

## REVIEW ARTICLE

**Evaluation of Post-part 1 Research Proposal Writing Among Resident Doctors in An Accredited Teaching Hospital in Nigeria**

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**ABSTRACT**

**BACKGROUND:** The residency training program in Nigeria is a postgraduate medical education during which doctors, having graduated from medical school; go through further training under the supervision of qualified trainers in accredited training centers to become specialists.

The senior registrar –a resident doctor who has passed the Part 1 fellowship exams- is expected to complete a dissertation research which is submitted for assessment, to the supervising postgraduate medical college at the exit exams of training.

Despite existence of a defined process for the development, assessment and approval of the synopsis, there is no clear guideline on the timeline for submission of dissertation proposal by the post-part 1 resident doctors for any of the post graduate medical colleges,<sup>2</sup> though it is generally expected that the senior registrar submits their proposal one year upon assumption of the post.

**AIMS:** This study aims to ascertain the time frame to submission of proposal following success at the part 1 examinations by senior registrars at the Federal University Teaching Hospital (FUTH) Owerri and also to assess the determinants with a view to proffering recommendations towards timely submission of proposals.

**METHODOLOGY:** This was a descriptive cross-sectional study carried out at FUTH Owerri, among senior registrars who had passed the part 1 exams of at least one of the Postgraduate Medical Colleges (NPMCN, WACP/WACS)

The study tool was a structured questionnaire adapted from a previous study involving resident doctors. The questionnaires were distributed to all post-part 1 residents of the various departments via the respective departmental chief residents. A total of 70 questionnaires were distributed and 60 were computed and returned.

**STATISTICAL ANALYSIS:** Data were stored electronically and analyzed using the Statistical Product Microsoft Excel version 2019. Data summary was presented as tables and charts. Qualitative data (categorical values) were presented as frequencies and percentages and Continuous variables were presented as mean +/- standard deviation

**RESULTS:** A total of 60 resident doctors participated in the study and majority of them were males, 42(70.0%). The highest number of respondents who participated in this study were from Anesthesia department 12(20%)

Research proposal submission was tagged Early(in time) – if proposal was submitted 0 – 12 months from date of passing part 1 exams; and late- if time of proposal submission was beyond 12months.

As at the time of conducting the survey, half of the participating residents had submitted their proposal. A few of the respondents 12(20.0%) submitted their proposals early/on time

Among the factors contributing to delay in proposal submission, ‘difficulty in deciding on a topic’ was the most common factor among the residents, 51(85%)

**CONCLUSION:** Most of the resident doctors who had submitted their research proposal for assessment, did so more than twelve months post part 1 exams; the major factors contributing to this were difficulty in deciding on a topic and poor knowledge of research methodology and statistical principles. Proper mentorship and guidance by the trainers may help to shorten this duration.

## INTRODUCTION

The residency training program in Nigeria was formally established in 1974, with the primary aim of training specialists who would serve the Nigerian population.<sup>1</sup> It is a postgraduate medical education during which doctors, having graduated from medical school; go through further training under the supervision of qualified trainers in accredited training centers to become specialists.<sup>2,3</sup> Residency training or Postgraduate medical education affords the resident doctor, the opportunity to build on the foundation laid in medical school while concentrating on a specific field from the vast knowledge of medicine.<sup>4</sup>

It is expected that the resident doctor amasses a wealth of knowledge, expertise and skills during the residency training period.<sup>2</sup> The resident doctor is also expected to develop and hone skills that would make him/her efficient in consumption, as well as in conducting medical researches.

The senior registrar –a resident doctor who has passed the Part 1 fellowship exams- is expected to complete a dissertation research which is submitted for assessment, to the supervising postgraduate medical college at the exit exams of training.<sup>2,3</sup> The residency training program in Nigeria is regulated by the postgraduate medical colleges, they include; National Postgraduate Medical College Of Nigeria (NPMCN), West African College of Physicians(WACP) and West African College of Surgeons(WACS). These bodies accredit hospitals where residency training is done, under the tutelage of qualified trainers (usually consultants of five years post-fellowship status). They also organize and conduct the necessary exams for admission into, advancement and exit from the residency program which are – Primaries, Part 1 and Part 2 fellowship exams.

The body also organizes clinical update courses as well as courses on research methodology and manuscript writing.<sup>2,5</sup>The Medical Residency Training Act (MRTA) is the law which regulates the residency training program as well as, resident doctors. The importance of research in postgraduate training cannot be overemphasized. Research emboldens clinical judgment, improves imagination and self-education. It also promotes knowledge acquisition.<sup>4,6</sup>Research develops resident doctors to practice evidence based medicine, using knowledge acquired through researches.<sup>2,7</sup>Research, thus has a pivotal place in the medical world, this may explain why development and submission of a research dissertation is a prerequisite to exiting the residency program by the supervising medical colleges in Nigeria, and indeed many parts of the world.<sup>4</sup> The resident doctors are expected to do this under the supervision and mentorship of their trainers.<sup>2,8</sup>This requires that residents during their residency training need to be involved in scholarly activities which include participation in journal clubs, conferences and researches which would be published, as well as presentation at regional and national scientific meetings.<sup>4</sup>

The first step in the dissertation process is the design and development of a dissertation (research) proposal. A research proposal is a concise and coherent summary of the proposed research.<sup>9</sup>The expected contents of the proposal is outlined by the respective colleges.

Post-part I resident doctors develop their research proposal and submit to the appropriate examining college.

Upon receipt of the proposal, the respective faculties appoint assessors from the pool of trainers/examiners in the faculties to review the proposal and make recommendation such as rejection, resubmission or approval. Approval of the proposal by the assessors gives the candidate the affirmative nod to go ahead with the research work.

Delay in the submission and approval of the proposal has been observed to be a major factor to prolonged residency training or failure to complete the programme with attendant deleterious consequences such as loss of national revenue, stagnation in training, missed opportunities to develop much needed specialists, depression among residents, loss of jobs, brain drain and worsening morbidity and mortality across populations.

Despite existence of a defined process for the development, assessment and approval of the synopsis, there is no clear guideline on the timeline for submission of dissertation proposal by the post-part 1 resident doctors for any of the post graduate medical colleges,<sup>2</sup> though it is generally expected that the senior registrar submits their proposal one year upon assumption of the post.<sup>4</sup>

This study aims to ascertain the time frame to submission of proposal following success at the part 1 examinations by senior registrars at the Federal University Teaching Hospital (FUTH) Owerri and also to assess the determinants with a view to proffering recommendations towards timely submission of proposals.

## **METHODOLOGY**

### **STUDY DESIGN**

This was a descriptive cross-sectional study carried out at FUTH Owerri, among senior registrars who had passed the part 1 exams of at least one of the Postgraduate Medical Colleges (NPMCN, WACP/WACS)

### **ETHICAL CONSIDERATION**

Ethical approval to carry out the study was obtained from the Health Research and Ethics committee (HREC) of FUTH Owerri, an accredited training center located in Owerri, the capital city of Imo state, Southeastern Nigeria.

### **DATA COLLECTION/SAMPLING**

The study tool was a structured questionnaire adapted from a previous study involving resident doctors.<sup>2</sup> It was divided into 4 sections: A-D.

Section A inquired about the sociodemographic details, as well as, basic details of the residency status such as Department, date of success in Part 1 exams etc. Section B inquired about time line of research proposal, duration to submission post Part 1, factors which could contribute to delay in proposal submission amongst others. Section C probed into residents' participation in research activities, and Section D assessed the factors that could shorten the duration to proposal submission.

The questionnaires were distributed to all post-part 1 residents of the various departments via the respective departmental chief residents. A total of 70 questionnaires were distributed and 60 were computed and returned.

## **STATISTICAL ANALYSIS**

Data were stored electronically and analyzed using Microsoft Excel version 2019. Data summary was presented as tables and charts. Qualitative data (categorical values) were presented as frequencies and percentages and Continuous variables were presented as mean +/- standard deviation

## **RESULTS**

A total of 60 resident doctors participated in the study and majority of them were males, 42(70.0%). Figure 1. The highest number of respondents who participated in this study were from Anesthesia department 12(20%), this was closely followed by the departments of Family Medicine and Internal Medicine with 11 (18.3%) participants each while Pediatrics department had the least number of participants 4 (6.6%), Table 1.

The mean age of the respondents was 38±6years with majority of the respondents being within the age bracket of 36-40 years (56%). Majority of the participants were married. As at the time conducting the survey, half of the participating residents had submitted their proposal. A few proportion of the respondents (12(20.0%)) submitted their proposals early/on time.

For the purposes of this research, the time of submission was tagged Early(in time) – if proposal was submitted 0 – 12 months from date of passing part 1 exams; and late- if time of proposal submission was beyond 12months, post part 1 exams..

Concerning the factors contributing to delay in proposal submission, 'difficulty in deciding on a topic' was the most common factor among the residents (85%) as shown in Table 2 below:

Only 14 (23.3%) of the participating residents had experience in manuscript publication, and the highest number of publications by a resident was 12; only one of these published their work prior to commencement of residency. Thirty (50%) of the participating residents had access to relevant journals and 37(61%) admitted to the presence of a regular journal review in their training.

The opinion of the factors which could ensure submission of proposal in record time are as shown in Table 3.

## DISCUSSION

‘Early proposal’ submission was seen amongst only 20% of residents who participated in the survey, this is not encouraging, considering that the National Post Graduate College Of Medicine (NPGMN), one of the supervising bodies for the residency program -expects that the specialist registrar submits their research proposal 12months upon assumption of that post.<sup>4</sup> This late submission of proposal, may suggest a poor attitude to research by residents of FTH Owerri.

Over 85% of the residents thought ‘difficulty in deciding on a topic’ was the major factor contributing to the delay in submission of their research proposal; other significant factors were ‘poor knowledge of research methodology’ and ‘lack of/poor training in statistical principles’. This finding is similar to that of Jeje et al., where about 75% of the residents reported that exposure to research training during the residency period was inadequate.<sup>4</sup>

Less than a quarter of the residents had experience in manuscript publication, this differs from the survey done by Jeje et al., where about 35% of residents were contributors to research publications. The difference could be accounted for by the fact that the latter survey was multicenter, as against the former which was conducted amongst residents in FTH Owerri alone.

Only half of the resident doctors who participated in the survey had access to relevant journals, while 61% had a regular departmental journal review, this is higher than that of residents who participated in the survey done by Jaja et al.

Concerning the factors which could reduce time to submission of proposal post Part 1 exams, proper mentorship and guidance had the highest frequency, in agreement with the work done by Eze et al.,<sup>10</sup>adequate tutoring on research methodology and statistical principles in during postgraduate medical studies is another factor which was top on the list.

## LIMITATIONS

The single-centre design of this study limits the generalizability of the findings to other postgraduate training institutions

## CONCLUSION

Most of the resident doctors who had submitted their proposal for assessment did so more than twelve months post part 1 exams; the major factors contributing to this were difficulty in deciding on a topic and poor knowledge of research methodology and statistical principles. Proper mentorship and guidance by the trainers may help to shorten this duration.

The study outcome will also serve as a guideline to the examining colleges towards setting a time frame for submission of proposals by the post-part 1 resident doctors

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**Table 1. Distribution of participants by departments**

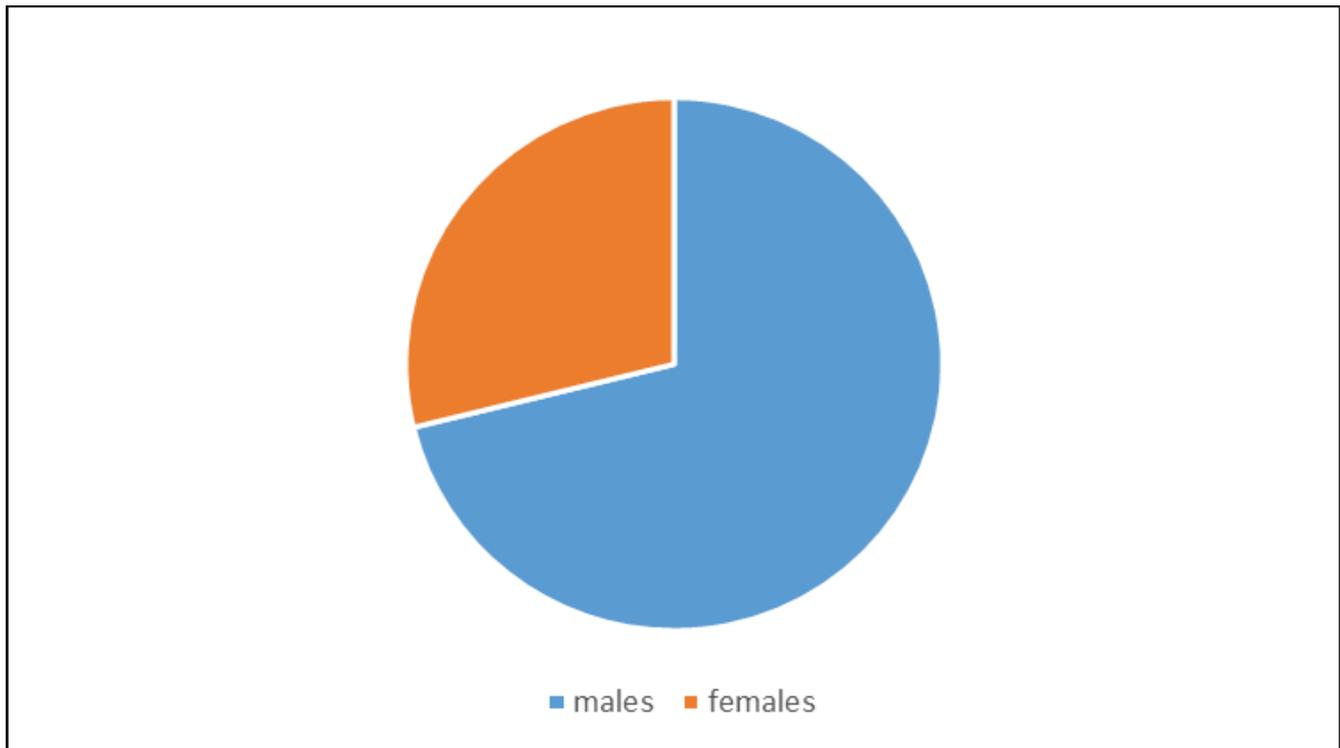
<b>Department</b>	<b>Number (%)</b>
<b>Anaesthesia</b>	<b>12(20)</b>
<b>Family Medicine</b>	<b>11(18)</b>
<b>Internal Medicine</b>	<b>11(18)</b>
<b>O&amp;G</b>	<b>10(16.6)</b>
<b>Surgery</b>	<b>7(11.6)</b>
<b>ENT</b>	<b>4(6.6)</b>
<b>Paediatrics</b>	<b>4(6.6)</b>

**Table2: Factors contributing to delay in research proposal submission**

<b>FACTORS</b>	<b>PERCENTAGE</b>
Difficulty in deciding on a Topic	51(85%)
Lack of access to relevant literature	20(33.3%)
Poor knowledge of research methodology	44(73.3%)
Dearth of tutoring/training in statistical principles	31(51.7%)
Poor mentorship	36(60%)
Tight work schedule	36(60%)
Financial involvement of research topic	16(26.7%)
Family duties Others	6(10.0%) 1(0.016%)

**Table 3: Factors that ensure early submission of research proposal**

Factors	Number (Percentage)
Proper mentorship and guidance	59(98.3)
Adequate tutoring on Research Methodology and Statistical Principles through updates, re-enforcement techniques and journal reviews	53(88.3)
Orientation by training Institution	51(85)
Financial support through sponsorship, grants, etc	39(65)
Putting up strict timeframes for Part 2 training by colleges/training.	30(50)
Other factors	4(6)



**Figure 1: Chart showing gender distribution of respondents**