

Practice of ophthalmology and work satisfaction: An overview of Nigerian ophthalmologists

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ABSTRACT

Background: With multiple medical specialities and subspecialties, the choice of a lifelong speciality can be a daunting task. Most medical students commence undergraduate training without complete knowledge of all the medical specialities available. Considering that various factors affect the choice of a speciality, practice location and productivity, this study sought to assess ophthalmologists' job satisfaction, remuneration and scope of practice. **Methods:** A semi-structured, pre-tested self-administered questionnaire was distributed to 140 consenting Ophthalmologists and ophthalmic Residents that attended the 2016 Annual Scientific Conference of Ophthalmological Society of Nigeria. Information obtained included participants' socio-demographic data, practice environment, remuneration, job satisfaction, and areas participants felt required a change in their ophthalmic practice. Responses were analysed using IBM Statistical Package for the Social Sciences 16.0 (IBM Corp., Armonk, NY, USA). **Results:** One hundred and five (75%) of the 140 questionnaires were filled and returned. The median age of participants was 35 years (range: 21-70 years) and 54.3% were females. Most Nigerian ophthalmologists practice in urban area. Consultants do more research spending an average of 6.44 hours per week on research. Most respondents (70, 66.7%) felt fairly compensated for their work with government-employed earning significantly less (₦4.2million/annum) than their private sector counterparts (₦6.3 million/annum). Most respondents (99[94.3%]) reported high levels of job satisfaction and 69(65.7%) were fairly productive. **Conclusion:** Despite the discrepancies in remuneration in private versus public sector ophthalmologists and trainees, most survey participants feel satisfied with their current level of remuneration and productivity.

Keywords: Practice, Remuneration, Work satisfaction, Nigeria, Ophthalmologists, Ophthalmology residents

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Introduction

With over 120 medical specialities and subspecialties, the choice of a lifelong speciality can be a daunting task. Of all the specialities in medicine, ophthalmology is one of the most selective specializations.¹

Most medical students commence undergraduate training without complete knowledge of all the medical specialities available and the choices that lie ahead of them regarding sub-specialization.²

Ophthalmologists are typically drawn to ophthalmic speciality because of the ability to combine surgical and medical practices, as well as maintaining a positive family life-style.³ Income is another determinant in the choice of a subspecialty.

In developed countries, the current compensation system preferentially rewards volume of consultations and procedures. This leads to working

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harder, longer and preferably in private practice with resultant higher income.^{4,5}

In 2016, Medscape reported that 71% of ophthalmologists spent 30-45 hours per week seeing patients. Also, a government analysis revealed that middle-aged physicians ages 46 and 55 work more hours than both their younger and older peers. A further breakdown of statistics showed that doctors ages 36-45 years work fewer hours, this was attributed to more women in those age groups, many of whom are working part-time.⁵

Whatever the reason for choosing ophthalmology, Dr. Fish had this advice: "Since ophthalmology consumes a great deal of our lives, I recommend choosing a path that coincides with your beliefs, philosophy, personality and lifestyle." The result should be practising the art and science of ophthalmology to the best of one's ability.⁶

Nigeria, the most populous country in Africa has an extrapolated population of 190 million people with approximately 510 ophthalmologists but those on the membership of the Ophthalmology Society of Nigeria are 300.⁷⁻⁹ This gives a ratio of 373,000 people to 1 ophthalmologist.^{7,10} Studies have found that in Sub-Saharan African countries, most ophthalmologists practice in tertiary/academic institutions. This leaves the teeming underserved rural populace with problems of access to eye care when required.^{11,12} In a typical tertiary academic centre, an ophthalmologist might have to run 2 or 3 clinic days per week, have a day for surgery and have some time dedicated to research, administrative duties, teaching or community outreach.^{3,13} This is to accommodate the training of medical students and resident doctors, the high patient clientele who present with complications of disease or unusual presentation.¹⁴

Considering that various factors affect the choice of a speciality, practice location and productivity; the authors assessed how satisfied ophthalmologists are with their work environment, remuneration and the extent these impact their overall job satisfaction.

Methods

This was a prospective study among ophthalmologists in Nigeria; to better understand their work satisfaction and scope of practice.

Following the review of available literature on the area of interest, a questionnaire was prepared. Pre-testing was performed prior to initiating the study by administering the questionnaire to a sample of ophthalmologists who would not be attending the conference to assess comprehension and feasibility. Areas highlighted by the results of the pre-test by volunteers were taken into cognizance and adjusted on the questionnaire.

Pretested self-administered questionnaires were distributed and collected during the 41st Annual Congress and Scientific Conference of the Ophthalmological Society of Nigeria, which was held in Port Harcourt, Rivers State, Nigeria, from 24th - 27th August 2016. The self-administered, anonymous questionnaires were distributed to 140 consenting ophthalmologists and ophthalmology residents with an assurance of confidentiality and they were informed that the results of this study would only be used for research purposes.

In all, 21 questions were included in the study questionnaire. The questions gathered information on the study participants' demographic and professional background, remuneration, practice, research, productivity, rewarding aspect of work, job satisfaction and areas requiring a change in the practice of ophthalmology. Data were analyzed with IBM Statistical Package for the Social Sciences 16.0 (IBM Corp., Armonk, NY USA). Descriptive statistics were presented as frequencies, percentages and proportions. The Chi-square test was used to test significant differences. A P-value of less than 0.05 was considered statistically significant.

Results

The survey questionnaires were distributed to 140 OSN attendees, of which 105 respondents completed the survey accounting for a 75% response rate.

Demographic and practice characteristics of participants

Most of the respondents were females 57(54.3%), practice in the urban area 93(88.6%), ophthalmologists in training 64(61%) and within the age range of 31-40 years 70(66.7%) as shown in Table 1.



Table 1: Biodata of respondents

Variable	Frequency	Percent
Sex		
Female	57	54.3
Male	48	45.7
Age		
21-30	5	4.8
31-40	70	66.7
41-50	21	20.0
51-60	7	6.7
61-70	2	1.9
>70	5	4.8
Designation		
Consultant Ophthalmologist	42	39.0
Ophthalmologist in training	64	61.0
Practice location		
Rural	1	1.0
Semi-urban	11	10.5
Urban	93	88.6
Employment status		
Government-General hospital	4	3.8
Government-Tertiary hospital	87	82.9
Others [§]	14	13.3
Type of employment		
Full time	77	73.3
Part time	28	26.7

[§] Mission, Private hospital, Self-employed, Public Private Partnership

Based on geopolitical zone distribution, 26(24.8%) practice in the South West, 22(21.0%) in South South, 7(6.7%) in South East, 24(22.9%) in North Central, 19(18.0%) in North West and 7(6.7%) in North East. Most respondents were in early phase of practice with 69(66%) practicing for 1-10years, 31(29%) for 11-20 years and 5(5%) for >20 years.

Remuneration

Figure 1 shows the gender distribution of compensation. Most respondents irrespective of gender felt fairly compensated 70(66.7%) for their work with no statistically significant difference between males and females (Odds ratio=0.84; 95%CI: $p=0.678$).



Figure 1: Gender distribution of compensation

On average, male survey respondents earned ₦4.4million per annum with their female counterparts earning ₦4.5million annually. This difference was not statistically significant. ($p=0.784$) This year, the highest earning was reported in the South-South Geopolitical zone (₦9.6 million per annum), while the lowest was in the Southwest (₦1.2 million per annum). Though not statistically significant ($p= 0.696$), career length had an impact on pay, doctors with mid-career length had the highest earnings (Figure 2).



Figure 2: Remuneration by duration of practice



Respondents in Government employment significantly earned less (₦4.2million/annum) than their counterparts in the private sector and in public-private partnership (₦6.3 million/annum, $p=0.003$). Even though most respondents felt fairly compensated, half of them (51%) did not receive any salary increase in the past year.

Time spent at work per week ranged from 35 hours in the South East geopolitical zone, 39 hours in the South-South, 40 hours in the North East, 42 hours in the North Central, 44 hours in the South West and 45 hours in the North West ($p=0.847$). Consultants spent an average of 6.5 hours per week on research activities compared to residents who spent an average of 4.5 hours per week ($p=0.095$).

Ophthalmology practice scope and satisfaction

Ophthalmologists in-training were in the clinic 3 days/week, spent more time with patients in the clinic on an average 20 minutes/patient, performed surgeries for 2 days/week while consultants were in the clinic 2 days/week, spent 19 minutes/patient, performed surgery once a week ($p=0.124$).

With regards to work productivity, 69(65.7%) reported that their productivity was fair, good in 27(25.7%) and poor in 9(8.6%). Ninety-nine (94.3%) respondents reported high levels of job satisfaction. Rewarding aspects of ophthalmic practice in Nigeria among participants are listed in Table 2.

Table 2: Rewarding aspects of ophthalmologist practice

Most rewarding aspect as an ophthalmologist	Frequency n=105*	Percent
Gratitude/ Relationship with patients	61	58.1
Being very good at what I do/finding answers; diagnosis	57	54.3
Knowing that I am making the world a better place	50	47.7
Being proud to be a doctor	14	13.3
Making good money at a job I like	10	9.5

N.B Some respondents had multiple responses (maximum of 2 responses allowed).

Most respondents - 101(96.1%) will choose ophthalmology again for the reasons stated in Table 3. Only 4 participants will not choose ophthalmology speciality if given another choice in life due to conflict

with other eye care workers, lack of equipment, availability of other less stressful specialities and high cost of eye care when compared with the outcomes.

Table 3: Reasons for choosing ophthalmology again

Reasons for remaking choice of ophthalmology	Frequency n=101	Percent
Personal interest/fulfilling/passion	60	59.41
Rewarding and impactful	22	21.78
Window of the body	6	5.94
Combine career and home keeping	6	5.94
Making the world a better place	5	4.95
Unique/ evolving	2	1.98

Respondents recommended the availability of functional equipment, local production of ocular medications/preparations and structured residency

training programs among others as ways to improve ophthalmic care in Table 4.



Table 2: Respondents' recommendations

Areas that require a change	Frequency n=105	Per cent
Residency training:	70	73.2
Decrease training duration		
Subspecialization		
Structured training		
Exchange programme		
Mentoring		
Equipment:	45	42.9
Availability		
Subsidized		
Local manufacture		
Others:	20	19.0
Group practice		
Public Private Partnership		
Collaborate with other specialties		
Community based practice		
Patient centered care		
Build interest in medical students		

Discussion

The work environment impacts productivity. Ophthalmologists in Nigeria practice both in public and private settings. Personal as well as professional goals, values, and interests also impact job satisfaction.¹⁴ In contrast to the general belief that doctors are increasingly dissatisfied with their job, the present study showed that most ophthalmologists and residents expressed satisfaction with their practice. This is similar to the observations in a longitudinal study among Norwegian doctors which showed a high level of job satisfaction.¹³

Unlike in the USA where ophthalmologists had a 5% increase in salary on average in 2016, most Nigerian ophthalmologists did not report a salary increase for a year.¹¹ Most ophthalmologists worked in the academic setting which is mostly government-owned and their salary was less than those in private practice. There was a similar report in the USA where academic physicians earned less than their private practice counterparts.³

Comparing the duration of practice to salary earned, respondents practising for 10-20 years earned more than those practising for less than 10 years or more

than 20 years in this survey. The researchers opined that this may be related to the ability to take on and practicalize new techniques for the elderly and better skills than those in early careers. It could also be that those in late careers concentrate more on imparting knowledge to younger ophthalmologists. This is similar to what was found in the US in 2016 where beginning ophthalmologists with less than five years' experience had a median pay of \$183,000 per year, those with one to two decades of relevant experience reported an average salary of approximately \$252,000, while the respondents who have worked for more than 20 years reported lower incomes of \$225,000.¹⁵ On the contrary, in 2017, the research said the pay of US ophthalmologists based on experience showed a positive trend with those in late career reporting the highest earning.¹⁵

This study found that most of the respondents spent little time on research, this is similar to the findings of Mahmoud *et al* where respondents generally indicated a poor enthusiasm for any type or class of research and the few research that were being conducted were largely simple low-budget retrospective studies,



cross-sectional and educational studies.¹⁰ Research could be demystified and the culture of research inculcated into the training of ophthalmology residents. Consultants while carrying out their research should give tasks to residents such as data collection, analysis and writing up the manuscript. Junior residents could be guided to identify interesting patient presentations, write case reports and present the results of such research during conferences.^{16,17}

The most rewarding aspects of ophthalmologist practice related to gratitude from patients, finding solutions to patient problems and making the world a better place. There is a possibility that patient satisfaction has an impact on ophthalmologists' productivity, work satisfaction and dealing with patients' concerns. This report is similar to findings in Harvard medical school teaching hospital where satisfied physicians were able to better respond to patients' concerns.¹⁸ In Medscape 2016, it was also found that 42% of ophthalmologists believed that a relationship with patients was a major source of satisfaction.⁵

Both residents and consultants spend approximately 19 -20 minutes seeing each patient which is similar to findings among ophthalmologists in the US that spend an average of 17 minutes with patients.⁵

Heraclitus, the pre-Socratic Greek philosopher's quote states that: "Change is the only constant thing in life".¹⁹ The world is changing so also the practice of ophthalmology. Ranking top on the list of areas requiring a change in ophthalmology was expensive ophthalmic equipment. Most ophthalmologists felt there is a need to subsidize ophthalmic equipment. Considering the high cost of ophthalmic equipment and limited work spaces in public hospitals, group practice will appear a good way forward. As a group, a machine which costs \$80,000 can be shared by members so that it will be at a reduced cost to the individual ophthalmologists, state-of-the-art equipment could be made available. Ophthalmologists with different specializations working together will ensure that patients get the best care at a go and reduce the need for referrals with the attendant cost.^{20,21} This will be in keeping with the World Health Organization Universal eye health action plan to scale up eye care services with comprehensive eye care (one-stop shop).²⁰ Group practice summarily, is not so much about making quick money with minimal investment and having

freer time but *is more about achieving a broader vision and being able to do better quality work with cutting-edge technology.* The patients also benefit as all subspecialties and cross-opinions are available at a go.^{22,23} The infrastructural deficit that Nigeria is facing due to neglect and paucity of investments affects the whole economy including the availability of ophthalmic equipment. Public-private partnership (PPP) is another option to ameliorate the impact of equipment costs and deficits on the populace.²⁴ PPP is defined as the "blending of resources and assets from both public and private sectors to provide a more efficient and cost-effective means of infrastructure and service delivery representing better value to people than traditional direct public delivery".²⁵

A "public-private partnership" is a collaborative relationship between the public and private sectors aimed at harnessing and optimizing the use of all available resources, knowledge, and facilities required to promote efficient, effective, affordable, accessible, equitable, better and sustainable health care including eye care for all Nigerians.²⁶

The limitations of this study were the relatively small sample size (105 respondents out of about 510 Nigerian ophthalmologists, a fifth of all ophthalmologists) and the selection bias associated with obtaining information from only those who attended the conference that agreed to participate in the research study.

In conclusion, most survey participants feel satisfied with their current remuneration and productivity. Respondents in private earned more than those in full government employment while mid-level doctors earned more than those in early and late careers. Practitioners would choose ophthalmology again if given another chance and made recommendations to improve ophthalmic practice

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