

DOES CLERKSHIP EXPERIENCE INFLUENCE INTEREST IN INTERNAL MEDICINE CAREER?

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ABSTRACT

BACKGROUND: The career intention of undergraduate medical students may be influenced by the clerkship experience in the various specialties.

AIM: This study was undertaken to assess the medical student's perception of the internal medicine clerkship and determine its influence in the choice of internal medicine as a career.

METHODS: The study involved a cross-sectional survey of 2009 and 2010 graduating medical class of University of Nigeria using self-administered questionnaires. The clerkship evaluation was assessed using a 3-point Likert scale (1=poor and 3 excellent).

RESULTS: The response rate was 70.3% (275/391). Sixty-five (23.6%) rated their medicine clerkship as excellent (mean rating 2.04). Aspects of the clerkship experience that contributed to the overall poor rating include quality of opportunity to participate in direct patient care, ability to manage problems in a general medicine setting, accessibility to consultants and feedback on performance during the postings. Experience in learning basic physical examination skills and overall quality of consultant teaching was considered excellent by 42.3% and 30.8% of the participants respectively. Twenty-six (9.5%) of the participants indicated interest in internal medicine while 96(35%), 43(15.6%) and 34(12.4%) chose surgery, paediatrics and obstetrics and gynecology respectively. Factors that swayed the choice of medicine were personal inclination (57.7%), clerkship experience (30.8%), diligence of faculty (7.7%), and lifestyle (3.8%).

CONCLUSION: Clerkship experience may not be the main factor influencing choice of internal medicine. However, a review of clerkship in internal medicine may improve experience and enhance choice of internal medicine as a specialty among medical students.

KEYWORDS: clerkship, career choice, internal medicine, medical students,

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INTRODUCTION

The gradual decline in the number of physician to patient ratio worldwide, particularly in sub-Saharan Africa which has a high rate of migration among young medical graduates may affect the quality of care received by patients^{1,2}. Specialty selection by medical students determines the future composition of the physician workforce and affect the health care^{3,4}. The considerations on a choice of medical specialty may begin as undergraduates during clinical rotations and may evolve throughout the course of training being affected mainly by exposure to clinical and intellectual demands of the various specialties and need for self-fulfillment^{3,4}. Dedication and

innovativeness among the teachers can arouse the interest of students in medical specialties during the clerkship. Studies have shown that other factors that may influence choice of medical specialization include gender, lifestyle challenges of the specialty, income and prestige of the specialty and experience during clerkship^{1,3,5-7}. The choice of internal medicine as a specialty has continued to decline with internal medicine considered as having an uncontrollable life style due to physicians' lack of control over work hours and patient care duties⁸. Improving clerkship experience among medical students may awaken their interest in internal medicine and improve career choice of internal medicine.

The study aims at evaluating the medical students' assessment of their internal medicine clerkship and the influence of this and other factors in their choice of internal medicine as a career choice.

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Materials and Methods

At the University of Nigeria, the medical students go through four clerkships in internal medicine to become eligible for the final examination in internal medicine. The clerkships (medicine 1 to medicine 4) each lasting for a period of 8-weeks are designed to expose the students to aspects of clinical medicine. During the clerkships, the students are taught by the consultants and the resident doctors in the clinics, during the ward rounds, and at the weekly medical and interdisciplinary academic programmes. Evaluation and assessment of the students is continuous and is undertaken by way of scoring the relevant procedures in the students' medical procedure book, and end-of-posting assessment quiz.

To evaluate medical student's perception of the medical clerkship and the factors that may influence choice of medicine as career, consecutive students of the 2009 and 2010 graduating class were surveyed after they completed the last medicine posting. The survey instrument was given individually to the students. Before completing the survey, the respondents received a separate note detailing the voluntary nature of participation, the study procedure, risks, and confidentiality with regard to the information in the survey. Those who consented proceeded with the survey.

The authors explored 3 domains in the survey: (1) demographics, (2), clerkship evaluation, and (3), choice of career. Clerkship evaluation involved rating of the students learning experiences including the overall quality of the clerkship using a Likert scale of 1 to 3 (1 = poor, 2 = just right, 3 = excellent). Aspects of the clerkship experience evaluated include: experience in learning history taking skills, basic physical examination skills, and interpreting laboratory data, clarity of posting goals and objectives, accessibility of consultant and resident doctors, quality of opportunity to participate in direct patient care, quality of direct observation of clinical skills, quality of feedback on performance in the posting, ability to manage problems in a general medical setting, overall quality of consultants and resident doctors teaching, and whether the student was treated in a respectful/professional manner, or was comfortable asking question during the postings. We compared the medicine ratings in each of the aspects of clerkship experience to those of the other 3 major clinical clerkships in our institution viz- surgery (clerkship A), paediatrics (clerkship B), and obstetrics & gynaecology (clerkship C). In the section on choice of career, the factors that informed the students' choice of career, and their opinion on ways to improve medicine clerkship were evaluated.

Data analysis

Data from completed questionnaires were entered into the statistical package for Social Sciences (SPSS 17.0 version, SPSS Inc, Chicago, Ill) for analysis. Results were expressed as percentages, or mean. Data were analyzed by chi-square test as appropriate. Level of significance was set to $p < 0.05$.

Results

Two hundred and seventy-five of a total of 391 students surveyed responded. This represents an overall response rate of 70.3%. The mean age of the students was 25.7 ± 2.2 years. Overall, 179 (65.1%) of the students responding were male and 96 (34.9%) were female.

Clerkship evaluation:

Majority of the students 186/275 (67.6%) rated their overall medicine clerkship as just right, while 38/275 (13.8%) and 51/275 (18.5%) rated it as poor and excellent respectively. This corresponds to mean rating of 2.04 on a 3-point Likert scale. Concerning learning history taking, 72 (26.2%) rated it as excellent, while 91 (33.1%) considered their experience in learning physical examination skills as excellent. The clarity of posting goals was perceived as exceptional by 63 (22.9%) of the participants while 50 (18.2%) considered it poor. One hundred and nineteen (43.3%) of the participants thought the opportunity given them to participate in direct patient care was deficient while 103 (37.5%) considered the quality of feedback on their performance was unsatisfactory.

Accessibility of consultants during the clerkship period was rated excellent by 72 (26.2%) of the participants. On the contrary, the consultants' teaching was rated highly with only 30 (10.9%) of the participants considering it as inadequate. None of those that selected internal medicine considered poor their experience in learning history taking and physical examination. Also, the accessibility of faculty and quality of faculty teaching were highly rated. This is further illustrated in table 1

When compared with the other three major clerkships, surgery (clerkship A), pediatrics (clerkship B) OBGYN (clerkship C) the overall quality of medicine clerkship had a low mean rating (Figure 1). On analyzing individual aspects on clerkship experience and comparing it with the other clinical specialties, some aspects were rated poorly in internal medicine clerkship in comparison with the others. These include the clarity of posting goals, quality of faculty and residents teaching and direct observation of clinical skills. This is further illustrated in table 2.

Choice of Medicine as a specialty

Overall, 26 (9.5%) of the students selected medicine as a choice of career, 96 (36%) selected surgery, 43 (15.6%)

selected paediatrics while 34 (12.4%) and 18 (6.5%) chose obstetrics/gynecology and public health respectively. Eighty-four (30.5%) of the students preferred other clinical specialties. Of the students that selected medicine 16 (61.5%) were male and 10 (38.5%) were female.

Among those that rated their medicine clerkship as excellent, only 9.2% (6/65) would like to pursue a career in medicine, while 9.9% (17/172) of those who thought their clerkship experience was just right and 7.9 (3/38) of those who considered their clerkship experience as poor, chose medicine as a specialty.

The factors indicated by the respondents as the major influence in their choice of medicine as a career were clerkship experience 30.8% (8/26), diligence of faculty 7.7% (2/26), personal inclination 57.7% (15/26) and life style 3.8% (1/26). This is further illustrated in table 3

Suggestions to improve quality of medical clerkship
Of the students, 165 (60%) suggested that more involvement of students in direct patient care may improve the quality of medical clerkship. Other factors advocated by the respondents to enhance quality of the clerkship include improvement in the faculty-students interaction (n=110; 40%); improvement in the quality of feedback on the posting performance (n= 55: 20%); and development of a program that will involve an initial block medicine lectures prior to clinical postings (n= 16: 5.8%).

DISCUSSION

This study may indicate that in our setting, the overall rating of medicine clerkship by the medical students is low when compared with the other major clinical clerkships. The reason for the low rating may not be easily deduced from the study, but certain aspects of clinical clerkship experience may have contributed to the overall poor rating. These include clarity of posting goals, quality of opportunity to participate in direct patient care, quality of direct observation of clinical skills and feedback on performance during the clerkship. Compared to the other specialties, these aspects in the clerkship experience in internal medicine received the lowest rating among our undergraduate and may have affected the career choice in internal medicine.

The study observed that a low percentage of the students would like to pursue a career in internal medicine. This finding differs from what was previously reported in some developing countries^{2, 9, 10} and the developed countries^{1, 11} where a higher proportion of the undergraduates indicated interest in internal medicine. It is noteworthy that in these studies, among those who chose a career in internal medicine,

they had high satisfaction with their internal medicine clerkship, and probability of choosing internal medicine was determined by core internal medicine clerkship^{4, 12}. Although our study noted that clerkship experience affected the choice of internal medicine in less than one-third of the participants who selected it, the need to improve on all aspects of internal medicine clerkship in our setting cannot be overemphasized. This is particularly incumbent in the aspects of quality of faculty- student interaction and experience with residents' teaching which have been found to attract students to internal medicine^{5, 13}.

Personal inclination as opposed to income and gender influenced the choice of internal medicine in our study. This is similar to earlier reports^{9, 14} and may suggest that despite the of clerkship experience, personal interest may be a strong driving force in the choice of medical specialty. The effect of gender on choice of internal medicine has been variable with some studies finding it more common among males while others found it commoner in females^{1, 15-17}. In the present study, more males than females selected internal medicine even though the difference was not significant. Internal medicine has been considered as having an uncontrollable life style due to physicians lack of control over work hours and patient care duties¹ and this might dissuade medical students from selecting internal medicine as a career choice, hence their attraction to other fields¹. In the present study, it could not be easily inferred the participants' view of lifestyle in internal medicine, as only a minimal percentage of them would chose a career in internal medicine because of the stressful work conditions associated with the other clinical specialties.

Surprisingly, income was not a factor considered in the choice of internal medicine. This is similar to the finding in an earlier report⁹. This is quite intriguing because over a span of about two decades, medical students' choice of specialty is not driven by income. Conflicting reports have emanated from the developed countries with some finding low income as a factor pushing students' away from a career in internal medicine^{5, 8}, while others found no relationship between income and a career choice in internal medicine¹. This finding may be related to debt incurred in the course of medical school training in the developed countries⁵.

Limitations of the study: the study is limited by the 3 point likert scale used in the assessment of students' response. A 5-point or 7-point scale would have been more appropriate

CONCLUSION

In our setting, clerkship experience was rated low

among the other major undergraduate clinical clerkships. Although this may affect the choice of internal medicine as a carrier by the medical students, other socio-cultural and personal factors might influence the ultimate choice of internal medicine in addition to the clerkship experience. Efforts geared at improving all aspects of internal medicine clerkship, particularly the quality of faculty and faculty-student interaction may enhance a career choice in internal medicine.

Final year medical student evaluation of the overall quality of medicine clerkships and the other 3 major clerkships at the University of Nigeria

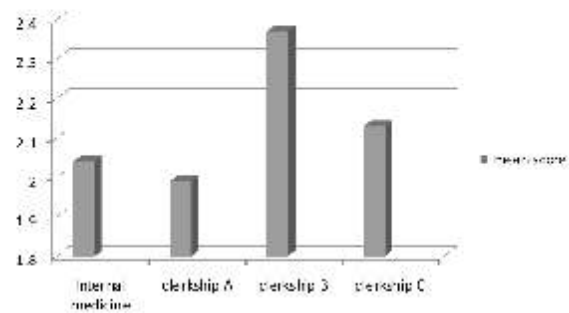


Figure 1: Showing comparison of mean score of the overall quality of the internal medicine clerkship and other major clinical clerkships

Table 1: students rating of different aspects of clerkship

Item	Rating					
	Poor		Just right		Excellent	
	All (N=275)	chose IM (N=26)	All	Chose IM	All	Chose IM
1. Experience in learning history taking skills	22 (8)	-	181 (65.8)	20 (76.9)	72 (26.2)	6 (23.1)
2. Experience in learning basic physical examination skills	20 (7.3)	-	164 (59.6)	15 (57.7)	91 (33.1)	11 (42.3)
3. Experience in interpreting laboratory data	41 (14.9)	5 (19.2)	185 (60)	15 (57.7)	69 (25.1)	6 (23.1)
4. Clarity of posting goals and objectives	50 (18.2)	2 (7.7)	162 (58.9)	21 (80.8)	63 (22.9)	3 (11.5)
5. Accessibility of faculty	62 (22.5)	7 (26.9)	141 (51.3)	10 (38.5)	72 (26.2)	9 (34.6)
6. Accessibility of residents	36 (13.1)	2 (7.7)	132 (48)	13 (50)	107 (38.9)	11 (42.3)
7. Quality of opportunity to participate in direct patient care	119 (43.3)	12 (46.2)	117 (42.5)	8 (30.8)	39 (14.2)	6 (23.1)
8. Quality of direct observation of your clinical skills	87 (31.7)	9 (34.6)	139 (50.5)	13 (50)	49 (17.8)	4 (15.4)
9. Quality of feedback on your performance in the posting	115 (41.8)	13 (50)	128 (46.6)	11 (42.3)	37 (11.6)	2 (7.7)
10. Ability to manage problems in a general medical setting	86 (31.3)	4 (15.4)	159 (57.8)	19 (73)	30 (10.9)	3 (11.5)
11. I was treated in a respectful/professional manner	68 (24.7)	4 (15.4)	143 (52)	16 (61.5)	64 (23.3)	6 (23.1)
12. I felt comfortable asking questions during the posting	39 (14.2)	1 (3.8)	160 (58.2)	17 (65.4)	76 (27.6)	8 (30.8)
13. Overall quality of residents teaching	41 (14.9)	1 (3.8)	165 (60)	16 (61.5)	69 (25.1)	9 (34)
14. Overall quality of faculty teaching	30 (10.9)	2 (7.7)	132 (48)	16 (61.5)	113 (41.1)	8 (30.8)
15. Overall quality of posting	38 (13.8)	3 (11.5)	172 (62.5)	20 (77)	65 (23.6)	3 (11.5)

Table 2: Showing aspects of internal medicine clerkship with low mean scores

item	Internal medicine	Mean ratings		
		Clerkship A	Clerkship B	Clerkship C
Quality of opportunity to participate in direct patient care	1.67	1.54	2.69	1.70
Quality of feedback on your performance in the posting	1.71	1.70	2.08	1.81
Clarity of posting goals and objectives	2.05	1.95	2.35	2.12
I felt comfortable asking questions during the postings	2.10	2.10	2.22	2.19
Overall quality of residents teaching	2.07	2.20	2.25	2.12
Quality of direct observation of your clinical skills	1.83	1.73	2.10	1.83
Overall quality of consultants teaching	2.35	2.44	2.49	2.35
Accessibility of faculty	2.02	2.01	2.39	2.08

Table 3: reasons for choice of specialty

Parameter	All	Chose IM
	Number (%)	Number (%)
Clerkship experience	85 (30.9)	8 (30.8)
Faculty diligence	21 (7.6)	2 (7.7)
Personal inclination	116 (42.2)	15 (57.7)
Stress of other specialties	8 (2.9)	1 (3.8)
Prestige of specialty	6 (2.2)	-
Financial reward	9 (3.3)	-
Did not give any reason	30 (10.9)	-

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