The Impact of Technostress on Librarians: A Survey of Covenant University Library.
by
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Abstract
This paper discusses technostress and how it affects librarians in Covenant University. The descriptive survey research method was used in investigating how technostress affects librarians in the course of carrying out their daily routines. Specifically, a questionnaire was designed and distributed to the librarians. The data was represented in tables and simple percentage used to analyze the data. It was found that technostress affects librarians to an extent while carrying out their duties on a daily basis. The study also found out that sitting positions, slow internet network among others are causes of technostress. It concluded by admonishing librarians to brace up and keep pace with technological developments because the library environment will keep changing. It is very necessary to create awareness about technostress, its effects and possible ways to manage it. Proper training should be given to librarians on how to handle new technologies.

Introduction
The world is fast turning to a global village and this is as a result of the introduction of the use of diverse technological tools in carrying functions or activities that originally were done manually. The present age is referred to as the information age or the digital age. The information age today is faced with diverse challenges and issues. Most of these issues are related to the use of information technology tools in carrying out various activities. Library and information services delivery have improved to a large extent as a result of the use of technology for library activities such as acquisition, circulation, cataloguing, reference, and serials control (Bichteler, 1986; Murthy & Cholin, 2003 in Ahmad, 2009).

Bitchteler (1987) 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'. The departure from the manual methods of carrying out library services has without a doubt improved the quality of service offered by the library to its clientele and it has also on the other hand brought about a reasonable degree of technostress experienced by professional librarians while carrying out library services.
The librarians in the process of carrying out their duties interact with the computer and other information technology tools. The job of librarians is mostly sedentary and therefore, they tend to spend quality time in front of the computer monitor in order to attain productivity and continuous and uninterrupted contact with the computer system could affect the individual.

Statement of Problem
The utilization of information technology tools have indeed brought a positive move to the discipline of library and information science (Bichteler, 1986 in Ahmad, 2009) but it has also resulted in stress and phobia experienced by both library staff and clientele. This stress, which is known as technostress, is caused by different factors during the continuous process of using information technologies in carrying out functions that initially where done manually.

It is also imperative for both library staff and clientele to be comfortable while making use of these technologies in order to enhance productivity. It is also important to note that when stress is experienced by workers in a particular organization, it always has negative effects on the organization (Ahmad, 2009). High productivity is achieved with minimal level of technostress especially on the part of librarians.
The purpose of this study is to determine the possible causes and likely sources of technostress experienced by librarians in Nigeria.

Objectives of the Research
The objectives of this research study are to:
1. Identify the sources and causes of technostress among librarians
2. The population of librarians and library assistants in the specified university that experience technostress;
3. Identify possible ways in which technostress experienced among librarians can be controlled;
4. Identify to what extent technostress affects the level of job productivity

Methodology
The methodology used for this study was the descriptive survey, where questionnaires were administered to all the library staff in the Covenant University Library (Centre for Learning Resources). A total of thirty- four (34) copies questionnaires were administered and retrieved among all the library staff and questionnaire responses was calculated on a frequency bases and interpreted descriptively in percentages.

Literature Review

Brod (1984) defined technostress as "a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner. It manifests itself in two distinct but related ways: in the struggle to accept computer technology, and in the more specialized form of over identification with computer technology."(Ahmad, 2009 and Ennis, 2005). Weil and Rosen (1997) described technostress as "any negative impact on attitudes, thoughts, behaviors, or body physiology that is caused either directly or indirectly by technology" while Aghwotu (2010) averred that technostress cannot be easily explained; many factors have contributed to its development among librarians. Genco (2000) also noted that 'technostress could be as a result of continuous concentration on the computer monitor. He noted that electrostatic fields emitting high ions, in dust particles from the computer monitor, collide with one's face causing ageing.'

In some instances, librarians and other library assistants find it difficult to adapt to the changes involved with the use of new technologies; they would rather stick to the old and very conversant method of carrying out library operations. Researchers have revealed that it is the change that should be properly managed and not the technology. It is of utmost importance that the individuals (librarians and library assistants) who are going to experience this change are properly tutored and prepared to receive the new positive change because the challenge in technostress is not the new technology involved in carrying out the activity but the ability of the personnel to adapt to this change. Tarafdar, Tu, Ragu-Nathan, and Ragu-Nathan (2007) described technostress as a problem of adaptation and as a result of a person's inability to cope with or get used to information and communication technologies (ICT). It is "a condition resulting from having to adapt to the introduction and operation of new technology, particularly when equipment, support, or the technology itself is inadequate" (Davis-Millis, 1998).

According to Ennis (2005), some reasons were attached to technostress especially experienced by librarians and they include
- Pace of technological change
- Lack of proper training: in some rare occasions, technostress could be as a result of improper training of both the librarians and the library clientele. When the needed professional training is lacking, technostress is unavoidable. A librarian who does not have a firm grasp of the intricacies of using computer system may have challenges when left to carry out functions using the computers.
- Increased Workload
- Lack of Standardization of Hardware and Software and
- Changing Roles of Librarians: the digital age in which we are presently in has brought about a correspondent change in the functions or responsibilities of librarians. Most libraries have abandoned the manual system of operations for the automated systems which involves the use of technologies.

Technostress could also be as a result of the network system available in the library. Most libraries today are fully automated and carry out their services through the use of library software. Technostress experienced by the librarian could be as a result of the introduction of new library software. There are technicalities involved in the use of software and if proper training is not done, the introduction of this software may lead to technostress on the part of the librarian.

The network system sometimes, may pose a challenge to the librarian, especially in the case of libraries that make use of web based library software, when there is continuous fluctuation in the network system, the librarian may have hitches or difficulties while using the web based library software. Our country, Nigeria, is still at the development level in terms of ICT infrastructure especially when compared with other developed countries of the world. The usual power failure and fluctuation could lead to temporary "stand still" of library services especially when there is no alternative means of electricity supply.

Technostress could also arise when the ICT proficiency level of the librarian is relatively low. He/she may have difficulties manipulating the technologies. In some instances, when the library software is not very user friendly, the librarian may also find it challenging to navigate from one module to another. Technostress may have detrimental consequences to the organizations which could lead to counterproductive results in morale, low performance and burnout (Porter & Kakabadse, 2006).

The Covenant University Library
Covenant University is a private Christian institution in Canaan Land Ota in Ogun State of Nigeria. It was founded on 22nd day of October 2002. Covenant University is a dynamic vision-birthed, vision driven University founded on Christian mission ethos and

committed to pioneering excellence at the cutting edge of learning. The University is driven by the compelling vision of raising a new generation of leaders for the African continent on the platform of a holistic, human development and integrated learning curriculum in order to raise men who will go out to develop their world. The library is the heart of any university. The Covenant University library (Center for Learning Resources) has fully computerized all routine activities and can boast of a functional virtual library service, which gives staff and students access to the Online Public Access Catalogue (OPAC), and other electronic resources.

Data Analysis and Interpretation
A total of thirty- four (34) library staff made up the population of respondents; fifteen (15) out of the 34 respondents were library assistants, two (2) were library officers and nineteen (19) were professional librarians.
Most of the respondents were between the age bracket of 31- 40 (52.9%). 6 library staff were within the age bracket of 20-30 (17.7%), 9 were in the age bracket of 41-50 (26.5%) and only one was in the age bracket of 51-60 (2.9%)

Most of the library staff (67.7%) in the Centre for Learning Resources had between 1 and 5 years experience in the librarianship profession, 8 (23.5%) of

the respondents had a work experience of between 6 and 10 years, 2(5.9%) of the library staff had between 11-20 years of experience and 1 (2.9%) had above 20 years experience.

Most of the library operations carried out in the library are automated; 31(91.2%) library staff noted that they make use of Information Technology tools in carrying out their library functions while 1(2.9%) indicated that he/she does not make use of information technology tools and 2(5.9%) were undecided.

The level of proficiency of the library staff was also noted; 14 (41.2%) library staff have a high level of proficiency, 5 (14.7%) have very high level of proficiency and 13 (38.2%) of the library staff have an average level of proficiency in the utilization of Information technologies.

Table 1 reveals that out of the 34 library staff, 27 (79.4%) experiences technostress while carrying out their library duties while 7 (20.6%) do not often experience technostress. This shows that majority of the library staff do experience technostress while carrying out their professional functions. This is in consonant with literature (Kupersmith, 1992 and Weil and Rosen, 1997)

Table 1: Population of Library Staff that Experience Technostress

	FREQUENCY	PERCENTAGE (%)
YES	27	79.4
NO	7	20.6
TOTAL	**34**	**100**

Table 2: Causes of Technostress among Librarians

CAUSES OF TECHNOSTRESS	Very High		High		Average		Low		Very Low		Undecided	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Inadequate Training	1	2.9%	7	20.6%	11	32.4%	6	17.6%	7	20.6%	2	5.9%
Slow Network	1	2.9%	5	14.7%	20	58.8%	3	8.8%	3	8.8%	2	5.9%
Faulty Equipment	0	0	2	5.9%	12	35.3%	11	32.4%	4	11.8%	5	14.7%
Introduction of New Technology	1	2.9%	12	35.3%	8	23.5%	8	23.5%	4	11.8%	1	2.9%
Change in Library Software	2	5.9%	7	20.6%	14	41.2%	7	20.6%	3	8.8%	1	2.9%
Poor Sitting Position	2	5.9%	5	14.7%	5	14.7%	5	26.5%	11	32.4%	2	5.9%
Apprehension or Fear	0	0%	1	2.9%	7	20.6%	6	17.6%	15	44.1%	5	14.7%
Poor computer proficiency Skills	1	2.9%	2	5.9%	5	14.7%	11	32.4%	10	29.4%	5	14.7%
Use of outdated technology	0	0%	0	0%	4	11.8%	8	23.5%	16	47.1%	6	17.6%
Inbuilt fear for Technology	0	0%	1	2.9%	6	17.6%	7	20.6%	17	50%	3	8.8%
Sitting in front of computer systems for long periods	2	5.9%	9	26.5%	8	23.5%	6	17.6%	5	14.7%	4	11.8%
Poorly designed workstations	0	0%	4	11.8%	11	32.4%	3	8.8%	10	29.4%	6	17.6%
Electric Power Fluctuation	3	8.8%	10	29.4%	10	29.4%	4	11.8%	5	14.7%	2	5.9%
Poor Technical Support	1	2.9%	7	20.6%	12	35.3%	5	14.7%	6	17.6%	3	8.8%

Table 2 reveals that 2.9% and 20.6% of the library staff perceive that inadequate training is a possible source of technostress; this goes a long way to show that inadequate training is not a strong source of technostress. Slow network is also seen on an average (58.8%) as a source of technostress for library staff while 8.8% of the library staff feel that the speed of the network being used in the library is a source of technostress. From the data collected, Faulty equipments are not seen as a major source of technostress as 32.4% view it as a low source of technostress and only 2 (5.9%) are the view that it is a major cause of technostress.

The table also shows that the introduction of new technology results in technostress to a great extent (35.3%) while the change in library software is also seen as a source of technostress for library staff. 14 (41.2%) and 7 (20.6%) of the library staff feel that a change in the library software could also result in

technostress to a high and average extent. The sitting position of the library staff is not an obvious reason for technostress, 2 (5.9%) are of the view that it is a major reason for technostress while 32.4% of the library staff are of the view that it is not a major reason for technostress. From the table it is also obvious that a major cause of technostress experienced among library staff is as a result of sitting in front of the computer systems for long periods. 5.9%, 26.5% and 23.5% of the library staff admit that this is a cause of technostress to a very high, high and average extent respectively. 32.4% of the library staff are of the opinion that poorly designed workstation and furniture have on an average contributed to technostress experienced while 20.6% and 35.3% attributed technostress to poor technical support to an average and high extent. This is in consonant with literature. (Shepherd, 2004, Aghwotu and Owajeme, 2010)

Table 3: Possible ways in which Technostress experienced among Librarians can be controlled.

WAYS TO CONTROL TECHNOSTRESS	Very High		High		Average		Low		Very Low		Undecided	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Competent and friendly computer network system	10	29.4%	16	47.1%	4	11.8%	3	8.8%	0	0%	1	2.9%
Regular trainings	12	35.3%	13	38.2%	7	20.6%	0	0%	1	2.9%	1	2.9%
Regular breaks intervals during working hours	1	2.9%	10	29.4%	11	32.4%	8	23.5%	1	2.9%	3	8.8%
Revert to manual systems of library operations	0	0%	5	14.7%	4	11.8%	4	11.8%	15	44.1%	6	17.6%
Maintain the use of old technologies and equipments	2	5.9%	2	5.9%	3	8.8%	7	20.6%	17	50%	3	8.8%
Use of good office furniture	13	38.2%	11	32.4%	8	23.5%	0	0%	1	2.9%	1	2.9%
Better ergonomics practice	13	38.2%	11	32.4%	2	5.9%	2	5.9%	2	2.9%	5	14.7%

Table 3 reveals that the use of competent 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. The table above shows that 29.4% and 47.1% of the library staff feel that competent and friendly network systems will control technostress to a very high and high level respectively. Regular trainings also could help to control technostress; 35.3% and 38.2% of library staff indicated that regular trainings could to a high and very high level respectively control technostress. Regular break intervals during working periods could also contribute in controlling technostress; 29.4% and 32.4% of the library staff opined that it could curb technostress to a large extent while majority (41.6%) of the library staff were of the opinion that reverting back to manual systems of library operations was not a solution to technostress. A total of 32 of the library staff also believed that the use of good office furniture will greatly control the

level of technostress experienced. The office equipments to be used should be ergonomically fit for the individual in question.

Another possible way in which technostress could be controlled is through better practice of ergonomics. 13 (38.2%) library staff noted that with the implementation of better ergonomic practice technostress experienced will be brought to the barest minimum. Thibodeau (1995) asserted that libraries cannot escape the ergonomic problems associated with the new technologies. She further stated that they must decrease the number and severity of injuries to employees and clients by a careful holistic analysis of the workplace and implementation of preventative measures. The work environment, the tools, and the persons performing the task must all be considered. The purchase of inexpensive aids such as wrist pads, lumbar supports, and foot rests can decrease the risk of injury.

Table 4: Technostress and Job Productivity

	Frequency	Percentage
Great Extent	5	14.7%
Some Extent	15	44.1%
Little Extent	8	23.5%
No Extent	6	17.7%
TOTAL	**34**	**100**

Table 4 reveals the extent to which technostress affects job productivity of library staff. Out of the 34 respondents, 5 (14.7%) are of the opinion that technostress could affect their job productivity to a great extent, 15 (44.1%) expressed that technostress experienced affects their job productivity to some extent, while 8 (23.5%) noted that technostress has very little effect on their job productivity and 6 (17.7%) noted that technostress does not in any way affect the level of their job productivity. From table 4, it is evident that technostress affects the level of job. Research works carried out by (Porter and Kakabadse, 2006, Jones and Chung, 2006, Kersten, 2007, Luftman et al., 2004,) showed that traits of includes but not limited to information overload, multitasking jobs, a need to attend to customers etc. all these might lead to diminishing returns in the productivity of workers (Gendreau, 2007; Mueller, 2006, Love and Irani, 2007).

Conclusion

Librarians need to keep pace with the changing environment; new formats of technologies, develop new skills and know how's in handling different metadata available in the library. This is very important because the library environment will keep changing to keep pace with technological developments. It is necessary to create awareness about technostress and its effects and possible ways to manage it. Librarians should be given proper training on how to handle new technologies. Sitting in front of computers all day can result into technostress therefore; it is good to take a break at regular intervals to stretch the back and to refresh.

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