Bibliometric study of the Nigerian *Predatory* Biomedical Open Access Journals during 2007-2012

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Content

1.0 Introduction and Objectives

Gold OA? **Why the study?**

2.0 Methods

Focus and Population
Research design
Data sources/extraction and analysis

4.0 Results and Interpretation

Characteristics of the journals; Continental/country distribution of contributors and users/top ten authors; Links to Web of Science; APC

5.0 Discussion and engagement

Questionable journals?
Who are the sustainers of these journals?
Global dynamics that explain the journals
Local scientific realities
Conslusions

Introduction

Open access is concerned with free and immediate availability of full text, digital, online and publicly-funded and commercially-published research outcomes – with the rights and licensing restrictions of the research outcomes residing with the author who also bears the costs.

APC has attracted substandard, fake, fee-gauging and predatory publishers (Beall 2009, 2010, 2011, 2012, 2013, 2014

These publishers are mainly based in the Southern hemisphere, a region of the world where academic print publishing did not blossom

As at December 2012, Jeffrey Beall had already identified 23 predatory publishing houses with close to 1400 journals (http://scholarlyoa.com/publishers/), as well as many stand-alone open access journals

Two of these publishers namely Academic Journals Inc. and International Research Journals originate from Nigeria

Objective of the Study

The paper undertakes a bibliometric sightsee to spotlight the predatory journals in order to uncover their timeline, geographical spread, sources and citation, as well as their performance.

This paper does not delve into the content analysis of the journals or the papers they contain to discover the authenticity of the authors' details, the veracity and validity of the claims in the papers, or characteristics of the editorial boards, etc

This paper is not designed to give support to the journals and their publishers nor give credence to their description as fake or predatory; for benchmarking purposes, the word predatory is retained in describing the journals.

Methodology

Focuses on two biomedical publishers of Nigerian origin: Academic Journals Inc (28 journals) and International Research Journals (6 journals).

Data about the journals, author information and the number of publications in the journals were collected from the websites of the publishers.

The journal titles were entered into the Publish or Perish (PoP) software to extract the total number of papers, total number of citations, number of citations per paper, number of citations per year, and h-index from Google Scholar.

Microsoft Excel was used to gauge the frequency distribution of the data. Search was conducted in Journal Citation Report to establish the predatory journals that are indexed in WoS, and to examine their citation by journals indexed in ISI.

Based on the country classification by The World Bank (2013), the countries whose authors published papers in the journals were categorized as developing and developed.

Result

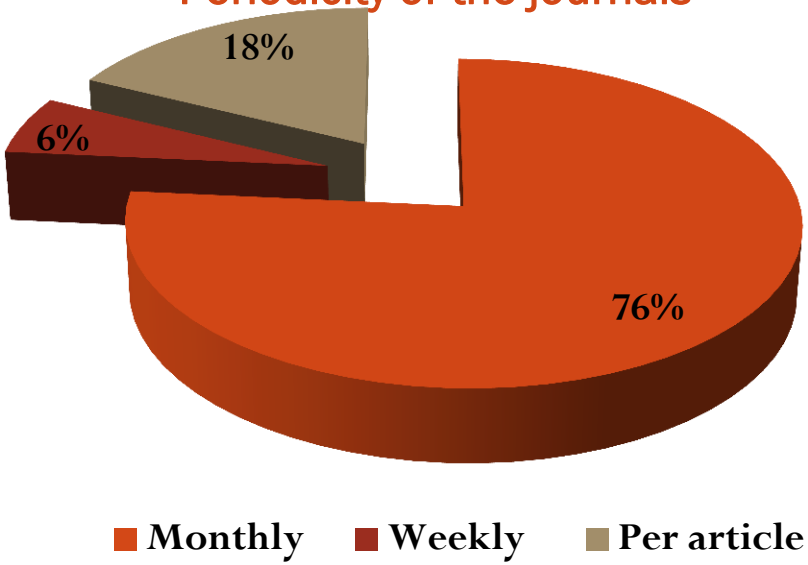
ISSN, DOI AND LANGUAGE OF PUBLICATIONS

- 29 had ISSN
- 6 had no DOI
- English is the language of the publications

START-UP YEAR OF THE JOURNALS

Year	N	%
2007	2	5.88
2009	18	52.94
2010	9	26.47
2011	2	5.88
2012	1	2.94
2013	2	5.88
Total	34	100

Periodicity of the journals



A TOTAL OF 5601 PAPERS IN FIVE YEARS WRITTEN BY 901 AUTHORS FROM SVEN CONTINENTS !

A TOTAL OF 2772 CITATIONS

PEER REVIEW AND INDEXATION STATUS

PEER REVIEW	N (Days)	Mean (Days)	SD	Med.	Max	Min
International Research Journals	301	50.33	40.29	40	286	1
Academic Journals Inc.	-	-	-	-	-	-

INDEXATION STATUS	
Index	**Number**
Web of Science	2/34
Directory of Open Access Journals	1/34
Google scholar	34/34

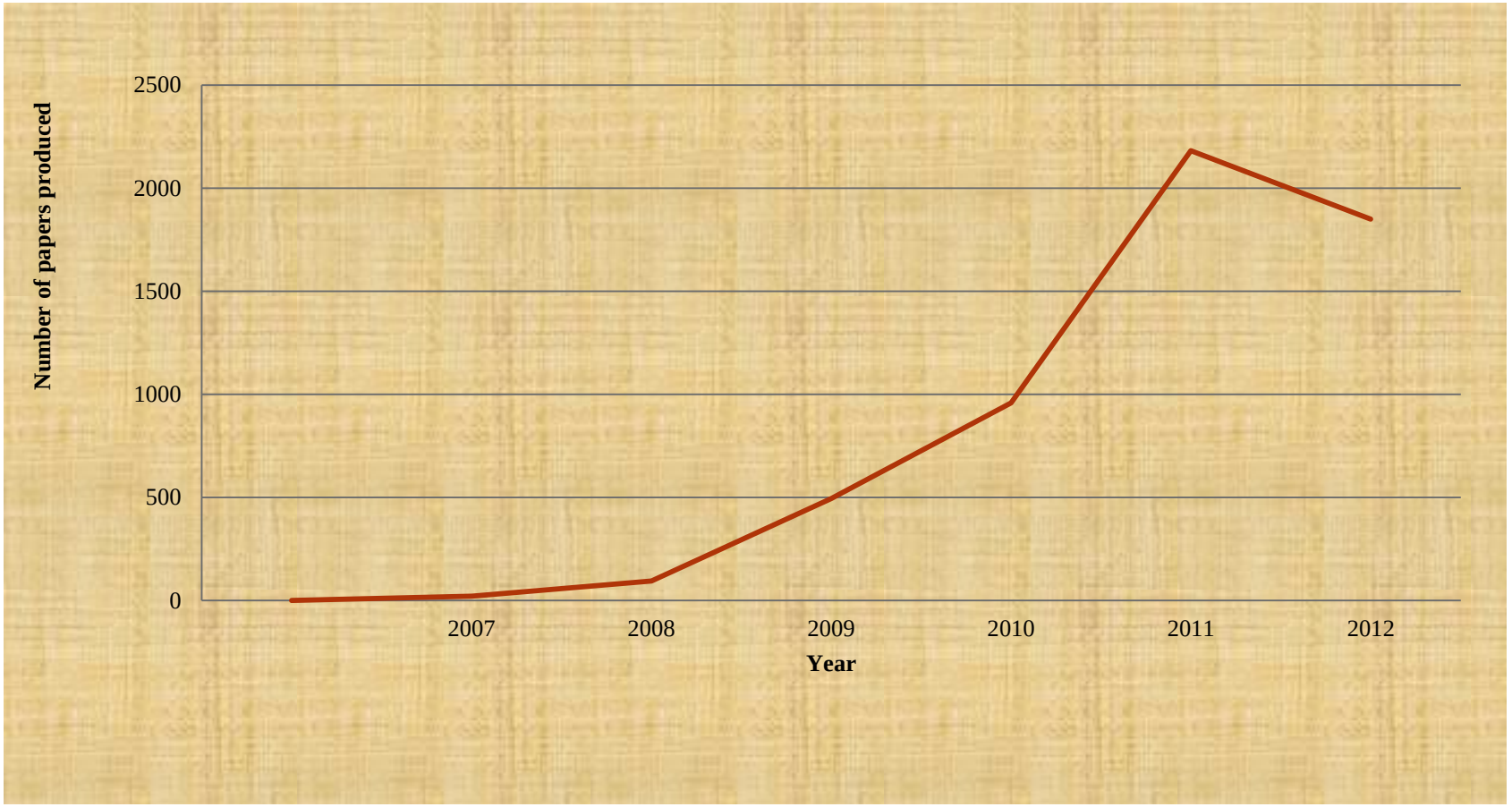
Publications by continents

Continent	No of countries contributing		Number of papers contributed	% of papers
	N	%	N	%
Europe	39	33.33	433	7.73
Africa	32	27.35	1588	28.35
Asia	31	26.50	3181	56.79
South America	6	5.13	163	2.91
North America	5	4.27	191	3.41
Oceania	3	2.56	19	0.34
Cent. America	1	0.85	3	0.05
Total	*117*	*100*	*5578*	*99.59*
Others		0	23	0.41
Grand total	*117*	*100*	*5601*	*100*

Top ten contributing countries to the Nigerian medical OA journals

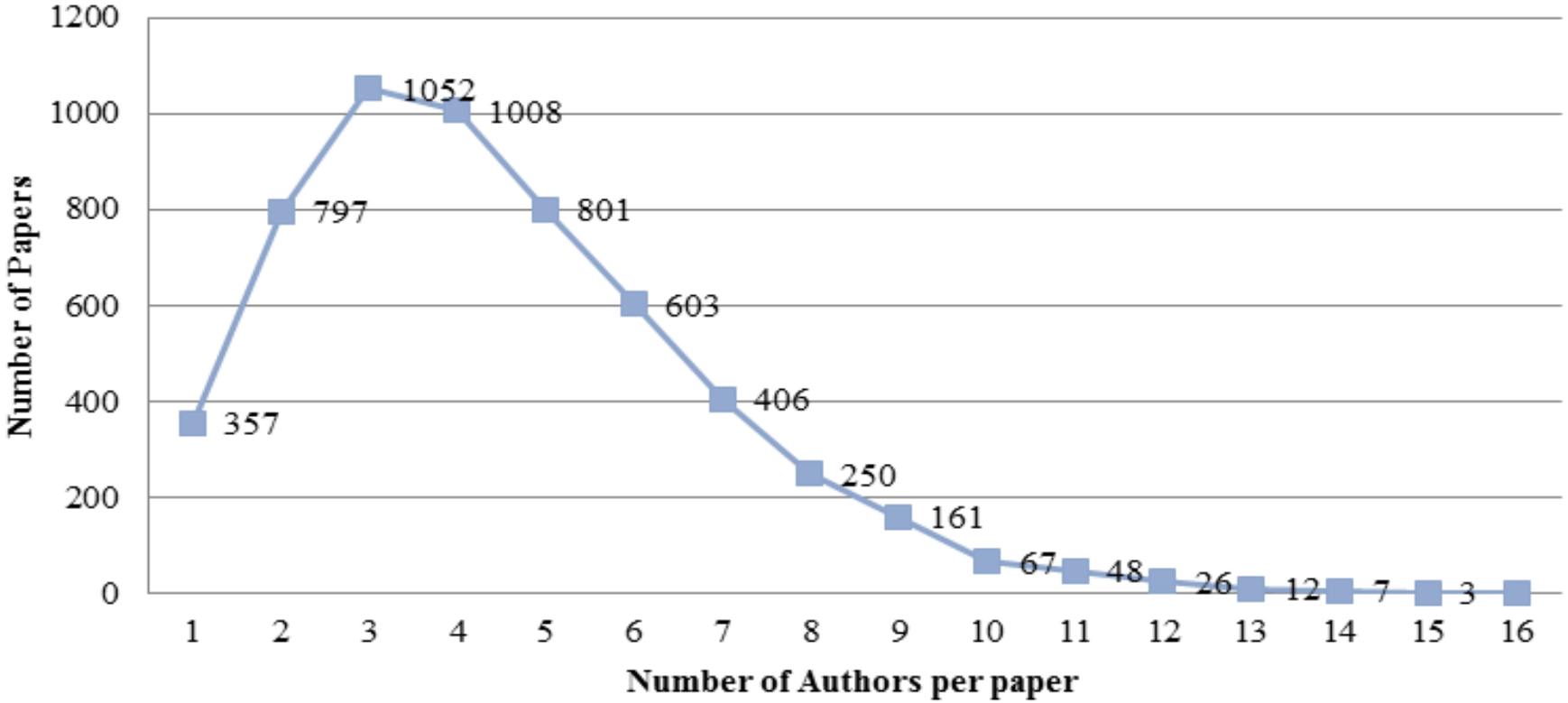
Continent	Countries	No of publications	%	Rank/ Global	Rank/ Regional
Africa	Nigeria	889	21.60	1	1
	South Africa	136	3.30	10	2
Asia	China	849	20.63	2	1
	India	634	15.41	3	2
	Iran	522	12.68	4	3
	Pakistan	382	9.28	5	4
	Malaysia	215	5.22	6	5
	S. Arabia	153	3.72	9	6
Europe	Turkey	189	4.59	7	1
S. America	Brazil	146	3.55	8	1
TOTAL		4115	100		

Paper production 2007-2012



Paper production came to a peak in 2011, and started declined thereafter

Figure 5: Number of contributions according to authorship



Papers with three authors 1052(18.8%) outnumbered other authorship categories, followed closely by papers with four, five, two and six authors each with 1,008 (18%), 801 (14.3%), 797(14.2%), and 603(10.8%).

Citation of the Nigerian Biomedical OA Journals by Continents

Continents	No of cntries	No of citations	%
Europe	18	469	16.92
Africa	14	506	18.25
Asia	13	1514	54.62
North America	3	186	6.71
South America	2	86	3.10
Oceania	1	11	0.40
	51	2772	100

Asia cited the papers the most (54.62%), followed by Africa

TOP TEN CITER COUNTRIES

	Countries	Number of citations	%	Rank/ Global	Rank/ Region
Asia	India	331	18.13	1	1
	China	296	16.21	2	2
	Pakistan	239	13.09	3	3
	Iran	194	10.63	4	4
	Malaysia	177	9.69	5	5
	Saudi Arabia	98	5.37	9	6
Africa	South Africa	143	7.83	6	1
	Nigeria	119	6.52	8	2
North America	USA	141	7.72	7	1
	Turkey	88	4.82	10	1
Total		**1826**	**100**		

Journals in Web of Science (WoS) citing Nigerian predatory biomedical OA journals

Journals in WOS citing Nigerian OA journals in WOS	Citing journals		Citations	
	N	%	N	%
Nigerian journals	5	9.25	313	26.19
Other journals	49	80.75	882	73.81
All journals	54	100	1195	100.00

The top five WoS journals citing the predatory journals are:

Journal of Ethnopharmacology, Molecules, BMC Complementary and Alternative Medicine, Plos One, Evidence Based Complementary and Alternative Medicine

Revenue

Average APC of USD636

Gross APC: .. to the tune of USD3,360,500 in six years

Considering that these are publishers operating at very low infrastructure threshold, this profit suggests a blossoming business.

Discussion

Is there any Reason to worry about these Journals?

i. Amazing global spread and heavy patronage
ii. Peer review is fly-by-night
iii. Indexation is neglected
iv. Periodicity is too rapid for new journals
v. Voluminosity too large

The author with the highest number of articles is Muhammad Akram, a lecturer in the Department of Eastern Medicine, University of Poonch, Rawalakot, Azad Jamu and Kashmir, Pakistan who contributed 20 papers during January 2007 – December 2012. Muhammad Akram's CV is freely available in the internet (see http://www.ecsdev.org/images/V1I1/CV%20M.Akram.pdf

One of Akram's papers is thus listed in his CV

"M. Akram, S. M. Ali Shah, H. M. Asif, Ghazala Shaheen, Tahira Shamim, M. Ibrahim Khan, Asmat Ullah and Khalil Ahmed, Comparative study of similarity and identity of human albumin with some selected organism albumin, *5(19):4974–4976:2011*".

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Full Length Research Paper

Comparative study of similarity and identity of human albumin with some selected organism albumin

M. Akram, S. M. Ali Shah, H. M. Asif, Ghazala Shaheen, Tahira Shamim,

M. Ibrahim Khan, Asmat Ullah and Khalil Ahmed

NOT AVAILABLE

Accepted: 03 October 2013 **Published:** 23 September 2011

What are the factors that explaining the sustenance of these journals?

i. A huge number of authors mainly from the South that cannot find space in the so-called mainstream journals or who choose to publish in the South
ii. Readiness of the authors to bear the APC
iii. Young and upcoming authors seeking for visibility
iv. Tight and cosmopolitan publishing regimes by the so-called mainstream journals
v. Poor technology environment
vi. Inordinate business motive
vii. Poor journal management skill

...factors continued

viii. Weak/absence of science policies and lack of research coordination

ix. Easy access to the Internet

x. Poor science literacy among scholars

Concluding Remarks and Recommendations

The startup or predatory journals will have a wider impact on scholarship throughout the world generally and in the low-income economies specifically in a short time to come, and the consequences might be harmful to science if their activities are not checked. The onus should be on academies, professional societies and institutions to define and prescribe publication channels to control where authors publish their papers.

Need for open mindedness: Warhust said "… certainly I do not believe that this is a toxic journal", and so may be many journals which have been slammed as predatory.

Beall himself cautioned: "… So the only way to judge them is by gathering all the information you can from their Web sites, from talking to them, from reading e-mails from people who have worked with them or submitted articles to them and combine all of that information and complete the analysis. And it is subjective"

Required

i. **Further studies are required about**
   - the journals, their managers, operations, content analysis adopting both observational and survey approaches
ii. **Who are the authors?**
   - science literacy, institutional and wider societal factors, etc

THANK YOU VERY MUCH