

Evaluation of Orthodontic Residency Training Programme in Nigeria: Perils and Pitfalls from Residents' Perspective

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Abstract

Background: The orthodontic residency program is an intensive 5-6 years of dedicated academic, research and clinical training programme. Residents rarely get an opportunity to express anonymous opinions regarding the programme. More so, the two examining bodies may not be conversant with the problems residents encounter during training and some of the shortcomings of the training programme from the residents' perspective. The aim of the study was to assess residents' perspective to the residency training programme and the challenges encountered.

Methods: A cross-sectional descriptive questionnaire based survey carried out among orthodontic residents from nine different postgraduate training institutions in Nigeria. The 14- item questionnaire was administered through a telephone conversation with respondents using closed and open ended options. Data was analysed using SPSS version 23.

Results: A total of 26 residents were interviewed across the country representing about 65% of the total sampled population of orthodontic residents in Nigeria. All respondents indicated they would be adequately prepared for unsupervised patient care after graduation. About 81% reported sufficient clinical based training while 26.9% were dissatisfied with the training. With respect to challenges faced, 92.3% felt that spending personal funds on patient care was a huge burden while 73.1% felt the junior residency period was too lengthy.

Conclusion: Orthodontic residents are exposed to sufficient clinical based training and are capable of taking up unsupervised orthodontic care after the programme although they are faced with challenges of poor infrastructure, and inadequate and irregular supply of orthodontic materials.

Keywords: Orthodontic residents, Orthodontic training, Residents' perspective, Challenges

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Introduction

The history of orthodontic education dates back to 1800s¹. Orthodontics as a specialty was introduced to Nigeria about 40 years ago² at the Lagos University Teaching Hospital. But as of today there are 9 accredited post graduate Orthodontic residency training institutions in the country and over 40 locally trained orthodontists have graduated from these institutions. The post graduate orthodontic training programme in Nigeria is co-ordinated by the National Postgraduate Medical College of Nigeria¹ and

the West African College of Surgeons. Each of the programmes run a minimum of 6 years; 3 years for junior residency and 3 years for senior residency with a compulsory research component and the award of fellow in Orthodontics is conferred on candidates by the two colleges at the end of the training.

The residency programme is an intensive period of dedicated academic, research and clinical programme which is designed to offer educational experiences that promote critical thinking and skills in orthodontics. Residents often times find it very challenging to establish a balance between academics, research and clinical activities. They rarely get an opportunity to express their anonymous opinions regarding the training they receive.

More so, the two examining bodies may not be conversant with the problems residents encounter during training and some of the short-comings of the training from the residents' perspective. Very few studies have previously been carried out to assess the perspective of orthodontic residents towards their training^{2,4}. The aim of the study was to assess the residents' perspective of residency training programme in Nigeria and the challenges faced.

Material and Methods

This was a cross-sectional descriptive questionnaire based survey carried out among 26 orthodontic residents from nine different Postgraduate training institutions in Nigeria. The 14-item questionnaire with close and open ended options was administered through a telephone conversation. All the residents that were contacted responded to the questionnaire and the anonymity of their responses was guaranteed. The questionnaire was modified from a similar study carried out among orthodontic residents in the United States and Canada. The questionnaire contained questions covering three major areas:

1. Demographics (gender, age, year of program, training centre)
2. Self-assessment of the program (level of satisfaction, number of patient seen from start to finish, competency etc.)
3. Challenges and setbacks of the program.

Data was analyzed using SPSS version 23

Results

Demographics

A total of 26 residents were interviewed across the country which represented about 65% of the total sampled population of orthodontic residents in Nigeria. There was equal gender distribution. Only 3 (11.5%) of responding resident doctors were junior residents, while 23 (82.5%) were senior residents. About 92.3% of these residents were undertaking their residency training in the southern part of the country while only 7.7% were undertaking their training in the northern part of the country. Approximately 54 percent of residents were in the age category of 30-39 years (Table 1).

Evaluation of the Programme

All 26 respondents indicated that they were exposed to numerous basic orthodontic treatment philosophies but when asked questions on interdisciplinary management of appropriate orthodontic cases no resident was exposed to Orthognathic surgery with orthodontics. Most residents (81%) indicated that the clinical based training is sufficient (Figure 1) however, 61.5% reported lack of appropriate didactic teaching session and dedicated academic time. The majority (69.2%) of residents felt that they were "satisfied" with their programme while 23.1% were somewhat dissatisfied and 3.8% were either very dissatisfied or very satisfied. Figure 3 shows resident doctors response when asked to estimate the number of patients that

they may likely treat from the beginning of their programme to the end of it. About 30.8% estimated that they would have treated above 50 patients by the end of the programme while 11.2% of residents could not estimate the number of patients that may be seen by the end of their programme. All residents felt they will be adequately prepared for unsupervised work after the programme.

Table 1: Demographics of respondents

Respondents	Number (%)
Age	
≤19	0(0.0%)
20-29	0(0.0%)
30-39	14(53.8%)
≥ 40	12(46.2%)
Sex	
Male	13(50%)
Female	13(50%)
Year of program	
Junior registrar	3(11.5%)
Senior registrar II	3(11.5%)
Senior registrar I	20(77.0%)

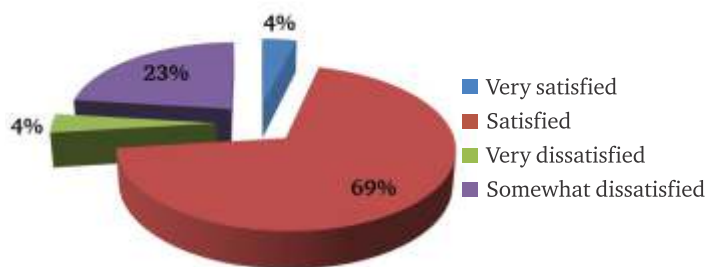


Figure 1: Level of satisfaction of Residents with the training programme

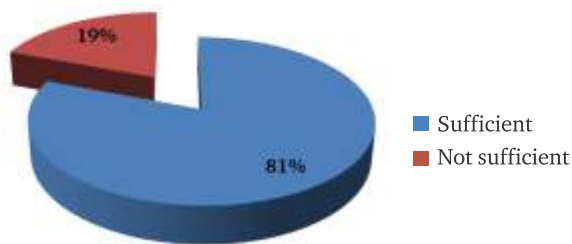


Figure 2: Residents' rating of clinical based training

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Table 2: Challenges and drawbacks of Orthodontic training programme

Drawbacks of residency training	Respondents		
	Yes (%)	No(%)	Total (%)
Spending personal funds for clinic and patients	92.3	7.7	100
Lack of orthodontic materials	76.9	23.1	100
Lengthy years of junior residency	73.1	26.9	100
Inadequate tutorials and practical sessions	61.5	38.5	100
Lack of exposure to orthodontic photography standards	61.5	38.5	100
Lack of structured mentorship program	53.9	46.1	100
Lack of patients compliance	46.2	53.8	100
Low patients turnout	30.8	69.2	100

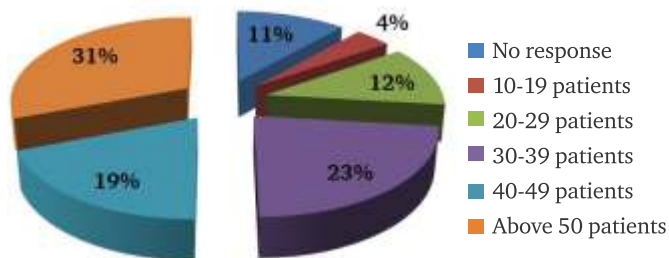


Figure 3: Number of patients expected to be seen from start to finish

Challenges of the Orthodontic training programme

Concerning challenges and short comings encountered during the training programme, a total of 76.9% of residents believe that non availability and irregular supply of Orthodontics materials and consumables was a major short coming of the training programme while 23.1% felt this does not pose a great challenge. The majority of residents (92.3%) pointed out that they spent personal funds for clinic patients, while only 7.7% do not have to spend personal funds on patients in other to increase number of patient treated (Table 1). Fifteen residents (57.7%) were of the opinion that they lacked adequate structured mentorship while eleven (42.3%) felt they had just the right mentorship they needed for the programme. When residents were asked questions on patients' turnout for treatment 30.8% felt low patient turnout was a serious challenge, while 46.2% expressed concern about lack of patients compliant with prolonged treatment durations. The majority of residents (73.1%) felt the three years of junior

residency rotation was lengthy and not necessary while 7.7% of residents believe the junior residency years were relevant in equipping residents for routine management of all common dental conditions at a level of proficiency higher than undergraduate. (Table 2)

Discussion

The Orthodontic training programme in corporates both clinical competency and research project for the graduating Orthodontic resident. Previous studies²⁻⁴ have evaluated motivational factors influencing the choice of Orthodontics as a specialty and future plans of Orthodontic residents. This study aimed at evaluating the overall satisfaction and challenges encountered by Orthodontic residents during their training. Findings from this study showed that the Nigerian Orthodontic residency training program offers sufficient clinical based training even though residents are faced with various challenges.

Most of the responding residents 81% indicated that they had sufficient clinical based training, which is slightly higher than a previous study conducted by Isiekwe et al.,² in 2015 who reported 73.1% but comparable to a United states survey⁵ where 80.29% of responding residents reported sufficient clinical based training while a report on Canadian residency training programme⁶ observed 90% responding residents reported sufficient clinical training. Although there was a widespread opinion by residents of sufficient clinical based training, 26.9% were dissatisfied with the programme. This is somewhat higher than other evaluation of Orthodontic programmes conducted in United States⁵ and Canada⁶ where 15.44% and 13.64% were reported respectively. This may be due to the fact that there are various challenges encountered by

residents in Nigeria. Some of these challenges are unique to training centres such as low volume patient turn out, nonfunctional Orthopantomogram and Cephalometric radiographic machines, poor electric power supply, spending personal funds for patient treatment, lack of structured mentorship programmes and non-availability of orthodontic materials. Many of these challenges are however peculiar to third world developing countries.

Graduate Orthodontic residents (92.3%) felt that spending personal funds for patients management was a huge setback of the training this contrasts reports from other climes where financial debt from residency training is usually a major concern when graduate specialty training are been considered. With respect to lack of regular supply and availability of Orthodontic materials, 76.9% of residents indicated that materials needed to treat patients are not readily available which in some centres may lead to low patients turn out for treatment. This therefore calls for an urgent need to address this challenge by increasing funding for the residency training program in the different centres.

Orthodontic residents (61.5%) observed that the residency training programme lacked dedicated academic time. This probably is due to the fact that trainers believe that the residency training period is more of a self-directed period of learning. One of the ways to increase didactic teaching sessions is to decrease the number of hours for clinic based training or to incorporate more academic sessions in the junior residency training programme. However, this may not be favoured by residents who are content with the amount of clinical based training they receive and who feel the junior residency training programme is already loaded with a lot of academic activities although a Canadian survey⁶ which observed a similar challenge suggested an extension of the programme length, or additional time within the programme for formal education session which may be in the evenings or weekends.

Most residents think the number of years for senior residency is adequate while the junior residency period is lengthy. Junior residency rotation where general dentistry is the focus is not part of the graduate orthodontic programme in other climes like United States⁵ and Canada.⁶ Some of the residents 26.9% indicated that the junior residency period is adequate and will enable residents to be proficient in general dentistry, common medical conditions related to dentistry, medical and surgical emergencies at a level higher than undergraduate.

Nigerian Orthodontic residents 53.84% expressed

concern about lack of structured mentorship programme in the graduate orthodontic training. Mentoring is acknowledged as a key to successful academic and career development^{7,8} however, the residency programme in Nigeria seem to lack a structured mentorship programme probably because trainers believe that the residency training is more of a self-directed learning process more so, mentors lack formal training on mentorship. On the other hand, mentees are also engrossed with meeting up with clinical requirements to create time for proper mentorship. Mentoring specifically for residents deserves consideration because it fosters a relationship that enables mentees shares their special skills and experience with junior colleagues.⁹ It produces an environment where sensitive issues can be openly raised for reflective beneficial discussions.⁹ The best methods of developing the mentoring relationship is unclear and nurturing mentor-mentee chemistry through formal programme is still a misery to unravel.¹⁰ Reports from an intervention study on a formal mentorship programme for internal medicine residents observed that formal mentorship programmes are at par or less beneficial compared to informal mentorship.¹¹ Recent reviews have highlighted some aspects of mentoring programmes associated with success such as mentee participation in pairing process and direction of the relationship^{12,13} as well as adequate training of mentors.^{14,15}

All responding residents believe that they will be able to undergo unsupervised patient management after their programme, this could be because of the sufficient clinical based training which makes residents feel confident and adequately prepared for unsupervised practice although this individual self-assessment may be subjective and may not reflect the true picture. This observation is comparable with reports from international studies^{5,6}. To improve the quality of postgraduate Orthodontic training in the country both postgraduate medical colleges and training centers should work together to attend to the challenges highlighted in this study.

Conclusion

Overall, this survey found out that Orthodontic residents are exposed to sufficient clinical based training and are capable of taking up unsupervised Orthodontic care after the training programme although they are faced with challenges of poor infrastructure and adequate and regular supply of Orthodontic materials. There is need to improve funding of the Orthodontic training programme as

well as including a well-structured mentorship programme in the training. Furthermore there should be regular feedbacks from trainees and training centres to the postgraduate medical colleges.

Funding/ Grants

Self

Conflict of Interests

Nil

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