument, the items included were derived from literature and guided by the research objectives. Additionally, the questionnaire was subjected to peer evaluation. A pilot test was done to ensure reliability of the instrument. The data from the study was analyzed using SPSS version 17.

Ethical Considerations

Approval to conduct the study was obtained from the Research Ethics Committee of the University of Eastern Africa Baraton and permission to access records from the Nursing Council of Kenya. The respondents were contacted and requested for consent to participate in the study. To ensure anonymity and confidentiality, the names of the respondents and the hospitals they were deployed for internship were not recorded in the questionnaire or divulged in the research report.

Results and Discussion

Rate of Response

One hundred and fifty seven questionnaires were distributed. Of these, hundred and thirty six were returned which is an impressive response rate of 87%.

Gender of Respondents

Of the respondents, 37% were male while 63% were female as shown in figure 1. This is generally consistent with the gender composition of the nursing profession.
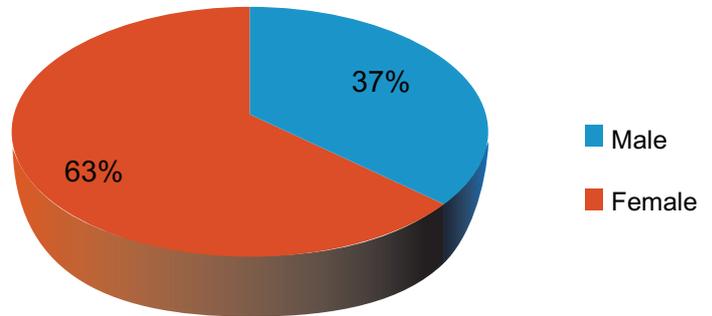

Figure 1
Gender of respondents

Age of Respondents

The age of respondents varied widely from 20 years to 45 years. The higher age bracket may indicate the presence of mature students seeking nursing education for the first time or are up-grading from diploma to degree. However, majority (72.9%) was in the ages of 24-27 years and only 4.8% were aged between 33–45 years. Statistical analysis did not show any relationship between age and success in the examination (p=0.884).

Marital Status

As shown in figure 2, thirty percent (30%) of the respondents were married while 70% were single. Marital status did not seem to influence performance in the licensure examination (p=0.952).
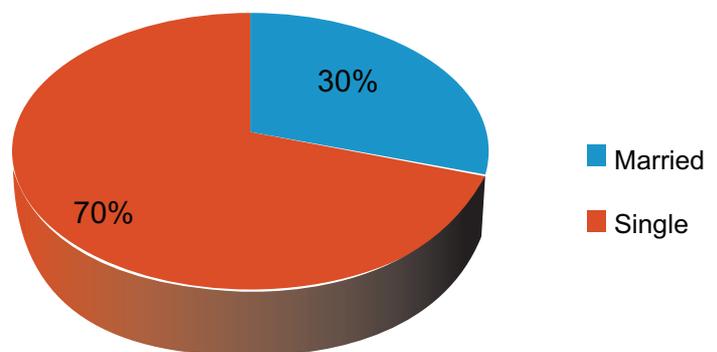

Figure 2
Marital status

Year of Graduation

The respondents indicated that they graduated from university between 2003 and 2011. Majority, 76.7% graduated in the year 2010. Those who graduated in 2009 to 2011 were 93.8%.

Training Institution

The BScN graduates represented seven (7) universities including University of Eastern Africa Baraton (UEAB), University of Nairobi (UoN), Moi University (MU), Kenya Methodist University (KEMU), Kenyatta University (KU), Great Lakes University (GLUK) and Egerton University (EU). The distribution of respondents by university is shown in figure 3.Statistical analysis indicated a significant relationship between academic institution and passing the licensure examination (p=0.004). This may be related to adequacy of learning resources and implementation of the teaching/learning process.
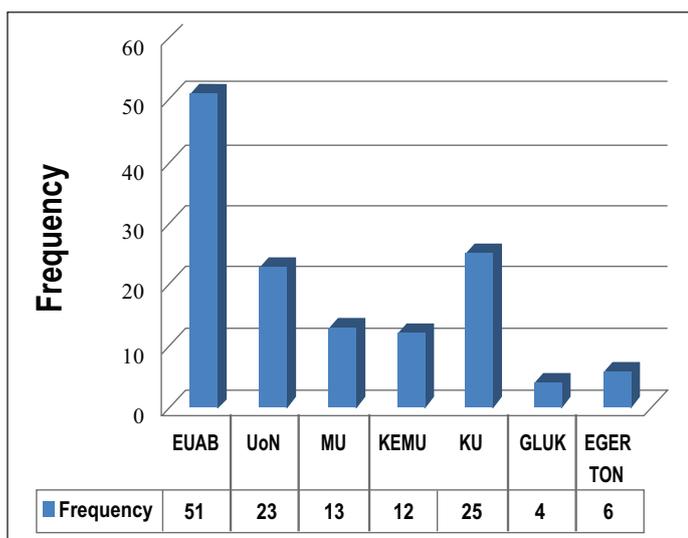

	EUAB	UoN	MU	KEMU	KU	GLUK	EGERTON
Frequency	51	23	13	12	25	4	6

Figure 3
Respondents' training institution

Professional Experience

Majority (83.6%) of the respondents was nursing interns, 13.3% had 1-2 years of experience and 3.1% had worked for 3 to 4 years.

Passing the Licensure Examination

A significant proportion (68.7%) of the respondents passed the licensure examination at the first attempt, 19.4% passed at second attempt and 6.7% passed at the third attempt. However, there 5.2% who had not sat for the licensure examination

but were on internship. It is therefore necessary to determine causes for delay in taking the examinations and whether those who delayed engaged in nursing practice.
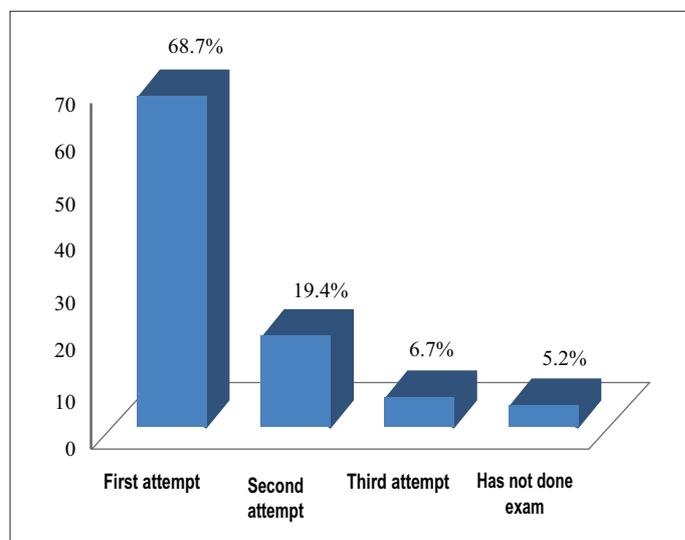

Figure 4
Passing the licensure examination

KCSE ("O-Level") mean grade

All the BScN graduates had the mandatory mean grade for university admission and cluster subject grades required for the nursing program. The mean grades ranged from A plain to C+ (plus). These were A plain 10.4%, A- 37.3%, B+ 20.1%, B plain 17.2%, B- 10.4% and C+ 4.5%. This indicated that 57.4% had mean grades of A- and B+. However, the KCSE mean grade did not have any relationship with passing or failing the licensure examination (p=0.366).

Repeating of Nursing Sciences Courses

The results indicated that a minimal number had repeated nursing courses during training. These included 3 (2.2%) in medical/surgical nursing, 5(3.7%) in critical care, 4(2.9%) in pediatrics, 3(2.2%) in midwifery, 5(3.7%) in community health, 5(3.7%) in psychiatry and 14(10.3%) in pharmacology. Statistical analysis shows a significant relationship between repeating psychiatry nursing and failing the licensure examination (p=0.012)

Repeating Basic Science Courses

Regarding the basic sciences courses, 5(3.7%) had repeated anatomy, 3(2.2%) in physiology,

18(13.2%) in biochemistry, 12(8.8%) in chemistry, 4(2.9%) in immunology, 4(2.9%) in nutrition, 15(11%) in microbiology and 4(2.9%) in pathology. Further analysis of this data indicated a significant relationship between repeating basic sciences and failing the licensure examination including physiology (p=0.003), biochemistry (p=0.005) and immunology (p=0.002). The relationship implies that students who experience difficulties in mastering basic sciences may be at risk of failing the licensure examination.

Best Time to Take the Licensure Examination

Majority (73.1%) indicated that the best timing for the licensure examination was soon after graduation and before starting internship while 26.9% preferred after internship. The advantage of taking the examination immediately after graduation is when information was still fresh in the graduates' memory and therefore better chance in passing.

Revision Approaches for Examination

The respondents adopted various methods of revising for the licensure examination. These included study groups (64%), review of past papers (67.4%), spent more time revising (36.3%), revised lecture notes (51.5%) and had discussion with nursing faculty (13.3%). Revision for examination in a study group seemed to have a relationship with passing (p=0.008). Other methods used in revising were online notes, AMREF modules, lecture notes textbooks, and memorizing information.

In the following section, the study focused on school, candidate and examination factors that may affect passing. The questionnaire rating scale had four items which were collapsed into two.Strongly disagree and disagree were considered as disagree while strongly agree and agree were considered as agree as tabulated below.

Table 1
School factors influencing examination passing

School Factors Influencing Exam Success	Disagree %	Agree %
Theory content for all courses was adequately covered	24	76
Clinical experiences were adequate in all placements	26	74
Nursing faculty/clinical instructors were often available in clinical placements	46	54
The knowledge I gained in university enabled me to pass exams comfortably	19	81
Basic sciences were hard subjects to learn	62	38
There was frequent shortage of nursing faculty at my university	60	40
There were adequate reading materials in the library	26	74
The nursing faculty coached students on test taking skills	42	58
Nursing faculty were accessible for consultations during revision for exam	41	59

Based on the data from table 1, the respondents seem to indicate that certain school factors seemed to contribute to failing the licensure. While the respondents were generally in the affirmative, items with scores of near half need to be given attention by the nursing schools to improve students' preparedness for examination and professional practice.

These items include clinical supervision by nursing faculty (46%), understaffing of nursing programmes (40%), coaching students on examination taking skills (42%) and availability of nursing faculty to assist students (41%). Apparently, school factors played a minor role in passing the NCK examinations in this study. These factors may have a bearing on the performance in examinations.

Candidate Factors Influencing Exam Success

Candidate Factors Influencing Exam Success	Disagree %	Agree %
I spent adequate time revising the week prior to NCK licensure exam	20	80
I was confident of passing the NCK licensure exam	31	69
I experienced a high level of anxiety during the NCK exam	42	58
I experienced high level of stress during the NCK exam	54	46
I had adequate finances for all my needs around NCK exam time	62	38
Family responsibilities interfered with my preparation for NCK exam	68	32
There was a major life crisis that affected my preparation for NCK exam	74	26
I was working in the hospital prior to exam time	55	45
My job affected preparation for the NCK exam	64	36
I had easy access to the library when revising for exam	55	45

A range of personal factors appear to have influenced the performance of candidates in the NCK licensure examinations.

These include high levels of anxiety (58%), inadequate finances for personal needs during exam period (62%), and lack of access to library resources (55%). However, many candidates stated that they revised adequately for examination and were confident of passing.

Table 3

Examination factors influencing passing licensure examination

Examination Factors Influencing Success	Disagree %	Agree %
The range of topics covered in the NCK exam was balanced in all papers	64	36
Time (3hrs) allocated for each exam paper was adequate	37	63
The two days allocated for the exam were adequate	70	30
The NCK exam focused on application rather than theory knowledge	48	52
The NCK exam was too difficult	39	61
The NCK exam was generally fair	54	46
The exam questions were clear and easy to understand	59	41
Examination centers provided a conducive environment to candidates	42	58
I had difficulty finding accommodation near the exam venue	49	51
The content covered by the NCK exam was relevant to practice	40	60
I answered all exam questions in each paper	39	61
The NCK exam fees is too high	18	82
The exam process at the center was candidate friendly	27	73
Timing of the examination after graduation was appropriate	41	59

The data in table 3 indicates that the respondents' judgement of the examination process and how it was conducted. Notable, was the feeling that range of topics covered in examination was not balanced (62%) and therefore not a valid measure of their knowledge and skills. The examination was perceived to be too difficult (61%) and unfair (54%) with the questions being neither clear nor easy to understand (59%). At the same time, half of the candidates reported difficulties finding accommodation near the examination centre while the exam fee was judged to be too high (82%).

Data from record review is presented in table 4. The information shows that the average national passing rate in the licensure examination was 77% while the failure rate was 23%. Further, there were various gaps in specific data available at the NCK archives even though the required records were available. This implied that examination reports were not analyzed in detail to capture all vital data.

Table 4

Licensure examination national success rates 1991- 2011

Year	Exam Session	No. 1St Entries	No. Repeating	Total Entries	1St entry passed	Repeat passed	Overall Pass (%)	Overall Fail (%)
1991	November			2	2		100%	0%
1992	May			1	1		100%	0%
	November			5	5		100%	0%
1993	May			1	1		100%	0%
	Unavailable			-	-		-	-
1994	May			10	10		100%	0%
	Unavailable			-	-		-	-
1995	Feb			1	0		0%	100%
	Aug			3	2		66.6%	33.3%
1996	Feb			1	1		100%	0%
	Aug			10	10		100%	0%
1997	Feb			5	5		100%	0%
	Unavailable			-	-		-	-
1998	Unavailable			-	-		-	-
	Aug			17			100%	0%
1999	Feb			30			85.7%	14.3%
	Aug			13			75%	25%
2000	Feb			22			40.9%	59.1%
	Aug			54			50%	50%
2001	Feb			11	9	2	100%	0%
	Aug			50			55.1%	44.9%
2002	Feb	17	17	34	9	11	58.2%	41.18%
	Aug	26	18	44	15	14	65.9%	34.1%
2003	Feb	14	18	32	14	18	100%	0%
	Aug	46	7	53	38	7	84.9%	15.1%
2004	Feb			40			40%	60%
	Aug			67			97%	3%
2005	Feb			47			41%	59%
	Aug			71			73%	27%
2006	Feb			46			98%	2%
	Aug	21	20	41			97.5%	2.5%
2007	Feb			68			97%	3%
	Aug			64			78%	22%
2008	Feb	44	12	56			69.6%	30.4%
	Aug			59			70%	30%
2009	Feb	38	28	66			67%	33%
	Aug	96	24	120			76.6%	23.4%
2010	Feb	71	18	89			60.7%	39.3%
	Aug	197	25	222			78.8%	21.2%
2011	Feb	120	80	200			60%	40%
	Aug	129	50	179			63.5%	36.5%
						Mean	77%	23%

Comments by the respondents were analyzed thematically. Additional school factors highlighted were the need for more practical experiences during training; avoiding situations where theory content was taught within a short period and lecturers availing themselves to assist students with revision. Some respondents were unhappy that lecturers were often absent during clinical placements and which inhibited effective acquisition of practical skills.

Among of the candidates' factors that were cited are overwhelming amounts of information to revise for the licensure examination, the fear of failure increases stress and sometimes led to physical symptoms such as abdominal upset. Inadequate time when on internship; not being allowed adequate revision time off from the hospital for revision, lack of appropriate accommodation near the examination venue and limited time for revision since the licensure examination is held immediately after graduation exercise. Some respondents expressed the need for prayer at the start of examinations papers.

According to respondents, the examination should be standardized and aligned to course objectives while the need for licensure examination was contested. It was suggested that licensure examination should be replaced with periodic core assessments by nursing faculty and qualified nurses in the hospitals as co-assessors such that the licensure requirements will be met upon graduation. This means that licensure protocols should be in-builtin the BScN curriculum and be ongoing. This suggestion implies that the nursing schools become agents of the Nursing Council. Additionally, the examination fee was said to be too high and instead the respondents suggested that those who repeat should pay per paper instead of the full examination fee.

There was a feeling among respondents that the present examination coverage is too narrow and not balanced. The examination as currently set was viewed as focusing on remote issues that are rarely encountered in practice. At the same time, it was expressed that some examination questions were not stated clearly and which often confuse candidates. Further, it was suggested that the examination should strictly be guided by the BScN syllabus from NCK. At the same time, paper four was said to be too broad and therefore should be separated into parts.

The two days allocated for the licensure examination were said to be inadequate. Therefore, it was suggested that the days be increased to four as it was in the past to reduce stress to the examinees. Some respondents expressed discomfort at mixing diploma and BScN candidates in the same examination hall and hence proposed the need for separate examination halls.

DISCUSSION

While passing the licensure examination is an important milestone in the professional life of nursing graduates, the results of the study indicate that it evokes considerable stress and anxiety in many candidates. However, it was not clear what percentage of candidates' experiences physical symptoms such as the reported abdominal upsets. This implies there may be unreported discomforts such as lack of adequate sleep and rest that are undetermined. Lack of access to the library and inadequate finances seemed to have increased stress to candidates and may have contributed to failing. While a significant number of candidates reported being on internship or employment, this did not adversely affect examination performance.

The admission characteristics to the BScN programme, KCSE mean grade, did not demonstrate any relationship to passing in the licensure examination. Success in the licensure examination may therefore be explained based on the school factors. The results indicate that students were unhappy with the frequent absence of nursing faculty from clinical sessions and understaffing in the nursing program affecting curriculum delivery. Additionally, limited coaching on examination taking skills and lack of support by nursing faculty with revision possibly contributed to failing.

The study demonstrated a possible relationship between repeating basic sciences and nursing sciences with failing the licensure examination especially physiology, immunology and biochemistry as well as psychiatry nursing. Studies elsewhere have shown a similar relationship (Beeson & Kisslings, 2001; Siktberg & Dillard, 2001; Arathuzik & Aber 1998). Students who perceived basic sciences to be hard subjects often experienced difficulty in understanding nursing sciences which predisposed to failing. It is unclear what remedial measures are used by various academic institutions to assist students at risk of failing or if such measure exist at all. Students who fail do not seem to receive any support and which is a cause for serious concern by the universities and the Nursing Council of Kenya.

The candidates used various approaches to revise for the licensure examination. Except for study groups which were related to passing the examinations, it is unclear how helpful the other approaches were. Apparently, study groups provided

an opportunity for candidates to share knowledge, support each other. Support by study group may provide added psychological benefits in reducing examination anxiety and raising candidates confident that is essential to passing.

Various concerns were raised about the examination. A significant proportion of candidates perceived the licensure examination to be narrow and unbalanced, not aligned to curriculum objectives and generally difficult. Further, the two days allocated for the examination were judged inadequate by the candidates. However, there was no observed reduction in examination performance when the examination was done for two days instead of four days in the past as shown in table 4. The observations by candidates raise serious basic questions that need to be addressed by the NCK as well the academic institutions. These include re-evaluating examination setting and marking standards, knowledge of the examiners in education testing and evaluation, professional nursing experience, currency in health practices and the teaching experience. Urgent steps needs to be taken to remedy possible weaknesses in the examination process.

The average national passing rate in the licensure examination was 77% while the failure rate was 23%. A study by Poorman and Webb (2000) shows the examination success rate in the USA was 83.4% while the failing rate was 15%. The NCK examination pass rate compares favorably in view that degree nursing in Kenya is relatively recent. However, various gaps were noted in the data storage and which need to be corrected.

Recommendations

The following recommendations arise from the findings of this study. These are directed at the training institutions, the NCK, candidates themselves and to a lesser extent, employers or internship venues.

To training institutions:

1. There is need to determine the reasons for delay by some graduates to take licensure examinations by the training institutions.
2. The training institutions should advise their nursing graduates sit the licensure examinations immediately after graduating and while maintaining contact with the nursing faculty.
3. Students at risk of failing should be identified early and be given focused remedial support especially

examination taking skills beore graduating. On the other hand, candidates who repeat require support by nursing faculty to succeed next time they re-take the examination.

4. Training institutions must ensure the quality of education the students receive including clinical practice.

To NCK

1. There is need to improve data on capturing, storage and retrieval by NCK for all types of candidates. The data should capture pre-service and upgrading candidates pass rates, repeating candidates pass rates, overall national pass and fail rates for each examination session for certificate, di ploma and degree. Digitalizing all past and present examination records will make the record keeping and retrieval more efficient and should be considered.
2. Analyze the possibility of charging proportionate fee for each paper repeated instead of full examination fee.
3. Setting and marking of the licensure examination should be re-considered. The focus should be in ensuring the examination is balanced, questions are clearly stated, easy to understand and adequately moderated for fairness. Marking scheme should also be moderated. Establishment of an examination bank is desirable while the qualifications, professional and teaching experience of examinersshould be considered.

To Candidates

1. It is advisable to form study groups to support each other when revising for the examination.
2. Candidates preparing for licensure examination should revise in proximity to their training school where they can receive support from the nursing faculty as well as access library resources.
3. Graduates should take the licensure examination immediately upon graduating when the knowledge is fresh and be licensed soon thereafter.

To Internship Stations

1. Graduates on internship and are preparing to take the licensure examination should be allowed adequate time off for revision preferably two weeks prior to examination.

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