

Perception and Level of Preparedness of Clinical Medicine Department Towards Clinical Assessment at the Kenya Medical Training Colleges in Western Kenya

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ABSTRACT

Assessment of clinical instructional strategies, learning activities, and clinical experiences occurs in a systematic and continuous manner through the process of clinical assessment. There is an evident gap between theory and practice in clinical medicine education, raising doubts about the quality of clinical learning assessment during college. The general objective of the study was to determine perception and level of preparedness towards clinical assessment in Clinical Medicine Diploma programme in the Medical Training Colleges in Western Kenya. The specific objectives were to identify the methods used in clinical assessment, assess the level preparedness of students and teachers for clinical assessment and determine the perception of department towards clinical assessment methods. This was a cross sectional descriptive study which included 138 students in the second academic year and 10 lecturers from the four Medical Training Colleges offering Diploma Clinical Medicine. The students were selected using stratified proportionate sampling from the study population. The researcher sought approval from Masinde Muliro University of science and Technology ethics and Review committee. Eligible research participants voluntarily gave informed consent and the risks and benefits of the study were explained to the participants. Data was collected using a semi structured self-administered questionnaire, observation checklist and interview guide. Data was analyzed using chi-square and presented in tables. It was established that the methods used in the clinical assessment were 40.6% (56) objective structured clinical examination; 18.1% (25) short cases. All the students 138(100%) had learning objectives in the clinical areas and 66.7% (92) of the students were assessed after every clinical rotation. Majority (79%) (10) of clinical medicine students strongly agreed that clinical assessment helps in the identification of areas of weakness and provide learning. All 6 (100) of clinical medicine lecturers strongly agreed that clinical assessment helps in the identification of areas of weakness and provide learning opportunities for the students. In addition, it strongly agreed 6 (100%) that clinical assessment was a measure of essential clinical skills opportunities for them. In conclusion majority of the students perceived that clinical assessment helps them identify their weaknesses and provides learning opportunities. The learners are well prepared for assessment and both long cases and short cases are used to assess knowledge and skills. The study recommends that assessment should be done frequently to prepare students for clinical assessment and more information about clinical assessment methods should be provided to the students.

Keywords: Clinical assessment, clinical medicine, level of preparedness, perception.

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I. INTRODUCTION

Clinical assessment involves examining the correctness and effectiveness of clinical performance, as well as activities such as communication, clinical examination and testing, referral and follow up. Assessment of clinical skills has a key role in medical education, and the selection of suitable methods of assessment is highly relevant [1].

Colleges of medicine have traditionally assessed medical students' clinical competence using long cases, short cases, and vivas. Long and short cases involve direct observation of

students and examining them in history taking, physical examination, ability to make diagnosis, order and interpret relevant investigations, proffer possible treatment, and manage possible complications. The long and short cases are based on the limited number of patient cases that the students can encounter and usually have an unstructured format and can be subjective [2].

Medical students' clinical performance refers to how well they are able to treat patients in accordance with their medical conditions; how well they are able to do it safely, completely, and on schedule; and how well they are able to meet their

educational goals [3]. Its importance in medical education is undeniable for personal, professional and clinical skills development. It has been proven that there is improvement in clinical competencies for student who perform well during clinical assessments, allowing them to provide individuals with very reasonable, timely, sufficient, quality, and cost-effective treatment. Even so, the global pattern of clinical competencies among medical students has been questioned due to their poor clinical results and several public complaints lodged against clinical practices [4].

A study done in India examining students' perceptions towards formative assessment. Formative examinations are important to students and faculties, according to the study. Some students' casual attitude toward formative assessment implies that they need to be more conscious of these intermediate assessments. The formative assessments make meaningful and successful academic development, thus they there is need for suggestions or criticism on an individual basis [5].

II. PROBLEM STATEMENT

It is well acknowledged that in higher education, the curriculum is defined by assessments, at least from the perspective of the students. Students at Kenya Medical Training College perceive that clinical assessment prepares them for professional qualification. Thus, having the students believe that assessments are only meant to prepare them for graduation.

Medical students undergo assessment throughout their learning period, from progress examination to final qualifying examination. There are different methods used to assess student in Clinical Medicine. In Kenya, a most recent report by the World Bank indicated that clinical medicine graduates lack key skills, and that education system is not producing graduates with knowledge, skills and competencies crucial for securing Vision 2030 [6].

A report of the Performance Need Assessment done in Kenya Health Training system reinforce concerns regarding an existing disconnect between classroom training and clinical/practical training. These raises doubts about perception of students and lecturers of assessment methods and the quality of students and lecturers' preparedness for clinical learning assessment during college.

III. MATERIAL AND METHOD

This was a cross sectional descriptive study which included 138 students in the second academic year and 10 lecturers from the four Medical Training Colleges offering Diploma Clinical Medicine. The students were selected using stratified proportionate sampling from the study population. The researcher sought approval from Masinde Muliro University of science and Technology ethics and Review committee. Eligible research participants voluntarily gave informed consent, and the risks and benefits of the study were explained to the participants. Data was collected using a semi structured self-administered questionnaire, observation checklist and interview guide. Data was coded and entered the data from questionnaires into the computer and analyzed

using the statistical SPSS version 25. Descriptive statistics were presented in tables in form of proportions. Qualitative data (interviews) were analyzed and reported verbatim. Ethical clearance was obtained from Masinde Muliro University of Science and Technology; Institutional Ethics and Review Committee (IERC), Kenya Medical Training College and National Commission for Science, Technology, and Innovation (NACOSTI). The researcher had to maintain the anonymity and confidentiality of the participants.

IV. RESULTS

A. Methods used in Clinical Assessment by According to Students

It was established by the students that the methods used in the clinical assessment were 56 (40.6%) Objective Structured Clinical Examination; 25 (18.1%) short cases; 23 (16.7%) a combination of objective structured clinical examination, short cases, and long cases; 20 (14.5%) a combination of short cases and long cases and 14 (10.1%) long cases. Results presented in Table I.

TABLE I: METHODS USED IN CLINICAL ASSESSMENT BY THE DEPARTMENT OF CLINICAL MEDICINE

Item	Responses	Frequency	Percent
Methods used in clinical assessment	OSCE	56	40.6
	Short cases	25	18.
	Long cases	14	10.1
	All cases	23	16.7
	Short and long cases	20	14.5

B. Methods used by Lecturers to Assess Students

The methods used lecturers in assessing students in the clinical areas were a combination of long cases, short case and OSCE 10 (100%). In addition 10 (100%) of the lecturers stated that long cases ,short case and OSCE assess both knowledge, skills and attitudes. Findings presented in Table II.

Key informants interview reinforced these findings which stated that

- objective structured clinical assessment is used in first year
- OSCE is sometimes used to assess students in the wards, in the second and third academic years.
- Objective Structured Clinical Examination can still be used to assess students in the wards since a checklist (score sheet) is used to score if the student can perform the required task

TABLE II: METHODS USED IN CLINICAL ASSESSMENT BY LECTURES

	Response	Frequency	Percentage
Methods are used in clinical assessment	Long case	10	100.00
	Short cases	10	100.00
	Objective		
	Structured Clinical Examination	10	100.00

C. Students Level of Preparedness for Clinical Assessment

To ascertain student level of preparedness for clinical assessment, the study found all the respondents 138 (100%)

had learning objectives in the clinical areas. During the assessment on the frequency of clinical assessment, it was observed that 66.7% (92) of the participants were assessed after every clinical rotation, 28.3% (39) were assessed at the end of the semester and only 5.1% (7) were assessed at the end of the academic year. The findings showed 86.2% (119) acknowledged the availability of procedure manuals at the workstations while 13.8% (19) observed a lack of procedure manuals at the workstations. From the 13.8% of the clinical medical students who observed lack of procedure manuals at workstations, felt that the lack procedure manuals were occasioned by delays in collection of the logbooks from KMTC headquarters. It was observed that 97.1% (134) of the clinical medicine students had logbooks during clinical rotation while 2.9% (4) did not have logbooks. It was observed by 89.1% (123) of the clinical medicine students that, clinical instructors were available at the clinical learning areas offering supervision roles. Only 10.9% observed that clinical instructors were not available at the clinical learning areas. From the 10.9% (15), it was established that the unavailability of clinical instructors at the clinical learning areas was occasioned by the fact the shortage of instructors from the department of clinical medicine. Results presented in Table III.

TABLE III: STUDENTS LEVEL OF PREPAREDNESS FOR CLINICAL ASSESSMENTS

Item	Response	Frequency	Percentage
Do you have logbooks during clinical rotations?	Yes	134	97.1
	No	4	2.9
Do you have learning objectives in the clinical areas?	Yes	138	100
Do you have procedural manual?	Yes	119	86.2
	No	19	13.8
Are clinical instructors available in the learning areas for supervision?	Yes	123	89.1
	No	15	10.9

D. Lecturers Level of Preparedness for Assessment

To determine the level of preparedness for clinical assessment of lecturers the study found out that 6 (100%) supervise 6-10 students in the clinical areas. In addition, 6 (100%) demonstrate skills the students during clinical learning. Regarding the frequency of lesson in the clinical areas 2 (33.3%) have lessons less frequently while 4 (66.7%) have lessons frequently. All the lecturers 6 (100%) reported availability of logbooks and procedure in the clinical learning areas. Finally, 1 (16.7%) rated the students to be average after clinical assessment while 5 (83.3%) rated the students to be above average after clinical assessments. The findings presented in Table IV.

TABLE IV: LECTURERS LEVEL OF PREPAREDNESS FOR CLINICAL ASSESSMENT

ASSESSMENT			
Level of preparedness		Frequency	Percent
How many students do you supervise in the clinical area	6 - 10	6	100.0
Demonstration of skills in the clinical area	Yes	6	100.0
Frequency of lesson in the clinical area	Less frequent	2	33.3
	Frequently	4	66.7
Availability of logbooks, procedure manual	Available	6	100.0
How do you rate the students after clinical assessment	Average	1	16.7
	Above average	5	83.3

E. Students Perception of Clinical Assessment

The majority 109 (79%) of clinical medicine students strongly agreed while 27 (19.6%) agreed that clinical assessment helps in the identification of areas of weakness and provide learning opportunities for them. It was strongly agreed 74 (53.6%) and agreed 62 (44.9%) that clinical assessment was a measure of essential clinical skills. Furthermore, 67 (48.6%) of the respondents agreed that examiners were polite and professional; 24 (17.4%) strongly agreed that examiners are always polite while 33(23.9%) of the respondent were of the opinion that examiners are not always polite. According to 66 (47.8%) and 20 (14.5%) of the students, they agreed and strongly agreed respectively that time given during clinical examination was enough. On the hand 37 (26.8%) of the respondents were of the opinion that time given during examination was not enough. In addition, 54 (31.9%) strongly agreed and 80 (58%) agreed that the clinical assessment covered components taught in theory, while 6 (5.8 %) and 6 (4.3%) of the respondent disagreed and strongly disagreed that assessment covered content taught. Finally, 54 (39.1%) strongly agreed and 74(53.6%) agreed that assessment covered a wide range of both cognitive and psychomotor components. However, 4 (2.9%) and 6 (4.3%) disagreed and strongly disagreed that assessment covered a wide range of both cognitive and psychomotor components. Results presented in Table V.

TABLE V: STUDENTS PERCEPTION OF CLINICAL ASSESSMENT

Perception of clinical assessment	Strongly agree	Agree (%)	Disagree (%)	Strongly disagree (%)
Assessment help identify areas of weakness and provide learning opportunities	79.0	19.6	1.0	0.0
It's a measure of essential clinical skills	53.6	44.9	1.4	0.0
Examiners are always polite and professional	17.4	48.6	23.9	10.1
Time given is enough	14.5	47.8	26.8	10.9
Assessment tasks cover components taught	31.9	58.0	5.8	4.3
Assessments cover a wide range of both cognitive and psychomotor component	39.1	53.6	2.9	4.3

F. Perception of Lecturers towards Clinical Assessment

All 6 (100) of clinical medicine lecturers strongly agreed that clinical assessment helps in the identification of areas of weakness and provide learning opportunities for the students. It was strongly agreed 6 (100%) that clinical assessment was a measure of essential clinical skills. According to 3 (50%) and 2 (33.3%) of the students, they strongly agreed and a greed respectively that time given during clinical examination was enough. In addition, 3 (50%) strongly agreed and 3 (50%) agreed that the clinical assessment covered components taught in theory. Finally, 5 (83.3%) strongly agreed and 1 (53.6%) agreed that assessment covered a wide range of both cognitive and psychomotor components. Results in Table VI.

The key informant interview collaborated this study findings which stated that.

- Lack of clinical instructors was raised as the reason for the average performance of students.
- Lack clinical officer role models in the wards since most of them work in the outpatient department”.

TABLE VI: PERCEPTION OF LECTURERS TOWARDS ASSESSMENTS

Overall perception of clinical assessment	Strongly Agree (%)	Agree (%)	Disagree (%)
Assessment helps identify areas of weakness and provide learning opportunities	100	0.0	0.0
It's a measure of essential clinical skills	100.0	0.0	0.0
Time allocation is adequate	50.0	33.3	16.7
Assessment tasks cover components taught	50.0	50.0	0.0
Assessment covers a wide range of both cognitive and psychomotor components	83.3	16.7	0.0

V. DISCUSSION

In the current study, it was established that the methods used in the clinical assessment were 56 (40.6%) was objective structured clinical examination; 25 (18.1%) was short cases; 23 (16.7%) was a combination of objective structured clinical examination, short cases, and long cases; 20 (14.5%) was a combination of short cases and long cases and 14 (10.1%) was long cases. The study agrees with [7] that indicated that directly observed long and short cases, objective structured clinical examinations (OSCE), and standardized patients are frequently used to assess competence in clinical performance and communication skills.

The under-preparedness of the learning institution has an impact on the level of preparedness of students thereby creating the perfect ground for students' poor performance in assessments. To ascertain student level of preparedness for clinical assessment, found that 94.2% of the students of clinical medicine were introduced to clinical assessment in their first year of college experience, while most of the students were introduced to clinical assessment in the skills lab and 66.7% of the students were assessed after every rotation. The findings agree with a study done in Tanzania [8] which indicated that lack of prior clinical experience, unfamiliar areas, difficult patients, fear of making mistakes, and being evaluated by faculty members were expressed by the students as anxiety-producing situations in their initial clinical experience. Initial clinical experience was found to be the most anxiety-producing part of their nursing education. The sources of stress during clinical practice have been observed by many researchers and include a new environment, lack of assessment before supervision, poor clinical orientation, and a shortage of nurses.

In this study, the majority 97.1% (104) of students were using logbooks during their clinical rotations. The results are like a study by [9] that showed that 71.5% (166) had logbooks during their internship while the rest 28.5% (66) did not have logbooks. The findings are like a study that indicated that clinicians and trainees frequently keep logbooks as a means of documenting their experiences and observations. Students or a clinician can use a logbook to keep track of the patients they've seen or procedures they've performed. Various aspects of patient care, difficulties, and lessons learned are all included in this report. Keeping a logbook helps students

keep track of the tasks they need to accomplish in a given amount of time [10] In addition to allowing instructors to keep track of their student's progress, logbooks as well serve as an incentive system based on competition among peers, promote tutor-student interaction, provide continuing, objective evaluation, allow for the evaluation of learning activities, validate the procedural experience at higher levels of training, and involve training participants.

The study showed 47.8% of the students agreed that the time given during clinical examination was enough. In addition, 58% of the respondents agreed that the clinical assessment covered components taught in theory. Finally, it was strongly agreed 39.1% and agreed (53.6%) that the assessment covered a wide range of both cognitive and psychomotor components. These results are like a study in general clinical assessment in surgery, 93.4% of the students agreed that the tasks reflected what was learned and 88.5% agreed that the assessment covered a wide range of surgical knowledge and skills. Nearly 90% agreed the time spent on the assessment was appropriate, 99% agreed the examiners were courteous and professional, and 95% agreed the assessment provided a true measure of the clinical skills involved in general surgery are essential [10].

VI. RECOMMENDATION

Despite most of the students identifying methods used in clinical assessment, more information should be provided by the faculty to the students. Assessment should be done frequent and scheduled interval to prepare students for clinical assessment. Moreover, more clinical instructors are needed to guide them during clinical learning sessions. Clinical medicine department in cooperate the student's perception of clinical assessment methods since it affects clinical learning and performance.

VII. CONCLUSION

The purpose of the study was to determine the perception of Clinical Medicine department towards clinical assessment at Kenya Medical Training Colleges in Western Kenya. The study concludes Objective Structured Clinical Examination is mostly used during preclinical assessment. In addition, both the long and short case assessment method are used to assess cognitive, psychomotor and attitude of clinical medicine students.

Majority of the learners agreed that they are well prepared for clinical assessment. However, the number of clinical instructors is minimal thus making it difficult for some of the students to acquire required clinical knowledge, skills, and attitudes.

Majority of the students perceived that clinical assessment methods helps them identify their weaknesses and provides learning opportunities. The students were satisfied with how clinical assessments are conducted and the way clinical learning content is assessment. Clinical assessments in general are a measure of the clinical knowledge, skills and attitudes. Clinical Medicine and surgery students' perceptions towards clinical assessment have a significant impact on their learning approaches. The study concludes that the way

clinical assessment is done has an impact of how the learners come out as professionals.

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CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

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