Influence of Demographic Factors on Research Productivity of Academic Librarians in Universities in North-Central, Nigeria

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Abstract

The study investigated influence of demographic factors on research productivity of academic librarians in universities in North-Central Nigeria. Three research questions were raised. Two null hypotheses were formulated and tested at 0.05 level of significance. Descriptive research design was used and the population was 207 academic librarians in 24 Universities in North-Central Nigeria. Multi-stage sampling technique was used to select 157 academic librarians in 13 randomly selected universities in North-Central Nigeria, Structured questionnaire was adopted. Descriptive and inferential statistics were used to analyse the data collected. Result showed the response rate of 112 respondents, and that males, MIS degree holders and assistant librarians dominated the respondents. Theses/dissertations were the major research output and that respondents published few articles in various outlets. The null hypotheses tested showed that, neither significant contribution of demographic factors to research productivity of academic

librarians nor significant difference between publication output by authorship and frequency range. The study concluded that there was neither spirit of collaboration nor differences in terms of research and publication output among academic librarians in universities in North-central geo-political zone. The study recommended among others, the university managements in the North-central Nigeria should encourage research and publication collaboration among academic librarians.

Keywords: *Research Output; Publication Output; Academic Librarians, Universities, North-Central, Nigeria.*

Introduction

Universities world-wide are established to provide learning, teaching, research and community services. Universities employ both teaching and non-teaching staff, and their roles are complimentary. Thus, the academic staff, particularly faculty members, saddled with not only teaching, rendering community services but also research activities to further enhance quality teaching and training of the undergraduate and postgraduate students in terms of researches. In fact, universities world-wide are ranked on the basis of research/publication output of academic staff. Thus researches carried out to earn degree or higher degree is expected to not only be of high quality but also contain innovations which are further used for national development (Saka, 2018).

The objective of establishing university libraries is to support the overall objectives of establ-ishing universities, which are for teaching/learning, research and community services. To achieve these objectives, university libraries are established to provide information resources to support undergraduate and postgraduate teaching, learning and research (Aina, 2004).

Before 1993, librarians in Nigerian universities were regarded as non-academic staff who do not have right to enjoy the same privileges like faculty staff (Omoluabi- Idodi and Bozimo 2012, as cited in NUC circular, 1993) and hence perform the professional duties in support of curriculum run and impleme-

nted in the universities. For it to be more pronounced, after the prompted strike action embarked on by ASSU in 1993 and with the negotiation with the academic staff of universities and Federal Government of Nigeria, librarians were granted the privileges and status like their counterparts in the academic department. Literature search revealed that in the (1980s) libraries in universities were granted academic status out of which academic productivity (teaching, research and publication) were among the criteria for promotion (Omuluabi-Idiodi and Bozimo, 2012; Omuluabi-Idiodi, 2012; Ugah, 2012)

With the privileges and academic status of librarians in Nigerian universities, it then means that they are not only involved in teaching and researches but also publish their research output in journals, textbooks, conference proceedings as well as presenting their research findings in seminars, conferences and workshops, and get promoted. In short they either publish or perish (promoted or stagnated on one rank). The equivalent ranks of academic librarians with their counterparts (faculty members) illustrated by Saka, Musa and Usman (2014) is shown below:-

CONUASS	Librarians by Rank	Faculty Members (Lecturers) by Rank
1.	Assistant Librarian	Graduate Assistant
2.	Librarian II	Assistant Lecturer
3.	Librarian I	Lecturer II
4.	Senior Librarian	Lecturer I
5.	Principal Librarian	Senior Lecturer
6.	Deputy University Librarian	Associate Professor
7.	University Librarian	Professor

influence of demographic factors on research productivity for academic librarians in universities in North-central, Nigeria.

Statement of the Problem

National development is the improvement in the social, economic, educational, scientific, cultural and political life of a country. One of the ways by which various development can take place is through research and development, which can further be accelerated through the effort of information professionals such as librarians and library educators. Librarians working in university libraries are expected to teach, conduct research, attend conferences and workshops as well as publish their researches in reputable outlets. With these additional requirement coupled with the discharge of professional duties (selection, acquisition, cataloguing and classification of collection, etc), Omoluabi-Idoidi and Bozimor 2012 posit that they are faced with the problems of not meeting the requirement of being promoted as academic staff, particularly in the areas of quality research and publication. The academic librarians are very much occupied with professional duties; attending or representing university librarians in the management meeting such that they do not have time to concentrate on research; engage themselves in professional development and publication (Tsafe and Abdurahman, 2016). This study is to investigate the influence of demographic factors on research productivity of academic librarians in university libraries in North-central, Nigeria.

Research Objectives

The study was confined to the following specific objectives:

1. identify demographic factors of academic librarians in universities in North-central Nigeria,
2. investigate the publication output of academic librarians by authorship in universities in North-central Nigeria,
3. determine the frequency range of publications by academic librarians in universities in North-Central Nigeria.

Research Questions

The study provides answers to the following specific research questions:

1. What are the demographic factors of academic librarians in universities in North-central Nigeria?
2. What is the publication output of academic librarians in universities in North-central Nigeria?
3. What is the frequency range of publication by academic librarians in universities in North-central Nigeria;?

Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

Ho1 There is no significant contribution of the demographic factors to research productivity of academic librarians in Universities in North-central Nigeria;

Ho2 There is no significant difference between publication output by authorship and frequency range of academic librarians in universities in North-central Nigeria.

Literature Review

Theoretical framework

A study of this nature is expected to be anchored on a related model or theoretical framework, particularly in the area of human productivity. This theory was propounded by Aithal and Kumal (2016). The study is based on Theory A for optimizing human productivity. Aithal and Kumar (2016) enumerated eight steps for achieving productivity in organizations. These eight steps include: planning, target setting, motivation, work strategies, monitoring, responsibility, role model and accountability. Organizations spell out their broad directions communicate the policy to members of the organization, interest of members in organization is aroused. Individual members are allowed to set their own goals in line with organizations goals; execution task are allowed to be carried in better way to serve as role model. Organizations can monitor and evaluate the performance of individual members against group goal and organization support. This theory is relevant to the present study in the sense that academic librarians

collaborate in terms of quality research and publication so that their universities can be ranked among the first ten in Nigeria. The publications of individual academic staff is usually accessed and the summation of the assessment gives individual university a place in the ranking. For example, in a study to find out the relationship between library resources and research productivity in five Nigerian health research institutes among other productivity by individual staff (Ugwuona and Dike, 2015).

Literature Review

Akinde and Nse (2011) reported that majority of librarians in Imo state, Nigeria, were not publishing, and this was attributed to lack of mentorship, low level of collaboration, lack of time due to heavy work load, etc. Omoluabi-Idiodi and Bozimo (2012) investigated the research productivity of librarians in university libraries in Nigeria with emphasis on publications output by types and frequency. Descriptive research design was adopted, with the target population of 169 librarians from 16 university libraries. Questionnaire was the only data collection instrument and data was analysed by descriptive statistics. Thesis/dissertation were the highest research output. Results showed that respondents patronised local/national journals as opposed to foreign journals, which causes paucity of the latter. However, This research is aimed at investigating the significant contribution of demographic factors to publication output as well as finding out the significant differences between publication by authorship and frequency range among academic librarians.

Anyanwu (2013), in a study to find out the "publication and research productivity among academic librarians in South-East Nigeria', reported that though few academic librarians were engaged in collaborative research/publication, they also possessed poor research and publication output, hence, published mainly in local journals. The respondents indicated that they conduct research and publish for promotion purposes.

Babalola (2013) investigated the job motivation, demographic and environmental factors and their influence on

librarians' productivity in 63 public colle-ges of education in Nigeria using survey research design. Total enumeration of 356 librarians was used while questionnaire was also used to collect data. Research questions, hypotheses and in-depth interview were further used to collect data. Results showed that the librarians' productivity significantly correlated with the independent variables. There was relative contribution of job motivation, staff development, educational qualification, work experience, job status, age, physical environment and collaboration with colleagues to librarians' productivity in colleges of education in Nigeria. Correlation table was used and the results further showed that gender had no significant influence, while age and educational qualification had significant influence on research productivity of librarians in colleges of education in Nigeria.

In a related study, Ani and Okwueze (2016) conducted bibliometric analysis of publication output of library and information science research in Nigerian universities between 2000 and 2014. Documentary sources, mainly two of the citation databases web of science were used. The results showed that Delta State University was the most productive and cited university in LIS research in Nigeria.

The uniqueness of the study lies on the fact that previous related studies were conducted in South-east and North-east Nigeria as well as research productivity of librarians in Nigerian universities, which cut across the six geo-political zones of Nigeria. There is a gap in the study of the demographic characteristics of librarians and their influence on research productivity, which has not been conducted in North-central Nigeria. This present study exa-mine not only the three demog-raphic factors (gender, qualific-ations and ranks) of academic librarians but also the significant difference between/and contributions of variables such as demographic factors, publication output by authorship and frequency range of publication to research productivity.

Methodology

Descriptive research design was used, as it deals with the relatio-

nship among variables and subjects of the study, thus involving data collection thereby prov-iding answers to the research questions (Ozioko, 2015). The target population of the study consisted of 207 academic librarians in the 24 National Universities Commission (NUC) approved universities in North-Central, Nigeria. Multi-stage sampling technique was used in the first stage to group/arrange the 24 universities by their types and ownership covering the six states and Federal Capital Territory, Abuja (FCT). The second stage involve the use of cluster sampling to select 13 universities within the six states and FCT Abuja, with at least one university from each cluster or state as the case maybe. In the third stage, convenience sampling was used to select 157 academic librarians from 13 sampled universities in the North Central geo-political zone. The selection of respondents in each university was carried out in such a way that samples selected is manageable, and accessibility to respondents would not create much problem.

Structured questionnaire similar to likert/rating scale was designed into two sections; demographic characteristics or factors and publication output by authorship and frequency range. Administration of the copies of questionnaire was carried out via research assistants in the studied universities.

Data was analyzed by descriptive method (percentages and means) as well as inferential method (testing of two null hypotheses) using regression model and analysis of variance (ANOVA) respectively to test whether there is significant contribution and interactive effect among independent variables of demographic factors, publication output by authorship and frequency range and dependent variable of research productivity of academic librarians. Results were presented in tables using descriptive and inferential statistics (frequency counts, percentage, as well as ANOVA and Regression Model). Statistical package for social sciences (SPSS 20.0) was used in data analysis. On the other hand, Otaha (2015) maintained that F-test is not only used for comparing three or more means but also the

"samples must be independent of each other". Aderotimi and Akinwunmi (2017) tested the differences between two independent variables and narrated the use of ANOVA to test the differences between independent variables.

Data Analysis and Interpretation

Table 1: Respondents by Universities

S/N	University	Type and Ownership of University	Location State	Copies of Questionnaire Administered	Copies of Questionnaire Retrieved	Total % Retrieved (Usable)
1.	Nile University of Nigeria, Abuja	Conventional/ Private	FCT, Abuja	8	3	1.91
2.	AUST, Abuja	Specialized/ Private	FCT, Abuja	5	2	1.27
3.	Baze University, Abuja	Conventional/ Private	FCT, Abuja	8	3	1.91
4.	Federal University of Technology, Minna	Specialized/ Public	Niger	20	14	8.92
5.	Federal University, Lokoja	Conventional/ Public	Kogi	10	7	4.46
6.	University of Jos, Jos	Conventional/ Public	Plateau	22	19	12.10
7.	Federal University, Lafia	Conventional/ Public	Nasarawa	10	8	5.10
8.	Nasarawa State University, Keffi	Conventional/ Public	Nasarawa	8	5	3.18
9.	Bingham University, Karu	Conventional/ Private	Nasarawa	8	6	3.82
10.	University of	Conventional/	FCT, Abuja	20	14	8.92

	Abuja, Abuja	Public			
11.	Kwara State University, Malete, Ilorin	Conventional/ Public	Kwara	10	9	5.73
12.	University of Ilorin, Ilorin	Conventional/ Public	Kwara	15	13	8.28
13.	Benue State University, Markurdi	Conventional/ Public	Benue	13	9	5.73
	Total			**157**	**112**	**71.30**

Key: AUST- African University of Science and Technology
Source: Field Survey, 2019

Out of 157 copies of questionnaire administered, 112 (71%) were filled and returned and found usable with higher and lowest respondents from University of Jos, Jos and AUST Abuja respectively. University of Jos, Jos, apart from being second generation University in the zone, it is a conventional university where almost all courses in human life are offered. AUST, Abuja, apart from being fourth-generation university in the zone, it is also a privately-owned and small university, where postgraduate courses in science and technology discipline are offered.

Research Question 1: What are the demographic characteristics of respondents?

Table 2: Demographic Factors of Respondents by their Universities

S/N	University	Gender				Qualification						Rank					
		Male	%	Female	%	BLIS	%	MLS/ Inf Sc.	%	PhD	%	AL	%	L II	%	L I	%
1.	Nile University, Abuja	3	2.34	-	0	3	2.68	-	0	-	0	1	0.89	1	0.89	1	0.89
2.	AUST, Abuja	1	0.78	1	0.78	2	1.79	-	0	-	0	1	0.89	1	0.89	-	0
3.	Baze University, Abuja	2	8.59	1	7.03	2	1.79	1	0.89	-	0	1	0.89	1	0.89	1	0.89
4.	Federal University of	5	3.91	9	7.03	2	1.79	10	8.93	2	1.79	8	7.14	3	2.68	3	2.68

	Technology, Minna																
5.	Federal University Lokoja	4	3.13	3	2.34	1	0.89	4	3.57	2	1.79	1	0.89	4	3.57	2	1.79
6.	University of Jos, Jos	7	5.47	12	9.38	3	2.68	13	11.6	3	2.68	8	7.14	9	8.04	2	1.79
7.	Federal University, Lafia	7	5.47	1	0.78	1	0.89	4	3.57	3	2.68	3	2.68	3	2.68	2	1.79
8.	Nasarawa State University, Keffi	5	3.91	-	0	1	0.89	3	2.68	1	0.89	-	0	5	4.46	-	0
9.	Bingham University, Karu	5	3.91	1	0.78	1	0.89	5	4.46	-	0	1	0.89	-	0	5	4.46
10.	University of Abuja, Abuja	8	6.25	6	4.69	2	1.79	7	6.25	5	4.46	12	10.7	1	0.89	1	0.89
11.	Kwara State University, Malete	7	5.47	2	1.56	-	0	9	8.04	-	0	2	1.79	-	0	7	6.25
12.	University of Ilorin, Ilorin	8	6.25	5	3.13	-	0	13	11.6	-	0	1	0.89	2	1.79	10	8.93
13.	Benue State University, Markurdi	6	4.69	3	2.34	1	0.89	7	6.25	1	0.89	1	0.89	4	3.57	4	3.57
	Total	**68**	**60.16**	**44**	**39.84**	**19**	**17.00**	**76**	**67.90**	**17**	**15.20**	**40**	**35.7**	**34**	**30.40**	**38**	**33.90**

Key:
BLIS = Bachelor of Library and Information Science.
MLS/Inf Sc= Master in Library Science/ Library and Information Science/Master in Information Science
PhD = Doctor of Philosophy (Library and Information Science)

This table provided answer to research question one which was to identify the demographic factors of academic librarians in universities in North-central Nigeria. Three demographic factors were investigated and include; gender, educational qualification and rank. From the gender column, there were 112 respondents, and males were discovered to be the highest with 68 (60.16%) as against female counterparts with 44 (39.84%). However, considering the columns for both genders, it has shown that the highest number of respondents by individual university came from University of Jos, Jos, with 12 (9.38%) female, and this was followed by Federal University of Technology, Minna, with 9 (7.03%) female respondents.

With the exception of the two listed universities, majority of males outnumber the female counterparts going by individual university.

In the area of educational qualifi-cations, Master degrees in Library and Information Science top the list, with 76 (67.90%) which can be attributed to the fact that with MLS degree, respondents have advantage of wide range of ranks between Librarian II and Senior Librarians. With few number of PhD holders, it is evident that it is not easy to acquire the terminal degree. This is because of the graduation requirements viz-a-viz vigorous academic exercises such as: undergoing course work, presenting required number of seminars, attending and presenting part of PhD work at conferences as well as publishing part of thesis in reputable journals within and outside Nigeria.

The third column was for respondents by their ranks, and based on data collected, only three ranks were discovered namely: Assistant Librarian, Librarian II and I. This means that 112 respondents were within these ranks. From the table column, it was discovered that 'Assistant Librarian' top the list with 40 (35.70%) and followed by 38 (33.90%) who were holders of BLS and master's degree respectively, and the least with respondents on the rank of Librarian I who are probably the newly-employed or transferred staff from their previous universities within Nigeria. On the rank column, respondents from Nasarawa State University (NSU), Keffi did not indicate their ranks.

Research Question 2: What is the research and publication output of academic librarians by authorship?

Table 3: Research and Publication Output of Academic Librarians by Authorship

Types of Publication	Authorship and % of Publications					
	Sole/Single Author	**Two Authors**	**Three Authors**	**Four Authors**	**Five Authors and above**	**Mean**
Articles in Peer Reviewed Journals (Foreign)	24 (18.75%)	53(41.40%)	41(32.03%)	5(3.91%)	5(3.91%)	1.00
Articles in Peer Reviewed Journal (National)	24 (18.75%)	39 (30.50%)	26(20.31%)	7(5.47%)	-	0.75
Articles in Peer Reviewed Journals (Local/State)	37 (28.91%)	45 (35.20%)	32(25.00%)	4(3.13%)	1(0.80%)	0.93
Conference Proceedings (Foreign)	7(5.47%)	12 (9.38%)	6(4.68%)	4(3.13%)	-	0.23
Conference Proceedings (National)	13 (10.16%)	21 (16.40%)	7(5.47%)	3(2.34%)	-	0.34
Conference Proceedings (Local/State)	21 (16.41%)	20 (15.60%)	15(11.72%)	2(1.56%)	1(0.80%)	0.46
Chapters in Books	19 (14.84%)	13 (10.20%)	11(8.59%)	3(2.34%)	2(1.60%)	0.38
Text Book	19 (14.84%)	6 (4.69%)	7(5.47%)	1(0.78%)	1(0.78%)	0.27
Theses/Dissertation	121 (94.53%)	5 (3.91%)	-	1(0.78%)	1(0.78%)	1.00
Published Reports	11(8.59%)	6 (4.69%)	-	-	1(0.78%)	0.14
Unpublished Reports	52 (40.63%)	17 (13.3%)	3 (2.34%)	1 (0.78%)	1(0.78%)	0.58

Table 4: Academic Librarians' Publication Output by Frequency Range

Types of Publication	Frequency Range					
	21-25	16-20	11-15	6-10	1-5	Mean
Articles in Peer-Reviewed Journals (Foreign)	-	-	-	11(8.59%)	54(42.19%)	0.51
Articles in Peer Reviewed Journal (National)	-	-	5(3.91%)	4(3.13%)	50(39.06%)	0.46
Articles in Peer Reviewed Journals (Local/State)	-	-	3(2.34%)	19(14.80 %)	48(37.50%)	0.55
Conference Proceedings (Foreign)	-	-	4(3.12%)	7(5.47%)	32(25.00%)	0.34
Conference Proceedings (National)	1(0.80%)	-	2(1.56%)	4(3.13%)	26(20.31%)	0.26
Conference Proceedings (Local/State)	2(1.60%)	1(0.78%)	1(0.78%)	5(3.91%)	43(33.59%)	0.41
Chapters in Books	2(1.60%)	1(0.78%)	2(1.56%)	1(0.78%)	37(28.91%)	0.34
Text Book	2(1.60%)	1(0.78%)	1(0.78%)	2(1.56%)	30(23.44%)	0.28
Thesis/Dissertation	1(0.78%)	1(0.78%)	-	1(0.78%)	62(48.44%)	0.51
Published Reports	3(2.30%)	2(1.56%)	-	5(3.91%)	37(28.91%)	0.37
Unpublished Reports	2(1.60%)	-	-	5(3.91%)	33(25.78%)	0.31

Table 4 showed the respondents by their research productivity in each of the range of research publications. Close to half of the respondents 62(48%) had published between 1 and 5

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Articles in Peer Reviewed Journals (Local/State)	-	-	3(2.34%)	19(14.80%)	48(37.50%)	0.55
Conference Proceedings (Foreign)	-	-	4(3.12%)	7(5.47%)	32(25.00%)	0.34
Conference Proceedings (National)	1(0.80%)	-	2(1.56%)	4(3.13%)	26(20.31%)	0.26
Conference Proceedings (Local/State)	2(1.60%)	1(0.78%)	1(0.78%)	5(3.91%)	43(33.59%)	0.41
Chapters in Books	2(1.60%)	1(0.78%)	2(1.56%)	1(0.78%)	37(28.91%)	0.34
Text Book	2(1.60%)	1(0.78%)	1(0.78%)	2(1.56%)	30(23.44%)	0.28
Thesis/Dissertation	1(0.78%)	1(0.78%)	-	1(0.78%)	62(48.44%)	0.51
Published Reports	3(2.30%)	2(1.56%)	-	5(3.91%)	37(28.91%)	0.37
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thesis/dissertations. Three respondents (2.30%) have published their research reports. Looking at the range of publication between 21 and 25, two publications each were from conference proceedings (local/state), textbook, chapter in books and unpublished reports, while publication was discovered from thesis/dissertations. This showed that out of the publication ranges of 16-20 and 21-25, 1 or 2 of them could be from thesis/dissertation which can further be from undergraduate, master's and/or doctoral degrees respectively.

From the mean score, data revealed that respondents patronized/published in local journals, as they have the highest mean score of 0.55. This situation could be attributed to the thorough review process of foreign journals through checking similarity index to reduce incidence of plagiarism. In addition, it is possible that some of the respondents also considered economic reason as it is cheaper to publish in local journal than foreign journals.

Testing of Hypotheses

H_{O1}: There is no significant contribution of demographic factors to research productivity among academic librarians.

Table 5: Regression Estimates of the Contribution of Demographic Factors to Research Productivity of Academic Librarians in Universities in North Central Nigeria

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43.001	2	21.501	2.372	0.118[h]
	Residual	190.332	21	9.063		
	Total	233.333	23			

From the observed significant levels for the contribution of variables shown on the table, the selected parameters were discovered to be non-significant. The table showed regression

analysis which indicate $F_{(2,372)} = 0.118$; $p>0.05$. This implies that there is a statistically non-significant contribution of demographic factors (gender, marital status, educational qualification and rank) to research productivity of academic librarians in univer-sities in North-central Nigeria. Since there was no significant contribution in the analysis, the hypothesis was accepted. This implies that demographic factors do not contribute to research productivity among academic librarians.

Ho_2: There is no significant difference between publication by authorship and frequency range among academic librarians in universities in North-Central, Nigeria

Table 6: Summary of Analysis of Variance (ANOVA) of Publication by Authorship and Frequency Range of Academic Librarians in Universities in North-Central Nigeria

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	129.666	1	129.666	0.331	0.567
within Groups	34522.734	88	392.304		
Total	34652.400	89			

Table 6 showed Analysis of Variance (ANOVA) table which indicated $F(1, 89) = 0.331$; $p>0.05$. Hence, the null hypothesis was accepted, therefore there was no significant difference between publication by authorship and frequency range among academic librarians in universities in the geo-political zone.

Discussion of Findings

Research question one sought to find out the demographic factors of academic librarians in university libraries in North-central Nigeria. It was discovered that the highest respondents were males, holders of MLS degree and those on the rank of Assistant Librarian. This finding disagree with that of Babalola (2013) who discovered that gender had no significant influence, while age and educational qualification had significant influence on

research productivity of librarians in colleges of education in Nigeria.

Research question two found out academic librarians' publication output by authorship. It was discovered that single/sole authorship in thesis/dissertation write-up was the highest publication output. However, it is not surprising as majority of the respondents engaged, at one time, during their undergraduate/postgraduate researches to write thesis/dissertation independently. These findings however disagree with that of Anyanwu (2013) who discovered that few academic librarians in South-west Nigeria were engaged in joint research productivity.

Research question three sought to investigate the frequency range of publication output of academic librarians. It was discovered that majority of respondents published between 1 and 5 publications. This showed that academic librarians published few articles which may not meet up with the criteria for promotion. This finding is contrary to that of Omoluabi-Idiodi and Bozimo (2012) and that of Tsafe and Abdulrahman (2016). The former co-researchers discovered that 45.6% of librarians do not have publications at all, while Tsafe and Abdulrahman (2016) reported that 123 librarians authored 373 publications in universities in North-west, Nigeria.

Two null hypotheses were formulated and tested at 0.05 level of significance. Hypothesis one tested significant contribution of demographic factors (gender, educational qualification and rank) to research productivity among academic librarians in university libraries in North-central Nigeria. The result showed no significant contribution of demographic factors to research productivity among academic librarians. This showed that gender, educational qualification and rank do not have positive influence or contribution to research output of academic librarians in university libraries in North-central, Nigeria. This result is not in line with the results of Babalola (2013). The researcher reported that the research productivity of librarians have significant relationship/composite influence of job motivation, staff

development, academic qualification and coll-aboration on their productivity. The result from the tested hypothesis using Analysis of Variance (ANOVA), revealed that there was no significant difference between research and publication output by authorship and frequency range among academic librarians in university libraries in North-central, Nigeria. This is a reflection that both publication output by authorship and by frequency range are the same. This finding contradicts that of Anyanwu (2013) who found out that few academic librarians were engaged in collaboration in the area of research and publications.

Conclusion

The study has revealed that demographic factors in research i.e age, rank, educational qualifications and gender playsignificant role in research productivity particularly among academic librarians. The assertion of demographic factors with research output will on doubt enhance the ranking of universities. For example academic librarians with higher qualifications (MLS and PhD) and rank principal/deputy university librarians can contribute positively to research productivity, thus enhancing the Institutional Digital Repositories (IDR) in universities in Nigeria.

Recommendations

Based on the findings, the study proffers that the management of universities in North-central, Nigeria:

1. Should not only employ more female librarians but encourage librarians to pursue their doctoral degree, write and publish, so as to get promoted as it when due.
2. Should encourage collaborative research and publication among academic librarians. This can be achieved through the use of academic librarians with different but related field of research interest.
3. Should encourage wide range of researches and publications in related areas to librarianship. This can be achieved by exploring different but related and interdisciplinary fields to librarianship. For example: climate variability and it influence on library building and re-

sources, geographic information system, bibliometric.

4. Should encourage academic librarians to work as team and at the same time ensure healthy competition with one another on the area of research and publication.

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