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The Influence of Technostress on Library: A Survey of the University for Development Studies Libraries

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Abstract
In this era of information and communication technology, Llibrary service delivery has (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. However, the new technologies tend to cause job related stress on workers which results from the challenges encountered in adapting to new systems called technostress. This study investigates the influence of technostress on Llibrary staff of the University for Development Studies (UDS). A survey was conducted on Library staff of UDS. Primary data were therefore, gathered from 71 respondents using a questionnaire. The data were analysed using descriptive statistics. The results indicate that, Library staff has s low levels of computer literacy as far as their job task is concerned. Besides, the limited knowledge on information and communication technology causes the presence of technostress among the Library staff. The results further indicate that the presence of technostress has a negative influence on the performance of library staff by slowing down delivery with some task unperformed thereby over burdening some staff with much knowledge in information and communication technology. Additional training through in-service or further studies is recommended for library staff of the University to) improved performance in the presence of technostress.
Keywords: Technostress, Library staff, Information and Communication Technology, University Libraries

1. Introduction

In recent times, society is overwhelmed with what is usually called the "mythology of stress", which implies that an individual's psychological and physiological well-being is continually endangered by a degree of stress unparalleled in history. Ragu-Nathan *et al*. (2008) indicated that a hasty look around our world shows that large and trivial events in our life cause stress. These events include work overload, working conditions, time pressure, and promotion are some of the key examples of stressful events that people experience.

The amalgamation of technology in every aspect of modern life, workplaces and working conditions has experienced profound fluctuations. Academic librarians largely depend on technology to function more effectively and efficiently. Nevertheless, technology also arouses negatively connoted opportunities through the destruction of space and time as previously slowing down mediators; technology redefines the limits of organizations. Hence, it has the potential to shorten response times physically and in social expectations (Laspinas, 2015). The world is fast turning to a global village resulting from the introduction of the use of diverse technological tools in carrying out functions that originally were done manually.

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 (Ahmad, 2009). The present age is referred to as the information or digital age which is however, faced with diverse challenges and issues (Ahmad, 2009; Ranjna, 2015). One main challenge associated with the digital age is technostress (Ranjna, 2015; Çoklar *et al*., 2016).

Technostress "arises when a person experiences an inability to fulfill multiple, possibly conflicting, responsibilities or to deal with the level of difficulty and complexity of tasks on hand (Nagarajah, 2016; Boonjinga and Chanvarasuth, 2017). Technostress is a general feeling of anxiety and negative impact on thoughts, behaviours, attitudes and body when a person is expected to deal with technology (Yo *et al.* 2017). Consequently, technostress is the price of technology use (Çoklar *et al*., 2016). This implies that people who easily adapt to the computer age pay less of such price than those finding it difficult to respond to information technology.

Generally, librarians are expected to continually refurbish their technical skills while keeping up with a persistently changing environment, even as sustaining a higher intensity of productivity (Laspinas, 2015). It is an undeniable fact that technology has become a vital and significant part in the 21st century knowledge management. Technological transformation in all institutions and organizations has improved efficiency and reduced the predicament of tediousness in the workplace (Vieitez *et al.,* 2001). For instance, the application of library automation has enormously enhanced the quality and effectiveness of library activities including acquisition, circulation, cataloguing, reference, and serials control. In line with this assertion, Gorman (2001) stated that, technology has better the capacity of the libraries to offer access to digital and electronic information sources despite the consequences of location and immediate delivery of library services in terms of "virtual

library", "electronic library" or "digital library".

As new technologies evolve, library operations also change swiftly and librarians need to adapt to new plans, tasks and activities (Al- Qualiaf, 2006). These changes have many consequences as far as librarians are concerned. Many librarians find it uneasy to attune to the contemporary technologies. This means that technology can cause stress for those who use it. As a result of the introduction of modern technology and swift technological changes in university libraries, there are demands on staff to make use of these technologies which can cause technological stress (Ahmad and Amin, 2012).

The phenomenon of the computer-related stress or "technostress" has attracted substantial attention among academic librarians. Technostress has been identified by researchers with a variety of terminologies such as technophobia, cyberphobia, computerphobia, computer anxiety, computer stress, negative computer attitudes, and computer aversion (Laspinas, 2015). In this era of technology, computer is a basic element of life. Cell phones, email, Internet, digital cameras, online banking and transactions, text messaging, laptops are gadgets that provide services that have only been introduced over the last four decades yet, they have significantly influenced our lives considerably. Technostress is a feeling of anxiety or mental pressure from over exposure or involvement with (computer) technology (Flores, 2012; Laspinas, 2015).

The application of information technology (IT) tools has certainly brought a progressive move to the discipline of library and information science but also given rise to stress and phobia suffered by both academic library staff and customers (Ahmad, 2009). This stress, which is branded as technostress, is instigated by diverse reasons during the constant process of applying information technologies in executing functions that previously were done manually. It is also essential for both academic library staff and customers to be comfortable when applying these technologies in order to enhance productivity. When stress is experienced by workers in a particular organization, it always inevitably has negative effects on the organization (Ahmad, 2009). High productivity is attained with minimal level of technostress particularly on the part of librarians.

The University for Development Studies has adopted computer technologies in its library management. An example of such technologies is the use of electronic resources in libraries (Yebowaah and Plockey, 2017). This suggests that the introduction of the technology has shifted the work of library staff from the existing manual operations to computer technology. The introduction of computer technology in the University Library has a potential of introducing technostress among the library staff. The situation remains uncertain as there is no study on the influence of technostress on UDS Library staff. . Also studies on technostress in university libraries are lacking.

2. Objectives of the Study

The main purpose of this study is to determine the possible causes and likely sources of technostress experienced by librarians in Ghana with the University for Development Studies as a case study.

Specifically, the study sought to achieve the following objectives:

1. To examine the use of Information and Communication Technology in the Library by library staff.
2. To examine the presence of technostress among Library staff.
3. To identify how to manage technostress among Library staff.
4. To analyse the influence of technostress on Library staff.

3. Literature Review

This section presents a review of literature related to this study. The specific issues covered by the literature include the symptoms of technostress in libraries, factors contributing to technostress, the effects of technostress on library staff, and the coping strategies with technostress in libraries.

Symptoms of Technostress in Libraries

The sign and symptoms of technostress include a wide variety of physiological, psychological and behavioral changes that are commonly recognized as part of the human condition. These changes are manifested in the form of physical and emotional exhaustion that involves a negative self-concept and negative attitudes as well as loss of concern and feeling for others, especially those who are considered as stressors. Long-term stress may cause psychosomatic illness (Ahmad and Amin, 2012). Brod (1984 cited in Tiemo and Ofua, 2010), describes exhaustion, sore muscles in back/shoulder, an inability to relax after work and difficulty in sleeping as symptoms of technostress.

Feeling of fear and intimidation are reported by Champion (1988) as symptoms of technostress. Similarly, the most common symptom given for technostress, as reported by Clute (1998) ,was panic, and anxiety, and this was followed by feeling of isolation/frustration. Negative attitude towards computers was listed as third. Others include irritability, anger, exhaustion, increased errors, absenteeism, illness, low morale/confidence. Burn out and difficulty in concentrating was cited as symptoms of technostress by the same study. Weil *et al.* (1987 cited in Tiemo and Ofua, 2010) opined that a symptom of technostress is broadly divided into three different categories, anxious technophobe: exhibits the classic signs of an anxiety reaction when using technology; sweaty

palm, heart palpitations and headaches. Tiemo and Ofua (2010) indicated that, cognitive technophobe: on the surface is calm and relaxed, but internally seethes with negative messages. An uncomfortable user may be slightly anxious or use some negative statement, but generally not in need of one on one counseling. The review on the symptoms of technostress suggests that different responds can be observed from workers that experience technostress in their organisations. However, the studies reporting the symptoms of technostress have not been conducted on library staff especially in the University for Development Studies.

Factors Contributing to Technostress

Tiemo and Ofua (2010) are of the view that several factors are responsible for technostress in an organisation. They explain that many managers did not allow sufficient training time when technologies were first introduced to libraries. Venfleet and Wallace (2003) mentioned rapid rate of change in technology as a factor of technostress in libraries. They also mention other factors such as resources challenges, insufficient training, changing role in libraries, ergonomics, and reliability of hardware or software, excessive workloads, outdated computers skill or software.

The introduction of the CD-ROM database presents a new problem in that each system has different interfaces (e.g. Dos Windows, proprietary) and may employ different search protocols (Isiakpona and Oyeronke, 2011). The new CD-ROM system comes with little or no documentation except internally based documentation like an F1 help screen or hypertext help menu. This phenomenon contributes to technostress in an organisation.

The internet is probably becoming the major causes of technostress due to the fact that many of new information sites with no standard on how they are designed maintained and updated and dealing with the information overload is a real problem (Isiakpona and Oyeronke, 2011). Planning for change is a common technostress portrayed by the advent of new online system that will be implemented but which one is not known. When the system is installed and working, one is expected to know how to use and teach all about the new technology already (Raitoharju, 2005). This position supports the view of Tiemo and Ofua (2010) that insufficient training on a new technology can lead to technostress. According to Ahmad and Amin (2012), technostress creators include inexperience with computers, performance anxiety and lack of training. Clute (1998) also found out that the common causes of technostress in workplace include lack of participatory management styles, ineffectiveness of communication and inadequacy of employees' involvement.

A study conducted by Al-Qallaf (2006) identified the lack of formal training as the number one cause of technostress. She also revealed that most of the respondents were not satisfied with the quality of training programs organized for them. The importance of training is also supported by Poole and Denny (2001), as well as Quinn (2007), who agreed that training should be one of the critical elements in overcoming technostress. Raitoharju (2005) discovered six ways on how technology creates stress in the workplace which include the change brought about by the implementation of technology, technology also can be seen as adding pressure for more effective performance, increasing the amount of information to the extent of information overload, causing anxiety due to the ever frequent change in technology, putting more demand on technical skills as skills needed to be upgraded frequently following technological change, and reducing social support since usage technology usually results in virtual organizations and distance working. Studies such as Tarafdar *et al.* (2007) and Isiakpona and Oyeronke (2011) therefore, described technostress as a problem of adaptation as a result of a person's inability to cope with or get used to information and communication technologies (ICT).

The factors contributing to technostress vary from research to research in different settings. Ken *et al.* (2016) results indicate that on average employees in a call center are experiencing technostress and thus technostress levels are significantly different between male and female, but not age, marital status and position among staff in a call center context. This means that the cause of technostress is associated with demographic characteristics of the affected people. Some other studies relate the cause of technostress to factors other than demographic variables.

Ranjna (2015) found out that factors that generate stress in the organizational environment are associated with the use of ICTs. The use of ICTs, according to Tarafdar *et al.* (2003), can cause technostress in five distinctive ways, which are technology imposed information and work load, technology invading personal and privacy, inability to deal with technology complexity, technology threatening job security and fear of technology uncertainty. Ahmed *et al.* (2009) findings show that among the major causes of workplace stress in today's environment is the introduction and implementation of technology. As regards job stress, Ikonne *et al.* (2016) show that much working pressure, work interfering during personal and family time; as well as the challenges of coping with technology were their major sources of technostress.

According to Ranjna (2015) there are five conditions (Techno - overload, Techno - invasion, Techno - complexity, Techno - insecurity and Techno - uncertainty) where ICTs users can suffer from techno stress. Techno overload is a situation where employees are forced to work more and work faster or change their working habits; trying to do more in less time, and experiencing tension and anxiety due to the advanced ICT's (Ranjna, 2015). Nagarajah (2016) noted that religion is significantly related to techno overload. He stated that non-religious participants experience lower techno overload as compared to religious participants. The review

revealed that techno-overload contributes to technostress through various ways. Techno‐invasion describes situations where professionals can potentially be reached anywhere and anytime and feel the need to be constantly connected. Due to this kind of continual connectivity, individuals feel attached to these technologies and experience intrusion on their time and space. Therefore, they experience frustration and stress (Ranjna, 2015). Techno-invasion occurs when people lose family time, work during vacations, stop taking vacations due to work, and experience a disruption of personal time due to ICT usage (Nagarajah, 2016). Techno‐complexity describes situations where the complex information system forces professionals to spend time and effort in learning and understanding how to use new applications and update their skills. Users can find the variety of applications and functions intimidating and difficult to understand, and consequently feel stressed (Ranjna, 2015). Techno‐insecurity is a situation where users feel threatened about losing their jobs to other people who have a better understanding of new information system. Existing professionals may thus feel insecure or cynical about information system, leading to tension and stress (Ranjna, 2015). It is therefore not surprising that Coklar *et al*. (2016) discovered that lack of security was one of the technical problems that contribute to technostress among teachers.

In line with Ranjna (2015) point of view, Coklar *et al*. (2016) established that reason for technostress expressed by teachers include; technical problems, educational oriented problems, health problems and time trouble. Professionals who engage in other activities aside their primary assignment for which they are employed are more prone to stress than the others (Dina, 2016). According to Coklar *et al*. (2016) the distribution of reasons for technostress also differs in terms of gender. On the contrary, Tieme's *et al.* (2010) investigation shows no differences relating to gender and technostress. They stated that majority of the librarians (both sexes) experienced technostress using computers and it related technology, as a result of technological changes. However, Khan *et al* (2016) maintain that technostress(es) levels are significantly different between male and female. Men are more inclined to use technology hence experienced a higher intensity of technostress than women. In India, higher levels of technostress difference are found in case of gender, technological awareness and age among academicians (Jane and Mahanti, 2014). Jane and Mahanti (2014) discovered that men academicians experience more technostress than women academicians because women find technology less easy to use than men. They further stated that older academicians experience more technostress than younger academicians. Khan *et al* (2016) strongly rejected this claim with the view that even though gender significantly causes technostress, age and marital status have no contribution to technostress. But Nagarajah (2016) disagreed with Khan *et al*. (2016) and stated that there was a statistically significant relationship between age and stress related to techno-complexity. In particular, the results of pairwise comparisons found that participants between the ages of 50 and 69 years old experienced significantly higher levels of stress due to techno-complexity than younger participants (Nagarajah, 2016). Techno- uncertainty is the context where continuing changes and upgrades to information system do not give professionals a chance to develop a base of experience for a particular application or system (Ranjna, 2015). Nagarajah (2016) realised that techno-uncertainty occurs when individuals lack awareness of technological developments in organizations, face constant changes in computer software/hardware, and experience frequent upgrades in their computer networks.

The influence of professional training and personal factors on technostress analysis demonstrated a significant relationship between race and techno-insecurity with Whites experiencing significantly lower levels of techno-insecurity compared to non-Whites (Nagarajah, 2016). Yo's *et al*. (2017) study which they conducted among academic staff of a tertiary institution in North-Central Nigeria found out that about 33% reported ill-health due to information overload and majority reported increased tension with work colleagues and diminished job satisfaction caused by information overload related to technostress thus showing that information overload is an important psychological effect of technostress with a great tendency to reduce job performance of workers. Furthermore, Gill (2017) found b that library professionals get frustrated due to low salary as well as low budget system, status and responsibility for missing books, and these factors are discouraging librarians to provide better library service. By this, Ken *et al.* (2016) revealed that the work place is a source of techno-stress, because of changes in software programs; computers, hardware and communication are frequent in most industries. Backing this claim, Coklar *et al*. (2016) point out that software supply and poor quality instruments are some technical problems that contribute to technostress among teachers.

In Nigeria, Olasanmi (2016) observed that individual auditors recorded high technostress level as a result of slow computer speed, slow internet connectivity, network failure which is needed for work, and intrustion of ICT on private life. Arguing on the same line, Yo *et al* (2017) said factors like poor power supply, poor internet network among others contribute to technostress among academic staff of tertiary institutions in Nigeria.

Influence or Effects of Techno stress on Library Staff.

Stress at workplace is a growing concern where employees are increasingly facing conditions of workload, job insecurity, and low levels of job satisfaction and lack of autonomy (Ranjna, 2015). Factors that create and inhabit technostress affect both employee satisfactions with the use of ICT and employee intention to extend the use of ICT (Fuglseth and Sorebo, 2014). In accessing the effect of stress on professional librarian's job

performance in Nigeria, Dina (2016) detected that the implication of technostress can result in serious physical and physiological illness as well as major resource loss for their university libraries. Hence technostress has health and job related consequences as discussed.

Health Issues

Work place stresses have a harmful effect on the health and well-being of employees (Ranjna, 2015). Even though the results of Olasanmi (2016) indicated that technostress is on a moderate level among four auditing firms in Nigeria. All workers experience pressure in the work place and excessive pressure are the primary cause of impaired visual performance, headaches, and tired, red or sore eyes (Agboola and Olasanmi, 2016). Individuals who are affected by technostress can suffer from physical problems such as neck pain, shoulder pains, eyestrain and sleeping disorder which are caused from overusing mobile phones (Boonjing and Chanvarasuth 2017). Interestingly, Olasanmi (2016) in his study revealed that technostress was found not to have any correlation with headache, visual fatigue, poor posture, back pain, finger numbness, migraine, inadequate sleep, wrist pain or depression, which is contrary to the findings in some studies (e.g Agboola and Olasanmi, 2016; Boonjing and Chanvarasuth 2017).

Additionally, various physical, psychological and behavioral symptoms related to technostress were identified by Yo *et al*. (2017) to include; neck aches, blurred vision, overspending on computers, information overload to find, analyze, evaluate and apply it in the right context of resources, sleep problems, anxiety, frustration, irritability and poor appetite (in order of decreasing frequency of respondents experiencing them). In the libraries, most librarians experience the symptoms of muscle tension and shaky hand when they use computer related technologies (Tieme *et al.* 2010).

Job Related Issues

In the developing countries, Agboola and Olasanmi (2016) noted that technological stressors can result in the ergonomic hazards, which are detrimental to workers and their places of work. Also, it was discovered that technostress experienced by academic staff of University of Jos significantly affected their job performance to various extent. In Pakistan, Khan *et al.* (2013) established that techno overload, techno invasions and techno uncertainty are predictors of job dissatisfaction. Similarly Tracy (2015) indicated that technostress, perceived usefulness and behavioral intent to use technology explain a significant amount of variation in job satisfaction. These physical illnesses, fatigue and mental disorder according to Tarafdar *et al.* (2003) will eventually lead to excessive absenteeism, turnover and decreased performance of the job. By the same token, Dina (2016) findings show that professional librarians' quality in terms of job performance in relation to their job demand and expectation can be affected negatively as result of enormous stress.

Khan *et al*. (2013) confirmed that stress caused by technological innovations have a significant effect on job satisfaction of Khyber Pakhtoonkhwa (KPK) university librarians. Boonjing and Chanvarasuth (2017) noted that when technostress occurs workers may feel less satisfied on their works. Further findings of Khan *et al*. (2013) indicated that technostress decreases job satisfaction of University Librarians in KPK of Pakistan. In the mobile environment, Hung *et al.* (2015) discovered that the higher the communication overload, the more pronounced the negative effect on productivity would be.

Technostress can also lower workers' job efficiency, thus workers are not able to concentrate on work as the level of technostress increases (Boonjing and Chanvarasuth 2017). As a matter of fact, technostress leads to the inability to fulfill multiple, possibly conflicting, responsibilities, or deal with the level of difficulty and complexity of task on hand (Tarafdar *et al.* 2003). Yo's *et al.* (2017) study revealed that technostress affects the job performance negatively. With all these effects of technostress, Ikonne *et al*. (2016) are of the strong notion that there is a positive relationship between job satisfaction and job stress. According to Boonjing and Chanvarasuth (2017), workers may not enjoy good relationship with their colleagues when they are experiencing technostress. This compendium of stress is distressing not just to the person suffering technostress but for those who must work with, for or mange these techno stressed individual (Clute, 1998).

Coping Strategies with Technostress in Libraries

Coping is the process of managing external and internal demands that are perceived as tasking or exceeding a person`s resources. Coping may consist of behavior or cognitive responses that are designed to reduce, overcome or locate the demands placed on the individual, known as coping strategies (Laspinas, 2015). In overcoming technostress, Boonjing and Chanvarasuth (2017) revealed that the absence of adequate technostress prevention mechanisms for employees can lead to undesirable consequences not in line with anticipated benefits. Tieme *et al.* (2010) established that for librarians to cope with technostress they should discuss technostress and plan for it and also buy more user friendly hardware and software and take frequent break from computer related technological related items.

Ranjna (2015) in his study explained that there is pressure on library professionals to adopt knowledge of new technological along with traditional methods of functions and services. However, there is a limited scope of training programs, higher studies, refresher courses and these become causes of stress among library professionals in Haryana State (Gill, 2017). Yo *et al.* (2017) found that the main strategies that can help

academic staff of the University of Jos in coping with technostress are organizing technology based training, effective time management, exercise, having an awareness of technostress and its levels, regular break intervals while using technology and sharing of knowledge among colleagues.

The empirical review has discussed various concepts related to technostress. The discussion brought together empirical evidence from different institutions. All the studies have admitted that the introduction of new technologies in an organisation introduces stress among the existing workers. This study will contribute to the debate of technostress on library staff by drawing empirical evidence from the University for Development Studies.

3. Methodology

This section presents the procedures for carrying out the study. It specifically presents a description of the study area, the research design, population and sampling, instruments for data collection and the methods of data analysis.

3.1 Study area

The University for Development Studies (UDS) was established by Provisional National Defence Council (PNDC) Law 279 of 1992. The University is mandated to serve the needs of the four Northern Regions namely: Brong Ahafo, Northern, Upper East and Upper West Regions. In September 1993, the first batch of 39 students was admitted. The University now has four campuses in the three Northern Regions of the country which are located at: Tamale, Nyankpala, Navrongo and Wa respectively. All the campuses have libraries that serve the needs of the academic community.

The Libraries provide wide range of reading materials including the subscription of electronic resources through the Consortium of Academic and Research Libraries in Ghana (CARLIGH). The subscribed e-resources are available for use by both lecturers and students (Yebowaah and Plockey, 2017). This means that information technology has been adopted to replace the existing manual operations by the Library staff. This requires the shift to electronic data base systems which can be a challenge to some staff of the Library.

3.2 Research design

The study used a survey design which usually produces a 'snapshot' of a population at a particular point in time. A survey has several characteristics and several claimed attractions. Typically it is used to scan a wide field of issues, populations, programmes etc. in order to measure or describe any generalized features (Cohen *et al.*, 2007). The survey method can be used for descriptive, exploratory, or explanatory research. This method is best suited for studies that have individual people as the unit of analysis (Bhattacherjee, 2012). The relative strength of the survey method informs the choice of it for this study.

3.3 Population and sampling

The population of the study consists of all library staff of the University for Development Studies. There was 71 library staff serving the various library facilities in the various campuses. There are 10 staff in the School of Medicine and Health Sciences, 7 in the Faculty of Education, 8 in Navrongo Campus, 33 in Nyankpala Campus and 13 in Wa Campus. Hence, total enumeration was adopted.

3.5 Data collection and analysis

Primary data were collected from the respondents for analysis. Copies of questionnaires were distributed to all the staff in the various Campus Libraries and retrieved. The period for data collection was in the Months of July and August 2017. The data consisted of respondents' demographic characteristics, use of ICT in the library, and the influence of technostress on library operations. The data were coded and transformed using the SPSS spread sheet. The analyses were done using descriptive statistics.

4. Results and Discussion

This section presents results of the study. Several variables have been discussed with much focus on the objectives of the study. The section first presents analysis of respondents' background characteristics. The other sections present the use of ICT in the Library, and influence of Technostress on Library operations. A total of 71 questionnaires were retrieved from the respondents; thus yielding a 100% response rate.

4.1 Background Information of Respondents

The background characteristics presented include respondents' ages, gender, formal educational attainment, and number of years' experience in the UDS Library. The distribution of the background characteristics are shown in Table 1. The ages of respondents were recorded in the survey as shown in the Table 1 below. It was observed that the respondents have a minimum age of 27 years and a maximum age of 59 years respectively. Besides, the

age was recorded as 37.20 with a standard deviation of 7.81. The respondents consisted of both males and females. The results indicate that 44 respondents amounting 62.0% were males while the remaining 27 respondents denoting 38.0% were females.

The level of formal education of respondents was obtained and categorized into SSCE/WASSCE, Diploma, HND, First Degree, and Masters. Findings from the survey revealed that 5 respondents representing 7.0% indicated that they were SSCE/WASSCE graduates, 18 respondents denoting 25.4% confirmed that they were diploma holders, 12 respondents denoting 16.9% indicated that they were HND holders, 15 respondents representing 21.1% confirmed that they were first degree holders and 21 respondents constituting 29.6% indicated that they had masters degree.

The respondents were asked to indicate their number of years of experience (working) in the University Library. A descriptive statistics shows that the minimum number of years of experience (working) in the University Library was 1 year; the maximum number of years of experience (working) in the university library was 22 years and mean of 8.17 with a standard deviation of 5.043.

Table 1: Background of respondents

Variable	Frequency	Percent
Gender		
Male	44	62.0
Female	27	38.0
Total	**71**	**100.0**
Education		
SSCE/WASSCE	5	7.0
Diploma	18	25.4
HND	12	16.9
First Degree	15	21.1
Masters	21	29.6
Total	**71**	**100.0**

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Age	71	27	59	37.20	7.815
Years of experience (working) in the university library.	71	1	22	8.17	5.043

Source: Field Survey (2017)

The results on background characteristics of the respondents revealed that the Library staff of the University for Development Studies has varied characteristics in terms of gender, education, age and working experience. The staff has different working experience with average years of experience as eight. This suggests that they might have been experienced use of Information Communication Technology as the Library transits from manual operations to ICT. This will have implications for technostress among the staff.

4.2 Use of ICT in the Library

The respondents were observed to have undergone training on ICT use in the Library. The results indicate that 94.4% of them have access to formal training on ICT use while the remaining 5.6% indicated that they have never undergone any training on information Technology (IT). Further analysis was done on their familiarity with information technology. The results as shown in Table 2 project that 91.5% have been familiar with the use of information technology in their respective Campus Libraries. Further findings revealed that 91.5% often use Information and Communication Technology in the Library.

Table 2: Use of Information Communication Technology in the Library

Variable	Frequency	Percent
Undergone Training on ICT		
Yes	67	94.4
No	4	5.6
Total	**71**	**100.0**
Familiar with ICT		
Yes	65	91.5
No	6	8.5
Total	**71**	**100.0**
Use of information ICT tools to carry out Library functions		
Yes	65	91.5
No	6	8.5
Total	**71**	**100.0**

Source: Field Survey (2017)

The results in Table 2 imply that the UDS Library staff have undergone training on Information and Communication Technology, and hence have been familiar with its application in the Library. Besides, they

often use it in the performance of Library functions. The results suggest that the Library staff is likely to experience technostress ones there is an intensive use of Information and Communication Technology in their respective Campus s Libraries.

The respondents were asked to mention their activities that required the use of information technology. Among the various applications cited included: accessing online journals, writing of daily and weekly reports, database technology, digital archiving on institutional repository, online cataloging, and uploading documents into the IR or checking the IR. The frequency distributions are shown in Table 2.

From Table 3, the activities with high frequencies included digital archiving on institutional repository, preparation of daily and weekly reports, and the use of database technology. Each of these activities had been done with the aid of Information and Communication Technology.

Table 3: Activities that require the use of Information Technology

Activities that require the use of IT	Frequency	Percent
Access to online journals	24	33.8
Daily and weekly reports	57	80.3
Database technology	46	64.8
Digital archiving on institutional repository	64	90.1
Online cataloguing	35	49.3
Uploading documents on to the IR, Checking the IR.	16	22.5

Source: Field Survey (2017).

The results from Table 3 suggest that staff of UDS Library perform much of their functions with the aid of Information and Communication Technology. This means that they are more likely to experience technostress in the performance of their duties because almost all their daily activities are performed with the use of Information and Communication Technology.

The respondents were also asked to rate their information technology proficiency level in the Library. The rating categories observed included Very high, High, Average, and Low levels of proficiency. It was observed that only eight respondents representing 11.3% rated their information technology proficiency level as very high, 33 respondents amounting 46.5% rated their information technology proficiency level as high, 27 respondents denoting 38.0% rated their information technology proficiency level as average and the remaining three(3) respondents representing 4.2% rated their information technology proficiency level as low. The distribution of respondents' information technology proficiency levels are shown in Table 4.

Table 4: Level of Information Technology Proficiency among Library Staff

Proficiency level	Frequency	Percent
Very high	8	11.3
High	33	46.5
Average	27	38.0
Low	3	4.2
Total	**71**	**100**

Source: Field Survey (2017).

The results on the levels of proficiency in ICT among the Library Staff is at least of average as indicated by 27 of the respondents. Only a relatively small proportion indicated that their levels of ICT proficiency low constituting only 4.2%. This means that those with low or average level of proficiency (i.e 42.2%) would tend to have challenges performing tasks that required advance knowledge in ICT. Such instances can introduce technostress among the staff.

4.3. Presence of Technostress among Library Staff

Respondents' views were sought on whether they experienced technostress when carrying out their duties using information technology (IT) tools. Out of the 71 respondents investigated, the results pointed out that 48 of them representing 67.6% responded affirmatively that they experience technostress when carrying out their duties using information technology (IT) tools. On the other hand, the remaining 23 respondents denoting 32.4% indicated that they did not experience technostress when carrying out their duties using information technology (IT) tools. This means that the introduction of information and communication technology in to the University's' Library operations resulted in technostress among the staff. The presence of technostress among the Library staff will have implications for the performance of the staff.

Several factors were responsible for the presence of technostress among the Library staff. When inquired from the respondents, among the causes of technostress were : inadequate training on ICT, slow network, faulty equipment, introduction of new technology, change in library software, poor sitting position, poor computer skills, use of outdated technology, working with the computer for long, and poorly designed work station. Others included electric power fluctuation, and poor technical support. The frequency distribution of the results is shown in Table 5.

Table 5: Causes of Technostress among Library Staff

Causes of Technostress among Library staff	Frequency	Percent
Slow network	69	97.2
Electric power fluctuation	50	70.4
Poor sitting position	45	63.4
Inadequate training	40	56.3
Faulty equipment	30	42.3
Poor technical support	29	40.8
Sitting in front of computer system for long hours	25	35.2
Poor computer proficiency skills	24	33.8
Poorly designed work stations	17	23.9
Introduction of new Technology	14	19.7
Use of outdated technology	13	18.3
Change in library software	10	14.1

Source: Field Survey (2017)

The factors leading to technostress, as identified in this study, confirmed earlier empirical literature. Venfleet and Wallace (2003) mentioned rapid rate of change in technology as a factor of technostress in libraries. In this study, the respondents maintained that a change in system software or introduction of a new technology all lead to technostress among the Library staff. However, this study reported different results that have not been found in the literature of technostress. The respondents maintained that the use of outdated technology also results in technostress. This position may correspond with situations where new technologies could increase the efficiency of staff but the University still maintains the outdated technology. This therefore, brings to the fore, the controversy on the role of technology change on technostress.

Besides, a factor such as insufficient training as noted by Isiakpona and Oyeronke (2011) and Al-Qallaf (2006) one of the key factors contributing to technostress among Library staff in the University for Development Studies. This means that, as introduction of new technology is necessary in obtaining new work output, so should management accompany new technologies with effective training. This relates with the case of change in the systems software that may require new functions. The lack of effective training on such functions leads to technostress among the users.

Agboola and Olasanmi (2016) reported factors such as over concentrating on the screen for long, poor positioning of the computer, in adequate lightening as factors leading to techno-overload which consequently causes stress. Similarly, this study identified related factors such as working with the computer for long, computer breakdowns, power fluctuation and poor sitting positions leading to technostress. This means that the causes of technostress are almost the same for staff even in different environments.

4.4 Managing Technostress among Librarians

Respondents were asked to indicate the ways that could help them to reduce technostress. Several suggestions were given as presented in Table 6. From the table, Out of the total sample population of 71, 65 respondents representing 91.5% maintained that development of competent and friendly computer network system can help them overcome technostress. Besides, 63 respondents representing 88.7% maintained that regular training/workshops on ITC application in Libraries can help them overcome technostress in the Library. Other ways provided by the respondents included use of good office furniture, better ergonomics practices, and regular break intervals during working hours. However, others also suggested that the University should maintain old technologies and equipment in Library operation to enable them gradually shift to new technologies.

Table 6: Ways of Managing Technostress among Librarians

Ways of Managing Technostress among Librarians	Frequency	Percent
Competent and friendly computer network system	65	91.5
Regular Training/workshop	63	88.7
Use of good office furniture	59	83.1
Better ergonomics practice	46	64.8
Regular break interval during working hours	29	40.8
Maintain the use of old technologies and equipment	6	8.5

Source: Field Survey (2017)

The results presented in Table 6 have some implications for the performance of Library staff. First, organisations of workshops for in-service training may contribute to overcoming technostress as found by empirical literature (e.g Yo *et al.,* 2017). Besides, as Ranjna (2015) suggested, the use of old technology alongside the new ones cam gradually migrate staff from the old to the improved technology without creating technostress among the staff. This study reported similar findings in order to minimize technostress.

4.5 Influence of Technostress on Library Operations

The respondents indicated different influence of technostress on library operations. As shown in Table 7, 47.9% of the respondents maintained that technostress slow down delivery rate, 32.4% indicated that some task are not done because of the effect of technostress while 19.7% maintained that some task are transferred to other staff with knowledge in ICT.

Table 7: Effects of Technostress on Your Job Activities

Effects of techno stress on your job activities	Frequency	Percent
Slow in delivery	34	47.9
Some tasks are sometimes not done	23	32.4
Some tasks are being transferred to others with knowledge in IT	14	19.7
Total	**71**	**100**

Source: Field Survey (2017).

The results suggest that technostress often has negative effect on the performance of employees. In this study the effect is that the performance of Library staff will be reduced through slow delivery, avoidance of some task and burdening of some staff with exclusive knowledge in ICT. Activities that are not often performed as reported include database searches, information storage and retrieval, sending of emails, and simple hardware works. These results are different from the health- related stress reported by empirical studies. For example, the fact that individuals who are affected by technostress suffer from physical problems such as neck pain, shoulder pains, eyestrain and sleeping disorder arising from overusing mobile phone as was reported by Boonjing and Chanvarasuth (2017) and Agboola and Olasanmi (2016) have not been observed in the case of the UDS Library staff. Besides, the report of Khan *et al.* (2013) and Ikonne *et al*. (2016) that technostress leads to job dissatisfaction has no empirical proof as far as this study is concerned.

On the other hand, empirical results that have been confirmed by this study on the effects of technostress include the work of Boonjing and Chanvarasuth (2017), Yo *et al.* (2017), and (Tarafdar *et al.* 2003). These studies maintained that technostress reduces work performance in support of the results of this study. This means that the effect of technostress ,according to the results of this study ,are more directly on work performance than the health consequences as reported by some studies.

5. Conclusion

The results of this study revealed several findings that have implications for new knowledge on the subject of technostress. It is now established that technostress is present among Library staff of the University for Development Studies. The staff have do not have high levels of computer literacy and hence have difficulty in adjusting to changes in software used in the library. Besides, the introduction of new technologies has not been accompanied by appropriate training. The study provided mixed findings and hence inconclusive on the performance of library staff. While new technologies bring about technostress which consequently lower performance, the use of outdated technologies also have the potential of reducing work efficiency. This observation places much emphasis on the role of training in influencing performance of library staff. As institutions adopt technologies to improve performance, such innovations can only be sustained through better orientation of the worker. The findings of the study are that technology adoption improves performance but on the other hand introduces technostress. Evidence also suggests that one main copying strategy for technostress is effective training on new technologies that have been adopted.

6. Recommendations

Management of the University for Development Studies, especially those in charge of library development should:

(i) Be regular at organizing in-service training for all library staff on the existing and new technologies that are yet to be developed. Appropriate intervention also includes granting existing employees study leave to study porgrammes on information and communication technologies to improve upon their skills.

(ii) Besides, management can also manage the factors leading to technostress among Library staff through improvement in Library infrastructure such as good office furniture, and

(iii) Procuring auxiliary power sources to support existing electricity supply.

These are essential because their absence facilitate technostress among Library staff.

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