

# Factors Affecting the Use of Indigenous Publications by Medical and Dental Students in Nigerian Universities

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*ABSTRACT: This study examined the indigenous medical publications used by medical and dental students in Nigeria with a view to discovering factors that affects their usage. Data was gathered through a questionnaire survey. The population of the study was 1,264 undergraduate medical and dental students from ten universities in all the geopolitical zones of Nigeria. Data gathered was analysed using SPSS to obtain the summaries of the variables in form of frequency distribution and other descriptive statistics. The findings reveal several factors affecting the usage of indigenous medical publications. In spite of all the inhibitors, 88.2% of the respondents indicated that they need indigenous medical publications for a well-rounded medical education.*

## I. Introduction

Teaching, learning, and research activities are all about the availability and use of information in the form of books, journals, and other forms of publications. The underlying assumption is that there is always a thriving publishing industry churning out publications on a regular basis for both students and researchers.

In Nigeria, medical education has witnessed a crisis or book famine due to a number of factors (Akinkugbe, 1998; Osuntokun, 2000; Akinyunju, 2002). According to Ibenta (2003), these include an over-dependency on foreign medical publications, which are very expensive due to the instability in exchange rates, placing the publications beyond the reach of libraries and students in medical schools. Also, in recent time, librarians have more electronic journals and networked databases to consider when making purchase decisions (John, 2004; McLellan, 2004; Farthing, 2003; Heckman, 2001). The book famine crisis in Nigeria has been further complicated by the poor state of the indigenous medical book publishing, which in turn has adversely deprived medical education in Nigeria from having, a complement of indigenously published medical resources in the country. As a result, the library collection development for medical

education in Nigeria is in poor shape where indigenous medical publications are very scanty or non-existent. But Nigerian health professionals should document their experience, as it relates to the tropics. Akinkugbe (2000) argued that even if clinical diseases are present in Africa and other tropical countries, they have their peculiarities in Nigeria. Therefore, there is need for indigenous medical publications to document local research findings for the benefit of future medical professionals in Nigeria.

## II. Objectives of the Study

The current study seeks to empirically verify the extent indigenous medical publications (IMP) in Nigeria during the period of 1973-2009 has influenced library acquisitions and their usage by students in selected colleges of medicine in Nigeria. More specifically, it aims to reveal what types of indigenous publications are stocked by the medical libraries, what types of indigenous publications are preferred to use by medical and dental students, and what impediments, if any, that affect the effective utilization of indigenous publications by medical students in Nigerian university libraries.

## III. Research Methodology

The descriptive research design was used for this study. Copies of the questionnaire were administered to at least 10% of the subjects in order to ensure adequate coverage. Data was analysed using Statistical Package for Social Sciences (SPSS) to obtain the summaries of the variables in the forms of frequency distribution and other descriptive statistics (e.g., mean, mode, and standard deviation). Further analysis was carried out for the purpose of testing the hypotheses, using the cross tabulation vertical variables (question most apt to the hypotheses).

## IV Findings

The sample population of the survey participants was drawn from all students registered for the 2008/2009 sessions in the health sciences colleges/faculties of selected universities in Nigeria. They were chosen because they need to use extensively medical publication resources in the fulfilment of all compulsory, required, and elective courses in order to meet the requirements of the MBBS (Bachelor of Medicine, Bachelor of Surgery) and BDS (Bachelor of Dental Surgery) programs. It is expected that these medical and dental students would provide adequate and relevant information on their experience in the undergraduate medical programmes of Nigerian universities.

Table1: Survey Population

University	Population	Sample Size	Questionnaire Returned	Return Rate (%)
University of Ibadan	1,654	165	119	7.3
University of Nigeria, Nsukka	3,576	358	185	11.4
Obafemi Awolowo University	2,794	279	163	10.0
Ahmadu Bello University	2,263	226	207	12.8
University of Lagos	945	95	95	5.9
University of Benin	2,344	234	227	14.0

University of Jos	1,724	172	155	9.5
University of Calabar	1,903	190	147	9.1
University of Port Harcourt	2,240	224	149	9.2
University of Maiduguri	2,202	220	177	10.9
Total	21,646	2,165	1,624	75.01

Table 1 shows the total survey population, sampled population, and the number of survey participants. The total number of the medical and dental students in 10 universities in geopolitical zones of Nigeria was 21,646, 10% of which (2,165) were randomly selected for the survey. 75.01% of those surveyed completed and returned the questionnaire.

Table 2: Usage Frequency of Indigenous Publications Not Available in the Library

Library Materials	Regularly (4)	Occasionally (3)	Rarely	Never	$\bar{x}$	Std Dev
Journals	350 (21.6)	730 (45.0)	391 (24.1)	153 (9.4)	2.78	88
Books	1,143 (70.4)	266 (16.4)	174 (10.7)	41 (2.5)	3.54	78
Medical Databases, e.g., MEDLINE	505 (31.1)	432 (26.6)	430 (26.5)	257 (15.8)	2.72	1.06
Other Learning Resources, e.g., CD-ROM	350 (21.6)	643 (39.6)	360 (22.2)	271 (16.7)	2.66	99
Weight Average = 2.93						

Table 2 shows that 1,143 (70.4%) respondents used indigenous books and 350 (21.6%) used indigenous journals not available in the library respectively.

Table 3: Usage Frequency of Indigenous Publications Available in the Library

Library materials	Regularly (4)	Occasionally (3)	Rarely	Never	$\bar{x}$	Std Dev
Journals	263 (16.2)	542 (33.4)	471 (29.0)	348 (21.4)	2.44	99
Books	941 (57.9)	388 (23.9)	153 (9.4)	142 (8.7)	3.31	9.96
Medical Databases, e.g., MEDLINE	266 (16.4)	567 (34.9)	297 (18.3)	494 (30.4)	2.37	1.08
Other Learning Resources, e.g., CD-ROM	187 (11.5)	458 (28.2)	437 (26.9)	542 (33.4)	2.17	1.02
Weight Average = 2.57						

Table 3 shows that 941 (57.9%) respondents used indigenous books and 263 (16.2%) used indigenous journals available in the library respectively.

A survey of the frequency of use of locally published journals, books and other learning resources between 100 and 600 levels showed that books were most frequently used at the 300-500 levels while journals, other learning resources (e.g., CD-ROM) and medical databases were most frequently used at the 400-600 levels.

Table 4: Extent to Which Books Are Used at Various Levels

Level	Great Extent (3)	Some Extent (2)	Not at all (1)	$\bar{x}$	Std Dev
100 level	609 (37.5)	756 (46.6)	259 (15.9)	2.21	.69
200 level	898 (55.3)	634 (39.0)	92 (5.7)	2.49	.60
300 level	990 (61.0)	467 (28.8)	167 (10.3)	2.50	.67
400 level	1,013 (62.4)	370 (22.8)	421 (19.3)	2.47	.73
500 level	991 (61.0)	320 (19.7)	313 (19.3)	2.41	.79
600 level	857 (52.8)	365 (22.5)	402 (24.8)	2.28	.83
Weighted Average = 2.39					

Table 4 shows that books were most frequently used by the respondents at the 300-500 levels (61.0%, 62.4%, and 61.0% respectively).

Table 5: Extent to Which Journals Are Used at Various Levels

Level	Great Extent (3)	Some Extent (2)	Not at all (1)	$\bar{x}$	Std Dev
100 level	62 (3.8)	513 (31.6)	1,049 (64.6)	1.39	.56
200 level	190 (11.7)	612 (37.7)	822 (50.6)	1.61	.68
300 level	227 (14.0)	726 (44.7)	671 (41.3)	1.72	.69
400 level	405 (24.9)	736 (45.3)	483 (29.7)	1.95	.73
500 level	613 (37.7)	563 (34.7)	448 (27.6)	2.10	.80
600 level	531 (32.7)	600 (36.9)	493 (30.4)	2.02	.79
Weighted Average = 1.79					

Table 5 shows that journals were most frequently used by the respondents at the 400-600 levels (24.9%, 37.7%, and 32.7% respectively).

Table 6: Extent to Which Other Learning Resources/Databases Are Used at Various Levels

Level	Great Extent (3)	Some Extent (2)	Not at all (1)	$\bar{x}$	Std Dev
100 level	110 (6.8)	540 (33.3)	974 (60.0)	1.46	.62
200 level	196 (12.1)	881 (54.2)	547 (33.7)	1.78	.64
300 level	238 (14.7)	893 (55.0)	493 (30.4)	1.84	.65
400 level	601 (37.0)	560 (34.5)	463 (28.5)	2.08	.80
500 level	709 (43.7)	419 (25.8)	496 (30.5)	2.13	.85
600 level	723 (44.5)	405 (24.9)	496 (30.5)	2.13	.85
Weighted Average = 1.90					

Table 6 shows that other learning resources (e.g., CD-ROM) and medical databases were most frequently used by the respondents at the 400-600 levels (37.0%, 43.7%, and 44.5% respectively).

Table 7: Use of Indigenous Medical Books for Aspects of Academic Training in MBBS and BDS Programs

Items	Always (3)	Sometimes (2)	Never (1)	$\bar{x}$	Std Dev
Course work	867 (52.8)	613 (37.7)	154 (9.5)	2.43	.65
Tutorial	717 (44.2)	690 (42.5)	217 (13.4)	2.30	.69
Class assignment	626 (38.5)	864 (53.2)	134 (8.3)	2.30	.61
Clinical	760 (46.8)	598 (36.8)	266 (16.4)	.30	.73
Project	701 (43.2)	592 (36.5)	331 (20.4)	2.22	.73
Examination	894 (55.0)	541 (33.3)	189 (11.6)	2.43	.69
Basic Therapeutic Skills (BTS)	594 (36.6)	667 (41.1)	363 (22.4)	2.14	.75
Weighted Average = 2.					

Table 7 shows that the indigenous medical books were used in the various aspects of academic training for the respondents. They were more frequently used in the aspects of course work (52.8%), examination (55%), tutorial (44.2%), and project (43.2%).

Table 8: Use of Indigenous Medical Journals for Aspects of Academic Training in MBBS and BDS Programs

Aspect	Always (3)	Sometimes (2)	Never (1)	$\bar{x}$	Std Dev
Course work	335 (20.6)	889 (54.7)	400 (24.6)	1.96	.67
Tutorials	357 (22.0)	769 (47.4)	498 (30.7)	1.91	.72
Class assignment	343 (21.1)	947 (58.3)	334 (20.6)	2.00	.64
Clinical	628 (38.7)	622 (38.3)	374 (23.0)	2.15	.77
Project	617 (38.0)	733 (45.1)	274 (16.9)	2.21	.71
Examination	572 (35.2)	564 (34.7)	88 (30.0)	2.05	.80
Basic Therapeutic Skills (BTS)	528 (32.5)	609 (37.5)	487 (30.0)	2.02	.79
Weighted Average = 2.04					

Table 8 shows that the respondents used indigenous medical journals for various aspect of their academic training. Indigenous medical journals were used more frequently in the aspects of clinical (38.7%), project (38.0%), examination (35.2%), and basic therapeutic skills (32.5%).

Table 9: Use of Other Indigenous Medical Learning Resources for Aspects of Academic Training in MBBS and BDS Programs

Aspect	Always (3)	Some (2)	Never (1)	$\bar{x}$	Std Dev
Course work	467 (28.8)	868 (53.4)	289 (17.8)	2.10	.67
Tutorials	408 (25.1)	846 (52.1)	370 (22.8)	2.02	.69
Class assignment	292 (18.0)	934 (57.5)	398 (24.5)	1.93	.64
Clinical	592 (36.5)	685 (42.2)	347 (21.4)	2.15	.74
Project	494 (30.4)	726 (44.7)	404 (24.9)	2.05	.74
Examination	640 (39.4)	647 (39.8)	337 (20.8)	2.18	.75
Basic Therapeutic Skills (BTS)	454 (28.0)	657 (40.5)	513 (31.6)	1.96	.77
Weighted Average = 2.05					

Table 9 shows that the respondents used other indigenous medical learning resources for various aspect of their academic training. Other indigenous medical learning resources were used more frequently in the aspects of clinical (36.5%), project (30.4%), and examination (39.4%).

Figure 1: Use of Indigenous Publications in Core Areas of the MBBS or BDS Degree Syllabus

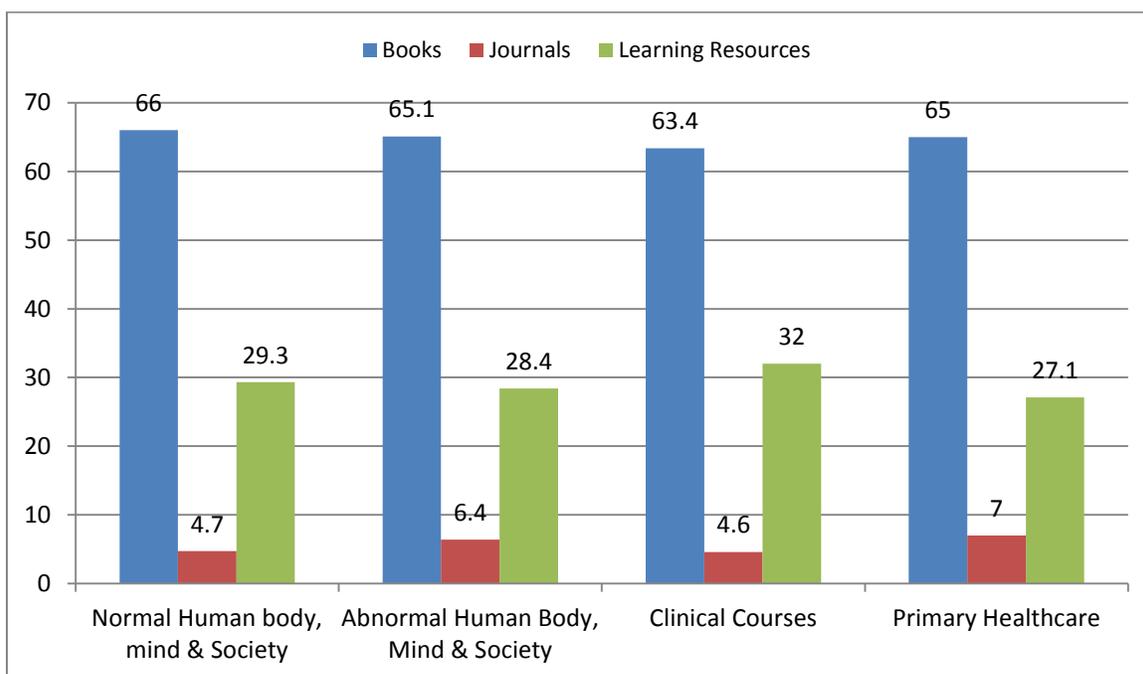


Figure 1 shows that indigenous materials were used in the core areas of the MBBS or BDS degree syllabus. Indigenous books were the first choice of the respondents: 66.0% in the area of normal human body, mind and society, 65.1% in the area of abnormal human body, mind and society, 63.4% in the clinical courses, and 65.0% in the area of primary health care. Other learning resources were used second frequently while journals were used least.

Table 10: Assessment of Indigenous Publications in Library Collection by Respondents

Items	E (6)	VG (5)	G (4)	F (3)	P (2)	VP (1)	$\bar{x}$	SD
I often visit the medical library for my publication needs.	224 (13.8%)	290 (17.9%)	421 (25.9%)	299 (18.4%)	174 (10.7%)	216 (13.3%)	3.65	1.55
Such needs are often met by the library.	94 (5.8%)	429 (26.4%)	378 (23.3%)	337 (20.8%)	71 (10.5%)	215 (13.2%)	3.56	1.45
I have never left the library without using the specific literature that I sought.	212 (13.1%)	251 (15.5%)	233 (14.3%)	406 (25.0%)	215 (13.2%)	307 (18.9%)	3.33	1.64
The quantity of indigenous books is adequate.	197 (12.1%)	214 (21.4%)	313 (19.3%)	337 (20.8%)	227 (14.0%)	202 (12.4%)	3.59	1.55
The quantity of indigenous journals is adequate.	79 (4.9%)	259 (15.9%)	450 (27.7%)	325 (20.0%)	274 (16.9%)	202 (14.6%)	3.28	1.42
The size of the learning resources is adequate.	181 (11.1%)	164 (10.1%)	481 (29.6%)	288 (17.7%)	298 (18.3%)	212 (13.1%)	3.38	1.50
The subject coverage of the collection is extensive.	237 (14.6%)	189 (11.6%)	473 (29.1%)	366 (22.5%)	228 (14.0%)	131 (8.1%)	3.66	1.44
The collection of indigenous publications is current and up-to-date.	115 (7.1%)	210 (12.9%)	339 (20.9%)	438 (27.0%)	257 (15.8%)	265 (16.3%)	3.19	1.46
There are varieties of indigenous	116	259	530	339	160	220	3.49	1.41

medical literature sources in the collection.	(7.1%)	(15.9%)	(32.6%)	(20.9%)	(9.9%)	(13.5%)		
Medical students cannot conduct their studies without recourse to indigenous medical literature collections in their libraries.	153 (9.4%)	415 (25.6%)	306 (18.8%)	291 (17.9%)	278 (17.1%)	181 (11.1%)	3.58	1.52
Most of indigenous books recommended for class use in my course are found in this collection.	193 (11.9%)	383 (23.6%)	325 (20.0%)	367 (22.6%)	209 (12.9%)	147 (19.1%)	3.71	1.47
Most of indigenous journals recommended for class use in my course are found in this collection.	134 (8.3%)	193 (11.9%)	235 (14.5%)	610 (37.6%)	215 (13.2%)	237 (14.6%)	3.20	1.42
Most of indigenous teaching tapes recommended for class use in my course are found in this collection.	99 (6.1%)	38 (2.3%)	272 (16.7%)	341 (21.0%)	336 (20.7%)	538 (33.1%)	3.52	1.45
Most of indigenous CD-ROMs recommended for class use in my course are found in this collection.	59 (3.6%)	79 (4.9%)	143 (8.8%)	426 (26.2%)	323 (19.9%)	594 (36.6%)	2.36	1.36

Notes: E = excellent; VG = very good; G = good; F = fair; P = poor; VP = very poor;  $\bar{x}$  = mean; SD = standard deviation

Table 10 shows the responses of the medical and dental students regarding the usefulness of the medical library collection to their educational needs. According to the frequencies and the percentages scored under the excellent to the good columns, the library collection barely meets the educational need of these students.

Table 11: Indigenous Publications in the Medical Library with Respect to Courses in MBBS or BDS program

Program	Very Adequate (3)	Adequate (2)	Inadequate (1)	$\bar{x}$	Std Dev
MBBS	440 (27.1%)	639 (39.3%)	545 (33.6%)	1.93	.77
BDS	250 (15.4%)	395 (24.3%)	979 (60.3%)	1.55	.74
Weighted Average = 1.74					

Table 11 shows that the students in the Bachelor of Medicine or Bachelor of Surgery programs considered the library collection of indigenous publications as very adequate (27.1%) and adequate (39.3%) while 60.3% of the students in the Bachelor of Dental Surgery program considered the library collection of indigenous publications as inadequate.

Table 12: Factors Hindering Effective Use of Indigenous Medical Literature in the Library

Factors	No.	%
Non-availability of current materials	663	40.8
Poorly stocked CD-ROMs in the library	548	33.7
Insufficient number of copies	539	33.2
Inaccessibility of available print journals	427	26.3
Epithetic Internet services	411	25.3
Lack of constant electricity	360	22.2
Lack of borrowing facilities	184	11.3

Table 12 shows that there were several factors hindering an effective utilisation of indigenous medical publications in various medical libraries of Nigerian universities. “Non-availability of current materials” (40%) was the factor negatively affecting the use of indigenous medical literature in the library, followed by “Poorly stocked CD-ROM in the library” (33.7%), “Insufficient copies of the relevant (33.2%), “Epileptic Internet service (25.3%), “Lack of constant electricity” (22.25, and “Lack of borrowing facilities” (11.3%).

Table 13: Need of Indigenous Medical Publications by Students

Response	No.	%	$\bar{x}$	Std Dev
Yes	1,433	88.2		
No	191	11.8	1.87	.34
Total	1,624	100.0		

Table 13 shows that in spite of all the inhibitors, 1,433 respondents (88.2%) indicated that they need indigenous medical publications for a well-rounded medical education. Only 191 (11.8%) did not consider them as essential.

Figure 2: Preference of Foreign vs. Indigenous Medical Publications by Students

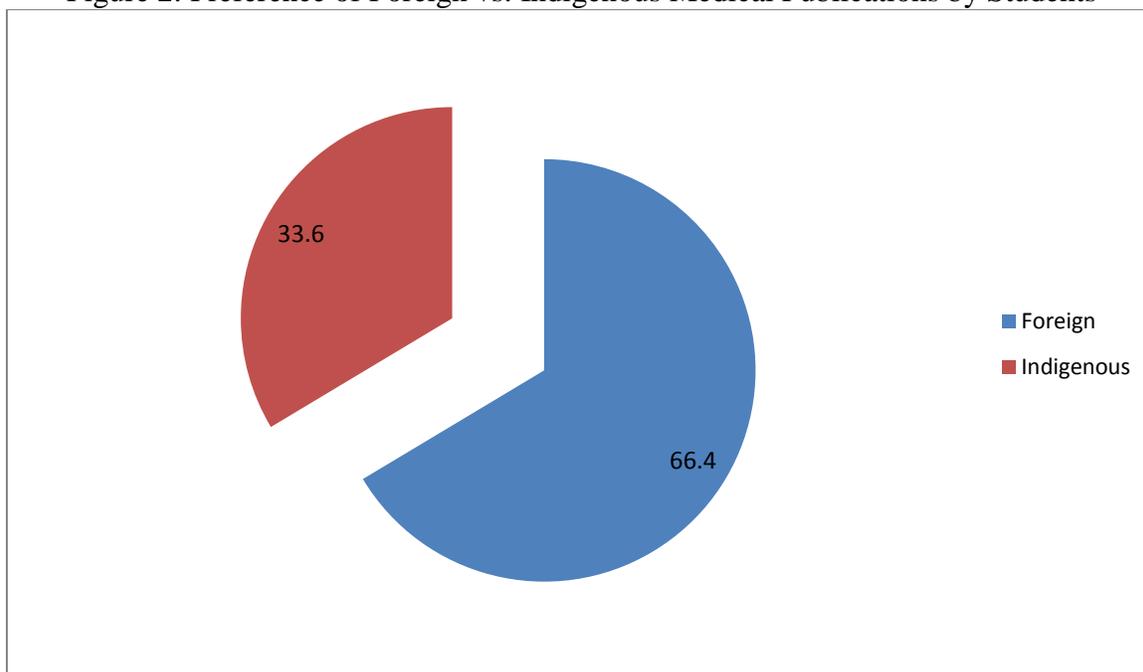


Figure 2 shows that the majority of the respondents preferred foreign publications. A major reason was that foreign publications were easily accessible even outside the library. Another reason was that foreign publications were recommended by their lecturers most of the time. Hence, 66.4% of the respondents preferred foreign publications while 33.6% preferred publications with local content.

## **V. Conclusion**

Despite the indigenisation of book industry in the later part of the 70s in Nigeria, the indigenous book publishing industry has continued to struggle to stay afloat. As the government controls education at all levels, it looks inward for local resources and adaptation of foreign books and materials. However, the government's efforts at encouraging local book industry in Nigeria have not resulted in any significant development of local book industry in the country. On the other hand, medical education aims at producing competent physicians. The medical students and the physicians are dependent on the medical information resources available in the library. This study provides some baseline information on the factors affecting the use of indigenous publications by medical and dental students in Nigerian universities.

The finding that 70% of the medical and dental students in Nigeria used indigenous books not available in the library suggests that the library collection is inadequate in providing indigenous books for their information needs. It also suggests that those medical and dental students were able to find indigenous books by themselves. This is contrary to the report by Fowowe (1987), who posited that medical students used the medical library because the price of these books was beyond their reach.

Another interesting finding is that other learning resources (e.g., CD-ROMs) were used second most frequently by medical and dental students in Nigeria, just behind books. It suggests that they have other sources of getting these learning resources. This may not be unrelated to the fact that intellectual properties are pirated in Nigeria, thereby reducing the price so that a student can manage to buy them on the street. It reinforces the findings by Osiobe (1986), Ogunyade and Ibegwam (2005), and Afolabi (2003) among others that students are showing more interest in electronic medical databases.

It is important to note that even though medical databases are free online as long as the institutions libraries have signed necessary agreements with the sponsor institution like the Health InterNetwork Access to Research Initiative (HINARI), many students did not find the journals to be an important source of medical information. This suggests that they either did not know about the existence of such databases or their values, which in turn suggests that the library must invest more on their publicity. It may also not be unrelated to the fact that electronic services in the libraries are usually paralysed due to lack of sufficient power supply. However, that the students used journals at all is to be applauded, as previous studies suggest that there was a seemingly preference for books (Druss & Marcus, 2005) and that medical students, early in their training, seldom consulted original medical literature such as journals.

Medical libraries of Nigerian universities are still in dire need of adequate funding. The old problems of epileptic Internet service resulting from poor power supply and non-availability of

current journals and books still exist. Years of neglect and poor funding for the library has resulted in a poorly stocked collection of indigenous publications, not sufficient to meet the needs of ever increasing medical and dental student population. Consequently, even though medical and dental students in Nigeria desire indigenous medical publications, they prefer foreign literature that is more readily available.

It is recommended that a cooperative collection development be established among medical libraries in the same region so as to ensure that all indigenous publications are collected and made available to the students. Librarians need also to make concerted efforts to break the walls which differentiate the post-graduate from the undergraduate libraries so that ever library user, regardless of his or her academic level, is allowed access to all library materials.

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