Technostress, Library Staff and Productivity: Ray on Landmark University Library

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Abstract

Purpose: *This study focused on identifying causes of technostress among library staff in Landmark University, Omu-Aran and proffering solutions. It examined the level of awareness, sources and causes of technostress among library staff and possible ways in which it can be controlled.*

Design/Methodology: *Survey method was used. Twenty (20) library staff were purposively selected. A structured questionnaire was used to collect data. Collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) software.*

Findings: *The paper revealed that all the library staff are aware of technostress most of whom have experienced it. The study also revealed that sitting in front of computer for long period is the most commonly cause of tehnostress. Further results showed that though some of the library staff have experienced technostress, they opined that reverting to the traditional system was not a possible amelioration. Other findings revealed that regular training, good office furniture, regular breaks and implementation of better ergornomic practice among other reasons will go a better way at reducing technostress. It was also found out that technostress moderately affected job productivity.*

Originality/value: *Credited to the findings from this study, majority of librarians and library assistants experience technostress and certain degrees of negative influence on their productivity.*

Keywords: *Developing Countries' Libraries*; *Information and Telecommunication Technologies; Landmark University; Nigeria; Technostress; Productivity of Librarians*

Paper type: *Empirical*

Introduction

Milestone achievements credited to Information and Communication Technologies (ICTs) in the 21st century has been allegedly tinted with gloom due to consequent effects of ICT on users especially librarians who mandatorily (inevitably) succumb to its application in their day-to-day official duties. Harper (2000) protested that in the process of adapting to the increasingly complex technologies, more users and staff have been experiencing physical and emotional stress.

This has resulted in higher levels of absenteeism and turnover, higher cost of retraining new staff and increase in litigation costs related to workplace stress. An earlier observer of technostress, Bichteler (1987) who observed that 'accompanying the successful and exciting high tech revolution in libraries has been the occurrence of a number of physical, psychological and social problems among staff and patrons'.

It is unequivocally accepted that library and information services delivery has improved to a large extent as a result of the use of technology for library activities such as acquisition, cataloguing, circulation, reference, and serials control (Ahmad, 2009). Melchionda (2007) also affirmed that the development of internet and electronic network resources encouraged the

development of new services such as digital libraries, he however pointed out that it might pose a great challenge since the internet was also seen as a threat and as it created a lot of uncertainty. Aramide and Bolarinwa (2010) asserted that productivity is impeded when staff experience stress associated with technology. The essence of ICT should be to boost productivity but if the stress hinder its use, there is likely to be a downward trend in productivity of librarians and their assistants.

The major objective of the Library is to make available and accessible diverse information resources and services to enhance the quality of teaching, learning and research. It acquires, organizes, stores and disseminates information in various formats. These include print and electronic formats.

The library has been automated since inception using a library management software (LMS) called Alexandria. It is an integrated web-based library management software developed by Companion Corporation, United States in 1987. Apart from managing all the library operations, it is a fully integrated computer system that includes various modules. These modules are acquisitions, cataloguing, indexing, patrons' registration, circulation, report generation, Online Public Access Catalogue (OPAC) and Web Public Access Catalogue (WebPAC).

Statement of the Problem

Indisputably, conspicuous revolution has been witnessed in the field of information acquisition, processing and dissemination. Traditional approach has been jettisoned in favor of electronic devices which obviously are advantageous to providers and users of information. Melchionda (2008) also attested to this fact. It has however been noticed that there exists evil in the good that ICTs has got to offer as librarians and library assistant have "tales of woes" resulting from the use of technologies deployed to improve their daily routines. Marisa, Susana & Eva (2013) in their work also queried that if modern technology was designed to empower us, to set us free, and to leave us satisfied, why do we often feel (techno-) stressed due to the use of this technology? Why does using email or the Internet sometimes lead to discomfort, anxiety and physical troubles? If the daily routine of librarians and their assistants has been intricately linked with ICTs, how do we ameliorate their distress? This study is therefore focused on identifying causes of technostress and proffering solutions.

Objectives of the Study

The objectives of this study are to:

1. Know the level of awareness of library staff (librarians and library assistants) on technostress
2. Identify the sources and causes of technostress among library staff
3. Identify to what extent technostress affects the level of job productivity
4. Identify possible ways in which technostress among librarians can be controlled

Literature Review

Technostress is a specific type of stress related to the use of ICT, mostly resulting from the high speed at which technological change takes place (Sahin & Coklar, 2009). Wang, Shu, and Tu (2008) defined technostress as a ''reflection of one's discomposure, fear, tenseness and anxiety when one is learning and using computer technology directly or indirectly that ultimately ends in psychological and emotional repulsion and prevents one from further learning or using computer technology.'' Salanova, Llorens, Cifre and Nogareda (2007) proposed a definition of the technostress experience at work as a ''negative psychological state associated with the use or threat of ICTs use in the future.

Agbonlahor (2006) observed that the adoption, rapid diffusion and utilization of ICTs in librarianship and other related information science professions have brought about a number of demands and challenges such as technostress and job burnout into workplace. Studies have been carried out establishing the fact that ICTs deployment in libraries comes along with varing challenges. Such studies include Popoola and Majinson (2001), Tiamiyu, Ajayi and Olatokun (2002), Adekunle, Omoba and Tella (2007), Uwaifo (2008), Olanrewaju, Ayodele and Abubakar (2011) and Sivakumaren, Geetha and Jeyaprakash (2011). Ragu-Nathan et al. (2008) indicated techno-complexity, techno-insecurity, techno-overload, techno-invasion, and techno-uncertainty as correlates of job dissatisfaction. Thus, employees suffering from technostress have low productivity and job satisfaction (Sinha, 2012).

Pors (2003) articulated that there is strong correlation between librarians' job satisfaction

and level of stress due to technology and other demographic characteristics. Majority of librarians revealed that technological innovations have developed technostress (Kupersmith, 2000).

Khan, Rehman and Shafiq-ur-Rehman (2013) reasoned that a satisfied librarian is needed in university libraries for effective performance. It is deduced that a stressful and unhappy librarian will not be productive. This will not only bring a depressing image of librarianship but will lessen the role of university libraries as service oriented programme in any academic institution. Ayyagari (2008) identified a negative correlation between technostress and job satisfaction and further elaborated that technology uncertainty is a strong predictor of job dissatisfaction among employees.

Methods

Study Area

The population of study comprised all librarians and library assistants of Landmark University Library Omu-Aran, Nigeria. The study population, though small, is an ideal case study for newly established academic libraries. Landmark University Library is known as Centre for Learning Resources (CLR).

Research Instrument, Sample and Sampling Procedure

This study used a questionnaire-based survey method, as many similar studies conducted earlier have also used this method for data collection such as (Isiakpona and Adebayo, 2011; Olanrewaju, Ayodele and Abubakar, 2011; Dunmade, Adegoke and Agboola, 2014). All the seven (7) librarians, one (1) library officer and twelve (12) library assistants in Landmark University Library which constitute a size of twenty (20) were used for this study.

For face validity, the questionnaire was circulated to ten experts in the fields of sociology, information science and computer science for their comment and observations. Their observations were considered in designing the final copy of the questionnaire before they were personally administered in December, 2014.

Data Analysis

Analysis of data was based on returned copies of questionnaire. Responses from the questionnaire were coded and Statistical Package for Social Science (SPSS) software was used for the analysis. Demographic data of the respondents, level of awareness of technostress, its sources and causes, possible ways to control tehnostress as well as the extent of technostress as it affects the level of job productivity were described.

Results

Demographic Characteristics of the Respondents

A total of 17 copies (85%) of the questionnaire were responded to and returned; 3 copies of the questionnaire were unusable because of either incompleteness of responses, illegible or unintelligible responses. The analyzed data from the questionnaire shows that female are (52.9%) and male (47.1%) having the following qualifications; Masters Degree (41.2%), Bachelor degree/HND (5.1%), and OND/NCE (52.9%). Library staff in the age group of 25-34years was the largest in number (58.8%) and most of them were library assistants (52.9%). Most of the respondents (76.5%) had between 1 and 5years experience in the librarianship profession, 23.5% have been in the profession for over 5 years.

Level of Awareness and Experience of Technostress by Library Staff

Most of the respondents (82.4%) agreed that library operations carried out in the library are automated; all the library staff noted that they make use of Information Technology/ICT tools in carrying out their daily routines. On a dichotomous scale, inquiries about awareness and experiencing of technostress were guided by two questions namely: “Are you aware of stress associated with the use of computer and other ICTs tools?” and “Have you experienced stress associated with the use of computer and other ICTs?” All the respondents reported they are aware of stress associated with the use of computer and other ICT tools while as much as (94.1%) have experienced the same while carrying out their duties.

Table 1 shows the population of library staff that have experienced technostress.

Table 1: Population of Library Staff that have Experienced Technostress

	Frequency	Percentage (%)
Yes	16	94.1
No	1	5.9
Total	**17**	**100.0**

Table 2: Technostress Experienced by the Library Staff

Technostress	Yes Frequency (%)	No Frequency (%)
Inability to concentrate on a task when using computer	5(29.4)	12(70.6)
Irritated when using computer	3(17.6)	14(82.4)
Isolated when using computer	2(11.8)	15(88.2)
Increased heart beats when working with computer	2(11.8)	15(88.2)
Redness of eye resulting from long computer usage	14(82.4)	3(17.6)
Frustrated by quick successive changes in ICTs	5(29.4)	12(70.6)
Headache resulting from ICTs usage	7(41.2)	10(58.8)
Back and neck pain when working with computer/ICTs tools	12(70.6)	5(29.4)
Ashamed to admit inadequate knowledge of computer/other ICTs tools	2(11.8)	15(88.2)

Furthermore, the results in table 2 shows that library staff experience stress in carrying out their duties. Specifically, both librarians and library assistants reported to have experienced 'redness of eyes resulting from long computer usage as well as back and neck pain when working with computer/ICTs tools ' (82.4% and 70.6%) respectively.

Causes of Technostress among Library Staff

Table 3: Causes of Technostress among Library Staff

Causes of Technostress	Agree Frequency	(%)	Disagree Frequency	(%)	Do not know Frequency	(%)
Slow network/internet access speed	11	64.7	5	29.4	1	5.9
Inadequate training	8	47.1	7	41.2	2	11.8
Faulty equipment	11	64.7	4	23.5	2	11.8
Irregular power supply	11	64.7	5	29.4	1	5.9
Change in library software	9	52.9	7	41.2	1	5.9
Use of outdated technology	8	47.1	7	41.2	2	11.8
Sitting in front of computer for long	14	82.4	3	17.6	0	00.0
Poor technical support	11	64.7	5	29.4	1	5.9
Poorly designed workstations and other ICTs tools	10	58.8	5	29.4	2	11.8
Poor sitting positions	10	58.8	5	29.4	2	11.8
Poor computer proficiency skills	9	52.9	5	29.4	3	17.6
Fear of new technology	10	58.8	6	35.3	1	5.9
Phobia for computer and other ICT tools	7	41.2	7	41.2	3	17.6

Table 3 shows the frequency distribution of the causes of technostress among library staff, indicating that sitting in front of computer for long period 14(82.4%) was the major causes of technostress among library staff, while phobia for computer and other ICT tools was the least 7(41.2%). Slow network and internet access speed, faulty equipment, irregular power supply, poor technical support were causes of technostress to as much as 11(64.7%) of the respondents. Poorly designed workstations and other ICTs tools 10(58.8%), poor sitting positions 10(58.8%), fear of new technology 10(58.8%), change in library software 9(52.9%)

and poor computer proficiency skills 9(52.9%) reported to have been causes of technostress among library staff.

Also, less than half of the respondents agreed that inadequate training 8(47.1%), use of outdated technology 8(47.1%) and phobia for computer and other ICT tools 7(41.2%) were causes of tehnostress among library staff.

Possible ways to control Technostress among Library staff

Table 4: Possible ways to control Technostress among Library staff

Ways to control Technostress	Agree		Disagree		Do not know	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Efficient and friendly computer network system	15	88.2	2	11.8	0	00.0
Regular trainings	15	88.2	2	11.8	0	00.0
Regular breaks during working hours	12	70.6	4	23.5	1	5.9
Revert to manual systems of library operations	4	23.5	10	58.8	3	17.6
Maintain the use of old technologies and equipment	6	35.3	9	52.9	2	11.8
Use of good office furniture	14	82.4	3	17.6	0	00.0
Better ergonomics practice	14	82.4	2	11.8	1	5.9
Reliable technical support	16	94.1	1	5.9	0	00.0

Table 4 shows that 15(88.2%) of the respondents agreed that efficient and friendly computer network system to carry out library operations could go a long way to reduce the level of technostress being experienced by library staff. It also shows that 14 (82.4%) and 15(88.2%) of the library staff indicate that use of good office furniture and regular trainings are possible ways to control technostress respectively.

To a large extent, regular breaks during working hours 12 (70.6%) while almost all the library staff 16(94.1%) were of the opinion that reliable technical support were solution to technostress. Another possible way in which technostress could be controlled is through better practice of ergonomics. 14 (82.4%) library staff noted that with the implementation of better ergonomic practice technostress will be brought to the barest minimum, while most 10(58.8%) and about half 9(52.9%) of the library staff were of the opinion that reverting to manual systems of library operations and maintaining the use of old technologies were not solutions to technostress.

To what extent does technostress affects job productivity?

Table 4: Technostress and job productivity

SCALE	Frequency	Percentage
Low	3	17.6
Moderate	11	64.7
High	3	17.6
Total	**17**	**100**

Table 5 shows that to various extent technostress affects job productivity of library staff. Most of the respondents 11(64.7%) indicate that technostress moderately affects their job productivity. 3(17.6%) are of the opinion that technostress could highly affect their job productivity, while the same percentage of the respondents 3(17.6%) noted that technostress affects their job productivity to some extent.

Discussion

The survey has brought to the fore the reality of technostress which undeniably taints the superlative benefits accruable from the use of ICT. All respondents attested to awareness of technostress and the resultant influence on their productivity, however at various degrees. This research has been able to establish through questionnaire administered to librarians and library assistants that sitting in front of computer

for long period among other reasons (82.4% of respondents affirmed) constitutes technostress. Poor technical support was also identified as a stressor. Other asserted reasons include but not limited to slow network and internet access speed, faulty equipment, irregular power supply etc. However, phobia for computer and other ICT tools rated least.

Comparatively, ICT despite the resultant tehnostress experienced, most respondents opined that reverting to the traditional system was not a possible amelioration. They affirmed that regular training, good office furniture, regular breaks and implementation of better ergornomic practice among other reasons will go a better way to reducing technostress. It was also found out that most respondents attested to the fact that technostress moderately affected their productivity.

Conclusion and Recommendations

Form the foregoing, it is evident that technostress has come to stay with the 21st Century and likewise its benefits are immense that one has got to device coping mechanism or amelioration methods to maximally benefit from ICTs. Credited to the findings from this study, it can be concluded that majority of librarians and library assistants experience technostress and certain degrees of negative influence on their productivity. Since it has been established that ICTs has unprecedented advantage over the traditional system, the onus lies on the library management team to ensure constant developmental approach as cushion effect on technostress.

It is inevitable for library staff to understand the changing environment through the use of ICTs and align properly by being proactive and live in readiness to measure up to challenges resulting from emerging technologies. Periodic trainings/seminars and intervention programmes to cushion the effect of technostress on library staff become paramount. Introduction of ergonomic devices and facilities for ease of use and healthy approach to work also become paramount to enjoy highly motivated and productive library personnel.

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