

Demographic Variables and Library Patronage of Undergraduate Students at Universities in South West Nigeria

Akanmu Oluwole Odunola

<https://orcid.org/0000-0001-9115-3288>

Federal University Oye-Ekiti, Nigeria

Adeyinka Tella

<https://orcid.org/0000-0002-5382-4471>

University of Ilorin, Nigeria

University of South Africa

tellayinkaedu@yahoo.com

Abstract

This study investigated the influence of demographic variables, such as gender, age, and the levels of study, on the library patronage by the undergraduate students at universities in South West Nigeria. It also focused on the improvements and innovations wanted by the undergraduate students in the library in view of the technological advancements ushered in by the fourth industrial revolution, and the hindrances to the patronage of the library. A survey research design was adopted using a sample size of 1 333 respondents selected out of the total population of 239 048 undergraduate students at universities in South West Nigeria. A questionnaire was used to collect the data, which were analysed using frequencies, percentages, mean and standard deviation, Pearson's chi-squared test and regression. The study found that the demographic variables have a significant influence on the library patronage. The most important improvements and innovations wanted by the respondents included high speed internet facilities, the introduction of artificial intelligence and robotics, increased subscriptions to more databases such as Scopus and Web of Science, and stocking the library with recent information materials that comprise both print and electronic materials. Hindrances and factors that discourage library patronage are limited and non-functioning workstations, poor networks and outdated collections. The study recommended that Nigerian university libraries provide high speed internet facilities, introduce artificial intelligence and robotics to the operations and services of the libraries, increase their academic subscriptions, and stock the libraries with recent collections.

Keywords: demographic variables, library, patronage, university, South West Nigeria

Introduction

A university is an institution of higher education which offers academic degrees in various subjects to undergraduate and postgraduate students. A university depends on the library collections for the provision of information materials for learning, teaching and research. A university library provides services such as the charging and discharging of books, a help desk, reference queries, placing books on hold for charging out at a specified time, reprography, reading room, computers, and other information materials that are also available in the library for patronage by the undergraduate students (Odunola 2018). Without mincing words, a library is essential in the university system and likewise its patronage by intended users becomes a necessity for educational support (Prakash 2017).

However, Onuoha and Subair (2013), in a study in Nigeria, reported that studies and observations suggest that there is a decline in library patronage. Similarly, Akin and Ajayi (2008) called the attention of researchers to the decline in library patronage whereas Yusuf and Iwu (2010) explained that although libraries are being patronised, they are reduced to seasonal places which most students visit to read when preparing for examinations. Odunola and Tella (2019) also observed that libraries are regarded as a reading centre in which users do less of in-depth consultation of the resources. This decline in library patronage could mean that library resources and services are not being fully used by the students.

The government in Nigeria has invested billions of naira on the acquisition of books, journals, online database subscriptions, e-journals and e-books to support the collections of university libraries. If the libraries are not patronised and these resources are not used by the undergraduate students, the investment by the government is considered a waste. Therefore, it is critical to investigate the library patronage from the perspective of the demographic variables such as gender, age, and year or level of study to determine whether they could influence the library patronage.

Aim of the Study

The aim of the study was to investigate the influence of demographic variables on library patronage by undergraduate students at universities in South West Nigeria.

Objectives of the Study

The specific objectives are to:

- examine the influence of demographic variables (gender, age, year or level of study) on library patronage by undergraduate students at universities in South West Nigeria;
- determine the extent of library patronage by undergraduate students at universities in South West Nigeria;

- highlight the improvements and innovations that undergraduate students want to increase their library patronage; and
- identify the hindrances to or factors discouraging undergraduate students' patronage of the library.

Research Questions

- What is the influence of demographic variables (gender, age and year or level of study) on library patronage by undergraduate students at universities in South West Nigeria?
- What is the extent of library patronage by undergraduate students at universities in South West Nigeria?
- What improvements and innovations do the undergraduate students want to increase their library patronage?
- What factors hinder or discourage the undergraduate students' patronage of the library?

Literature Review

Patronage enables the library management to determine what users want, which helps libraries design, refine and monitor their services and identify service problems. User satisfaction on the other hand is a concept that includes the level of satisfaction of users after patronising the library, and their likelihood to return to that library when next information is needed by them (Song 2009).

Okoronkwo (2015), in a study on the decline in library patronage in North West Nigeria, reported factors such as obsolete books and dilapidated structures that influenced the decline in library patronage. The author noted that inadequate funding had hindered the smooth operation of most public libraries, leading to poor patronage. In the Kebbi, Katsina and Kano States of Nigeria, most conventional libraries either closed down or serve as “mere reading rooms” without the books needed to add value to studies (Odunola and Tella 2019).

Aliu and Emese (2014) conducted a study on the time series analysis of students' patronage of the John Harris Library (E-learning Centre) at the University of Benin, Nigeria. Time series was analysed using the Zaitun Time Series software applied to four-year data (2009–2012) which were retrieved from the E-learning Centre. The results from the study show 23 107 patronage for 2009; 22 455 patronage for 2010; 11 707 patronage for 2011; and 16 814 patronage for 2012. These results revealed a decrease in the patronage of students of the library. Ofodile and Ifijeh (2013) investigated the library patronage by lecturers from faculties at the Ladoke Akintola University of Technology, Ogbomosho, Nigeria. A descriptive survey type of research design was adopted for the study. A total of 350 respondents (lecturers) were selected using stratified random sampling out of a total population of 700. The study revealed

that there was a significant reduction in the library patronage of the lecturers. The study identified the unavailability and inaccessibility of current information materials, and poor reference and document delivery services as barriers to the library patronage.

Onuoha and Subair (2013) examined the library patronage among undergraduates at federal universities in South West Nigeria with the objectives of determining the frequency of library visits, the extent of use of the library resources, and challenges faced by students when using the library. The descriptive survey design was used for the study. The multi-stage sampling technique was used for selecting a sample size of 633 from the total population of 2 086 third-year students. Data were collected with the aid of a questionnaire and analysed using frequency distribution and percentage counts. Findings from the study revealed that the majority of the respondents patronised the university library. Books and the help-desk service were found to be heavily patronised. The lack of relevant books and the breakdown of internet facilities were, however, found to be the greatest challenges when using the library. The results of this study are an indication that the findings on library patronage by the undergraduate students at universities in Nigeria are mixed.

Odede and Odede (2016) examined the frequency of library patronage. The result of the study revealed that the majority of the undergraduate students use online resources in the library frequently. A total of 91 respondents (45.5%) use online resources daily; 73 (36.5%) use online resources weekly; and 25 (12.5 %) use online resources monthly. Similarly, Oluyomi (2016) examined the frequency of library use by undergraduates at the University of Ibadan. The study revealed that 60 per cent of the respondents used the library at least twice a week. Daily use of the library to study and read for examinations was 30 per cent, whereas finding materials for assignments, doing research work, and consulting references ranged from 12 to 20 per cent in each case. This result is also a reflection of the decline in library patronage.

There is a measure of difference in individuals' access and patronage of university libraries owing to demographics factors. These factors such as gender, age, income, and skills, may serve as determinants of the access and use of information and communication technology at the university libraries. It is therefore of paramount importance to analyse the demographic variables of undergraduate students in relation to information technology skills needed to patronise library resources in this information age (Olatokun 2009). In response to this, Quadri (2015) investigated the influence of demographic factors (age, gender, level of study, and religion) on the patronage of online library resources in selected universities in Nigeria. The author reported that the categories of student that patronised the online public access catalogue (OPAC) were mostly the 300- and 400-level students (i.e. year 3 and 4) with 26.5 per cent and 46.5 per cent respectively. The study also revealed that library patronage varies based on age groups with the respondents of ages 19 to 21 years who recorded the highest percentage of patronage than others.

Rahman, Mahmud and Jamaludin (2013) similarly investigated the influence of gender on the patronage of university libraries in Malaysia. A survey research design was adopted with a sample of 534 students. A questionnaire was distributed and the data collected were analysed using descriptive statistics and Pearson's product-moment correlation. The findings showed that the distribution of the means score patronage of library between male and female respondents is comparable with the exceptions of a few respondents who patronised the library more frequently. The respondents of ages 31 and 40 years were found to have patronised the library more frequently compared to other age groups. About 50 per cent of the respondents in this group have patronised the library for about four times on average in a week. The results further revealed that there was no significant difference in the mean score on patronage of the library between the male and female group. However, there was a significant difference between age groups, i.e. between ages 22 and 30 years and 31 and 40 years.

Saikia and Gohain (2013) examined the use of library resources and services, users' satisfaction, and information-seeking behaviours of the students and research scholars at the Tezpur University in India. A survey research design was adopted for the study. A total of 200 copies of the questionnaire were distributed among the students and research scholars. Descriptive statistics such as the frequency, mean and standard deviation were used for the data analysis. The results of the study revealed that the majority of the respondents (82.4%) patronised the library to use text books, 79.9 per cent patronised the library to use journals and 75.5 per cent patronised the library to use newspapers. The results of the study also revealed that the students and research scholars of the Department of Engineering patronised the library more frequently than the students and research scholars of the Department of Science.

Fabunmi and Asubiojo (2013) investigated the use of library resources by undergraduate students at the Obafemi Awolowo University in Nigeria. They discovered that the respondents' gender was not statistically significant, but that the differences between patronages of the library at various levels of study were statistically significant. Sivathaasan (2013) examined personal characteristics and the use of library facilities at the University of Jaffna in Sri Lanka. The study adopted a survey research design. A total of 202 copies of the questionnaire were randomly distributed to the undergraduate students. The responses were analysed using descriptive and inferential statistics. The results of the study revealed that demographic characteristics influence the patronage of library facilities.

Wu and Yeh (2012) surveyed the effects of undergraduate students' computer competence on the use of electronic library collections at the National Taiwan University. The study adopted a survey research design. A total of 443 copies of the questionnaire were randomly distributed to the undergraduate students. The responses were analysed using descriptive statistics of mean, percentage, standard deviation. The results revealed that not all undergraduate students possessed equivalent information technology skills to patronise the electronic library resources and services. Gender and

the course of study were factors that correlate with patronage of electronic resources in the library.

Methodology

The descriptive survey research design was adopted for the study. The total population of the study consisted of 239 048 undergraduate students at universities in South West Nigeria (Odunola 2018). The Research Advisors' (2006) published table with a confidence level of 95 per cent and a margin error of ± 2.5 was used to select 1 527 respondents who represented the sample for the study. A questionnaire was used as the research instrument for the data collection. The reliability of the instrument was determined when it was administered to 30 undergraduate students who were outside the envisaged population but who shared the same characteristics with the respondents in the study. The 30 responses were collected and divided into halves and then correlated. The reliability coefficient using Cronbach's alpha yielded $r = 0.80$.

The researcher administered the questionnaire at the participating universities after seeking permission from the appropriate authorities. At each of the universities, the respondents' informed consent was sought before administering the questionnaire and they were assured of the confidentiality of the data they supplied and that the exercise was purely for research. A total of 1 527 copies of questionnaires were randomly distributed to undergraduate students at the selected university libraries, out of which 1 333 copies were returned, representing a response rate of 87.3 per cent. The data collected were analysed using the Statistical Package for Social Sciences (SPSS). Pearson's chi-squared test, frequencies, percentages, mean and standard deviation and regression were used to analyse the collected data.

Results

Response rate of Questionnaire

A total of 1 527 copies of the questionnaire were distributed to the respondents at the university libraries in South West Nigeria. A total of 1 333 copies were returned, giving a response rate of 87.3 per cent. Table 1 shows the number copies of the questionnaire distributed and the usable number that were retrieved.

Table 1: Questionnaires administered and returned and the response rate

Name of university	Number of copies of questionnaire administered	Number of copies of questionnaire returned and valid for analysis	Response rate (%)
Adekunle Ajasin University (AAUA)	128	114	89.1
Ekiti State University (EKSU)	147	137	93.2
Federal University of Agriculture (FUNAAB)	95	81	85.3
Federal University Oye-Ekiti	38	35	92.1

Name of university	Number of copies of questionnaire administered	Number of copies of questionnaire returned and valid for analysis	Response rate (%)
(FUOYE)			
Federal University of Technology Akure (FUTA)	77	62	80.5
Ladoke Akintola University of Technology (LAUTECH)	160	144	90.0
Lagos State University (LASU)	224	204	91.7
Obafemi Awolowo University (OAU)	152	135	88.8
Olabisi Onabanjo University (OOU)	64	52	81.3
Ondo State University of Science and Technology (OSUSTECH)	46	38	82.6
Osun State University (UNIOSUN)	83	72	86.8
Tai Solarin University of Education (TASUED)	78	65	83.3
University of Ibadan (UI)	86	77	89.5
University of Lagos (UNILAG)	149	117	78.5
Total	1 527	1 333	87.3

Source: Field survey 2017

Table 1 shows that the highest number of responses was from LASU, with 204 (91.7%) out of 224 copies of the questionnaire distributed and valid for analysis. This was followed by LAUTECH, with 144 (90.0%) out of 160 distributed to the respondents. The EKSU, OAU, UNILAG and AAUA followed with 137 (93.2%), 135 (88.8%), 117 (78.5%) and 114 (89.1%) out of 147, 152, 149 and 128 copies of the questionnaire which were distributed to the universities, respectively. Generally, a total of 1 333 copies of the questionnaire returned were usable for the analyses.

Table 2 shows the distribution of the respondents by gender on library patronage at the universities in South West Nigeria. The majority of the respondents 704 (52.8%) were male students and 629 (47.2%) were female students. The distribution of the respondents (undergraduate students) by age shows that the majority, 700 (52.5%), were between the ages of 21 and 25 years, 510 (38.3%) respondents were between the ages of 16 and 20 years, 107 (8.0%) respondents were between the ages of 26 and 30 years, and 16 (1.2%) respondents were between the ages of 31 and 35 years. The distribution of the respondents by level of study also revealed that the majority of the respondents, 455 (34.1%), were at 200 level or year 2 undergraduate students, 378 (28.4%) respondents were at 300 level or year 3 undergraduate students, 193 (14.5%) respondents were at 100 level or year 1 undergraduate students, 208 (15.6%) and 99 (7.4%) respondents were at 400 level and 500 level or year 4 and 5 undergraduate students respectively.

Table 2: Respondents' demographic information

Demographics	Frequency	Percentage
Gender		
Male	704	52.8
Female	629	47.2
Total	1 333	100
Age		
16–20	510	38.3
21–25	700	52.5
26–30	107	8.0
31–35	16	1.2
36 +	0	0
Total	1 333	100.0
Year/Level of study		
Year 1/100 level	193	14.5
Year 2/200 level	455	34.1
Year 3/300 level	378	28.4
Year 4/400 level	208	15.6
Year 5/500 level	99	7.4
Total	1 333	100.0

Research Question One: What is the influence of demographic variables on library patronage of undergraduate students at universities in South West Nigeria?

To determine the influence of demographic variables of undergraduate students on library patronage, provision was made in the questionnaire for the students to indicate their gender, age, level of study and course of study. The data were cross-tabulated with the library patronage using Pearson's chi-squared test. The results are presented in Table 3.

Table 3: Influence of demographic variables on library patronage using Pearson' chi-squared test

Demographic variables	Value	Df	<i>p</i> -value (Asymp. Sig.) (2-tailed)
Gender	58.155	38	0.019
Age	2.389E2	152	0.000
Level of study	2.542E2	152	0.000

Table 3 shows the influence of demographic variables of the respondents on library patronage at universities in South West Nigeria. Pearson's chi-squared test was conducted to examine whether there was a significant relationship between demographic variables and library patronage. The results revealed that there was a significant relationship between gender and library patronage ($\chi^2 = 58.51$, $N = 1\,333$, $df = 38$, $p < 0.05$). In addition, the result also revealed that there was a significant relationship between age and library patronage ($\chi^2 = 2.389E2$, $df = 152$, $p < 0.05$). Similarly, there was a significant relationship between the level of study and library patronage ($\chi^2 = 2.542E2$, $df = 152$, $p < 0.05$). All of these imply that demographic variables have an influence on library patronage by the undergraduate students at universities in South West Nigeria.

To further clarify the way in which demographic variables influence undergraduate students' library patronage, and to indicate the direction of the influence, a separate analysis on each of the demographic variables was conducted. Tables 4, 5 and 6 present the results.

Table 4: Influence of gender on the undergraduate library patronage

S/N	Gender	Frequency	Mean $\bar{x}$	SD
1	Male	704	0.52	19.3
2	Female	629	0.47	17.2
3	Total	1 333		

Source: Field survey 2019

The results in Table 4 show that there is gender influence on the undergraduate students' library patronage with the male undergraduate students demonstrating greater library patronage of the library ($\bar{x} = 0.52$; and $SD = 19.3$) than the patronage demonstrated by their female counterparts ($\bar{x} = 0.47$; and $SD = 17.2$). This implies that the male undergraduate students patronise the library more than the female undergraduate students.

Table 5: Influence of age on the undergraduate library patronage

Model	B	Std. Error	Beta	t-value	p
Constant (library patronage)	25.635	3.607		6.557	.000
16–20 years	.298	.182	.300	1.309	.000
21–25 years	.301	.199	.345	2.001	.000
26–30 years	.307	.201	.434	3.122	.000
31 years +	.502	.095	.573	4.616	.000

Source: Field survey (2019)

Dependent variable: Library patronage

Independent variable: Age grade

Table 5 shows the extent to which age had a significant influence on library patronage by the undergraduate students. The results revealed that undergraduate students in the age group 31 years and above demonstrate significant patronage of the library (Beta = .573; $t = 4.6$) than the other age groups. Following closely are the undergraduate students aged 26–30 years (Beta = .434; $t = 3.1$), the undergraduate students aged 21–25 years (Beta = .345; $t = 2.001$), and the undergraduate students aged 16–20 years (Beta = .300; $t = 1.3$). This implies that age exerts a significant influence on undergraduate library patronage with students aged 31 years and above and 26–30 years patronising the library more frequently than the other age groups, thereby indicating that, the more undergraduates advance in age, the more they patronise the library.

Table 6: Influence of year/level of study on the undergraduate students' library patronage

Model	B	Std. Error	Beta	t-value	p
Constant (library patronage)	21.701	3.567		5.337	.000
Year/Level 1	.289	.199	.327	1.381	.000
Year/Level 2	.296	.198	.361	2.332	.000
Year/Level 3	.300	.207	.467	3.452	.000
Year/Level 4	.317	.195	.552	4.778	.000
Year/Level 5	.401	.211	.593	4.931	.000

Source: Field survey (2019)

Dependent variable: Library patronage

Independent variable: Year/level of study

Table 6 shows the extent to which the year or level of study had a significant influence on the library patronage by the undergraduate students. The results revealed that undergraduate students in year five of study demonstrate significant patronage of the library (Beta = .593; $t = 4.9$) than the students in the other years and levels of study. This is followed by the undergraduate students in year 4 of study (Beta = .552; $t = 4.8$), undergraduate students in year 3 of study (Beta .467; $t = 3.5$), the undergraduate students in year 2 (Beta = .361; $t = 2.3$), and the undergraduate students in year 1 of study who demonstrated low patronage of the library (Beta = .327; $t = 1.4$). This implies that the year or level of study significantly influences undergraduate students' library patronage, thereby demonstrating that as students advance in their level and year of study, their patronage of the library increases.

Research Question Two: What is the extent of library patronage of undergraduate students in universities in South West Nigeria?

To determine the extent of library patronage by undergraduate students in universities in South West Nigeria, the respondents were provided with options of very highly patronised (VHP), highly patronised (H), moderately patronised (MP), low patronised

(LP) and very low patronised (VLP) in the questionnaire. They were requested to indicate their levels of library patronage using these indicators.

Table 7 reveals the extent of library patronage by undergraduate students at universities in South West Nigeria. The majority of the respondents indicated that they patronised the reading room of the library to prepare for examinations at a very high rate ($\mu = 4.18$). The results revealed that the library was very highly patronised by the undergraduate students as a reading room to study their own information materials ($\mu = 4.12$), and highly patronised to read library books ($\mu = 3.82$). The library was highly patronised as a reading room for assignments ($\mu = 3.69$), to borrow information materials (for example, books) ($\mu = 3.62$), and for making photocopies ($\mu = 3.32$). The use of the OPAC was highly patronised to search for library holdings ($\mu = 3.17$), to search library books and to place books on hold to be collected later at the circulation ($\mu = 3.12$). However, library subscribed databases were moderately patronised ($\mu = 2.99$), whereas the library website were lowly patronised ($\mu = 2.84$). The results hereby imply that the undergraduate students patronised the library to a high extent.

Table 7: Extent of library patronage of undergraduate students at universities in South West Nigeria

S/N	Library patronage	VH (%)	H (%)	M (%)	L (%)	VL (%)	μ	Σ	Decision
1	I patronise the library to read books	427 (32.0)	590 (44.3)	61 (4.6)	162 (12.2)	93 (7.0)	3.82	1.204	H
2	I patronise the library to do assignments	318 (23.9)	653 (49.0)	87 (6.5)	187 (14.0)	88 (6.6)	3.69	1.169	H
3	I patronise the library to borrow information materials	344 (25.8)	556 (41.7)	112 (8.4)	224 (16.8)	97 (7.3)	3.62	1.235	H
4	I patronise the library to use OPAC to search for library holdings	215 (16.1)	441 (33.1)	187 (14.0)	341 (25.6)	149 (11.2)	3.17	1.284	H
5	I patronise the library through the library website	181 (13.6)	340 (25.5)	139 (10.4)	435 (32.6)	238 (17.9)	2.84	1.347	M
6	I patronise the library to use the reprographic services	286 (21.5)	472 (35.4)	118 (8.9)	299 (22.4)	158 (11.9)	3.32	1.345	H
7	I patronise the library to prepare for exams	617 (46.3)	515 (38.6)	65 (4.9)	95 (7.1)	41 (3.1)	1.18	1.021	VH

S/N	Library patronage	VH (%)	H (%)	M (%)	L (%)	VL (%)	μ	Σ	Decision
8	I patronise the library to place books on hold to be collected later at the circulation	217 (16.3)	396 (29.7)	200 (15.0)	368 (27.6)	196 (14.7)	3.12	1.291	H
9	I patronise the library to use the subscribed databases	203 (15.2)	374 (28.1)	163 (12.2)	397 (29.8)	196 (14.7)	2.99	1.333	M
10	I patronise the library to meet with friends and to discuss information materials	581 (43.6)	531 (39.8)	61 (4.6)	121 (9.1)	39 (2.9)	4.12	1.046	VH

μ = mean

σ = standard deviation

VHP (4.01–5.00), HP (3.01–4.00), MP (2.01–3.00), Low P (1.01–2.00), VLP (0.01–1.00)

Table 8 shows the frequency at which undergraduate students patronised the library at universities in South West Nigeria. A total of 435 (32.6%) respondents patronised the library between 2 and 3 times a week, 354 (26.6%) respondents patronised the library daily, and 175 (13.1%) respondents patronised the library once a week. Furthermore, 124 (9.3%) respondents patronised the library once a semester, 98 (7.4%) respondents patronised the library once in 2 weeks, and 75 (5.6%) respondents patronised the library monthly. These results also indicate that the frequency of undergraduate students' library patronage is very high.

Table 8: Frequency of undergraduate students' patronage of the library at universities in South West Nigeria

Items	Frequency	Percentage
Daily	354	26.6
Two to three times a week	435	32.6
Once a week	175	13.1
Once in two weeks	98	7.4
Monthly	75	5.6
Once a semester	124	9.3
When I feel like it	72	5.4
Total	1 333	100.0

Source: Field survey 2017

Research Question 3: What improvements and innovations do the undergraduate students want to increase their library patronage?

To answer this research question, the respondents were asked to identify the improvements and innovations they want in the library that will increase their patronage of the library. The results are presented in Table 9.

Table 9: Improvements and innovations to increase library patronage by the undergraduate students

S/N	Impact	Frequency	Mean $\bar{x}$	SD
1	High speed internet facilities	321	35.6	7.8
2	Increased workstations	259	28.7	6.3
3	Improvement in 24/7 ask-a-librarian service	107	11.8	2.6
4	Quick and immediate response to queries on library electronic platforms such as social media (Twitter, Facebook, YouTube)	87	9.6	2.1
5	Introduction of robotics and artificial intelligence	303	33.6	7.3
6	E-registration	15	1.6	0.3
7	Stocking the library with recent collections both in print and electronic	105	11.6	2.5
8	Increase subscriptions to more databases such as Scopus and Web of Science	105	11.6	2.5
9	Other: dormancy of library website and blog to follow library events	31	3.4	0.7
	Total	1 333		

The analysis on the improvements and innovations the undergraduate students want to increase their patronage of the library shows that high speed internet facilities is given a top priority and this is followed by the need for the library to introduce artificial intelligence (AI) and robotics into the library operations and services, and to increase the number of workstations in the library. It was also indicated that the undergraduate students want to be following library events online. Therefore, there is the demand that library websites and blogs not be dormant as they used to be. The results here imply that undergraduate students want to see improvements such as high speed internet facilities, AI and robotics and an increase in the number of the library's workstations.

Research Question 4: What factors hinder or discourage undergraduate students' patronage of the library?

To answer this research question, the respondents were asked to identify the hindrances to their patronage of the library. The results are presented in Table 10.

Table 10: Hindrances to library patronage by the undergraduate students

S/N	Impact	Frequency	Mean $\bar{x}$	SD
1	Limited and non-functioning workstations	311	44.4	7.3
2	Poor attitude of some librarians	208	29.7	4.9
3	Poor connectivity and slow networks	301	43.0	7.0
4	Outdated collection	109	15.5	2.5
5	Limited subscribed databases	270	38.5	6.3
6	Standstill of library activities and operations during power failure due to lack of standby generators	95	13.5	2.2
7	Other: limited space	39	5.5	0.9
	Total	1 333		

Prominent among the hindrances to library patronage by the undergraduate students are limited and non-functioning workstations, poor connectivity and slow networks, limited subscribed databases, negative attitudes of some of the librarians, and outdated collections.

Discussion of the Findings

From the analysis of findings, the study found that the majority of the undergraduate students who patronised the university libraries were male students. This finding concurred with those by Sivathaasan, Murugathas, and Chandrasekar (2014), Fabunmi and Asubiojo (2013), and Quadri (2015). This result may be owing to the fact that male students are adventurous when searching for knowledge compared to their female counterparts. However, this finding disagreed with the report by Rahman, Mahmud and Jamaludin (2013) that there was no significant difference in library patronage by undergraduate students based on gender. These results are mixed thereby confirming what was obtained in the literature that both male and female students influence library patronage.

Regarding age and library patronage, the finding of this study revealed that the majority of undergraduate students who patronised the university libraries are between the ages 26–30 years and 31 years and above. The result is in agreement with the earlier report by Rahman, Mahmud and Jamaludin (2013) that undergraduates aged 31 and 40 years were found to patronise the library more frequently than the other age groups. This implies that the more advanced in age the undergraduates are the more frequently their library patronage will be. This also means that as the undergraduate students grow in age, they have a better understanding of the usefulness of a library to education.

Regarding the level of studies and library patronage, the finding in this study revealed that the higher number of undergraduate students who patronised the university libraries were at their 500 and 400 levels, that is year 5 and 4 of their study compared to those in year 1, 2 and 3. The results here imply that the higher the level of education of the

undergraduates, the more the undergraduates realise the relevance of the library to their learning, and hence the increase in patronage. This is consonant with Rahman, Mahmud and Jamaludin (2013) who reported that the respondents at the higher levels of study patronise the library more frequently than the respondents at lower levels of study. It should be noted that this may be as a result of the realisation that they are graduating, and hence, the need to improve performance to achieve a good grade, improve their results, and, by extension, their cumulative grade point average. The finding also corroborates Olatokun's (2009) report that the level of education of undergraduate students had an influence on the capability to patronise the library.

The finding that a sizeable number of the respondents patronised the library between two and three times a week, corroborates the report by Ukachi (2013) who revealed the same finding. The finding, however, disagrees with that by Gohain and Mukesh (2013) who reported that the majority of the undergraduate students patronised the library daily. A possible reason for this finding by Gohain and Mukesh might be that the students are able to find and locate the necessary materials. If undergraduate students are able to locate what they need in the library at any time, there is the tendency that they will patronise the library daily.

The suggested improvements and innovations reported by the respondents in this study are not unexpected considering the fact that they might have heard or read about libraries in advanced countries such as the United States, the United Kingdom, Spain and Australia that have introduced AI and robotics into their operations. The respondents might have heard about a close scenario at the University of Pretoria in South Africa where a robot has been developed and used in the University of Pretoria library.

The finding on the hindrances such as limited and non-functioning workstations, and outdated materials are consonant with reports by Onuoha and Subair (2013), Odede and Odede (2016), and Quadri (2015) who reported hindrances such as the lack of relevant books, breakdown of internet facilities, inadequate computers, outdated materials, and poor attitudes of some librarians. The similarity is also not a coincidence considering the fact that all the studies were conducted in Nigeria where libraries are experiencing budget cuts, which happen to be the major factor hindering them from rendering effective services as expected by the respondents.

Conclusion

The study examined the influence of demographic variables on the library patronage by the undergraduate students at universities in South West Nigeria. It also examined the level of the library patronage of the undergraduate students, and the improvements necessary to improve the patronage and the hindrances to the patronage of the libraries. The results revealed that demographic variables such as age, gender, and year or level of study influence library patronage by the undergraduate students. Male undergraduate students and undergraduates in year four and five of study patronised the library more frequently than other students. The most important improvements and innovations the

respondents wanted are high speed internet facilities, introduction of AI and robotics, increased subscriptions to more databases such as Scopus and Web of Science, and stocking of the library with recent information materials that comprises both the print and electronic materials. Hindrances and factors that discourage library patronage are limited or non-functioning workstations, poor networks and outdated collections.

Recommendations

The school administrators and the librarians should encourage the female undergraduate students to patronise the library as frequently as their male counterparts. They should encourage the students to start using the library immediately when they are admitted and not to wait until they reach a certain age or year of study. This can be done during the library orientation for the new intake at the university. Stocking a balanced collection with information materials has been the major concern in Nigerian university libraries. There is a need for the library to match the needs of its patrons, especially the undergraduate students, irrespective of study levels, gender, and year of study, and provide the appropriate information materials and services. It is believed that these materials and services are the major components of the library system upon which the library services are hinged. The frequency of use of these materials and services indicates the effectiveness of a library.

The librarians should provide assistance to the undergraduate students in retrieving the relevant resources in the library. This may go a long way to increase the continued patronage of the library from three times per week to every day.

It is also recommended that Nigerian university libraries provide high speed internet facilities, introduce AI and robotics to the operations and services of the libraries, increase the subscriptions to Scopus and Web of Science, and stock the libraries with recent collections of both print and electronic materials.

References

- Agboola, I. O., and O. B. Bamigboye. 2011. "Students' Level of Study and User of Library Resources in Nigerian Universities: Comparative Study." *Library Philosophy and Practice* <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1559&context=libphilprac>.
- Akin, A. O., and P. O. Ajayi. 2008. "Students' Utilization of Academic Libraries in Nigeria: A Case of Federal University of Technology, Akure between Year 2001–2005." *Asian Journal of Information Technology* 7 (5): 172–174.
- Aliu, E. 2014. "A Study on Time Series Analysis on Students' Patronage of an Electronic Library: Case Study of John Harris Library (E-Learning Centre) University of Benin." *IOSR Journal of Humanities and Social Sciences* 19 (11): 5–12. <https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.9790%2F0837-191110512>.

- Emiri, O. T. 2015. "Influence of Demographic Factors and Use of Online Public Access Catalogue (OPAC) by Undergraduates in Selected University Libraries in Southern Nigeria." *International Journal of Scientific and Technology Research* 4 (7): 164–167. <http://www.ijstr.org/final-print/july2015/Influence-Of-Demographic-Factors-N-Use-Of-Online-Public-Access-Catalogue-opac-By-Undergraduates-In-Selected-University-Libraries-In-Southern-Nigeria.pdf>.
- Fabunmi, O. M., and B. O. Asubiojo. 2013. "Awareness and Use of Online Public Access Catalogue by Students of Obafemi Awolowo University, Ile-Ife, Nigeria." *Library Philosophy and Practice* 922: 1–18.
- Gohain, A., and S. Mukesh. 2013. "Use and Users Satisfaction on Online Public Access Catalogue (OPAC) Services among B.Tech. Students of School of Engineering in Tezpur University: A Survey." *Library Philosophy and Practice* 990.
- Odede, I., and E. Odede. 2016. "Undergraduates' Computer Skills and the Use of Online Information Resources: A Case Study of Library and Information Science Students of Delta State University, Nigeria." *International Research Journal of Library and Information Science* 4 (5): 87–93. <https://irjlis.com/undergraduates-computer-skills-and-the-use-of-online-information-resources-a-case-study-of-library-and-information-science-students-of-delta-state-university-nigeria/>.
- Odunola, O. 2018. "Influence of Demographic Variables on Library Patronage by Undergraduate Students in South-West, Nigeria." PhD thesis, University of Ilorin.
- Odunola, O. A., and A. Tella. 2019. "Influence of Information Technology Skills on Library Patronage by Undergraduate Students in South-West, Nigeria." *Library Philosophy and Practice* 2582. <https://digitalcommons.unl.edu/libphilprac/2582>.
- Ofodile, F. I., and G. Ifijeh. 2013. "Current Trends in Library Patronage by Faculties in Nigerian Universities: A Study of Ladoke Akintola University, Ogbomosho, Nigeria." Accessed 20 August 2020. https://www.connecting-africa.net/query_2.php?rid=B00058322.
- Okoronkwo, N. 2015. "Library Patronage Fall in North-West. The Union Anchored on Equity and Justice."
- Olatokun, W. M. 2009. "Analysing Socio-Demographic Differences in Access and Use of ICTs in Nigeria Using the Capability Approach." *Issues in Informing Science and Information Technology* 6: 479–496. <https://doi.org/10.28945/1075>.
- Oluyomi, F. E. N. 2016. "Influence of Library Environment and User Education on Undergraduates' Use of Library at the University of Ibadan, Nigeria." *European Scientific Journal* 12 (19): 1857–788. <https://doi.org/10.19044/esj.2016.v12n19p288>.
- Onuoha, U. D., and M. O. Subair. 2013. "Study Habits of Undergraduate Students in Selected Federal Universities in South-West Nigeria." *Educational Research* 4 (10): 717–721.

- Prakash, I. N. 2017. "Resource Sharing: A Library Perceptive." *International Journal of Library and Information Science* 6 (1): 19–22.
<https://www.iaeme.com/IJLIS/issues.asp.?JType=IJLIS&VType=6&IType=1>.
- Quadri, O. G. 2013. "Influence of Demographic Factors on Use of Online library Resources by Undergraduate Students in Two Private Nigerian University Libraries." *Library Philosophy and Practice* 976: 1–15.
- Rahman, A. A., Z. Mahmud, and A. Jamaludin. 2013. "Age, Gender and Race Differences in the Usage of Digital Library among Malaysian Postgraduate Students." *Recent Researchers in Education* 137–140.
- Research Advisors. 2006. "Required Sample Size." Accessed 20 June 2019. <http://research-advisors.com/tools/SampleSize.html>.
- Saikia, M., and A. Gohain. 2013. "Use and User's Satisfaction on Library Resources and Services in Tezpur University (India)." *Library Philosophy and Practice* 972.
<https://doi.org/10.2139/ssrn.3377087>.
- Sivathaasan, N. 2013. "Personal Characteristics and Use of Library Facilities: A Special Reference to Faculty of Management Studies and Commerce University of Jeffna, Sri Lanka." *European Journal of Business and Innovation Research* 1 (1): 72–79.
<https://www.eajournals.org/wp-content/uploads/personal-characteristics-and-use-oflibrary-facilities.pdf>.
- Sivathaasan, N., K. Murugathas, and K. Chandrasekar. 2014. "Attitude towards the Usage of Electronic Information Resources in Medical Library, University of Jaffna, Sri Lanka." *Information and Knowledge Management* 4 (1): 48–57.
- Song, Y. S. 2009. "Designing Library Services based on User Need: New Opportunities to Reposition the Library." Paper presented at the 75th IFLA General Conference.
<http://www.ifla.org/annualconference/ifla75/indexhtin>.
- Ukachi, N. 2013. "Information Literacy of Students as a Correlate of their Use of Electronic Resources in University Libraries in Nigeria," *Electronic Library* 33 (3): 486–501.