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## Outcomes of Formal and Informal Nursing Mentorship Programs in Kenya Public Universities

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### ABSTRACT

Mentorship was a one to one reciprocal nurturing relationship between a more experienced and knowledgeable mentor and a less experienced mentee. A mentor was a person who had expertise in the areas of need identified by the mentee and was able to share the wisdom in a nurturing way. A mentee was someone seeking guidance in developing specific competencies, self awareness and skills in early intervention. The study aim was to evaluate outcomes of formal and informal nursing mentorship programs in Kenya public universities. This was a descriptive and exploratory cross-sectional evaluative study. It used both qualitative and quantitative methods in data collection where 305 mentees and mentors participated. Qualitative data collection utilised focus group discussions, while quantitative utilised questionnaires. In quantitative data collection method, simple random sampling was used while in qualitative, purposive and snowball non probability samplings were used to select participants. Exploratory data analysis was used to summarize quantitative data. For qualitative data analysis, thematic content analysis was done. The outcomes of formal and informal mentorship programs that were reported were nursing profession, nursing program and personal growths. Nursing profession growth was the outcome that was highly rated by almost more than a half (52.3%) of respondents. On nursing profession growth, averagely (67%) of mentees passed the national nursing council exam; more than a half (50%) of nurse mentors reported quality of nursing care given to patients by mentees improved; and less than 50% of mentors reported they got promotions. On nursing programs growth, there was a fairly constant rate in recruitments and retention of mentees and mentors. On personal growth, there was improved personal satisfaction, accountability and responsibility, morale, self confidence, knowledge and skills, and development of connectedness and everlasting friendships. The study therefore recommended that, all the stakeholders should be encouraged to evaluate nursing mentorship programs in institutions' of higher learning. On the other hand, stakeholders should create, implement and update useful mentorship programs evaluation tools. Policy makers should act to their best to secure mentorship programs and produce laws that favours their implementation and evaluation. For further studies, this study recommended, study to assess relational and reciprocal outcomes such as personal growth, interdependence and connectedness.

**Key words:**

Evaluation, Mentees, Mentors, and Mentorship

## INTRODUCTION

Over the past several years, nursing programs had been called upon to restructure education programs to better prepare nursing students for increasingly complex and rapidly changing health care environments. According to Benner, Sutphen, Leonard and Day (2010), "Nursing education must be redesigned to prepare student nurses for new responsibilities and challenges in health care environments." To accomplish this, the practice-education gap must be addressed by major shifts in teaching methods (Benner et al., 2010). One major shift in teaching methods was mentorship programs. For mentorship programs to exist there should be a mentor and mentee. A mentor was a person who had expertise in the areas of need identified by the mentee and was able to share the wisdom in a nurturing way. A mentee was someone seeking guidance in developing specific competencies, self awareness and skills in early intervention (Allen, Eby & Lentz, 2006a).

Elements of mentorship included giving advice, psychosocial support, role modelling, career advising or counselling, cultivating the intellect of mentee, and varying help given to meet the needs of the mentee over time (Allen, Eby & Lentz, 2006b and May, Meleis & Winstead-Fry, 2008). Mentorship provided guided skill perfection by modelling proficiency, providing corrective feedback and maintaining confidence in mentees' abilities.

Mentorship programs took a variety of forms. In some cases, formal mentorship programs were administered where students were assigned to mentors. Formal mentorship programs were where relationships were assigned in relation with organizational mentorship programs structures (Campbell & Campbell, 2007). In others, students and mentors develop relationships "naturally" with no formal structure or support from the institutions' administration (Dietz & Dettlaff, 2007).

Mentorship programs commenced in the year 1985 worldwide, but in Kenya in 2000. Considering nursing programs in Kenyan public

universities, KU was the first public university to roll out formal mentorship program on 21st June, 2006. UON and MMUST rolled out informal mentorship programs, which started in the year 2003 and 2007 respectively (Gichugi, 2009).

Since the initiation of mentorship programs in nursing programs in Kenyan public universities, they had not been evaluated to determine outcomes of nursing mentorship programs in Kenya public universities. As a result of this, necessary amendments had not been done and mentees received ineffective and non systematic support during their practice, which hindered nursing profession growth and development (Allen, et al., 2006a). This also inhibited mentees coordination of care within the unique context of general practice and as a result clients ended up suffering on their hands and those who had acute illness ended up with chronic illness (Allen, et al., 2006b). The clients then ended up staying in hospitals for a long duration of time and this posed challenges to their economic status (Allen et, al., 2006a).

Furthermore, there was lack of understanding of mentees' needs during mentorship programs which affected their learning dynamics (Asefzadeh, Javadi & Sharif, 2004). Mentees had needs which needed to be attended to, to enhance smooth running of the mentorship programs, for example availability of adequate infrastructure and environment. Non awareness of these needs made mentees to suffer in the complex landscape of academics as they struggled to cope with its unique philosophies (Asefzadeh, et al., 2004).

In addition, mentees' suffered from vast amount of stimuli particularly within the community setting where clinical environment was difficult to control. These stimuli were interpersonal relationships, staff and patient attitudes, physical structure of the settings, lack of knowledge and skills, and difficulty in handling the gap between on-the-job reality and the training they received (Allen et, al., 2006b).

On part of mentors, this caused increased level of anxiety, lowered level of self confidence, impaired development of technical skills, decreased personal and professional growth, and decreased cooperative learning and critical thinking (Gichugi, 2009). Also it caused mentors to provide inadequate psychosocial support and career development functions to mentees that lowered quality of their learning process (Allen et, al., 2006b). Therefore, there was need to evaluate outcomes of formal and informal nursing mentorship programs in Kenya public universities.

## MATERIALS AND METHODS

### Study Design, Area and Population

This was a descriptive and exploratory cross sectional evaluative study design. It was carried out in KU, UON, MMUST, KNH (Kenyatta National Hospital) and KPGH (Kakamega Provincial General Hospital). The study population comprised of mentors (lectures and nurses) and mentees in the above institutions.

### Sample Size

The sample size formula of Cochran (1977), was used to calculate the sample size as follows:

$$n_o = \frac{(t)^2 * (P)(q)}{(d)^2}$$
$$n_o = \frac{(1.96)^2 (.5)(.5)}{(.05)^2} = 384$$

Where

- t = value for selected alpha level of .025 in each tail = 1.96
- (p)(q) = estimate of variance = .25 (maximum possible proportion (.5) \* 1-maximum possible proportion (.5) produces maximum possible sample size).
- d = acceptable margin of error for proportion being estimated = .05

Therefore, for a population of 1,000, the required sample size was 384. However, since this sample size exceeded 5% of the population, Cochran (1977), correction formula was used to calculate the final sample size. These calculations were as follows:

$$n_1 = \frac{n_0}{(1 + n_0 / \text{Population})}$$
$$n_1 = \frac{384}{(1 + 384/1000)} = 277$$

Where population size = 1,000

Where  $n_0$  = required return sample size according to Cochran's formula = 384

Where  $n_1$  = required return sample size because sample > 5% of population

The calculation result in a minimum returned sample size of 277.

Attribution 10% for the sample size

$$10/100 * 277 = 28$$

$$28 + 277 = 305$$

Then probability proportionate to sample was used to calculate sample size for lecturer-mentors, nurse-mentors and mentees as follows using their population sizes (KNH and KPGH registry data 2012 and MMUST, KU and UON registry data 2012) (Table 1).

### Sampling Procedure

Simple random probability, purposive and snowball non probability sampling methods were utilized. According to Creswell (1994), "Simple random probability sampling was a sampling technique achieved by randomly selecting cases from a sampling frame." In this study, simple random sampling helped the researcher to randomly select two Kenya public universities (UON and MMUST) offering informal mentorship programs and respondents (mentees and mentors) who were to provide quantitative data who filled the questionnaires.

According to Mugenda and Mugenda (1999), "Purposive sampling was a sampling technique that allowed a researcher to use cases that had the required information with respect to the study objectives. In snowball sampling, initial subjects with the desired characteristics were identified using purposive sampling techniques. The few identified subjects named others that they knew had the required characteristics until the required number of subjects was gotten."

In this study, first, purposive sampling was used to sample KU because it had formal mentorship program; KNH and KPGH because they were the largest health facilities where BscN students from (UON and KU) and MMUST do their clinical practice respectively and nursing program from UON, KU and MMUST because this was the program in the universities where the study was to focus. Secondly, purposive sampling was used to select 3<sup>rd</sup> and 4<sup>th</sup> year BscN students (mentees) as the group to participate in the study. This was because they had been in mentorship program for more than two years. Thirdly, it was used to select initial mentees and mentors who were informative about nursing mentorship program, who participated in naming other mentees and mentors who were to participate in focus group discussion using snowball non probability sampling. For qualitative data, mentees and mentors were purposively selected outside the group of mentees and mentors who responded to the questionnaire.

### **Criteria of Inclusion**

All mentees who were doing Bachelor of Science in Nursing (BscN) in KU, UON and MMUST and were in their third and fourth year; Lecturers in health sciences programs and nurse mentors in the above institutions mentoring the third and fourth year BscN students; mentees and mentors who were in the above institutions within the study period and who gave consent to participate in the research.

## **Study Tools**

The tool used for quantitative data collection was a semi-structured questionnaire. Qualitative data was collected using focus group interview guide.

## **Selection and Training of Enumerators**

Purposive and snowball non probability sampling was used to select fifteen and five Bachelor of science in nursing interns in Kenyatta National Hospital (KNH) and Kakamega Provincial General Hospital(KPGH) respectively as enumerators. The enumerators were trained prior to data collection.

## **Pre-Testing of Research Tools**

After the training session, the questionnaire and the focus group discussion guide were corrected after pilot study that was done in Moi University School of nursing and Moi Teaching and Referral Hospital (MTRH).

## **Data Collection**

Data collection was done using both quantitative and qualitative methods. They included cross-sectional survey and focus group interview.

## **Data Analysis**

Exploratory data analysis was used to summarize quantitative data. For qualitative data analysis, the following steps were followed: reception of cassette and tape recorders, data transcription, data organization, open, axial and selective coding, and evaluation of information selected.

## **Ethical Considerations**

Ethical approval from KNH/UON and Great Lake University of Kisumu (GLUK) institutional ethical committee was sorted. Informed consent was also sorted.

## RESULTS

Participants described various outcomes of nursing mentorship programs. These were categorized into themes. A total of three themes were identified as outcomes. The outcomes were: nursing profession, nursing program and personal growth. The outcome of mentorship that was highly rated by most respondents 52.3% (n=80/153) was nursing profession growth. The respondents rated nursing program and personal growth low, that was (n=38/153, 24.9% and n=35/153, 22.9%) respectively (Figure 1). In formal mentorship program, the rate of growth of nursing profession, nursing program and personal were rated as (n=33/44, 75%), (n=15/44, 34.1%) and (n=15/44, 34.1%) and for informal mentorship programs they were (n=28/73, 38.4%), (n=14/73, 19.2%) and (n=12/73, 16.4%) respectively.

### Nursing Profession Growth

The result of nursing council exam done by mentees in January 2013 was one of the indicator outcomes of nursing professional growth. The number of mentees who passed nursing council exam in UON, KU and MMUST, were 72.7% (n=16/22), 66.7% (n=12/18) and 61.5% (n=8/13) respectively (Figure 2). For their average performance, majority of them (90%) complained that BscN curriculum was intensive and all that was covered in four papers, which they did in two days.

Another indicator outcome of nursing professional growth was quality of care given to clients. Nurse mentors rated the quality of care clients received from mentees of KU highly (Figure 3). Ninety two percent and 85% of nurse mentors from KPGH reported that mentees' from MMUST were not guided in clinical areas and had no clinical objectives respectively.

The last indicator outcome of nursing professional growth was mentors' promotion. Figure 4 showed that, lecturer mentors had the lowest rate of promotions due to involvement in mentorship programs compared to nurse mentors especially those from KNH.



*One lecturer mentor from KU said that: "Most of us are recently employed in the institution and thus we have to finish some duration of years teaching and also publish in international referred journals before being promoted to the next level." She continued by saying that: "In University, promotion is guaranteed by both years of teaching, publications, and community services (mentorship programs) offered"*

Lastly on evaluation of overall nursing profession satisfaction, majority (75%) of respondents who were involved in formal mentorship programs reported to be highly satisfied. Minority of mentees (43%) as opposed to mentors (85%) reported being highly satisfied. *One mentor said that: "We are highly satisfied with nursing profession when mentees' fulfil their learning outcomes. It just makes us happy."*

Nursing program growth

### **Nursing Program Growth**

On evaluation of nursing programs growth, 95% of respondents reported that they had a fairly constant rate of recruitment and retention (Figure 5 and 6).

### **Personal Growth**

On personal growth, mentees' who were involved in formal mentorship programs reported personal satisfaction and improved morale. Those who were involved in informal mentorship programs reported development of everlasting friendship with mentors.

*One mentee from KU stated that: "Mentorship programs made my transition in academic community much easier, this increases my personal satisfaction and morale." Another mentee from UON reported that: "Mentorship program has improved my relationship with my mentor, and we have developed not only*

*professionally, but at a friendship level as well, and this is very valuable and fulfilling."*

One aspect that improved personal satisfaction and morale of mentees' was successful identification and meeting of their learning objectives. *One mentee from KU attested that: "Thanks to my mentors, last trimester I was able to identify and meet my learning outcomes especially for paediatric nursing."* Another aspect was improved self confidence in performing various clinical procedures. This made them to develop positive self-worthiness.

*One mentee from UON said that: "When I was a first year, I feared conducting many procedures in the hospital, but now I have gained self confidence and I can perform them with minimal supervision. Thanks to my mentor....This has made me to have positive self-worthiness"*

The last one was connectedness in clinical areas. *One mentee from MMUST attested that: "Through mentorship programs, I developed skills of team work that enhanced my connectedness in clinical areas."*

Mentors who practiced formal mentorship programs became accountable and responsible, which enhanced nursing profession career-building opportunities and this led to their advancement within the institutions. *One mentor from KNH reported that: "Since I was given three mentees from KU, it made me to be accountable and responsible. It always keeps me on toes."* Their self confidence in performing various activities increased and they became more satisfied with their mentors' roles.

*One mentor from KU stated that: "My self confidence for counselling mentees have improved drastically and this has made me to be more satisfied with my mentor role. I take great pride being a mentor.....Thanks to my God."*

Mentors who were involved in informal mentorship programs kept up to date with current knowledge and skill of nursing profession, and this made their practice to be evidence based.

*One mentor from KPGH said that: "Am grateful.... Mentorship programs have enabled me to keep up to date with current knowledge and skills in nursing profession, because it involved reciprocal exchange of knowledge and skill between mentees and me."*

## DISCUSSION

More than a half (52.3%) of mentors rated nursing profession growth highly than nursing program and personal growth. These findings were also noted by Allen, Eby, Lentz, Poteet and Lima (2004), who reported that: "Nursing profession growth was rated averagely as 62%, compared to nursing program and personal growth, which were rated as 22% and 16% respectively." According to Sherry and Gordon (2010), "When there was growth in nursing profession, automatically the quality of care clients received went up." This increased rate of patients' recovery; decreased duration of their stay in the hospital and decreased amount of cash government spent on hospitals' expenses. Therefore, it was important that mentorship programs improve nursing profession growth to enhance quality nursing services provided to clients.

The findings of personal growth contradicted a study done by Becker and Neuwirth (2004), who said that: "Respondents rated personal growth as 50% as compared to nursing profession and nursing program growth which were rated as 30% and 20% respectively." In Becker and Neuwirth (2004) study, the respondents seemed to focus more on personal rewards and relationship-building as their main outcomes. Also Gibson and Heartfield (2005), contradicted with the above finding when they noted that: "Nursing program growth in institutions' of higher learning was highly rated as 65% by both mentors and mentees." From this, we can conclude that, the way

mentorship programs outcomes were rated varied from one institution to another.

On nursing profession growth, the number of mentees who passed nursing council exam in UON, KU and MMUST, was (72.7%), (66.7%) and (61.5%) respectively. The same findings were also reported by Becker and Neuwirth (2004), who attested that: "Almost 65% and 70% of pharmaceutical students passed their national pharmaceutical exam after being involved in formal and informal mentorship programs respectively." With these findings it seemed, there was no great difference in academic performance, when mentees were involved in formal or informal mentorship programs.

For the average performance, majority of mentees (90%) complained that BscN curriculum was intensive and all that was covered in four papers, which they did in two days. The same findings were also reported by Becker and Neuwirth (2004), who attested that: "The average performance of pharmaceutical students' in their national exam was due to improper guidance and wide coverage of the exam." With proper mentorship programs, students would be guided well to prepare for their national exams in their profession, regardless of its wide coverage range.

Nurse mentors rated the quality of care clients received from mentees of KU highly as opposed to care given by mentees from MMUST and UON. Ninety two percent and 85% of nurse mentors from KPGH reported that mentees' from MMUST were not guided in clinical areas with their mentors and had no clinical objectives respectively. The same findings were also reported by Dyer (2008), who said that: "Eighty three percent (83%) and 77% of mentees from Marocco medical training institute were not guided in clinical areas with their mentors and had no clinical objectives respectively. This lowered the quality of care they offered to clients." From this, it meant that, because in MMUST informal mentorship programs were practiced, no proper guidance was provided to mentees, unlike

where there was formal mentorship program. In formal mentorship programs, mentees were under constant guidance and follow ups.

Promotion at work place was a form of incentives for mentors (Allen et al., 2004). Incentives were important for successful mentorship relationships. In the current study, lecturer mentors rated their promotions due to involvement in mentorship programs lowest compared to nurse mentors. Eighty five percent and 91% of lecturer mentors reported they had less than three years of experience of teaching in a university and had not published in referred journals respectively and this hindered them from being promoted. The same finding was reported by Andrews and Wallis (2009), who attested that: "Majority of lecturer mentors (85%) had no promotions in past one year, because most of them (75%) had less than three years of teaching experience in a university, 87% had no publications in referred journals and 76% had not offered required community services."

Lastly, on evaluation of overall nursing profession satisfaction, minority of mentees (43%) as opposed to mentors (85%) reported being highly satisfied. Sambunjak, Strauss and Marusic (2009), were in agreement with the above findings and they reported that: "On average, about 82% and 41% of mentors and mentees respectively, were highly satisfied with nursing profession." However, contrary findings were reported in studies done by Becker and Neuwirth (2004), who stated that: "Seventy four percent of mentees were highly satisfied with nursing profession as opposed to 45% of mentors respectively." Hence, from these findings, it seemed that nursing profession satisfaction was varied from one institution to the other between mentors and mentees, and this could be caused by varied reasons, such as, improper mentorship programs, poor working conditions and remunerations.

For nursing programs growth, 95% of respondents reported that they had a fairly constant rate of recruitment and retention (Figure 5 and 6). Similar observations were made in Tourigny and Pulich (2005)

study, who ascertained that: "Almost 96% of mentors and mentees reported their nursing program had a fairly constant rate in recruitment and retention." According to Dorsey and Baker (2005), "Mentorship programs provided mentees' and mentors' with effective and systematic support in nursing profession, facilitated their professional development, and enhanced their integrations within academic world, which resulted in their fairly constant rate in recruitment and retention in nursing programs."

On personal growth, mentees' who were involved in formal mentorship programs reported personal satisfaction and improved morale unlike their counterpart who reported development of everlasting friendship with mentors. The identified positive outcomes were consistent with those reported by Becker and Neuwirth (2004), who said that: "Formal mentorship programs increased personal satisfaction, self confidence, morale and transition to new profession."

One aspect that improved personal satisfaction and morale of mentees' was successful identification and meeting of their learning objectives. *One mentee from KUI attested that: "Thanks to my mentors, last trimester I was able to identify and meet my learning outcomes especially for paediatric nursing."* These findings were in agreement with that of Earnshaw (2004), who said that: "Mentees reported that formal mentorship program was rewarding in the sense that they were able to meet their learning objectives." In a similar study done by David and Toni (2005), they reported that: "Seventy four percent (74%) of mentees felt they were able to successfully identify and met their learning objectives in formal mentorship programs." When mentees' were able to identify and meet their objectives, they had improved knowledge and skill in nursing profession, which improved their morale and satisfaction.

Another aspect was mentees' improved self confidence in performing various clinical procedures. This made them to develop positive self-worthiness. According to Val and Richard (2004), they noted that:

“Formal mentorship programs led to lasting impact on mentees’ personal growth such as positive self-worthiness when their self confidence of performing various nursing procedures increased.” Therefore, through mentorship programs, mentees’ increased their knowledge and skills, which necessitated them to gain self confidence and develop positive self worthiness.

The last aspect was connectedness in clinical areas. *One mentee from MMUST attested that: “Through mentorship programs, I developed skills of team work that enhanced my connectedness in clinical areas.”* Similarly, Levett-Jones, Fahy, Parsons and Mitchell (2006), reported that: “Formal mentorship programs enhanced mentees’ sense of belonging in clinical environments and enabled them to feel accepted and valued as part of health team members.” Without a sense of collegiality and connectedness, mentees’ felt they were on periphery of health team members. This made them to have a feeling of inferiority complex, which lowered quality of nursing care they offered.

Mentors who were involved in formal mentorship programs became accountable and responsible, which enhanced nursing profession career-building opportunities, and this led to their advancement within the institutions. These findings were also reported by Gibson and Heartfield (2005), who emphasised that: “Formal mentorship programs improved mentors’ accountability, responsibility and their knowledge and skill of nursing profession.” Formal mentorship programs improved mentors’ self confidence. According to Becker and Neuwirth (2004), “Formal mentorship programs increased mentors’ self confidence, self esteem, and they became more satisfied with nursing profession.” These outcomes for mentors were important for survival of any successful mentorship relationship.

Informal mentorship programs made mentors to keep up to date with current knowledge and skill of nursing profession, and this made their practice to be evidence based. These findings were also reported by Gibson and Heartfield (2005), who emphasised that: “Informal

mentorship programs improved mentors' knowledge and skill of nursing profession, and this enabled them to be up to date with current knowledge and skills of nursing profession."

## CONCLUSION AND RECOMMENDATIONS

The outcomes of mentorship programs that were reported were nursing profession, nursing program and personal growths. On nursing profession growth, more mentees who were involved in formal mentorship programs passed national nursing council exam and offered quality nursing care to patients. More mentors who were also involved in formal mentorship programs got promotions. For nursing profession satisfaction, most respondents involved in formal mentorship programs reported being highly satisfied.

On nursing program growth, respondents reported a fairly constant rate in recruitments and retention of mentees and mentors in all forms of mentorship programs. On personal growth, mentees' who were involved in formal mentorship programs reported personal satisfaction and improved morale unlike their counterpart who reported development of everlasting friendship with mentors. Mentors who were involved in formal mentorship programs became accountable and responsible, while their counterparts kept up to date with current knowledge and skill of nursing profession, and this made their practice to be evidence based.

For further studies, this study recommended, study to assess relational and reciprocal outcomes such as personal growth, interdependence and connectedness, a study to assess the strength of friendship bonds within mentorship relationship; and future researchers to use a study with a longitudinal design.

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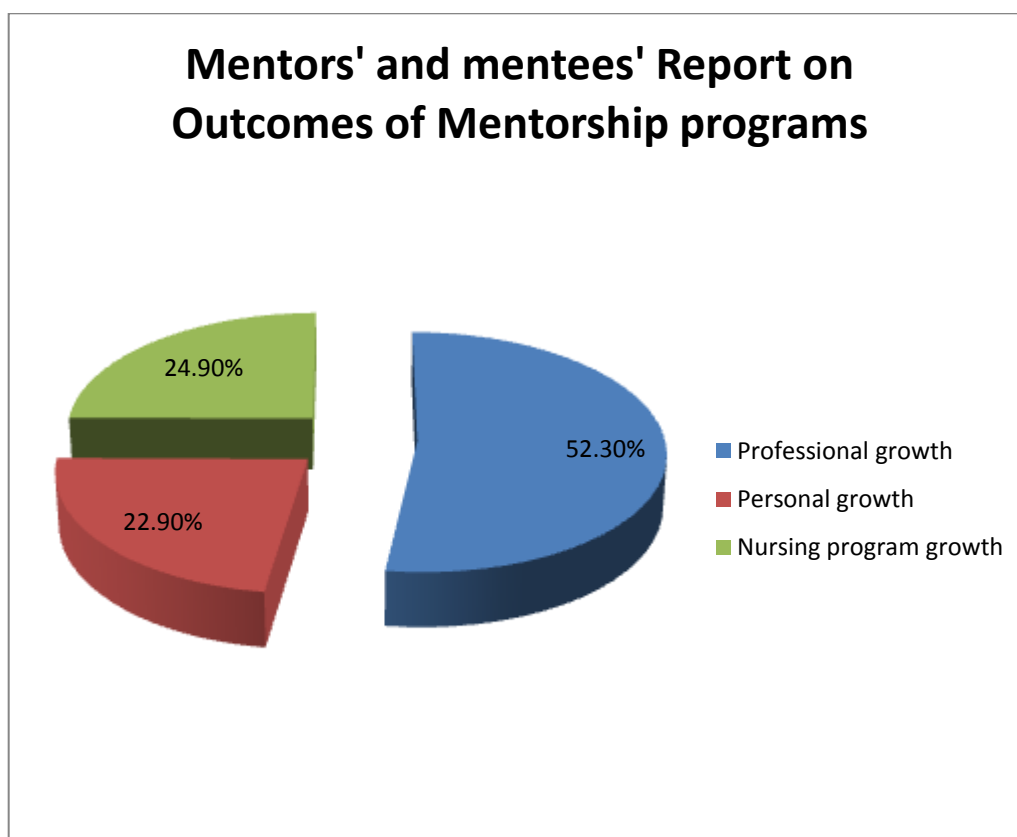
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## TABLES AND FIGURES

**Table 1: Probability proportionate to sample size used to calculate sample size for lecturer-mentors, nurse-mentors and mentees**

Sampling unit	Population size	Sample size
Lecture-Mentors	150	$150/1000 * 305 = 46$
Mentees	350	$350/1000 * 305 = 106$
Nurses-Mentors	500	$500/1000 * 305 = 153$



**Figure 1: Mentors' and mentees' Report on Outcomes of mentorship programs**

Figure 2: Performance of mentees' in nursing council exam

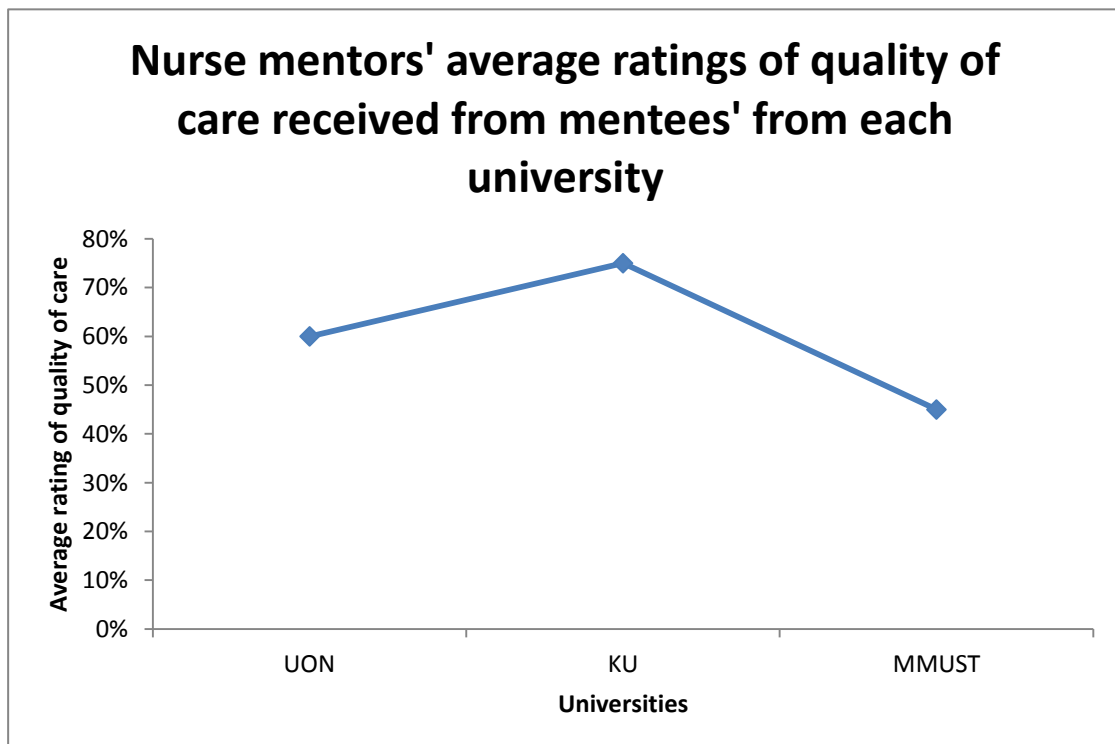
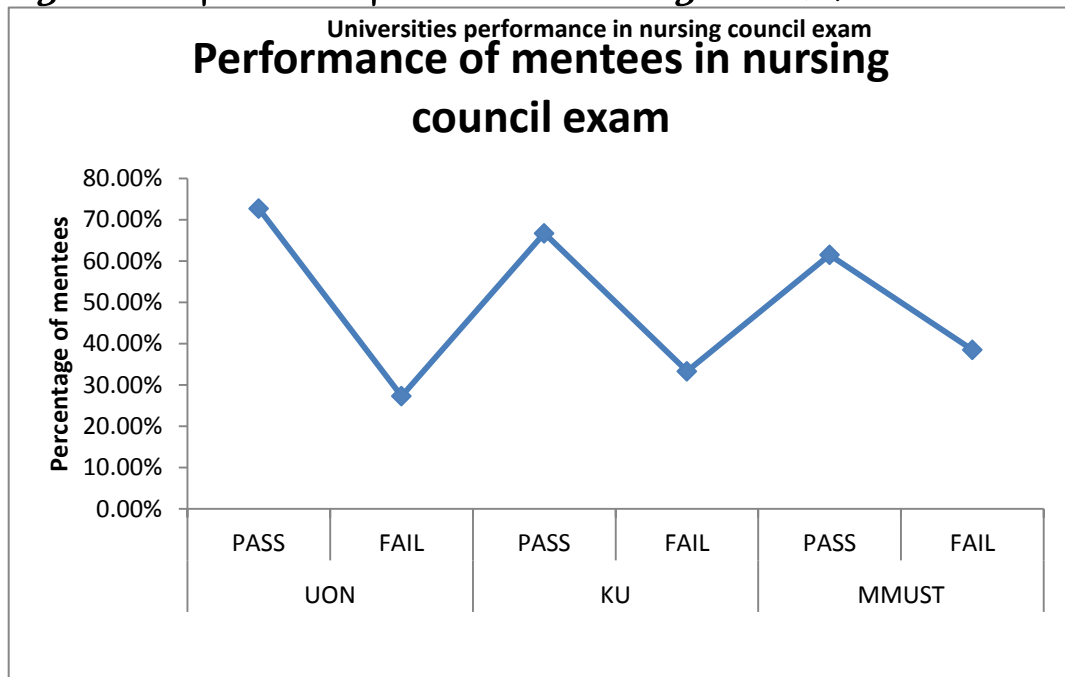


Figure 3: Nurse Mentors' average ratings of quality of care received from mentees' from each university

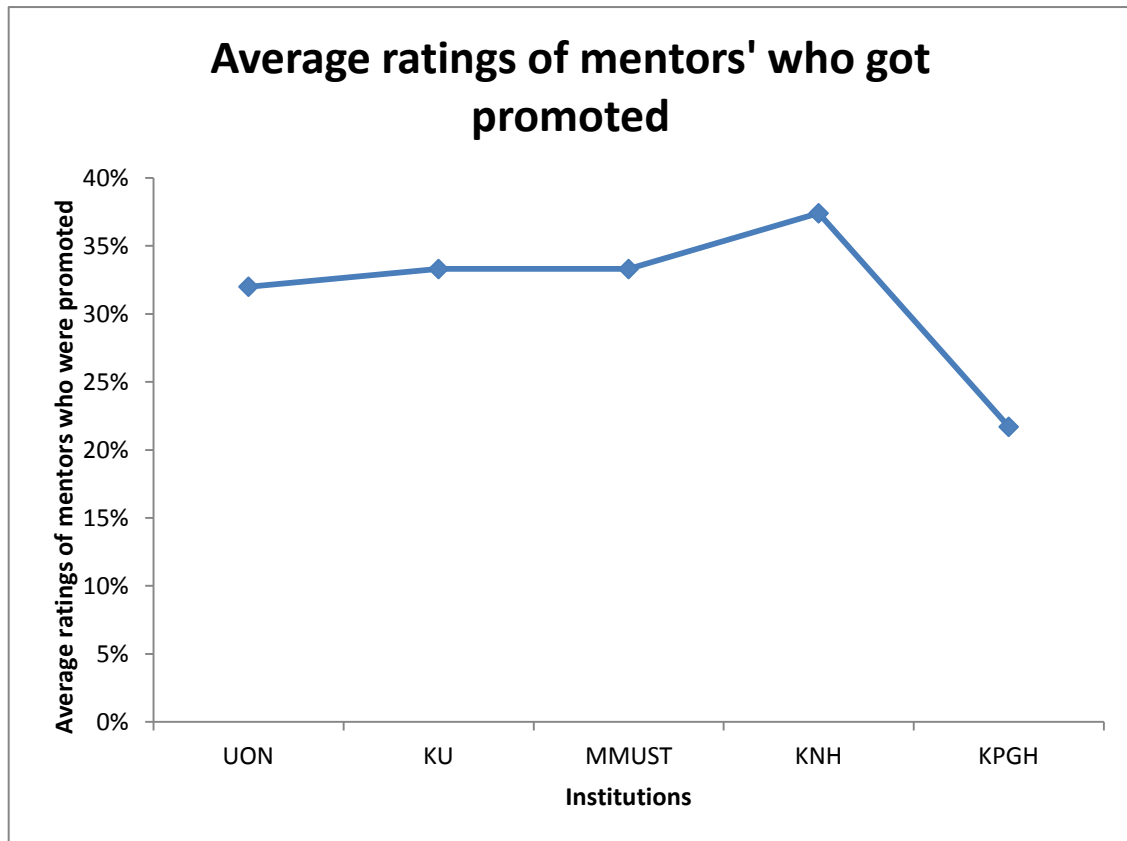
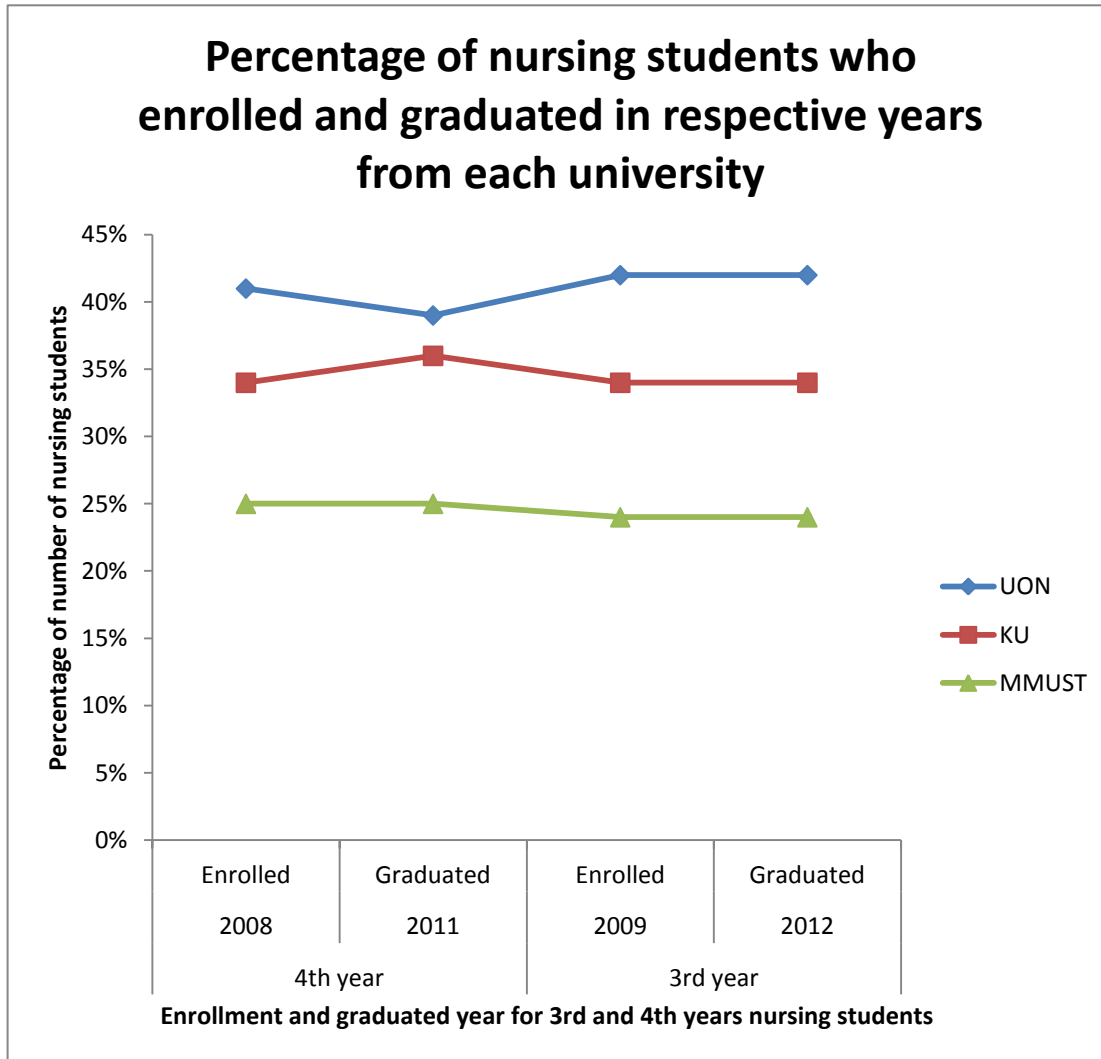


Figure 4: Average ratings of mentors' who got promoted

Figure 5: Percentage of nursing students who enrolled and graduated in respective years from each university



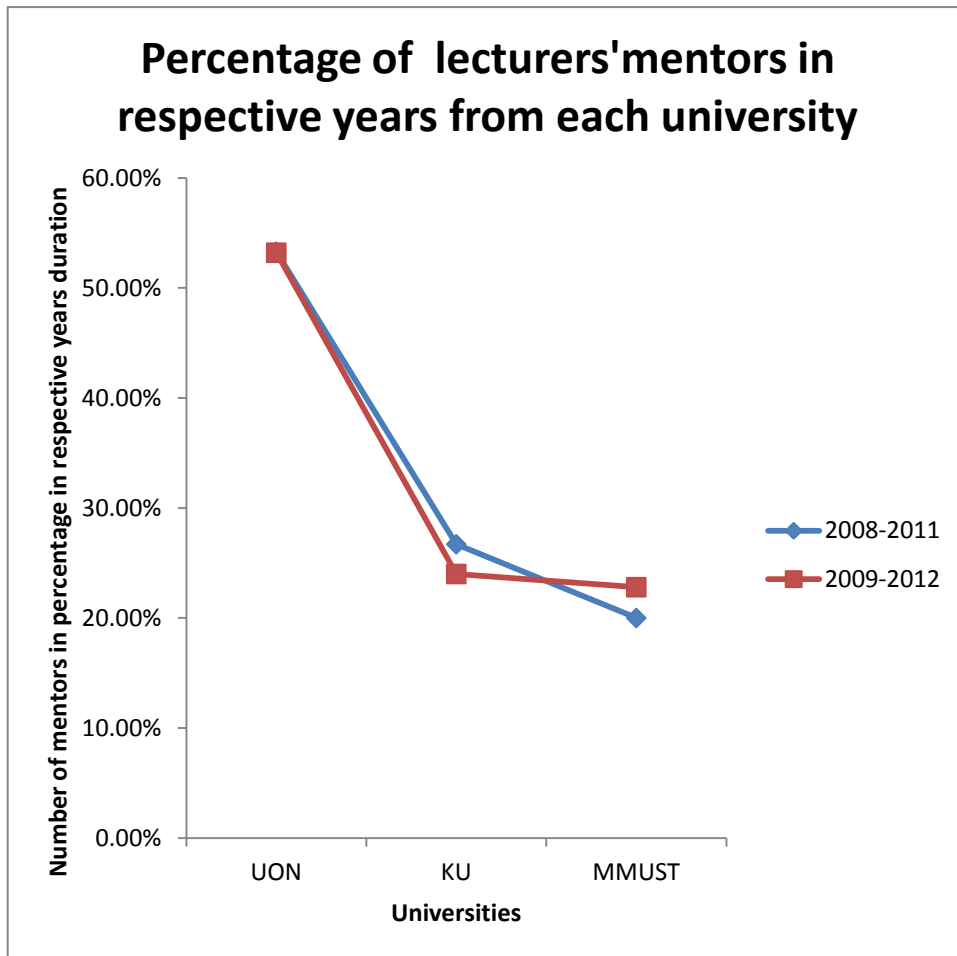


Figure 6: Percentage of lecturers' mentors in respective years from each university