

## **A REVIEW OF RESEARCH PAPERS IN THE TROPICAL JOURNAL OF OBSTETRICS & GYNAECOLOGY: (1998 – 2007)**

<sup>1</sup>*Adeniran O. Fawole*, <sup>2</sup>*Olufunmilayo I. Fawole*, <sup>1</sup>*Akinyinka O. Omigbodun*

<sup>1</sup>*Department of Obstetrics & Gynaecology, University College Hospital, Ibadan*

<sup>2</sup>*Department of Epidemiology, Medical Statistics and Environmental Health, University College Hospital, Ibadan*

### **ABSTRACT**

**Context:** Promotion of relevant research in reproductive health and dissemination of research findings are the principal goals of the Tropical Journal of Obstetrics & Gynaecology (TJOG), the official publication of the Society of Gynaecology and Obstetrics of Nigeria (SOGON). The ultimate objective of research is to influence practice by employing appropriate study design to answer research questions.

**Objective:** To evaluate the pattern of study designs and range of scientific research in TJOG between 1998 – 2007.

**Method:** The Methods section of all articles published during the study period were reviewed to document the type of study design and research focus. Articles were classified as Commentary/Review, Case Report, Cross-sectional Study, Case-Control Study, Cohort Study, Randomised Controlled Trial and Systematic Review as appropriate.

**Results:** Eleven issues from nine volumes comprising of 918 papers were examined. There were 55 commentaries and 4 review articles. There were 95 case reports constituting 10.3% of the 859 research papers. Cross-sectional studies formed the largest category of publications, accounting for 82.5%. Case-control studies (37 - 4.3%), cohort studies (3 - 0.4%) and randomized controlled trials (15 - 1.8%) constituted the rest. There was no systematic review. Maternal and perinatal medicine was the commonest area of research (46.4%). Publications in other sub-specialties were limited.

**Conclusion:** Most of the research publications were descriptive; experimental research designs were few. Urgent steps are needed to promote diversity in research designs and coverage of all aspects of reproductive health. Concrete actions to increase research activities and improve quality of scientific writing in Nigeria and other tropical countries are urgent imperatives.

**Keywords:** Study design; sub-specialisation; tropical; sub-Saharan Africa

### **INTRODUCTION**

Health and wellbeing of individuals are increasingly being recognized as closely linked with a nation's progress and socio-economic development. Thus in Nigeria, health<sup>1</sup> and development<sup>2</sup> policies strive to promote health and wellbeing of the people in the realization that they constitute the vehicles for sustainable development. At the global level, the declaration of the millennium development goals – MDGs<sup>3</sup> further reinforces the strong link between health and development. The afore-mentioned national policies also recognize the crucial role of health research in promoting people's health and wellbeing. There is a clear and demonstrable correlation between the level of social and economic development on one hand and research on the other<sup>4</sup>. Indeed, research feeds development and vice versa<sup>5</sup>.

Salter and Martin<sup>6</sup> have shown that for both scientific research in general and health research in particular, the benefits to a country are not just in terms of status and respect but in concrete economic terms. It is therefore worthwhile to monitor periodically the quality and quantity of research output. This is especially true in reproductive health particularly in developing countries where reproductive health indices remain poor.

The Tropical Journal of Obstetrics and Gynaecology (TJOG) was established to promote relevant research and disseminate research

---

**Correspondence:** A O Fawole

<sup>1</sup>**Department of Obstetrics & Gynaecology, University College Hospital, Ibadan**

**E-mail:** [fawoleo@yahoo.co.uk](mailto:fawoleo@yahoo.co.uk)

findings in obstetrics, gynaecology and reproductive health. The journal serves as a medium for international dissemination of information about obstetrics and gynaecology in the tropics and also promotes inter-regional cooperation among obstetricians and gynaecologists<sup>7</sup>.

The study was designed to evaluate research designs and research areas covered in articles published in the TJOG over a ten-year period with regard to number and quality.

## **METHODS**

The TJOG is a peer-reviewed journal established in 1980. It publishes relevant research papers in obstetrics, gynaecology and reproductive health. Three editions are published annually comprising of two full issues and a supplementary issue. All articles published in the journal between 1998 and 2007 were included in this review. Articles were identified by hand searching. Full articles and abstracts from conference proceedings were included in the review. Articles were classified as commentary/review, case report, cross-sectional study, case control study, cohort study, randomized controlled trial (RCT) and systematic review. The article was further categorized by the research area/sub-specialty namely general gynaecology, perinatal medicine, urogynaecology, reproductive health, assisted reproduction and family planning.

The methods and results sections of each article were independently assessed by two authors and differences were resolved by discussion. Where there were doubts, the third author was consulted. Relevant data were extracted onto a structured data sheet. The name of the first author of each article, year of publication, nature of the report (full article, abstract, letter, commentary), study design and the area of research were documented. Quality of each article was assessed in terms of whether the study design stated by the authors corresponded with what was described in the Methods section.

## **RESULTS**

There were 918 articles in 23 issues of the journal between during the period covered by this review. There were 763 (83.1%) original research reports, 95 (10.3%) case reports, 55 (6.0%) commentaries

and 4 (0.4%) review articles. These were published in 276 (30.2%) full length reports and 641 (69.8%) abstracts. The research areas covered by the research reports are shown in Table 1. Majority of the articles were in the area of maternal and perinatal medicine accounting for almost half (46.4%) of all reports. There were a handful of reports on prenatal diagnosis. Research reports on general gynaecology took a distant second place accounting for just about one-fifth (20.3%) of all publications. There were limited publications in the fields of assisted reproduction, gynaecological endoscopy, gynaecological oncology, family planning and uro-gynaecology. In most of these sub-specialties, publications were mainly as abstracts. Review of the study designs showed that cross sectional studies were the commonest type accounting for about four-fifths (82.5%) of all study designs (Table 2). Case control and RCT study designs were utilized in 4.3% and 1.8% respectively. There were only 7 RCTs during the study period. Although more studies claimed to have utilized cohort design, detailed review showed that only 3 (0.3%) were truly cohort in design.

As shown in Fig. 1, 383 (54.0%) of the cross sectional studies were prospective studies while 326 (46.0%) were retrospective. About two-thirds of the case control studies were prospective. The type of publication and research design is shown in Table 3. Only about a third of all publications were published as full length articles. The majority were published as abstracts. There was no systematic review during the period.

## **DISCUSSION**

Periodic assessment of research output namely publications and scientific presentations is worthwhile. It can assist institutions and countries in the areas of planning, monitoring and evaluation of research agenda as well as support for research. A previous comparative evaluation of research publications from the different regions within the World Health Organisation (WHO) showed that the sub-Saharan/Eastern Mediterranean regions lagged behind the Americas and the Asian/Pacific regions<sup>8</sup>. These

differences were attributed to influences of socio-economic status, human resources and infrastructure available for research among other factors. With particular respect to Nigeria, this finding is supported by the observation of declining research publications<sup>9</sup>. Documentation of the level of current research activities in these countries is the first step towards addressing the gap between need and action in biomedical research<sup>5</sup>.

This review showed that the TJOG was published consistently during the period of review. The distribution of research design is in conformity with the hierarchy of research evidence with a wider base of observational studies viz case reports, cross sectional studies, case control studies and cohort studies; and a narrower peak of experimental study designs namely RCTS and systematic reviews. Only a few cohort studies were published during the study period. The fact that only 15 RCTs were published over a ten-year period is a matter of serious concern. This is quite low compared to the number of RCTS published per decade in the South African Medical Journal over a 50-year period<sup>10</sup>. The greater proportion of the RCTs published in TJOG (73.3%) were published as abstracts. RCTs when appropriate are regarded as the gold standard for evaluating the effects of health care interventions<sup>11</sup>. The low output of RCTs is a sad reflection of the status of reproductive health research in Nigeria. Although low-income status and weak research infrastructure may be implicated, motivation and research capability of scientists are also questionable.

Almost 70% of the articles reviewed were published as abstracts. We would like to assume that the greater proportion of these abstracts in supplements of the journal have subsequently been published as full length articles. It has previously been reported that almost half of all abstracts eventually are published as full articles<sup>12</sup>. Increasing the frequency of publication of the TJOG needs to be considered to enable it accommodate more full length articles.

Research topics/themes covered by the articles in this review were very revealing. Lack of sub-

specialisation was apparent as shown by the limited publications in gynaecological endocrinology, gynaecological oncology, gynaecological endoscopy and uro-gynaecology. It is possible that Nigerian authors publish in other international journals. Indeed, between 1995 and 2004, Nigerian authors were reported to be second only to South Africans with respect to publications in sub-Saharan biomedical journals indexed in Medline between 1995 and 2004<sup>13</sup>. However, the nature of publications in their own journal would reflect their contribution to other journals. We concede the fact that the preponderance of articles in maternal and perinatal health is probably relevant for addressing the country's high priority health problems particularly in meeting the challenges of maternal and perinatal morbidity and mortality. However, urgent measures are needed to establish sub-specialties in the various training institutions and promote local research in these fields.

In conclusion, this review has highlighted deep deficiencies in research activities in Nigeria and related tropical countries. There is a paucity of experimental research design in the publications of the TJOG during the period under review. Although the potential for improvement appears to be in place, sub-specialisation in the field of obstetrics and gynaecology is yet to take root. These are issues of national and regional interest deserving attention at the highest levels of policy formulation and decision making. Scientists working in Nigeria and other tropical countries need to seek increased opportunities for collaboration amongst themselves and explore linkages with funding agencies and research institutions elsewhere in order to promote quality research. Concrete actions towards capacity building in research methods and scientific writing are urgent imperatives.

## REFERENCES

1. Federal Ministry of Health. National reproductive health policy and strategy to achieve quality reproductive and sexual health for all Nigerians. Abuja: Federal Ministry of Health, 2001.
2. Federal Government of Nigeria. National policy on population for sustainable

- development. Abuja: Federal Government of Nigeria, 2004.
3. The United Nations. United Nations Millennium Declaration. The Millennium Assembly, United Nations, New York, September 6 – 8, 2000. <http://www.un.org/millennium>. Accessed July 13, 2009.
  4. Gureje O, Ogunniyi A, Olley BO. Tracking the impact of research in Nigeria. Ibadan: Postgraduate School, University of Ibadan, Ibadan, Nigeria. 2006.
  5. Gureje O, Kola L, Fadahunsi O. Mental health research in Africa: current status in 26 countries. Book of Abstracts. Global Forum for Health Research. Forum 10 28<sup>th</sup> October – 2<sup>nd</sup> November, 2006, Cairo, Egypt, 152.
  6. Salter A, Martin BR. The economic benefits of publicly funded basic research: a critical review. *Res Policy* 2001; 30: 509–532.
  7. Omigbodun AO. A change at the helm. *Trop J Obstet Gynaecol* 2000; 17: 2.
  8. Nasser B. Professor Ebenezer Oluwale Akande and the promotion of reproductive health in Africa and Eastern Mediterranean. In: Dada OA ed, Population and Reproductive health in developing world – challenges for the new millennium. Proceedings of a symposium in honour of Professor E. Oluwale Akande. 2002; 93–107.
  9. Babalola JB. Writing for international academic journals: Focus on scholarship, censorship and readership. In: Olayinka AI, Adetimirin VO, Ojebode A eds, Scholarly writing and publication. Ibadan; The Postgraduate School, University of Ibadan, Ibadan, 2006; 132–147.
  10. Pienaar ED, Volmink J, Zwarenstein M, Swingler GH. Randomised trials in the South African Medical Journal 1948 - 1997. *SAMJ* 2002; 92: 901-903.
  11. Schulz KF, Grimes DA. The Lancet handbook of essential concepts in clinical research. Edinburgh: Elsevier, 2006.
  12. Scherer RW, Dickersin K, Langenberg P. Full publications of results initially presented in abstracts. A meta-analysis. *JAMA* 1994; 272: 158-162.
  13. Hofman K, Kanyengo C, Beitin A, Prudhommen W, Rapp B, Kotzins S. Biomedical publications in sub-Saharan Africa (1995 – 2004): strengthening the culture of research to promote health. Book of Abstracts. Global Forum for Health Research. Forum 10 28<sup>th</sup> October – 2<sup>nd</sup> November, 2006, Cairo, Egypt, 77.

**Table 1. Areas of research and mode of publication**

Area of research	Frequency		Mode of publication			
	n	%	Abstract		Full length	
			n	%	n	%
Family planning	58	6.3	44	75.9	14	24.1
Assisted Reproduction	47	5.1	44	93.6	3	6.4
General Gynaecology	186	20.3	120	64.5	66	35.5
Gynaecological Endocrinology	7	0.8	3	42.9	4	57.1
Gynaecological Oncology	46	5.0	22	80.4	9	19.6
HIV/AIDS	72	7.9	65	90.3	7	9.7
Gynaecological Endoscopy	17	1.9	16	94.1	1	5.9
Maternal and Perinatal Medicine	425	46.4	279	65.7	146	34.3
Uro-gynaecology	19	2.1	12	63.2	7	36.8
Reproductive Health	38	4.2	19	50.0	19	50.0
<b>Total</b>	<b>915</b>	<b>100.0</b>	<b>641</b>	<b>69.8</b>	<b>276</b>	<b>30.2</b>

**Table 2. Type of Research design**

Research design	Frequency	
	N	%
Case Report	95	11.1
Cross sectional	709	82.5
Case Control	37	4.3
Cohort	3	0.4
Randomised Controlled Trial	15	1.8
<b>Total</b>	<b>859</b>	<b>100.0</b>

**Table 3. Study design and mode of publication**

Study design	Mode of publication			
	Abstract		Full length article	
	n	%	n	%
Case Report	46	48.4	49	51.6
Cross Sectional	532	75.0	177	25.0
Case Control	21	56.8	16	43.2
Cohort	1	33.3	2	66.7
RCT	11	73.3	4	26.7
<b>Total</b>	<b>611</b>	<b>71.1</b>	<b>249</b>	<b>26.7</b>

