Synopsis of Papers Published in the Nigerian Dental Journal: 2007 – 2021

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Abstract

Using quantitative methods to analyze various aspects of written scientific documents helps to monitor growth of literature and patterns of research. This paper examines the articles published in the Nigerian Dental Journal (NDJ) from 2007 to 2021 for geographical distribution, pattern of study design analysis and topic analysis. Through the review we were able to provide a broad aspect of the types of research published in the Nigerian Dental Journal. Within Nigeria, the contribution from Lagos is the highest while majority of contributions from outside Nigeria were from India. In total 183 articles were published, out of which 103 (56.3%) were full-length articles. The remaining papers included short communications and technical notes. Only one article provided qualitative data, and there were no laboratory-based research highlighting a need to foster further research in this area.

Introduction

Bibliometrics is the quantitative evaluation of publication patterns of written scientific documents[1]. It utilizes mathematical and statistical calculation to analyze various aspects and subject areas of written scholarly communication[1-3]. Bibliometrics was introduced in 1926 and was initially applied to examine patterns of author productivity before it was subsequently used to analyze the frequency distribution of scientific publications across journals in specific research fields[3].

The Nigerian Dental Journal (NDJ) is the official publication of the Nigerian Dental Association. The NDJ is dedicated to promoting the advancement of oral health in Nigeria through the dissemination of original research and review articles, as well as case reports and other relevant information for dental professionals. Since its first publication in 1980, NDJ continues

to provide a platform for the sharing of new knowledge and ideas, and is a valuable resource for dentists, researchers, and other oral health professionals in Nigeria and beyond.

The use of quantitative methods to analyze various aspects of written scientific documents is being increasingly embraced to monitor growth of literature and patterns of research [4-6] This article aims to keep readers up to date with the trends and themes of the literature published in this journal and at the same time to reflect upon the scientific aspects of dentistry, which is being covered and provided to readers.

Methods

All issues of NDJ within the years 2007 to 2021 were reviewed by two independent reviewers (OK KI). All original articles were selected. Conference abstracts, letters to editor, were excluded (n=18). The remaining articles were then categorized into two broad themes based on length of article as full length and short communication. Papers within each theme were explored and summarized within this article.

Results

Type of Publication: In total 183 articles were published, of which 103 (56.3%) were full-length

articles that predominantly focused on several topics in dentistry. The remaining papers included short communications and technical notes. With regards to the full-length articles, 17 articles were retrospective, 6 were prospective, 21 cross-sectional, 50 survey, 1 randomized trial 8 and were not specified. Only one article

provided qualitative data and there was no laboratory-based research article.

Geographic distribution: Southwestern Nigeria accounted for the majority of the articles published in the journal within the period of review accounting for 108 (59%) with university of Lagos having 44, university of Ibadan 35 and Lagos state university 15. There were 38, 3, 2, and 1 publications from the South-South, North-West, South-East and North-East parts of Nigeria respectively. Majority of publications from outside of Nigeria were received from India (n=22).

Topic/Specialty: 13 articles are from community dentistry, 21 conservative dentistry, 34 general dentistry, 2 oral diagnosis, 10 oral medicine, 22 oral pathology, 24 oral surgery, 21 orthodontics, 18 pediatric dentistry, 11 periodontology and 7 prosthodontics

Table 1: the distribution of articles by year

YEAR	ISSUE 1	ISSUE 2	Frequency
2007	-	11	11
2008	8	7	15
2009	9	7	16
2010	9	7	16
2011	9	6	15
2012	11	8	19
2013	9	7	16
2014	9	9	18
2015	7	7	14
2016	7	5	12
2017	4	-	4
2018	4	-	4
2019	4	-	4
2020	8	7	15
2021	4	-	4
Total	102	81	183

Table 2: Breakdown of types of article published

Type of Publication	Number (%)
Full length articles	103
Empirical (quantitative)	78
Empirical (qualitative)	1
Review	24
Short communications	
Case series/ reports	52
Technical notes	4
Total	262

Table 3: Types of full-length article published

Study Design	Number (%)
Retrospective	17
Prospective	6
Cross-sectional	21
Survey	50
Randomized trial	1
Others	8
Total	103

Table 4: Geographic distribution of all articles published

Location	Number (%)
South West	108
South East	2
South South	38
North West	3
North East	1
North Central	5
Outside Nigeria	27
Total	183

Table 5: Distribution of all articles published by specialty

Specialty	Frequency
Community Dentistry	13
Conservative Dentistry	21
General Dentistry	34
Oral Diagnosis	2
Oral Medicine	10
Oral Pathology	22

Oral Surgery	24
Orthodontics	21
Pediatric Dentistry	18
Periodontology	11
Prosthodontics	7
Total	183

Figure1: Word Cloud of Topic
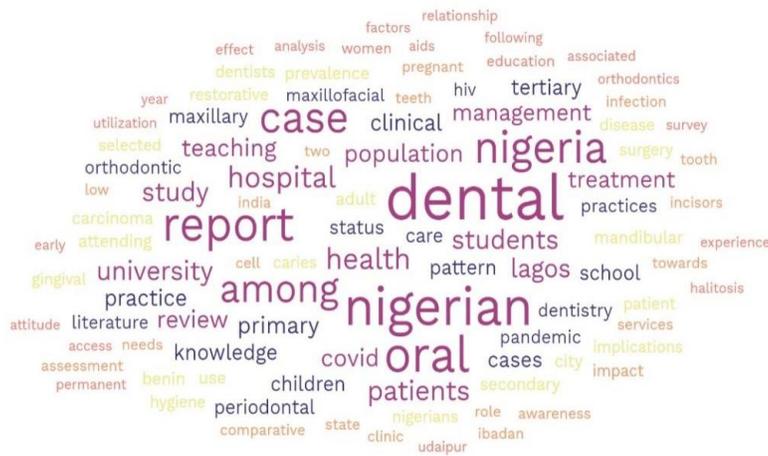
Discussion

The volume and year distribution shows that except for years 2007, 2017, 2018, 2019 and 2021 when only one issue was published, biannual publication was maintained for the remaining period. The reason for this inability to maintain frequency of publication is multi-factorial and has implications for journal ranking.

While majority of the articles published provided quantitative empirical data, a sizeable proportion used knowledge synthesis in the form of review articles to answer research question. Majority of the review articles were unstructured and did not provide enough methodological information. The JBI Manual for Evidence Synthesis provides guidance to authors for the conduct and preparation of reviews and evidence syntheses to address different types of review questions[7]. These reporting guidelines are improving the standards of reporting review articles; however, adherence to these guidelines remains suboptimal. Endorsement of these guidelines by deliberate NDJ editorial policy is one strategy to enhance adherence. Of note is the considerable paucity of empirical qualitative empirical studies and randomized clinical trial (RCT). Qualitative research methodology offers

unique perspective about a subject of inquiry while RCT is the highest form of evidence for experimental studies. The research methodologies for these two research designs are complex and may be the reason why NDJ authors have not been using them.

The geographic distribution is heavily skewed to university teaching hospitals in the South West of Nigeria. This is not surprising because of the well-known history of dentistry in Nigeria. The preponderance of Indian authors contributing from outside Nigeria is an interesting finding which requires further study as to be able to unravel the probable reason(s).

The articles published by NDJ within the period of review cut across all the specialties of dentistry, not surprisingly because the journal is a multi-specialty journal. The word cloud of the topics of all the 183 articles shows orthodontic and maxillofacial surgery as the dominant topic perhaps reflecting the popularity of both.

Some limitations of the study should be taken into consideration. We used the address of the corresponding author to determine geographic location, we also classified articles into specialties based on our perception of the topic. Notwithstanding, the data provided reflected the pattern of articles published accurately.

Conclusion

During 2007–2021, the research in full-length articles appeared to be confined to certain areas, with no RCT and qualitative studies. With only one randomized study and no laboratory-based study published, there is need to optimize scope of NDJ articles published by NDJ.

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