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Nigerian Journal of Paediatrics: The First Ten Volumes

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Summary

Abdurrahman MB. Nigerian Journal of Paediatrics: The First Ten Volumes. *Nigerian Journal of Paediatrics* **1984; 11:99.** The first ten volumes of the *Nigerian Journal of Paediatrics* were reviewed with the purpose of assessing, among other things, characteristics of the published papers, use or misuse of statistics and the quality of the publications. There were 26 issues over a ten-year period, with 131 papers and 284 authors, giving an average of two authors per paper. More than half of the papers were descriptive in nature and there were few editorials and review or special articles. Statistical error was detected in 17 instances. Fifteen out of 102 papers were assessed to be of low quality. The main weakness was in methodology and in presentation of results. The Journal achieved some, but not all of its objectives.

Introduction

It seems appropriate that after ten years of publication, a young journal like the *Nigerian Journal of Paediatrics* is reviewed. Such a review should aim to assess how far the stated objectives of the journal have been achieved and what impact the journal has made on its readers.

The present study was undertaken to review the first ten volumes of the *Nigerian Journal of Paediatrics* with the objective of assessing the following:

1. Whether the Journal's objectives had been achieved.
2. Characteristics of the papers published.
3. Use or misuse of statistics.
4. Quality of publication.
5. Miscellaneous items such as the time interval between acceptance of a paper and its subsequent publication.

The views expressed in this paper are personal, subjective and not necessarily, scientific. It should also be pointed out that some of the author's publications appeared in the issues of the Journal under review and the author has been a consultant editor to the Journal for the past few years. The study does not, therefore, claim to be objective.

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Materials and Methods

All the papers published in the first ten volumes of the *Nigerian Journal of Paediatrics* were read. The following were extracted or deduced:

1. Objectives of the Journal.
2. Characteristics of the papers published.
   (*a*) Number of issues in each volume, number of articles in each issue, number of pages in each issue, and number of authors in each paper. Letters to the editor and abstracts of proceedings were not counted as articles.
   (*b*) *Type of publication.* Each paper was categorized as: descriptive (including case reports), review article, clinical and/or laboratory observations, epidemiological, editorial, preliminary report, or basic research. A paper that did not fit into any of these categories was put under "others".
   (*c*) *Classification.* Each publication was classified as prospective or retrospective. If it was not clear from the paper whether the study was prospective or retrospective, the paper was classified as "not clear". The term "not applicable" was used for papers that were not classifiable; such papers included review articles, annotations and case reports. The papers were further categorised according to the aspects of paediatrics covered by the study: infection, growth and development, respiration, newborn, etc.
3. *Use or misuse of statistics.* In assessing publications for use or misuse of statistics, the following terms were used:
   (*a*) *Used appropriately.* There was indication for the use of statistics and the authors used the appropriate one.
   (*b*) *Used inappropriately.* The authors used statistics which were inappropriate for the data given, or the authors gave a statistical value without giving the data or the statistical method used.
   (*c*) *Ambiguous.* Ambiguity arose if the meaning of a statistical figure given was not clear, or if the meaning of unusual statistical abbreviation used was not given. For example, 44 $\pm$ 3 would be considered ambiguous if the author did not state whether 3 was standard deviation or standard error of mean.
   (*d*) *Not indicated.* The use of statistics was not indicated.
   (*e*) *Not used.* The use of statistics was indicated, but authors did not use it.
4. *Quality of publication.* The quality of publication was considered from two aspects. Academic quality refers to the quality of the study and its presentation. This was classified as either "good" or "not good enough".

   The criteria for a good paper were:
   (*a*) The publication must have a message-to increase knowledge or understanding, to improve diagnosis or management.
   (*b*) The message must be clearly stated and delivered—appropriate design of study, and simple and clear presentation.
   (*c*) There should be no discrepancy between the proposed message and the actual message. Simply put, the summary must be a fair reflection of the content of the paper.
   (*d*) There should not be too many diagrams. The maximum number of diagrams (tables and figures) was arbitrarily fixed as six for a full article and three for a case report. The figures were partly based on the editor's instruction that articles should not exceed 10 pages.

Case reports were excluded from quality assessment because often, they did not contain enough data to allow for proper assessment. The non-academic quality was based on the quality of printing (arrangement of the print, clarity of print and absence of many typographical errors) and clarity of figures and tables.

5. *Miscellaneous.* The items included under this heading were:
   (*a*) Location of the consultant editors.
   (*b*) Location of reviewers.
   (*c*) Number of papers on studies done outside Nigeria.
   (*d*) Time interval between acceptance and publication of papers.
   (*e*) Cost and circulation of the Journal.
   (*f*) Comparison with other medical journals published in Nigeria regarding quality of print, regularity of publication and duration of publication. Regularity of publication was based on the author's personal knowledge, since such information is not published.

Each paper was identified by the volume and the number of the Journal and the serial number of the article. Thus, 7/2/4 means Volume 7 Number 2 Article number 4.

Results

The first issue of the *Nigerian Journal of Paediatrics* was published in January 1974 and the last issue of the tenth volume was published in October 1983. During the ten-year period, there were ten volumes and 26 issues. The Journal was published biannually from Volume 1 through Volume 7, and quarterly from Volume 8 through Volume 10.

Objectives of the Journal

The objectives of the Journal were clearly stated in the editorial of the maiden issue[1] and were also summarised in the first paragraph of "Information for Contributors and Subscribers" which was published in every issue of the Journal. I will quote here, only the objectives which I consider relevant to the present study.

1. The Journal will have a vital role to play as educator of those involved in paediatric practice at all levels.....
2. It will have an important role in shaping policies and practice in Child Health at local and national levels.....
3. It must also aim to become the forum which the new generation of medical scientists in Africa will choose to publish the results of their researches.
4. ...The Editor therefore welcomes contributions relating to all aspects of Paediatrics and Child Health from workers throughout the world.

Characteristics of papers published.

There were 26 issues of the Journal over a ten-year period. The number of pages in each issue varied from 18 to 54, with a mean of 29. Ten issues had 31 or more pages, and only two issues had more than 40 pages. The total number of articles in the ten volumes was 131. This figure does not include editorials which were four in number. The first editorial was in 1974, announcing the birth of the Journal and stating its objectives. There was one editorial each in 1975, 1976 and 1981. The last editorial announced changes in the frequency and format of the Journal and also evaluated the Journal. The number of articles per issue ranged from three to eight, with a mean and a mode of five. There were 284 authors and 131 papers, giving an average of two authors for each paper. In 46 of the papers, there was only one author per paper and in 43 papers, there were two authors per paper. Seven of the 131 publications came from centres not affiliated with a university, while the remaining 124 were from university centres. Six of the papers from non-university centres were

published in the first few volumes of the Journal. The types of paper published were descriptive 73, clinical/laboratory observations 33, epidemiological 16, others 5, research 2 and one each of review article and preliminary report. The five others were annotation 2, special article 2, and clinical trial 1. The 131 publications were classified as prospective 58, retrospective 27, not applicable 35 and not clear 11. The subjects covered by the publications are summarised in Table I. The three most frequent subjects were infection with 27, the newborn with 25 and genetics/congenital malformations with 21 publications. Some publications covered more than one area. Thus, a paper on the incidence of congenital heart disease was taken as covering both cardiovascular and genetics/congenital malformations.

TABLE I

*Subjects Covered by Publications**

Subject	*No. of Publications*
Infection	27
Newborn	25
Genetics/congenital malformations	21
Cardiorespiratory system	18
Gastrointestinal tract	14
Genitourinary tract	13
Haematology	12
Others	58

* In some cases, a publication covered more than one subject.

Use or misuse of statistics

The use of statistics was not considered necessary in 75 papers. Statistics were used appropriately in 39, used ambiguously in eight, used inappropriately in two and not used in seven papers. Two examples of the latter are given. In paper 1/1/6, the author stated that there was increased susceptibility to infection in patients with sickle-cell anaemia compared with non-sicklers. Of the 32 patients with bacterial infection, 20 had haemoglobin S (it was not clearly stated whether these were SS and AS) compared with 12 who had "bacterial infection alone" (presumably, non-sicklers). It would have been neater to give the number of patients with bacterial infection and genotype AA and the number with infection and genotype SS. The figures are then compared for statistically significant difference. In paper 10/4/3, the author compared the outcome of management of imperforate anus over two five-year periods, giving morbidity and mortality figures. The comparison would have been simpler and clearer with the use of appropriate statistical analysis. Relatively simple statistical procedures were used throughout the publications: standard deviation, P, regression, standard error of mean, log transformations and Fisher's exact test. An average reader would therefore, have no difficulty in understanding them.

Quality of publications

The printing of the papers was clear, the arrangement of the print was good and there were only few typographical errors. However, several diagrams were of poor quality, or were small in size or too crowded. Examples were papers 3/1/4 Figure 3, 8/2/3 Figure 4, 8/4/4 Figure 3 and 9/2/5 Figures 1 and 2. In some photomicrographs, either the stain or the magnification was not stated—6/1/1 Figure 3, 9/2/5 Figures 1 and 2, and 10/3/4 Figures 2 and 3. In twelve papers, the number of diagrams was considered too many. In paper 10/3/5, a case report of four pages, there were four photographs and two photomicrographs. Paper 6/1/1 was 14 pages in length and had 3 tables and 8 figures made up of 10 photographs.

The 29 case reports in the 131 publications were excluded from assessment of academic

quality. Of the remaining 102 papers, 15 were rated as not good enough. The deficiencies in these papers are summarised in Table II. Four of the not-good-enough papers were among 53 papers published in the first five years, compared with 9 out of 78 papers in the second five-year period. That is, the few poor quality papers were uniformly spread throughout the ten volumes of the Journal. Analysis of three of the not-good-enough papers is as follows. Paper 1/1/6 on severe anaemia in the first two years of life was defective in several aspects. The stated objectives were not carried out. The paper set out to, among other things, compare causes of anaemia with a previous study in the same institution. However, data from the previous study were not given. One of the objectives of the study was to assess the result of treatment. Although one of the immediate results of blood transfusion was elevation of haemoglobin, the post-transfusion haemoglobin levels were not stated. The methodology of the study was not detailed enough, and there was no control group with which to compare the frequency and severity of malaria parasitaemia. Although the author defined severe anaemia as a haematocrit value of 20% or less, eleven of his patients had haematocrit between 20 and 27%. This was also shown in the figure. Lastly, the author presented no data to justify his claim that sicklers were found to be more susceptible to infection. In the second issue of Volume 1, there was a paper on the management of intersexual disorders. This paper was considered to be of low quality for the following reasons. The data were incomplete. There were 22 cases, 14 of whom were operated on, but data were available for only three "illustrative cases". Moreover, no laboratory data were given. The author made statements without giving evidence to support them. Such statements included "Intersexual disorders are not uncommon in Nigeria", "Surgery is the mainstay of definitive management". The third example of a not-good-enough paper was in the first issue of Volume 10. The study was an investigation of the pattern of infections in hospitalised sicklers. The authors sought to "ascertain what infections precipitated crisis". Instead, the paper gave a list of infections without attempting to differentiate infections that precipitated crisis from infections arising as a result of the crisis. Children in the first decade of life were underrepresented, giving a false impression that infections were relatively uncommon in this period. The authors' excuse that this bias could be due to the fact that the study was based in the Department of Haematology is not acceptable. The title of the paper could have been changed to reflect that the study was carried out in patients over 10 years old. It must be pointed out that there was the possibility that some studies might have been well planned and executed but the reporting was poor.

TABLE II

*Defects in 15 Publications Graded as of Low Quality**

Defect	*No. of Publications*
Poor methodology	13
Poor presentation of results	8
Incomplete information	4
Inadequate statistical procedure	4
Discrepancy between objectives and presentation	3

* Each publication contained more than one defect.

Miscellaneous

This was a mixed bag of unrelated items of interest to the author. There were 76 reviewers listed, 11 of whom were from outside Nigeria. Although the consultant editors changed, at any one time, about half of them were from Nigeria, The others were from other African countries, the United Kingdom and United States of America. There was no single publication on studies done outside Nigeria. The interval between acceptance

and publication of a paper could be assessed with effect from Volume 8 in January 1981 when this practice was introduced. The interval ranged from one to 14 months, with a mean of 5.8 months. The cost of the Journal was ₦4.00 annually when it was published biannually. The cost increased to ₦16.00 annually with effect from January 1981 when the Journal started appearing quarterly. Circulation of the Journal appeared limited to Nigeria and a few other places outside the country. Although the *Nigerian Journal of Paediatrics* was not the first medical journal to be published in Nigeria, it had the singular reputation of being the only one that had been published without interruption since its maiden issue. In addition, the quality of printing was uniformly good.

Achievements of objectives

The Journal achieved some but certainly not all of its objectives. It achieved its objective of becoming an educator of those involved in paediatric practice and of serving as a forum for publishing results of medical scientists in Nigeria. I like to believe, admittedly without irrefutable evidence, that it did play a role in shaping policies and practice of child health by individuals and governments in Nigeria. However, the Journal did not attract papers from workers outside Nigeria. This was probably related to poor circulation and insufficient indexing. One is aware of the effort being made to have the Journal indexed in *Index Medicus*.

Discussion

This study shows that the *Nigerian Journal of Paediatrics* was published continually during the ten-year period under review. The articles published covered wide areas of paediatrics, were mostly descriptive or clinical, and were written by one or two authors per paper in 68% of cases. The predominance of single author or two-author papers could be a reflection of the types of papers (descriptive and clinical) published. It is almost impossible for one person to be able to carry out all aspects of a study, and the emphasis now is on multidisciplinary team approach to research. There were few editorials, review or special articles on basic science as applied to paediatrics. One important impact the Journal made on its readers was that readers were assured of a journal that was published regularly, with minimum delay in publishing an accepted article. With improved circulation and increased citation, it is hoped that workers in other African countries will publish their papers in the *Nigerian Journal of Paediatrics*. In these days of austerity and scarce foreign exchange, editors and publishers of medical journals in Africa should consider working out an exchange and circulation scheme. There are few other areas that need improvement. It is suggested that every issue of the Journal should have an editorial, either related to, or independent of the articles contained in that issue. The editorial could be written by the editors or by invited guests. Review and special articles should feature more regularly. Paediatric practitioners and scientists and scientists in other disciplines could be invited to write on specific topics. The topics would cover difficult or controversial areas, as well as current areas of research. If possible, an attempt should be made to keep the number of pages in each issue constant, or, at least, not less than a certain minimum number. This could be ensured by having "reserve" articles. These are articles with long "expiry date" that is, they are unlikely to get out of date too soon.

The defects of the papers rated as not good enough were mainly in the methodology. In any research project, it is important to pay particular attention to the planning stage and to define clearly, the subjects and the controls. If the study is a critical trial, it is pertinent to give due consideration to randomization, blindness and drop-outs. Involvement of a statistician at the planning stage could prevent a lot of headache and disappointment at the end of the study. Depending on the nature of the study, the statistician's involvement could be in the form of

advice or as a member of the research team. Useful information on research planning, execution and analysis of results is contained in a series of eight articles by Altman, the first of which was published in November 1980,[2] and in another paper by Altman *et al.*[3]

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