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Survey of teaching, research and conference experiences of paediatric surgical trainees in Nigeria

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ABSTRACT

Aim: To determine the teaching methods used by residents in paediatric surgery in Nigeria and their exposure to research and conferences. **Materials and Methods**: A structured questionnaire was administered to trainees in paediatric surgery in Nigeria seeking information regarding different teaching methods used, frequency of use, involvement in research and participation in conferences. **Results**: There were 11 respondents (91.6%) of 12 questionnaires that were distributed. All of them were training in accredited teaching hospitals in Nigeria. All of them had been involved in teaching medical students. Ten residents were involved in teaching in wards/bedside two times or more in a week and all were involved in teaching at the clinics. Only one resident used audiovisual aid at least once a week to teach students. Eight trainees used tutorial or seminar group discussion as a teaching tool once a week. Four trainees had not used written essay as a way of teaching students while five had never given students lectures in a classroom before. All the respondents had participated in retrospective research while nine had been involved in prospective research. Nine residents had attended conferences nationally while two had attended international conferences. Six trainees presented a paper or more at national conferences while one presented at an international conference. **Conclusion**: Trainees in paediatric surgery in Nigeria are significantly involved in the teaching of undergraduate medical students and clinical research. This should be encouraged and further enhanced by motivating the trainees to attend international conferences.

Key words: Paediatric surgery trainees, research involvement, teaching experience

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INTRODUCTION

Paediatric surgery training in Nigeria is only a few decades old.[1] The undergraduate medical curriculum in most universities in Nigeria allows medical students to rotate through the subspecialty for a variable period of 4-6 weeks. During this period, paediatric surgical trainees (senior registrars who have spent at least 3 years in postgraduate surgical training) are actively involved in the teaching of medical students. They may sometimes spend more time with these students than the consultants in the units. In addition, involvement in research and participation in conferences are essential parts of the postgraduate surgical training in order to build a culture of logically solving clinical problems as well as developing the capacity to share experiences with peers and documenting them.[2,3]

This study was conducted to determine the different methods used by paediatric surgical trainees in the teaching of medical students as well as to determine their involvement in research and conferences.

MATERIALS AND METHODS

A structured questionnaire was administered to senior registrars in paediatric surgery in Nigeria. Information about their age, gender and institution of training were obtained. Further information regarding the different teaching methods employed by the residents and the frequency of employing those methods was collected. Residents' involvement in medical research as well as attendance of conferences and level of participation in such conferences were also obtained. The questionnaires were administered to residents present during the sixth annual conference of the Association of Pediatric Surgeons of Nigeria held in Benin city in November 2007 while those not physically present were contacted through e-mail.

There were eleven respondents of the 12 questionnaires

administered. There were 14 trainees (Senior Registrars) in paediatric surgery in the country at the time.

The results were analysed using Statistical Package for Social Sciences (SPSS version 13.0).

RESULTS

All the respondents were males. The residents were distributed in various training centres around the country [Table 1].

Teaching of medical students

All 11 respondents have been involved in the teaching of medical students during their training. The different methods used in teaching are summarized in Figure 1. Five of the residents are involved in teaching of medical students at ward rounds more than four times a week and 5 are involved two to four times a week. One resident was involved in the teaching of medical students through ward rounds once a week.

Eight residents were involved in the teaching of students using clinical demonstration in the outpatient clinics once a week and two were involved in teaching more than four times a week. One resident used this method of teaching two to four times every week.

Table 1: Institution of respondents according to primary affiliation and accredited institutions for specialist training in paediatric surgery

Institution	Regional location of the institution in Nigeria	Paediatric surgery training offered	Affiliation of respondents
LUTH	South west	1	1
OAUTHC		3	1
LAUTECH			1
UCH		1	1
NAUTH	South east		1
UNTH		1	
UITH	North central	2	2
JUTH		1	
GSH			1
ABUTH		2	
UMTH	North east		1
AKTH	North west		1
UDUTH			1
Total		11	11

LUTH, Lagos University Teaching Hospital; OAUTHC, Obafemi Awolowo University Teaching Hospitals' Complex; LAUTECH, Ladoke Akintola University of Technology Teaching Hospital; UCH, University College Hospital; NAUTH, Nnamdi Azikiwe University Teaching Hospital; UNTH, University of Nigeria Teaching Hospital; UITH, University of Ilorin Teaching Hospital; JUTH, Jos University Teaching Hospital; GSH, Gwagwalada Specialist Hospital; ABUTH, Ahmadu Bello University Teaching Hospital; UMTH, University of Maiduguri Teaching Hospital; AKTH, Aminu Kano Teaching Hospital; UDUTH, Uthman Dab Fodio University Teaching Hospital

The actual time spent by the trainees in these teachings include 1-2 h for lectures/tutorials, 1-2 h for teaching at ward rounds and 1 h for clinical demonstration in outpatient clinics. Of all these teachings, only the lecture/tutorial is formal.

Involvement in research

All the residents have participated in research during their training. Seven residents have initiated research projects on their own while four have not. All the 10 residents have been involved in retrospective studies at different levels [Figure 2A] while nine of them have been involved in prospective studies [Figure 2B]. There were no laboratory or basic science researches. The types of project the residents were involved in were mostly in data acquisition and, less frequently, data analysis. All the trainees who participated in the study had been involved in retrospective studies. Three trainees were involved only with data extraction and collation. Two trainees had each designed a research protocol, collated the data, analysed it and wrote up the findings while two other residents did all these and, in addition, presented the findings at academic conferences. Involvement of other trainees is as shown in Figure 2A.

Nine trainees have participated in prospective studies during their training. Of these, five were involved only with collation of the data while one was involved with

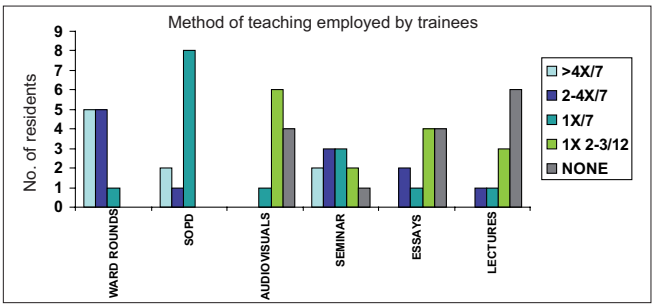


Figure 1: Methods of teaching used by trainees

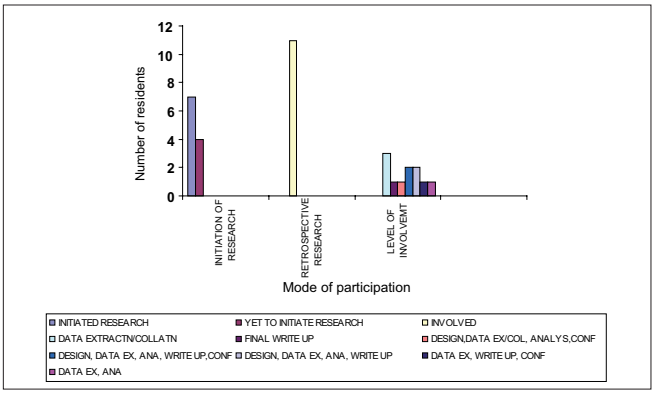


Figure 2A: Participation of residents in retrospective studies

design of the study, data extraction, analysis and final write-up. Involvement of other residents is as shown in Figure 2B.

Seven residents have had their research findings published. Two residents have had a publication in an international journal and one had two publications in international journals. Another resident had published five articles in international journals. All the international journals are peer reviewed and indexed in Medline. In national journals, three residents have a publication each, while one resident each have had three and four publications [Figure 3]. All the national journals are peer reviewed but some are not indexed in Medline.

Attendance at conferences

Nine trainees had attended national conferences and two had attended international conferences. At national conferences, three paediatric surgery trainees had presented a paper while one resident had presented 10 papers. At international conferences, only one resident had presented a paper [Figure 4 A,B].

DISCUSSION

Paediatric surgery as a specialty is relatively new in most parts of Africa and practicing paediatric surgeons are few.[1,4] In Nigeria, it is about three decades old. The surest way of sustaining the specialty, apart from mentoring by established paediatric surgeons,[5] is to develop specialists who are apt to teach, design creative and innovative research relevant to the setting and disseminate the findings in order to enhance service delivery. The goal of surgical education and residency is to prepare them for this lifelong vocation[6] and, to achieve this, such qualities should be imbibed as trainees. The American Accreditation Council for Graduate Medical Education lists six core competences for which a resident must be assessed during training, one of which is Practice-Based Learning and Improvement that includes research, attendance of conferences and practice of evidence-based surgery.[3,7]

In the present study, all trainees are actively involved in teaching of medical students.

Ward rounds (bedside teaching) and outpatient clinic (demonstration of signs and symptoms) are the most commonly employed methods. This is a reflection of the pattern of service delivery in the hospitals where their training takes place. The use of PowerPoint presentation, seminars or group discussions is less often employed while assessment of written essays by students and delivery of lectures are rarely used by residents. The implication of this is that when such trainees are later appointed to the position of lecturer in a university, they are well equipped to teach medical

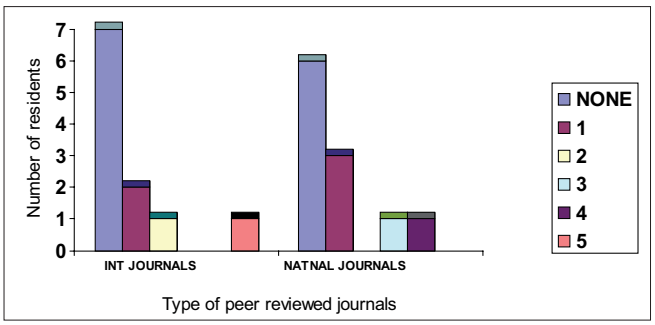


Figure 3: Publications in peer reviewed journals

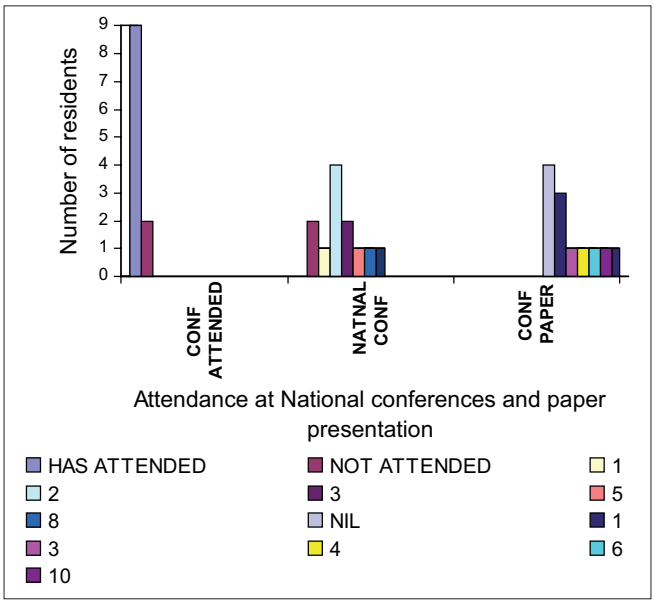


Figure 4A: Participation in national Conferences

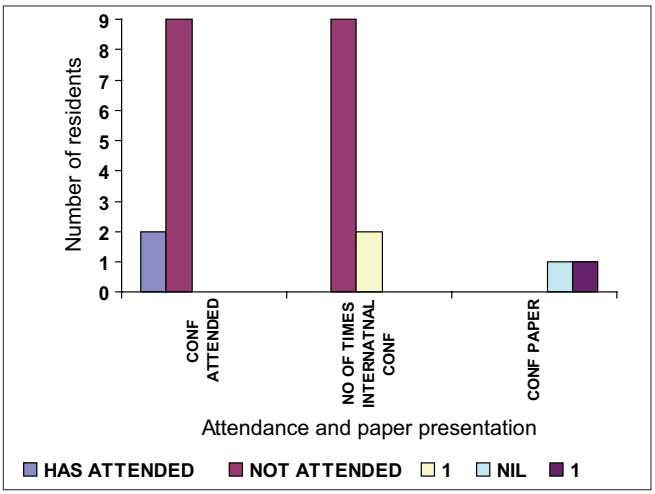


Figure 4B: Participation in international Conferences

students using the time-honoured methods of ward rounds and clinic teaching. However, they either need to be retrained or find themselves deficient and need to acquire other teaching skills, such as use of PowerPoint and seminar discussion groups.

Practically, all the residents have been involved in research - from initiating a research project to final write-up and dissemination of findings. They have participated both in retrospective and in prospective studies, although more have been involved in retrospective studies than prospective research. Most of them have been used to extract and collate data for these studies and a good number have written-up their findings. This is a good trend that should be sustained. At the University of Lagos, as in most universities in Nigeria, evidence of publication is a requisite condition[8] for employment and trainees should be encouraged to meet this condition before their exit from training.

With respect to attendance of conferences and scientific meetings, nine residents have attended national conferences while only two have attended international conferences. The reason for the low attendance of international exposure to conferences and meetings is fund related. The resident who presented a paper in an international conference was sponsored. The Association of Pediatric Surgeons of Nigeria (APSON) encourages trainees to present at the annual meetings and fees for such attendance are subsidized. The rotation of these meetings among the different regions of the country is an added advantage as, during the 3 years of training, at least one region close to the training centre would have hosted the meeting.

The need for trainees to be involved in teaching and research cannot be overemphasized. Paediatric surgery residents in Nigeria are well involved in teaching of medical students and the exposure to research is commendable. These qualities will stand them in good stead as lecturers/consultants on completion of their training. More funding for research and conferences will improve their attendance in international conferences and involvement in basic research.

REFERENCES

1. Ameh EA, Adejuyigbe O, Nmadu PT. Pediatric surgery in Nigeria. J Pediatr Surg 2006;542-6.
2. Faculty of Surgery training program and curriculum of the West African College of Surgeons. Accessed www.wacs-coac.org, January 2009.
3. Bancroft GN, Basu CB, Leong M, Mateo C, Hollier LH Jr, Stal S. Outcome-based residency education: Teaching and evaluating the core competencies in plastic surgery. Plast Reconstr Surg 2008;121:441-8.
4. Bickler SW, Kyambi J, Rode H. Pediatric surgery in sub-Saharan Africa. Pediatr Surg Int 2002;17:442-7.
5. Ameh EA. Paediatric surgery in sub-Saharan Africa. Pediatr Surg Int 2003;19:128.
6. Collins JP, Civil ID, Sugrue M, Balogh Z, Chehade MJ. Surgical education and training in Australia and New Zealand. World J Surg 2008;32:2138-44.
7. Accreditation Council for Graduate Medical Education. ACGME Outcome Project: General competencies, 1999. Available from http://www.acgme.org/outcome/comp/compFull.asp. [cited in 2009].
8. Anonymous. University of Lagos Revised Conditions of Service Governing Senior Staff. University of Lagos Printing Press; 1994. p. 3-41.

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