Comparative Study of Professional Competences of Graduates of Innovative and Conventional Medical Schools in Kenya: A Case of Graduates of School of Medicine-Moi University and the School of Medicine-University of Nairobi

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Abstract

Since the first half of the 20th Century, the training of medical doctors has undergone major educational reforms. Many factors have contributed to the driving forces that have changed the development and implementation of curricula for training doctors. However, some medical schools, both in developed and in developing countries have continued to use the conventional approaches whiles others have shifted to innovative approaches. The World Federation of Medical Education and the World Health Organisation (WFME/WHO, 2003) have advocated for reforms in the planning, development and implementation of curricula in medical education for the overall purpose of improving performance of medical doctors as they play their current and future roles in the world. In Kenya, the School of Medicine at the College of Health Sciences-University of Nairobi has implemented a conventional curriculum over the years while the School of Medicine at Moi University has implemented an innovative curriculum since its inception.

The purpose of the study was to compare the competences of the graduates of Moi University and University of Nairobi using the seven global minimum requirements of competences of medical doctors as advocated by various international organisations involved in medical education such as the International Institute of Medical Education (IIME) and WFME. The seven global competences are i) knowledge of scientific foundation of medicine ii) application of clinical skills iii) Population health and health systems iv) Communication skills v) Critical thinking and research vi) Management of information systems and vi) Professional ethics, attitudes, behaviour and values (Schwarz, M.R., Wojtczak, A., 2002).

The statement of the problem of the study focuses on the declining trend in the health situation in Kenya despite the investment made in the health sector especially training of health professionals, particularly doctors. The National Health Sector Strategic Plan II (2005-2010) indicates that there is need to reverse this trend and one of the strategies is in training of human resources. Medical doctors in Kenya and the world at large play a major role in improving health of populations. However, it is not clear how graduates of the two Schools of Medicine compare concerning the seven minimum global

competences. Therefore, the objectives of this study were to (i) determine the competences of graduates from conventional and innovative medical schools on the seven global professional competences as perceived by the graduates themselves and their supervisors (ii) determine any significant differences on the competences of the graduates of the two medical schools as perceived by the graduates and the supervisors. The study was of a comparative descriptive design, which used a self-administered questionnaire, and focus discussion group guide in collecting data. The questionnaire had specific indicators in each competence area. The questionnaire was pilot-tested and comments incorporated to improve its content validity, reliability and objectivity.

A population of 280 intern doctors was randomly sampled using Gay's (1992) sample estimate of 20%. An increase of 10% to the sample accounted for non-response, lack of return of the questionnaires. The desired random sample size was therefore 84 intern doctors. Intern doctors in four (4) provincial and eleven (11) district hospitals were used in the study. In total, six (75%) provinces in Kenya were covered. A purposively selected sample of 47 supervisors from a population of 140, which included Medical Doctors and Nursing Officer in charges, were given questionnaires to fill. Research assistants distributed to the graduates and supervisors the self-administered questionnaire. A total of 54 (64.3%) questionnaires from graduates were returned. Out of these, 26 questionnaires were returned from graduates of school of medicine, Moi University, while 28 were received from graduates of school of medicine, University of Nairobi. A total of 47 (100%) questionnaires from supervisors working in four (4) provincial and eleven (11) district hospitals were returned.

Data on competences of graduates from the two schools was analysed using descriptive and inferential statistics. The chi-square test with Yates correction was used to determine significant differences between ratings of competences from graduates and supervisors of the two medical schools using categories of Excellent and Good while controlling for confounding factors on the seven global professional competences.

Female supervisors were the majority (60%) compared to female graduates (41 %). On further analysis of the results pertaining to gender distribution, there was significant

difference (χ^2=6.48, 1df, P>0.05 [0.010]) between the proportion of male and female respondents in the study. The findings on distribution of male and female graduates showed that the majority of the respondents were male graduates (61%) from the conventional medical school as compared to 58% from innovative medical school However, there was no significant difference (χ^2=0.00, 1df, P>0.05 [0.959]) in gender distribution of graduates from the two medical schools.

The findings showed that graduates from the conventional school rated themselves 82% and 18% on excellent and good categories respectively in the knowledge of scientific foundation of medicine while the graduates from innovative school ratings were 89% and 11% on the same categories. On further analysis of the results, there was no significant difference (χ^2=1.45, 1df, P>0.05 [0.228]) between the graduates. The ratings of supervisors on graduates from conventional school (56%, 34%) and those from innovative school (53%, 47%) on this competence showed no significant difference [χ^2 =2.99, 1df, P>0.05 {0.084}] either.

The majority of graduates of the two schools considered themselves highly competent in clinical skills (76%, 24% IMS; and 79%, 21% CMS). However, there was no significant difference [χ^2=0.11, 1df, P>0.05 {0.735}] between the ratings of proportion of graduates from the two schools. The findings on supervisors ratings (70%, 30%IMS; and 70%, 30% CMS) of graduates showed no significant difference [χ^2=0.2, 1df, P>0.05 {0.877}] as well.

On population health and health systems competence, the graduates' rating from innovative and conventional school was 69%, 31% and 85%, 15% respectively. On the same competence the supervisors rating of graduates was 40%, 60% and 42%, 58% from innovative and conventional schools respectively. On further analysis of the results, there was significant difference (χ^2=6.35, 1df, P>0.05 [0.012]) in the ratings of graduates on

this competence. However, there was no significant difference [χ^2=0.02, 1df, P>0.05 {0.0886}] in the ratings of supervisors.

As regards communication skills competence, graduates from innovative school rated themselves 100% and 0% on excellent and good categories while those from conventional school rated themselves 85% and 15% on the same category. The supervisors' ratings of graduates from innovative and conventional schools were 47%, 53% and 51%, 49% respectively. Further analysis of the results showed that there was significant difference (χ^2=14.13, 1df, P>0.05 [0.000]) in the ratings of graduates on this competence with no significant difference [χ^2=0.08, 1df, P>0.05 {0.671}] in the supervisors ratings. The study showed that graduates from innovative school rated themselves 88% and 12% on critical thinking competence while graduates from conventional school rated themselves 50% and 50% on the same competence. The graduates' ratings showed a significant difference [χ^2=10.73, 1df, P>0.05 {0.001}] concerning this competence. However, on further analysis of supervisors' results there was no significant difference [χ^2=0.10, 1df, P>0.05 {0.754}] in the competence.

The results showed a significant difference [χ^2=41.50, 1df, P<0.05 {0.000}] in the graduates' ratings (100%, 0% IMS; 64%, 36% CMS) on the management of information system's competence although the supervisors ratings of graduates (58%, 42% IMS;51%, 49% CMS) showed no significant difference [χ^2=0.51, 1df, P>0.05 {0.477}] on the same competence.

Concerning competence on professional ethics, attitudes, behaviour and values, the graduates ratings from innovative and conventional schools (77%, 23% and 71%, 29% respectively) showed no significant difference (χ^2=0.65, 1df, P>0.05 [0.42]). The supervisors ratings on graduates of innovative and conventional schools on the same competence (78%, 22% and 78%, 22% respectively) showed no significant difference (χ^2 =0.03, 1df, P>0.05 [0.86]).

In conclusion, graduates from the two medical schools do not differ at all as perceived by their supervisors on the seven global competences. However, there seems to be significant differences in the way graduates perceive themselves as regards the four competences as shown in the study. These differences may be due to limitation of self-assessment method, which does not always provide for objective information, as was the case in graduates' ratings. However, since this limitation applied equally to respondents of the two universities, the differences between the graduates from the two schools of medicine can be indicative of the effects resulting from the different curricula used.

This study focused on the seven global competences of medical doctors and was conducted using self-administered questionnaire to generate information from graduates and supervisors. A further study, which uses multiple methods of data collection, should be conducted to compare graduates' competences from innovative and conventional schools of medicine in order to establish the meaningful gains obtained by re-orienting medical education to new educational strategies and approaches.