

DEMOGRAPHICS OF COLLABORATORS INVESTIGATING THE NIGERIAN MEDICAL AND DENTAL INTERNS: A MEDICAL INTERNSHIP TRAINING IN NIGERIA (MINTING) STUDY COLLABORATION

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ABSTRACT

Introduction: The internship period is a peculiar time in a doctor's career, and some have described it as a "nuisance year" during which the junior doctor assumes many roles at the same time.

Junior doctors especially house officers are faced with many unique challenges; this is even more pronounced in poor resource settings like Nigeria. This study aimed to unravel and improve understanding of the challenges faced by medical and dental interns in Nigeria.

Methodology: A nine-member House officers Research and Statistics Committee (HRSC) was immediately set up to include three senior colleagues - Senior Registrars and Registrar. To carry out her responsibility efficiently the committee created the House Officers Research Collaboration Network (HRCN), a 103-member team comprising medical and dental interns from across Nigeria under a collaborative - Medical Internship Training in Nigeria (MINTING) study.

Result: Out of a total of the 103 House Officers Research Collaboration Network, 80 of them participated in this survey giving a 78% response rate.

Ten of the intern Collaborators had additional qualification and seven of them had BSc as an initial degree. About 66 % of the Collaborators have never authored any publication. Of the 27 that have published an article; three collaborators are said to have published 15, 13, 16 articles respectively.

Male collaborators were more likely to have published at least one article in the past.

Thirty one of the 80 Collaborators have never been in a research collaborative group prior to this MINTING collaborative.

Conclusion: This commentary is set out to describe in detail Nigerian House Officers initiative in terms of the structure, functions, operational modalities, and to investigate the demographics of the HRCN collaborators which showed that over two third of collaborators have never authored any publication and about a third of them have never been involved in collaborative research. We also believe the findings will serve as policy guide and benchmark in training the critical medical health force.

Keywords: House officer, Housemanship, Intern, Junior doctors, Nigerian, Research, Trainee

INTRODUCTION

Doctors in the early stage of their medical career termed junior doctors or early career doctors (ECDs) are essentially medical practitioners who are resident doctors, medical officers below the rank of Principal Medical/ Dental Officers and Medical/ Dental interns.¹ House officers in Nigeria are young doctors, the most junior doctor of the team, supposedly fresh out of medical school, who have completed their medical training and have received a temporary license from the medical and dental council of Nigeria with which they proceed to embarking on a one-year uninterrupted practical training program called Internship (Housemanship) under the supervision of a senior doctor referred to as a consultant, in any of the centers designated by the medical licensing council and are thereafter given a permanent practicing license upon completion of the training.

This is the formative stage in the career progression of a doctor and as such requires deliberate mentorship, networking, and guidance especially in research and clinical duties.

This doctor is faced head on with an abrupt change in relationship with fellow colleagues, other health workers and patients.²

He is also at the same time undergoing training and research to practice as a professional in an increasingly competitive society- https://youtu.be/SaaQmMHY_qI.³

Hence the importance of having a collaborative research network amongst young doctors cannot be overemphasized, as researchers are beginning to explore the many benefits that come with such collaborations.

Earlier studies have shown a strong association between collaboration and research productivity.⁴ Collaboration in research is said to have taken place

when two or more investigators work together on a project and contribute resources and effort, both intellectual and physical.⁴

‘A house officer, therefore, is a doctor who is the most junior member of the medical staff of a hospital, usually resident in the hospital, United States and Canadian equivalent; Intern’.⁵

House Officers are in rigorous and intense mandatory one year training programme with accompanied work-related challenges, which rests on the tetrapod of clinical service delivery, training, research, and health services management.^{1,6}

In high income countries, various issues facing this category of medical doctors and dentists are widely researched giving useful input for policy formulation. This changes the pattern of interaction or relationship with various stakeholders that interphase with them. Furthermore, the more researched themes especially psychosocial issues among this sub-occupational group in Nigeria are subjects of majorly single institutional or regional studies.

Report from an institution-wide graduate medical education research collaborative amongst house officers in Nebraska showed a significant benefit for this type of collaborative resource to support and stimulate successful scholarly activity amongst house officers and this was evidenced by the number of projects they received in their first year of operation.⁷ However, in Nigeria today, there is no research collaborative network that exists amongst house officers nationwide. The closest to it is the early career doctors’ research network amongst Nigerian doctors in residency training.⁸

In view of this, a group of House officers at University College Hospital, Ibadan decided to create the first

national house officers' research collaborative network which was initially a Sixteen-man team but now has a membership strength of over a hundred house officers that cut across various houseman ship training centres in Nigeria.

This study will look at the demographics of this House officers research collaborative network while the MINTING Study in general is aimed at bridging the gap of the perceived dearth of data as it affects medical and dental interns in Nigeria. The House Officers Research Statistics Committee (HRSC) was created (Figure: 1) to drive this through the **Medical Internship Training in Nigeria (MINTING)** Study collaborative. This committee was commissioned by 11.00 Am on Friday, the 11th of August 2023 via a hybrid meeting; zoom and physical at the board room of Annals of Ibadan Postgraduate Medicine with the responsibility of exploring and bringing forth the available data on internship, with emphasis on demographic, psychosocial and workplace related issues among house officers in Nigeria who form a sizeable proportion of doctors providing medical care to over 200 million Nigerians. It started initially as a center-based initiative and has grown to become a multicenter research collaborative project having the requisite resources and personnel to achieve its aims and objectives.

Structure of HRSC and HRCN

The HRSC in a bid to effectively discharge her duties and bequeath a legacy of House officers' -driven Research Collaborative, initiated the House Officers Research Collaboration Network (HRCN). This initiative draws inspiration from well entrenched trainee-driven surgical research collaboration in the United Kingdom, West Midlands Research Collaboratives (WMRC), and Nigerian Association of Resident Doctors Research Collaborative Network. The duties of this national, and multi-centre trainee driven research collaboration, is to investigate the different thematic highlighted below.^{8,9,10}

The HRSC is a nine-member committee led by administrative directors who are graduates of Obafemi Awolowo University and currently undergoing internship (rotating through Paediatrics and Surgery respectively) at University College Hospital, Ibadan, with the overall responsibility of coordinating this research initiative with support from members of the editorial board of Annals of Ibadan Postgraduate Medicine. The HRSC sent out a "call for collaborators" to house officers across the nation through the WhatsApp platforms of House Officers' representatives of different institutions in Nigeria. Following a rigorous review of applications, 103

doctors at various stages of their postings were recruited into the HRCN.

The HRSC and HRCN work hand in hand to ensure smooth delivery of the set aims and objectives of the research, with the HRCN reporting to HRSC. Collaborators subscribed to a set of rules and regulations called *Collaboration/ Authorship/ Draftsmanship Rules for House Officers' Research and Statistics Committee (HRSC), and House Officers Research Collaboration Network (HRCN)* developed at the inception of the committee. The document explicitly highlighted the principles behind the research collaboration, rules on authorship which was based on the International Committee of Medical Journal Editors (ICMJE) universally acknowledged criteria for authorship.¹¹ The document highlighted the abhorrence of plagiarism, fabrication and falsification in the collaboration's documentary activities while also providing relevant guiding resources.¹² All collaborators are required to sign the document before they can be involved in the collaborative studies.

AIMS AND OBJECTIVES

The goal of the HRCN is to get as many house officers as possible to be exposed to the rudiments of research, authorship and publishing of her high impact findings which will contribute to the body of knowledge within a one-year time frame. This demographic study is proposed to be her maiden publication.

To achieve this, the HRCN was further stratified into twenty-seven research subgroups with each group consisting of a minimum of three young doctors who are saddled with the responsibility of working on one research project. The HRCN is therefore expecting to publish at least 27 research articles, to be carried out within the time frame by House officers already recruited nationwide into the collaborative. (Table: 1). This early phase of the house officer's research collaborative network will leverage on her multicenter membership (Table: 2), to take on research projects related to Medical Internship Training in Nigeria (MINTING STUDY).

The aim of the project is to research into key issues affecting Medical and Dental interns in Nigeria; to develop a database of these key issues; and to initiate the Nigerian House Officers' database.

Specific Objectives of HRSC and HRCN

1. Demographic issues

- a. Migration
- b. Distribution, and geospatial spread of house men across the country.

2. Workplace issues

- a. Job satisfaction/ dissatisfaction
- b. Training and skills acquisition
- c. Job description and specification.

3. Psychosocial issues ⁹

- a. Burnout issues
- b. Occupational hazard.

4. Medical education

- a. Preference for specialty training
- b. Cost of medical education.

5. Attitude to Research

- a. Publication practice by interns

- b. Research wrongdoings.

6. Historical perspective of medical internship in Nigeria

Specific, and Expected Outputs of HRSC and HRCN

- 1. At least twenty-five (25) research articles published in recognized and peer review journals.
- 2. At least one (1) monograph.
- 3. At least two (2) technical reports.
- 4. At least two (2) presentations during the ARD UCH December 2023 Annual General Meeting and Scientific conference.

Table: 1. Timeline of the HRSC and HRCN targets.

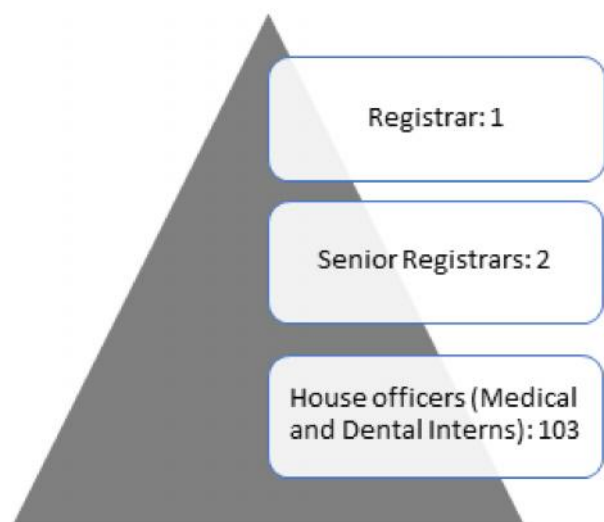
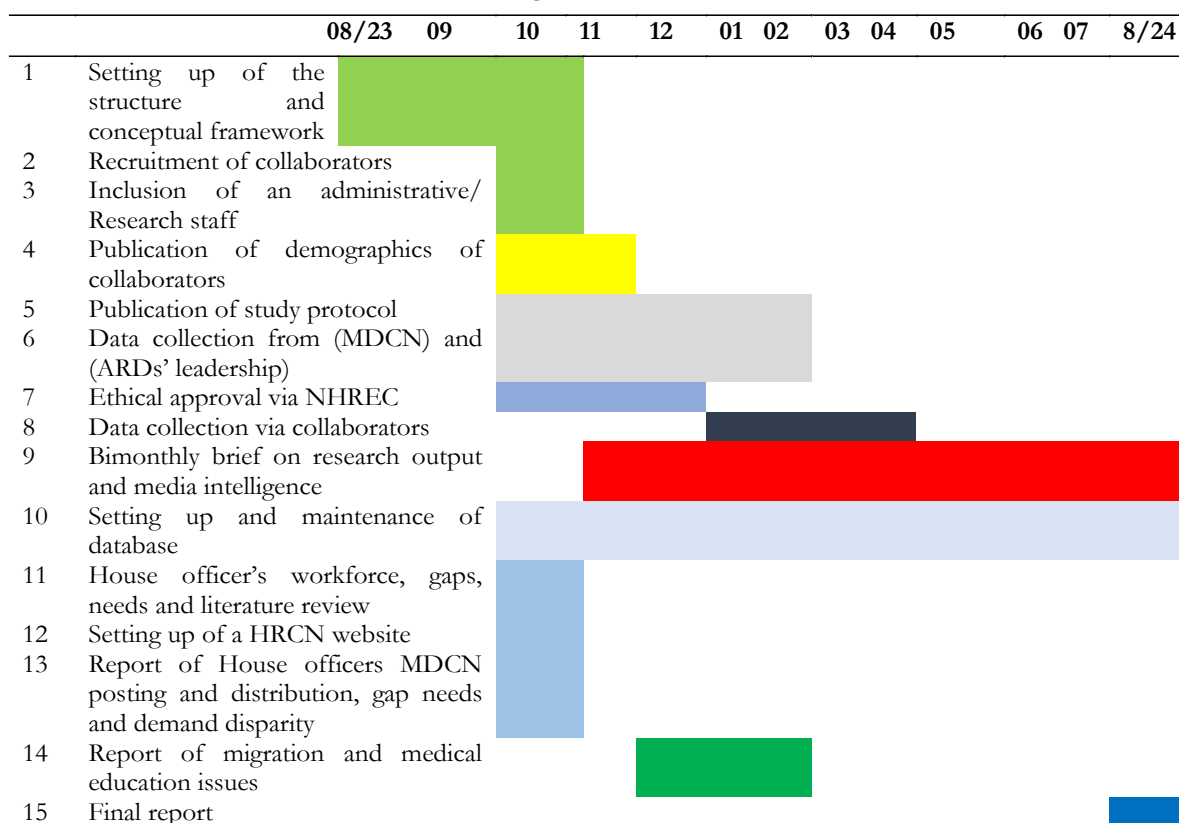


Figure: 1: HRSC and HRCN

- 5. Creation of an operational website which is under construction.
- 6. Dissemination of Research findings across all medical trainee platforms while highlighting our policy thrust with info graphics and media intelligence.

METHODOLOGY AND STRATEGIES

Online social media tools were used to allow for effective communication among HRSC and HRCN at different institutions. Routine communication is being done using emails, WhatsApp application, and calls while structured meetings are held regularly through free conferencing apps such as zoom or google meet platforms. The meetings are usually monthly with the date of meeting chosen among the

HRSC, sometimes using the WhatsApp poll application if there are no consensus.

Drafting of manuscripts is crowd-drafted and uploaded using google document app with collaborators making corrections or additions using phone devices or computers. A single protocol for institutional ethical approval by the National Human Research Ethical Committee (NHREC) was initiated, and the research will be guided by the ethical principles as highlighted in the Helsinki's declaration. A protocol paper will be drafted for publication in a peer reviewed journal to further elucidate on this **Medical Internship Training in Nigeria (MINTING)** Study Collaborative and the uniqueness of this trainee led research initiative. The exact data collection methods would include

retrieval of administrative data from the different internship centres via the House Officer's representative, the local Resident Doctors Association Executives and, individually from medical interns all over Nigeria using structured self-administered questionnaires administered both physically and via google forms and focus group discussions (FGD) in selected training institutions. The key timelines have been identified and would serve as a guide to this initiative. The data and infographics will be used to generate relevant policy briefs to our trainers – Consultants, Chief Executive Officers of institutions, Federal Ministry of Health and Medical and Dental Council of Nigeria.

Table: 2: Distribution of collaborators across the country as shown in the google document and table below. https://docs.google.com/spreadsheets/d/166gPviYWdIAN7iY_-qtRNx8pL9rP5TGj683mRS7jacE/edit?usp=sharing

S/N	Breakdown of Centres	Numbers of Collaborators
1	University College Hospital, Ibadan	24
2	Lagos University Teaching Hospital, Ikeja	17
3	Federal Medical Centre, Abeokuta	2
4	University of Benin Teaching Hospital, Benin	3
5	Olabisi Onabanjo University Teaching Hospital, Sagamu	2
6	Federal Medical Centre, Jabi, Abuja	2
7	Federal Teaching Hospital, Ido-Ekiti	2
8	University of Port-Harcourt Teaching Hospital, Port Harcourt	2
9	Federal Teaching Hospital, Gombe	1
10	Federal Medical Centre, Umuahia	3
11	Ahmadu Bello University Teaching Hospital, Zaria	2
12	Obafemi Awolowo University Teaching Hospital, Ile-Ife	5
13	Jos University Teaching Hospital, Jos	1
14	Bowen University Teaching Hospital, Ogbomoso	1
15	University of Uyo Teaching Hospital, Uyo	2
16	Federal Medical Centre, Jalingo	4
17	Federal Medical Centre, Makurdi	1
18	University of Calabar Teaching Hospital, Calabar	2
19	University of Nigeria Teaching Hospital, Enugu	3
20	Delta State University Teaching Hospital, Oghara	1
21	Lagos State University Teaching Hospital, Ikeja	1
22	Federal Medical Centre, Keffi	6
23	Federal Medical Centre, Owo	1
24	General Hospital Ijaiye, Abeokuta	3
25	Ogun State Hospital Management Board, Abeokuta	2
26	National Obstetrics and Fistula Centre, Abakilki	1
27	Oyo State Hospital Management Board, Ibadan	2
28	Central Hospital, Benin	1
29	Garki General Hospital Abuja	1
30	National Hospital Abuja	1
31	State Hospital Ijebu-Ode	1
32	University of Ilorin Teaching Hospital, Ilorin	1

Three advisors who are Fellows of either the West African College of Surgeons/Physicians or National Postgraduate Medical College of Nigeria with sound research background were sought and appointed to be advisors to this network.

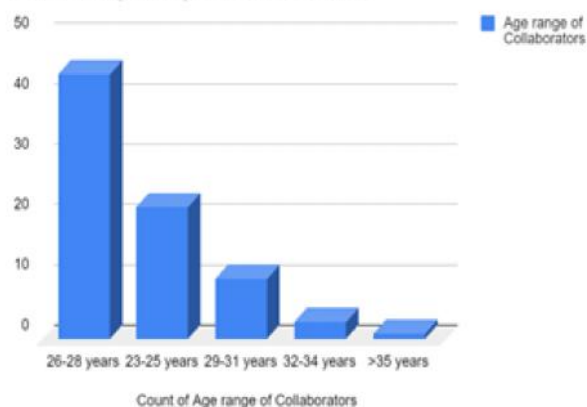
An ad-hoc staff was utilized to carry out operational activities of the research network.

RESULTS

Demographics of **80** Intern Collaborators.

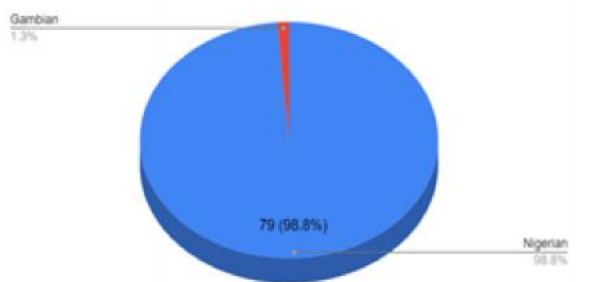
Out of a total of the 103 HRCN, 80 participated in this study giving a 78 % response rate.

Count of Age range of Collaborators

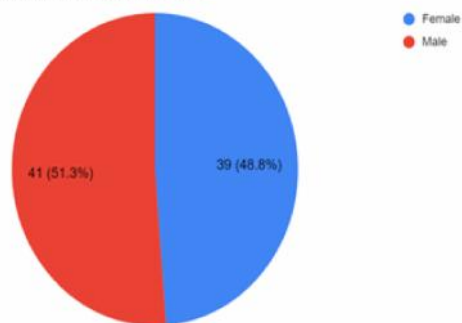


Majority (55 %) of the collaborators are in the upper quartile of the third decade.

Count of Nationality

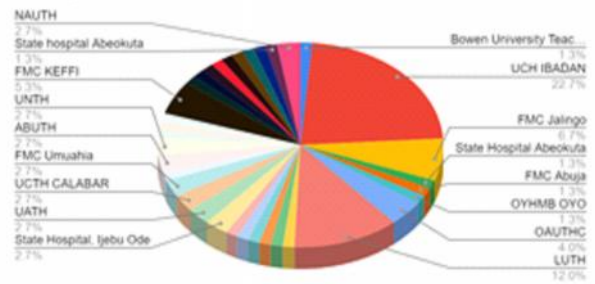


Count of Gender of Collaborators



There is no observed clinical difference in gender ratio amongst collaborators.

Count of Centers where collaborators are currently doing their housejob



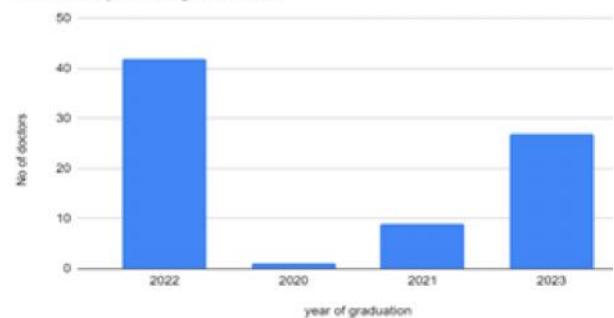
Eighteen (22.7 %) of the Collaborators are currently having their internship at UCH, Ibadan, and LUTH, Lagos 10 (12.0%).

Eight medical interns are foreign medical graduands.

Seventy nine out of the 80 respondents are Nigerian Medical interns.

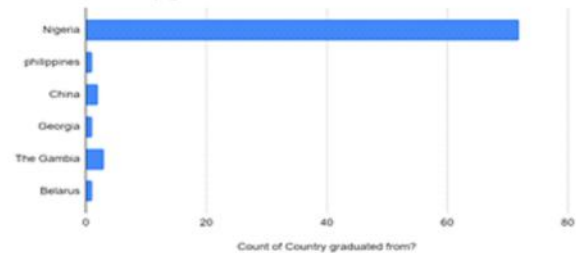
Of the 79 Nigerian interns; over a third of them are from Imo (13.8%), Osun (12.5%) and Enugu (11.3%) States, constituting a larger proportion of Nigerian collaborators.

Count of year of graduation



Majority (53.2%) of the collaborators are 2022 medical graduands while one graduated in 2020.

Count of Country graduated from?



Over 85 % of the collaborators graduated from a Nigerian Medical School, of which five were from private medical schools, 22 (27.5 %) graduated from University College Hospital and LAUTECH Ogbomoso both in Oyo State while 17 (21.3%) graduated from University of Nigeria, Nsukka and Enugu State University of Science and Technology both in Enugu State.

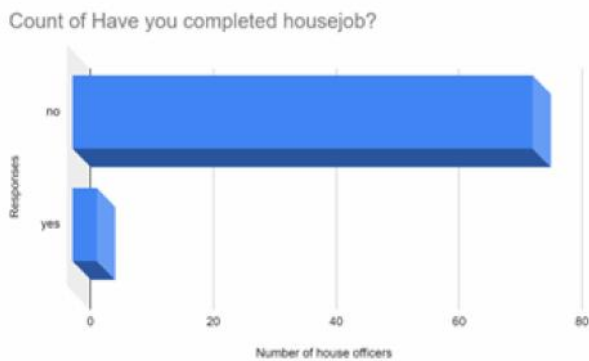
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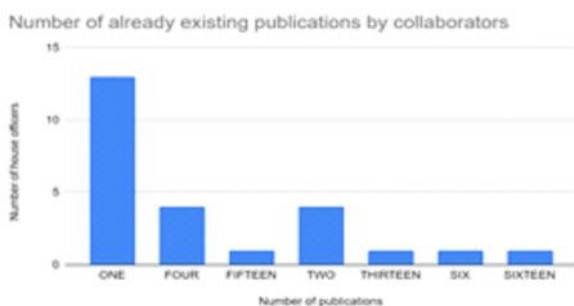
Ten of the intern Collaborators had additional qualification and seven of them had BSc as an initial degree.



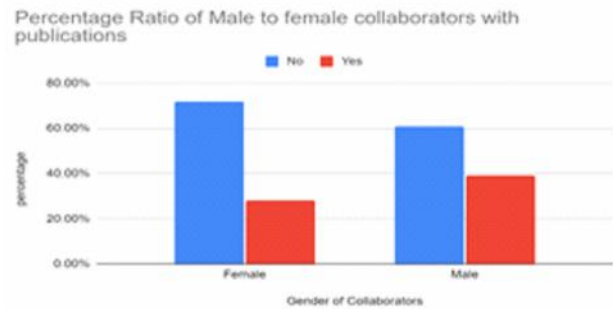
Over a-fourth of our collaborators either just completed internship or are in the twelfth month of rotation while the remainder are at different stages of their posting. Most, 20 (25 %) are currently rotating through Paediatrics, and four of the collaborators are Dental House Officers.



Out of the four that have completed houseman ship; three did their internship at UCH, Ibadan while one was at University of Uyo Teaching Hospital, Uyo.



About 66% of the Collaborators have never authored any publication. Of the 27 that have published an article; Majority of them have authored 1 publication, and three collaborators are said to have published 15, 13, 16 articles respectively.



Male collaborators where more likely to have published at least one article in the past.



Thirty one of the 80 Collaborators have never been in a research collaborative group prior to this MINTING collaborative

CHALLENGES

1. The erratic and unreliable internet access in some parts of the country is a serious constraint to leveraging on information technology that would help to galvanize in making the HRSC and HRCN function effectively and efficiently.
2. We also envisage less than optimal participation from interns as majority are busy with clinical duties especially with the thin work force in most training centre.
3. Maintaining collaboration is not an easy task as several measures and strategies must be taken to ensure the overall goal of the team is achieved despite the challenges of research collaboration.¹⁴

CONCLUSION

From the demographics of Collaborators, majority of them have never authored an article and about a third of them have never been involved in collaborative research. It is our hope and believe that this collaboration would foster scholastic comradeship, build systems, strengthen research skills among intern

trainees in Nigeria while generating the necessary data to bridge the current dearth of information regarding medical interns and houseman ship training in Nigeria and set an agenda for this collaborative in the year following. We also believe the findings will serve as policy guide and benchmark in training the critical medical health force -House Surgeons / Physicians alike.

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