

Are Residents in University of Port Harcourt Teaching Hospital Ready For The Teaching Role Post-Graduation?

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Abstract

Background/Introduction:

Resident doctors play a crucial role in healthcare, balancing clinical duties with teaching responsibilities. In Nigeria, the West African College of Physicians (WACP) and the National Postgraduate Medical College (NPMC) have integrated teaching into their curricula. However, the effectiveness of these initiatives in preparing residents for teaching roles remains uncertain.

Methods:

A descriptive comparative study was conducted using a self-administered, semi-structured questionnaire targeting resident doctors in paediatrics, internal medicine, obstetrics and gynaecology, and oral and maxillofacial surgery at a teaching hospital in South-South Nigeria. The survey assessed teaching experience, preparedness, and motivation. Data were analysed using SPSS version 24, with statistical significance set at $p < 0.05$.

Results:

Out of 120 respondents, 34.2% were dental surgeons, 11.7% internal physicians, 19.2% obstetricians, and 53% paediatricians. Significant differences were found in teaching preparedness and motivation across specialties. Only 26.7% had formal training in teaching methodologies, and 48.3% expressed high interest in teaching. Senior residents rated their teaching abilities higher than junior residents.

Discussion:

The study highlights gaps in formal teaching training among resident doctors, despite high aspirations to teach. The reliance on informal apprenticeship models and inconsistent implementation of teaching curricula contribute to these gaps. Comparisons with global studies reveal similar challenges in teaching preparedness among resident doctors.

Conclusion:

While many resident doctors in Nigeria are motivated to teach, there is a significant need for structured teaching training programs to enhance their readiness and effectiveness as educators. Addressing these gaps is essential for the sustainability of medical education in Nigeria.

Keywords: Nutritional status, cleft palate, surgical outcome, UPTH

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I. Introduction

Resident doctors serve as essential contributors to healthcare systems, managing clinical care while also bearing the responsibility of teaching medical students and junior colleagues. (1 - 3) In Nigeria, the West African College of Physicians (WACP) and the National Postgraduate Medical College (NPMC) (4, 5) have formally recognised the importance of teaching in residency programmes by introducing teaching-related seminars and tutorials into their curricula. The curriculum of the WACP has a 2-unit credit load and 30 hours of contact time with their teachers, with teaching and learning methods and aids, classroom management, principles of adult learning and case studies in medical teaching. These initiatives are critical as resident doctors are expected to fulfill dual roles: providing patient care while also contributing to medical education. Despite these curriculum efforts, the preparedness of resident doctors to take on teaching roles remains unclear.

Entry requirements for the residency training programme in most disciplines is the MB;BS, BDS and success in primary professional examination, which is an assessment of basic knowledge competency. The resident then begins basic principles of his discipline which is achieved through clinical rotations in general and the sub-specialty disciplines. After this rotation which should be concluded in about 3 years, the resident is adjudged qualified to sit for the Part I professional examination. In the second stage, the resident is expected to demonstrate competency in teaching, research, leadership and other professional abilities. Resident doctors face challenges related to time constraints and balancing clinical responsibilities with educational duties. (6)

Anecdotally, the teaching curriculum aspect of the residency, although present, has not been fully implemented in many residency programmes across Nigeria. There are also the time constraint factors as resident doctors have the limited time to learn the curriculum for their core disciplines and attain competency in these. Compounding this issue is the lack of formal pedagogical training for many resident doctors, whose teaching experiences may be limited to an apprenticeship model devoid of structured methodologies. (7, 12) This raises concerns regarding their competency and motivation to teach effectively. Our study aims to assess the readiness of resident doctors in Nigeria to assume educational roles and to explore the challenges they face, as well as their training needs. The research questions were;

1. How do resident doctors perceive their competence to teach medical students and colleagues in the clinical setting?
2. What is the level of preparedness of resident doctors to teach?
3. How motivated are resident doctors to teach?
4. What are resident doctors' perceived difficulties to teach in clinical settings?

II. Methods

A descriptive comparative study was conducted using a self-administered, pre-tested, semi-structured questionnaire. The survey targeted resident doctors in the fields of paediatrics, internal medicine, obstetrics and gynaecology, and oral and maxillofacial surgery within a teaching hospital in South-South Nigeria. To determine reliability of question items, the questionnaire was pilot tested with two related sample groups on-site: fellows that just graduated in paediatrics postgraduate medical colleges (n = 8) and resident doctors that just graduated from post graduate surgical colleges (n = 6). The selection of respondents was purposeful, and the questionnaire was distributed through an online Google Form. The questionnaire gathered demographic data, teaching experience, perceptions of preparedness, and motivations for teaching. Information sources used in establishing the validity of the questionnaire were (1) research in the fields of teaching theory, learning methods, and medical education, (2) resident doctors teaching activities at the study site, and (3) content review by several groups of experts in medical education and higher education survey research.

Data collection occurred between 1st of May 2023 and 30th of May 2023. Participants completed the questionnaires without any self-identification, except their email addresses. As responses were completely voluntary and confidential, the reasons why some resident doctors chose not to complete the questionnaire are not known. The researchers conducted interviews with questions rated using a Likert scale (1 to 5), assessing resident doctors' perceived teaching competency and motivation.

The data collected were analysed using the Statistical Package for the Social Sciences (SPSS) version 24 for Mac. The confidence interval used to estimate the range for population means was 95%. The statistical analyses included tests of significance to detect a difference on questionnaire responses (χ^2 , Fisher's exact test, analysis of variance), to examine relationships (Pearson's correlation), and to compare groups (t tests, independent samples test). The reliability of identified question sets was evaluated with Cronbach's α to develop a composite index for groups of variables (for example, teaching skill preparedness, teacher characteristics). A p-value of less than 0.05 was considered statistically significant.

III. Results

A total of 120 resident doctors completed the survey, including 41 (34.2%) dental surgeons, 14 (11.7%) internal physicians, 23 (19.2%) obstetricians, and 42 (53%) paediatric resident doctors. The difference in the proportions across these specialties was statistically significant ($\chi^2 = 19$, $p < 0.001$). Among the participants, there were 64 senior resident doctors and 56 junior resident doctors, with an average residency duration of 4.02 years (range 1–8 years). The gender distribution revealed that 70 (58.3%) were female, and 50 (41.7%) were male, with a significant gender difference ($p = 0.02$).

Table 1: Primary study variable for teaching among resident doctors

Study variable	Study question
Teaching experiences	Have you ever taught before starting residency?
	Where did you learn to teach?
	To what extent do you think you are prepared to teach in clinical practice?
Motivation to teach	To what extent do you think these factors motivate you to teach?
	Significantly impact students 'career and education
	Remuneration
	My personal and lifelong ambition for career development
Perception of teacher's quality	Power to influence thoughts and reasoning
	To what degree should a good teacher have these qualities?
	Commitment to work
	Motivate students
	Ability to foster critical thinking

	Ability to receive and give feedback
Perceived difficulties in teaching	To what degree do you think these factors hinder your teaching in your practice?
	Focus on core discipline of clinical practice
	Lack of time during clinical duties
	More concerned about patients' condition
Interest to teach	What is your level of interest to teach?

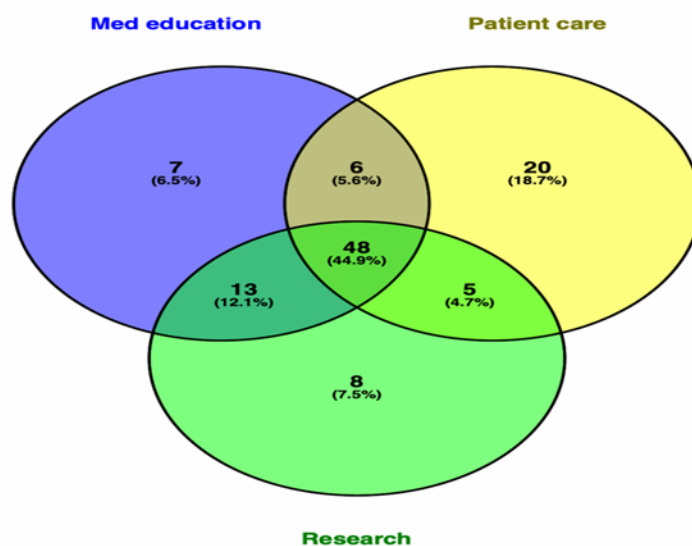


Figure 1: Venn diagram representing resident doctors perceived roles post-graduation from the programme.

Nearly half of the resident doctors (44.9%) expect to be involved in all three roles: medical education, patient care, and research. This suggests that a substantial proportion of resident doctors see themselves as fulfilling a comprehensive, multifaceted role in the future. Twenty resident doctors (18.7%) plan to dedicate themselves solely to clinical practice, indicating that for some, patient care will remain their singular focus. Only 7 resident doctors (6.5%) perceived they will play on teaching roles in the future.

Of the 120 resident doctors, 32 (26.7%) have received formal training in teaching methodologies, whether didactic lectures, workshops, seminars and certifications, but 88 (73.7%) had not received any formal training in teaching methodologies. Fifty respondents (43.3%) have had some teaching experiences (full time non medical teaching, tutorial leadership, and seminar presentations).

Table 2: Comparison of perception of teaching ability between senior and junior resident doctors and whether resident doctors are physicians or surgeons

Self-perception of teaching abilities

Residency cadre	Junior resident	6 (5.0%)	Average	Poor	Total
	Senior resident	8 (6.7%)	47 (39.2%)	11 (9.2%)	64 (53.3%)
Physician/Surgeon	Physician	4 (3.3%)	46 (38.3%)	6 (5.0%)	56 (46.7%)
	Surgeon	10 (8.3%)	48 (40.0%)	6 (5.0%)	64 (53.3%)
Total	14 (11.7%)	94 (78.3%)	12 (10.0%)	120 (100.0%)	

$\chi^2 = 8.122$, p value = 0.017, likelihood ratio = 0.009, for residency cadre and
 $\chi^2 = 2.090$, p value = 0.352, likelihood ratio = 0.339, for medical discipline

There is **no statistically significant difference** between physicians and surgeons regarding their self-assessed ability to teach. A higher proportion of senior resident doctors (6.7%) rated their teaching ability as *Good* compared to junior resident doctors (5.0%). One senior resident (0.8%) perceive their teaching ability as *Poor*, compared to 11 (9.2%) of junior resident doctors and the difference in proportion was significant, p = 0.017.

Level of interest to teach and knowledge of teaching principles

Fifty eight (48.3%) of resident doctors indicated high interest to teach as against 14 (11.7%) who would rather have others take the responsibility and 46 (38.6%) thought teaching was a distraction, $\chi^2 = 8.482$, p

value= 0.037. Thirty-eight (31.7%) resident doctors agreed that they had good knowledge of teaching principles and adult learning and use them for their teaching sessions with students, but 82 (68.3%) were uncertain or did not know about these principles.

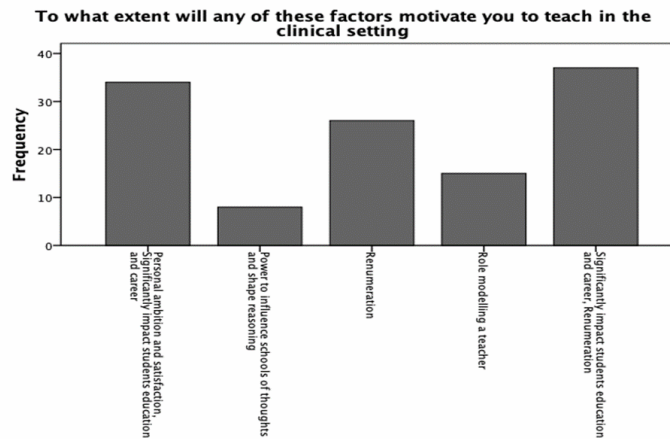


Figure 2: respondents' perception of what would motivate them to teach in the clinical setting.

Note that remuneration alone was a high motivator by itself, and even in those who thought impacting students' education and career was a high motivator, remuneration was also included.

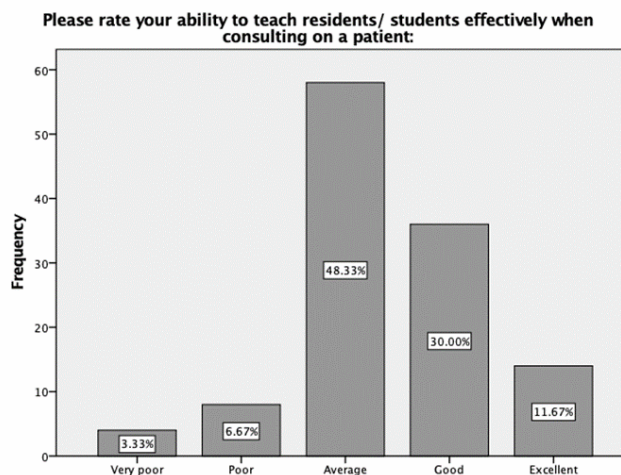


Figure 3: respondents' perception of their ability to teach during patient consultation.

Most respondents perceive their ability to be average or above average.

IV. Discussion

This study highlights the varied readiness of resident doctors in Nigeria to assume teaching roles. While the WACP (4) and NPMC (5) have introduced teaching curricula, the implementation remains inconsistent across programmes, leading to significant gaps in teaching preparedness. The findings reveal that while many resident doctors aspire to become educators, a substantial portion lacks formal training, relying instead on an informal apprenticeship model of teaching. Similar challenges with teaching preparedness have been documented globally, suggesting that while resident doctors often have high aspirations to teach, they frequently lack the structured training needed to excel as educators. In the United States, for instance, surveys conducted among resident doctors before starting teaching workshops or implementing teaching curricula revealed a strong desire to teach but highlighted a lack of systematic pedagogical training. (1, 13 - 16) They also noted that resident doctors often felt unprepared for teaching due to minimal formal instruction in educational methodologies, which mirrors the Nigerian experience where many resident doctors informally acquire teaching skills on the job rather than through structured programmes.

Incorporating teaching curricula, as seen in Nigeria's West African College of Physicians (WACP) and National Postgraduate Medical College (NPMC) programmes, can be beneficial, but inconsistent

implementation hampers its effectiveness. This aligns with findings from a study in India, where Kumar et al. (17) highlighted similar inconsistencies in the adoption of teaching training across postgraduate medical programmes, leading to variable outcomes in teaching competence. The informal apprenticeship model often becomes the default, where resident doctors learn to teach primarily by observing their mentors. However, while apprenticeship provides exposure, it lacks the structured feedback and pedagogical depth required to develop robust teaching skills (10) (Ericsson et al., 1993). There is a growing consensus in the literature that structured teaching training during residency improves teaching skills, which in turn enhances the quality of clinical education (1, 18, 19). Studies suggest that incorporating formal teaching frameworks—such as the "Resident as Teachers" programmes introduced in Canada and Australia—can provide residents with essential skills in lesson planning, effective communication, and learner assessment (8, 9, 14, 20). Structured programmes like these have shown positive impacts on resident doctors' confidence and effectiveness as educators, emphasising the importance of integrating formal teaching preparation into residency training.

The perception of teaching ability among resident doctors during patient consultations reveals most respondents rating their teaching ability as average and a fewer rating it positively high, aligns with findings from other regions where self-assessment of teaching skills among resident doctors is similarly moderate to positive but often lacks critical evaluation. (19, 21 - 23) This self-perception can significantly influence the sustainability of medical education by impacting the quality of knowledge transmission to subsequent generations of medical professionals. South African studies (24 - 26) reported that resident doctors often perceived themselves as moderately competent in teaching roles, especially in clinical settings. However, like their Nigerian counterparts, they acknowledged gaps in formal teaching training. This reliance on self-assessed competence without structured teaching training can lead to inconsistencies in the quality of instruction provided to junior doctors, ultimately affecting the continuity and quality of medical education. In the absence of formal teaching curricula, informal models of teaching—while valuable—often fall short of instilling comprehensive teaching skills and strategies.

European resident doctors display a similar pattern, often perceiving their teaching abilities positively yet recognising that more formal preparation could enhance their effectiveness. Studies from the United Kingdom (27 - 29) found that while most resident doctors rated their teaching ability favorably, many felt inadequately prepared for formal teaching duties, suggesting that positive self-perception does not always correlate with teaching competency. The lack of structured training impacts medical education sustainability as it can lead to variations in teaching quality and a potential mismatch between self-assessment and actual teaching skill. (30 - 32) In the United States, resident doctors' self-perception regarding teaching ability has similarly been found to be generally positive, with many rating their teaching effectiveness highly. However, it is found that without targeted training, resident doctors' confidence in their teaching abilities could result in overestimation, ultimately affecting the depth and effectiveness of clinical teaching. (33 - 35) This "confidence gap" can influence the sustainability of medical education by creating a cycle in which new educators lack comprehensive training, perpetuating a reliance on informal teaching models that may not fully equip students and junior doctors for the complexities of clinical practice.

If educators view their teaching skills as merely adequate, they may not strive for excellence or seek innovative approaches to engage their students. Additionally, this average self-assessment can perpetuate a cycle where teaching is not prioritised, ultimately affecting the quality of medical education. The healthcare field is continuously evolving, and educators must adapt to new pedagogical strategies and technologies to prepare students adequately. Senior resident doctors, by virtue of their longer exposure to training and clinical activities, are likely more confident in their teaching abilities than junior resident doctors. This confidence is reflected in the higher proportion of seniors rating themselves as *Good* and the minimal number who feel *Poor* in their teaching role. Across both cadres, most resident doctors rate their teaching ability as *Average* (78.3%). This suggests that while they recognise some competence, there is a need for targeted interventions to enhance their teaching skills.

While surgeons show a slightly higher proportion of high ratings, this could reflect a difference in clinical teaching dynamics, where surgeons often engage in practical, hands-on training. However, the difference is not large enough to be statistically significant.

In medical education, understanding what drives resident doctors to teach in clinical settings is paramount. (16, 36 - 42) This survey reveals that the primary factors influencing resident doctors' decision to teach include the desire to significantly impact students' education and the importance of financial remuneration. These reflect underlying economic and social disparities that affect the sustainability of the health workforce across countries of varying economic status. In high-income countries, financial incentives are often more structured, and medical professionals are generally better compensated. Here, the primary motivation for resident doctors to teach often leans more towards personal and professional fulfillment, including the chance to shape future medical professionals. For example, studies in the United States and Western Europe have found that while financial remuneration is valued, many resident doctors are motivated by career advancement,

prestige, and the opportunity to contribute to medical education and society (37, 39). These motivations align with a philosophy of lifelong learning, contributing to a self-sustaining model of medical education, where teaching is seen as integral to a physician's professional identity rather than merely an additional task.

In middle-income countries, such as parts of Eastern Europe, Asia, and Latin America, (38, 41) the motivation to teach is often a blend of financial necessity and the desire to impact students. While many resident doctors in these regions report that the desire to educate and mentor junior doctors is a strong driver, they also emphasise financial remuneration as a significant motivating factor. In such economies, the additional income from teaching is often a critical supplement to base salaries, which may not be sufficient on their own. This dual motivation can create a sustainable yet fragile health education model; as long as financial incentives remain adequate, resident doctors are willing to teach, but this model may be vulnerable to economic downturns or reduced funding for medical education.

In low-income countries, including many in sub-Saharan Africa, financial remuneration tends to be an even stronger motivator for resident doctors who choose to teach. In Nigeria, for example, teaching roles are often necessary for resident doctors to secure additional income due to the generally low salaries in clinical roles alone. (43) However, this heavy reliance on financial motivation can pose risks to the sustainability of the health workforce. When financial rewards become the primary incentive, the deeper educational philosophies of skill-building, mentoring, and academic growth may take a secondary role. This was not the initial motivation in the early 1970s – 1990s when the Nigerian economy was very strong and the remuneration of university lecturers were possibly the highest in the country. Remuneration as a motivation may hinder the development of a resilient, highly skilled workforce, as resident doctors may focus more on the economic benefits than on transferring core competencies and educational philosophies to future medical professionals. Furthermore, when teaching becomes primarily financially motivated, there can be a diminished emphasis on quality. Over time, this can erode the standards of medical education, ultimately impacting healthcare quality. In low-resource settings, where there is already a strain on healthcare infrastructure, this can exacerbate issues such as brain drain and workforce shortages, as many resident doctors eventually seek better-paying opportunities abroad.

To cultivate a generation of physician-educators who are passionate about their roles, institutions must create environments that promote teaching as an integral part of a physician's identity. This could include formal training in teaching methodologies, opportunities for mentorship, and fostering a culture that values educational contributions alongside clinical expertise. To effectively engage resident doctors in teaching, medical institutions must recognise and support both the altruistic and practical aspects of teaching. By fostering an environment that values education, provides adequate compensation, and encourages resident doctors to embrace their roles as mentors, we can ensure a richer educational experience for both teachers and students in the clinical setting. (16, 37- 42)

Ultimately, investing in the motivations of resident doctors to teach is an investment in the future of healthcare itself. Offering teaching skills training early in residency and undergraduate medical education could enhance the self-perception of junior resident doctors. Senior resident doctors could mentor junior resident doctors, reinforcing peer learning and promoting skill transfer. Regular assessments and feedback can be used to track improvements in teaching ability over time. While senior resident doctors generally perceive themselves as more capable teachers than junior resident doctors, both cadres could benefit from enhanced training programmes to elevate their teaching abilities. The significant relationship between cadre and perception underscores the importance of targeted interventions at different stages of residency training. Institutions could offer **mentorship and structured development opportunities** to those interested in academic medicine and research, encouraging the pursuit of dual or multifunctional careers.

Time constraints due to clinical responsibilities further exacerbate these challenges, making it difficult for resident doctors to balance patient care and teaching duties (12, 44) Addressing these challenges will require structured teaching workshops focused on pedagogical techniques, effective communication, and assessment strategies. Providing resident doctors with formal training in these areas will not only enhance their readiness to teach but also improve the quality of medical education in Nigeria. Medical institutions must prioritise the development of resident doctors as educators to ensure that future physicians are equipped with both clinical and teaching competencies. This investment is essential to maintaining the quality and sustainability of medical education in Nigeria.

V. Conclusion

In conclusion, while many resident doctors plan to include teaching in their life career, they self-report lack of pedagogical teaching skills, with difficulty in combining their clinical and core discipline skill acquisition and teaching their junior colleagues. Remuneration is a strong motivation to teach for which the sustainability of the teaching workforce may become impracticable when the living wages remain poor as seen in many low- and middle-income countries like Nigeria. Improving and ensuring that the teaching aspects of all

post graduate colleges curriculum are strictly adhered to will also ensure sustainability of the teaching workforce in medical education in Port Harcourt and Nigeria.

Limitation of the study

The study sought out quantitative assessment of readiness to teach by resident doctors in University of Port Harcourt Teaching Hospital, so the result cannot be generalised to other institutions in Nigeria. Authors believe that this can be built upon using qualitative data retrieval processes like focus group discussions, and or 360° feedback among residents, and between residents and their trainers.

Authors contributions

KSY conceived the research and IEY developed on it. KSY and IEY developed the questionnaire survey and KSY distributed them to the residents. The background, methodology and results were done by KSY and IEY, and while KSY wrote the discussion, proof reading of the discussion was done by IEY.

Conflict of interest

There are no conflicting interests in this research.

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