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Gender Disparity and the Dental Profession in Nigeria: A 10-year Follow- up Study

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ABSTRACT

Objective: To compare and assess gender disparities in the dental profession in Nigeria after 10 years (2003-2013) a follow up study.

Methods: This was a cross sectional study which collected data from females in academic and postgraduate dental education from institutions accredited by the Nigeria Universities Commission (NUC), National Postgraduate Medical College of Nigeria (NPMCN) and West African College in Nigeria using a semi structured self-administered questionnaire. This was compared with results of a study done in 2003.

Results: The number of accredited dental schools increased from four to seven in 10 years. The total number of residents in the seven institutions was 213 as against 83 in the four institutions in 2003. Female residents (postgraduates) made up 87 (40.8%) as opposed to the 38 (45.8%) from the previous study. That of lecturers from the seven institutions was 153 as against 61 from the four institutions in 2003 with females making up 65 (42.5%) of the lecturers when compared to the 22 (36.2%) in 2003, this distribution varied among institutions. There was a predominant intake of male residents and lecturers over females in most institutions; females dominated in preventive and child dental health specialties. Female participation in leadership positions and advancements in the academic cadre also increased.

Conclusions: There has been an increase in female participation in academic dentistry in Nigeria, there is still more room for improvement and increased participation especially in postgraduate dentistry and leadership roles in the profession.

Keywords: Gender, Female, Academic dentistry, Postgraduate dentistry, dental profession.

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INTRODUCTION

The most populous country in Africa is Nigeria and it accounts for approximately one sixth of the African population (or one fifth of Sub-Saharan African population). Approximately 50% of Nigerians are urban dwellers. Nigeria suffers from a population explosion, with a current population in excess of 170 million as at 2012 and a growth rate of more than 2% per annum. Women make up 49.2% of the total population; the average literacy (total population of people aged over 15 years who can read and write) is about 61.3% with male population being 72.1% and females 50.4%. The average school life expectancy from primary to tertiary education is a total of 9 years with that of males being 10 years and females 8 years.¹

Dental education in Nigeria began in 1966 with the University of Lagos offering the award of the

degree of Bachelor of Dental Surgery to undergraduates, followed by the University of Ibadan in 1975, the University of Benin and Obafemi Awolowo Universities in 1976. The duration of undergraduate dental training in Nigeria is 6 years, with an entry qualification of West African School Certificate or General Certificate of Education (WASCE/GCE), National Examinations Council (NECO) or 5 years with an Advanced Level Certificate (A- Level) or Bachelor of Science degree in relevant subjects. Admission is processed through the Joint Admission and Matriculation Board (JAMB) followed by the admitting school's Post Unified Tertiary Matriculation Examination (UTME). The curriculum covers basic medical and dental courses, preclinical courses, clinical medical courses and clinical dental courses.

Postgraduate training through residency programmes started in 1978 with the first primaries examination conducted in 1979.² It is a tailored programme through which qualified dentists receive training in some specialist area and receive a fellowship certificate afterwards.³ Two colleges run the residency programme currently and they are the National Postgraduate Medical College first established in 1969 by the

Decree No 41 of 1969, and the West African Postgraduate Medical College which was inaugurated in 1973 for the West African sub-region. Residents are trained in hospitals accredited by the postgraduate colleges. The residency programme involves 3 major examinations namely; primaries, part I and part II. The primaries is made up mainly of basic medical and dental sciences, the part I consists essentially advanced general dental practice and the part II focuses on the specialty of the graduate in any discipline in dentistry.³

Undergraduate and Postgraduate training in dentistry are only undertaken in accredited schools and hospitals. Currently for the undergraduate programme seven dental schools are accredited by the National Universities Commission (NUC) and are the Universities of Lagos, Benin, Ibadan, Port- Harcourt, Maiduguri, Obafemi Awolowo University and the Lagos State University. Mainly Federal Hospitals are accredited by the postgraduate colleges for residency training and some state owned institutions and these include, Lagos University Teaching Hospital (LUTH), University of Benin Teaching Hospital (UBTH), University College Hospital Ibadan (UCH), Obafemi Awolowo University Teaching Hospital (OAUTH), Lagos State University Teaching Hospital (LASUTH), University of Maiduguri Teaching Hospital (UMTH), University of Nigeria Teaching Hospital Enugu (UNTH), Aminu Kano Teaching Hospital (AKTH), Ahmadu Bello University Teaching Hospital (ABUTH), National Hospital Abuja and University of Port- Harcourt Teaching Hospital (UPTH).⁴

Obafemi Awolowo University and University of Ibadan remain the only institutions offering master's degree programmes in Dental Public Health and Dental Sciences in Nigeria respectively. Initially the participation of females in dental education was said to be low at its inception with 8.24% female graduates from 1971-1979 at the University of Lagos but gradually increased, as at the year 2000 to 33.5% from the four existing dental schools.⁵ A study reported that women in academic dentistry in Nigeria were at lower ranks in the academic cadre such as professorial and associate professor positions while they increased in number down the ladder at the positions of senior lecturers and lecturers.⁶ Female participation in postgraduate dental education in Nigeria was also low, beginning at 44.6% before 2000 and increasing gradually to about 53.4% showing a gradual female dominance⁷, and certain barriers were noted in regards to the promotion

in the profession.⁸

The third millennium development goal established following the Millennium summit of the United Nations in 2000 is to promote gender equality and empowering women. Its target is to eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by the year 2015, this study as a 10 year follow up study of women in the dental profession will help shed more light on our proximity to our target. It will also help compare the population of women in the profession before 2003 to date and give possible factors influencing the current trend it presents, associated problems and make possible recommendations on how to enhance the general interests and leadership status of women in the profession. The objective of this study was to compare and assess gender disparities in the dental profession in Nigeria after 10 years (2003-2013) a follow up study.

MATERIALS AND METHODS

This was a cross- sectional study and data was collected from females in academic dentistry in seven federal institutions accredited by the Nigerian Universities Commission (NUC), offering undergraduate dental education. Data was also collected from female dental resident doctors (postgraduate) currently undergoing training in the same institutions with Hospitals accredited by the National Postgraduate Medical College of Nigeria (NPMCN) and West African College in Nigeria. The study was conducted over a period of 6 months. The result was compared with previous studies done 10 years prior.

Selection criteria

Inclusion criteria

1. Study participants who gave their informed consent to participate in the study
2. Study participants in academics or doing the residency training during the study period.

Description of instrument.

A semi structured self- administered questionnaire was used to collect the data, and where accessibility was a problem, phone interviews were carried out asking questions from the questionnaire.

Data analysis

The data was analysed using the statistical package for social sciences (SPSS) version 15.0. Findings were expounded in tables, results presented as absolute values and represented as frequencies and percentages for descriptive

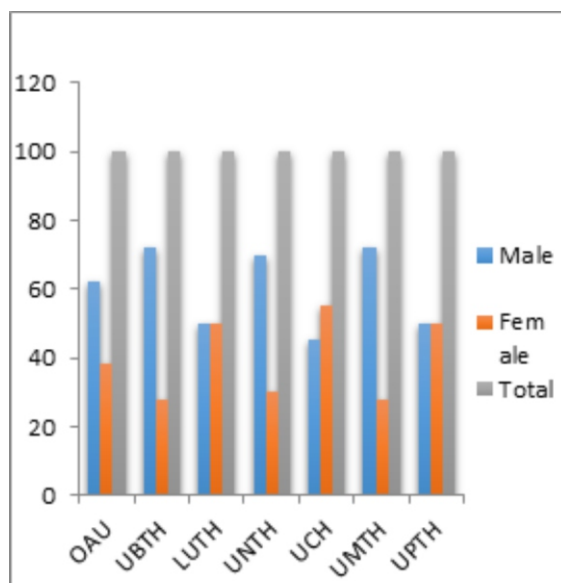


Figure 1: Distribution of residents by gender in the various institutions

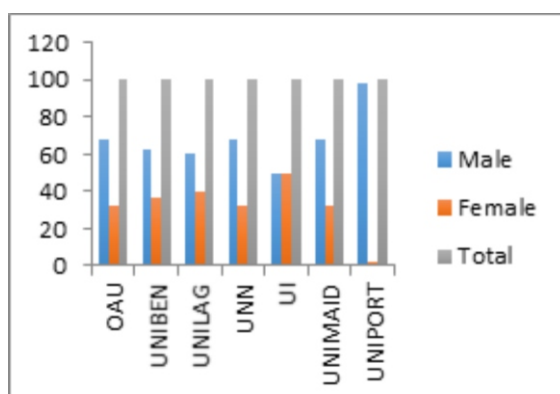


Figure 2: Distribution of Lecturers by gender in the various institutions

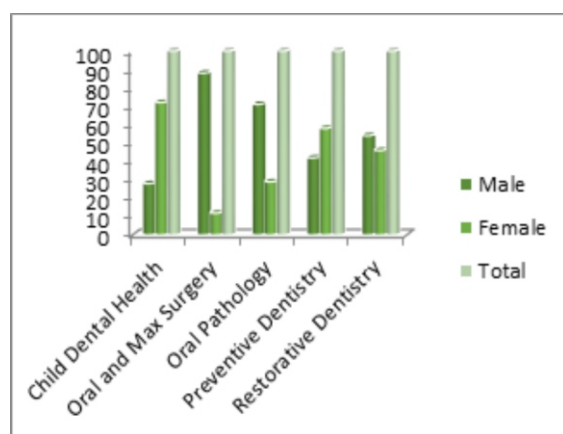


Figure 3: Gender distribution in various specialties

ABBREVIATIONS

OAUTH-Obafemi Awolowo University Teaching Hospital

UBTH- University of Benin Teaching Hospital

LUTH- Lagos University Teaching Hospital

UNTH -University of Nigeria Teaching Hospital

UCH- University College Hospital

UMTH- University of Maiduguri Teaching Hospital

UPTH- University of Port Harcourt Teaching Hospital

Figure 2 also shows a greater proportion of male lecturers in most of the institutions especially in University of Port Harcourt where the female lecturer population was smallest. University of Ibadan also showed an equal number of male and female lecturers.

Figure 3 shows females dominating the Preventive (consisting of Periodontics, Oral Medicine and Community Dentistry) and Child Dental Health (consisting of Orthodontics and Paediatric Dentistry) specialties. The Oral and Maxillofacial Surgery and Oral Pathology specialties showed the least female participation in these specialties.

Figure 4 shows equality in the number of junior lecturers, senior lecturers and associate professor status. The professorial positions were still predominantly males than females, but an increase in the number of female professors was also noted when compared with that from 2003.

Figure 5 shows the Leadership positions occupied by females increased and was statistically significant for deanship position ($p < 0.05$), but not for heads of department ($p > 0.2$) or provosts in

Men in both academia and private work forces have traditionally dominated the dental community, but progress has been observed, some increase in participation of women in dentistry.⁹⁻¹¹ A national study concluded that though men and women share similar leadership aspirations and are equally engaged in their work, medical schools have failed to create and sustain an environment in which women feel fully accepted and supported to succeed.¹² This low representation of women in leadership positions in all sectors of higher education is an important issue.¹³

GENDER TREND OF WOMEN PARTICIPATION IN DENTAL AND POST GRADUATE EDUCATION

A gradual increase in female participation in science and technology education has been noted particularly in the fields of engineering and natural sciences in Nigeria¹⁴ this study reported similar findings as the participation of women in both academic dentistry and post graduate

Table 1: Leadership among academic staff 2003 and 2013

Dental school	Provost 2003	Provost 2013	Dean 2003	Dean 2013	HOD or Ag HOD 2003	HOD or Ag HOD 2013
	M	F	M	F	M	F
OAU	0	0	0	0	1	3
Uniben	1	0	0	0	1	4
Unilag	0	0	0	0	1	3
UNN	-	-	0	0	1	2
UI	0	0	0	0	1	3
Unimaid	-	-	0	0	-	0
Uniport	-	-	0	0	-	2
Total	1	0	0	4	5	17

Table 2: Number of lecturers in all the dental schools according to position and gender

Dental school	T 2003	T 2013	Prof 2003	Prof 2013	AP 2003	AP 2013	SL 2003	SL 2013	LI 2003	LI 2013	LII 2003	LII 2013
	M	F	M	F	M	F	M	F	M	F	M	F
OAU	10	4	2	0	2	0	1	4	2	5	3	2
Uniben	14	5	2	0	3	1	1	0	4	1	7	1
Unilag	8	15	4	1	5	6	0	1	3	2	3	9
UNN	-	-	-	-	1	0	-	-	0	0	-	3
UI	8	9	1	0	3	2	1	1	0	2	5	4
Unimaid	-	-	-	-	1	0	-	0	-	1	0	-
Uniport	-	-	0	0	2	0	-	0	-	3	1	-
Total	40	33	88	65	9	1	19	11	4	2	5	16

key:

M=Male

F=Female

T= Total

Prof= Professor

AP= Associate Professor

SL= Senior Lecturer

LI= Lecturer I

LII= lecture II

education were noted to increase when compared to the number of female lecturers in academia and postgraduate residency programme 10 years ago from the previous study. The reasons for this increase may include the role of older female mentors or the motivation to be like a female they admired in the profession.

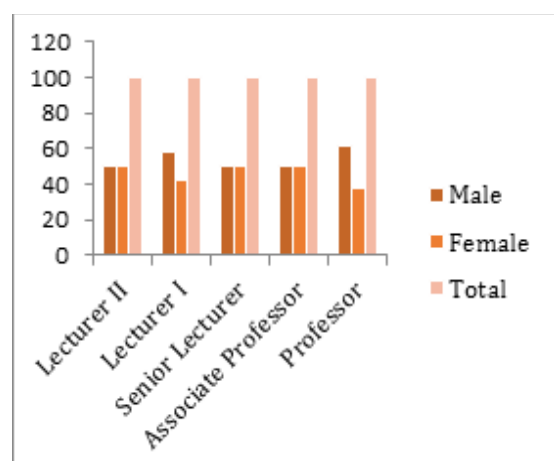


Figure 4: Distribution of lecturers by positions in the various institutions

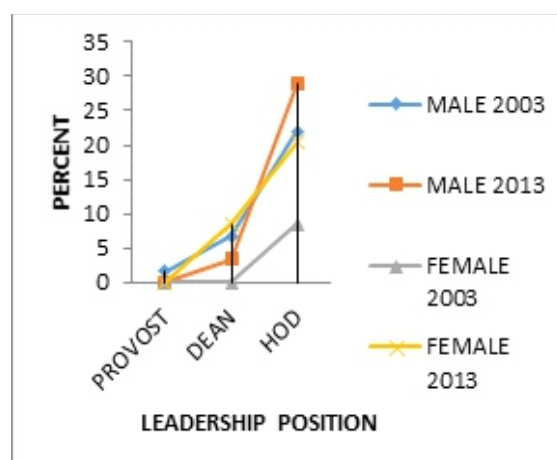


Figure 5: Leadership positions by gender

TRENDS IN CHOICE OF STUDY AND SPECIALIZATION AMONG FEMALES IN DENTISTRY

This study found more women participating more in Preventive Dentistry (Community Dentistry, Periodontology, Oral medicine) and Child Dental Health (Paediatric Dentistry, Orthodontics). Oral Surgery had the least female participation. The finding of this study was similar to other studies.¹⁵⁻

¹⁶ This may apply to the female inner intuitiveness, which predisposes them to caring and nurturing. In Baron Cohen's view of the psychological sex differences of humans, he characterized male

minds as tending more towards systemizing and females more empathizing.¹⁷ Due to these sex differences the female sex tends to be more caring as an offshoot of being empathic while the male sex is more competing, risk taking, tenacious and flamboyant.¹⁷ This might have a bearing on the choice of specialties as this study found a female predominance in the preventive and child oral health specialties which reflects that females tend to specialize more in fields that express their caring nature as related to prevention of oral diseases and helping children which is embodied in the preventive and child dental health specialties.

TREND OF GENDER IN GENERAL AND LEADERSHIP ROLES IN THE DENTAL PROFESSION OVER THE DECADE

Though women are slowly closing the gender gap in business and management, in academia women continue to be severely underrepresented in the higher-ranking faculty positions, especially in fields such as science and engineering.¹⁸ This study found an increasing female participation in leadership roles (such as heads of departments and deanship) in the dental profession when compared to 2003 but females still held very few positions in general, especially in holding higher faculty ranks such as being provosts, which this study found no female occupying the position. This is comparable to the findings of Yuan et al.¹⁹ and they suggested that the proportion of female senior mentors may be insufficient to provide guidance for junior female academics. There was a marked increase in the number of female deans (57%) in the dental schools compared with 2003 (0.0%) when there was none. The position of provost still remains unoccupied by females in all dental schools till date. With the increase in female deans the underrepresentation of females in leadership may gradually change and shows great potential for more women representation in administrative positions.

CONCLUSION

Though there has been some increase in female participation in academic Dentistry in Nigeria, there is still more room for improvement and increased participation in postgraduate training and leadership roles to achieve and maintain the specified millennium development goals of

female roles in development.

RECOMMENDATIONS

We recommend that females in higher cadres in academia or leadership roles or who have held these positions should take to mentoring and guiding younger female undergraduates, postgraduates and academics and act as role models which will further enhance the female participation in academic, postgraduate and leadership roles in dentistry.

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