UNIVERSITY OF GHANA

DEPARTMENT OF INFORMATION STUDIES

TECHNOSTRESS AMONG THE STAFF OF COLLEGE OF HEALTH SCIENCES LIBRARY, UNIVERSITY OF GHANA

BY
HANNAH OKINE
(10334065)

THIS THESES IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL INFORMATION STUDIES DEGREE

JULY 2019

DECLARATION

I hereby declare that this work is the result of my own research done under the tutelage of Dr. Philip Nukpe and Prof Harry Akussah and has not been partly or wholly presented by anyone for any academic purpose in any institution of study. All references used have been dully acknowledged.

…….. **…….....……**

HANNAH OKINE **DATE**

(STUDENT)

…… **…….....……**

DR. PHILIP NUKPE **DATE**

(PRINCIPAL SUPERVISOR)

……. **…….....……**

PROF. HARRY AKUSSAH **DATE**

(CO-SUPERVISOR)

DEDICATION

This thesis is dedicated to my Mother, Madam Beatrice Amorkor Armah, my Father, Mr. Joseph Armah Okine, my Beloved, Mr. Charlse Kwadwo Tweneboah and last but not the least my Son Terry-Larry Kwadwo Kwakye Tweneboah, for believing in me and for the immense sacrifices they made to support me this far. God bless them constantly.

ACKNOWLEDGEMENTS

I would like to firstly thank the Almighty God for the success of this thesis. I am also indebted to my supervisors Dr. Philip Nukpe and Prof. Harry Akussah for their tolerance and patience from the commencement of my work to finish. Their impeccable guidance and coaching were invaluable throughout this thesis. I am as well grateful to the entire faculty members of the Department of Information Studies for supporting me by way of constructive criticisms. They all kept me on track and heart centred during seminars.

To all my study participants, thanks for making a difference in my life, for without their cooperation this research would not have gotten this far. To my family, especially my parents who relentlessly lent a helping hand, they are greatly loved and appreciated.

Last but not the least, I also owe a depth of gratitude to Dr. Samuel Kofi Badu Nyarko, a Senior lecturer and former Head of Department of the Department of Adult Education who is like a father to me, contributed immensely towards the success of my graduate studies, God grant you good health. To all other persons not mentioned, who in diverse ways contributed to the success of this thesis, my heart goes out to you all.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

APP	–	Application
BBC	–	Born Before Computer
CARLIGH	–	Consortium of Academic and Research Libraries Ghana
CD	–	Compact Disc
CD-ROM	–	Compact Disc-Read Only Memory
CHS	–	College of Health Sciences
CHSL	–	College of Health Sciences Library
CSIC	–	Superior Council for Scientific Research
Dumsor	–	Local name for power outage in Ghana
DVD	–	Digital Versatile Disc
E-resources	–	Electronic-resources
EdX	–	Online learning destination, offering courses from global universties
ICT	–	Information and Communications Technology
IS	–	Information Systems
NAB	–	National Accreditation Board
NLM	–	National Library of Medicine

Mid-Sem	–	Mid Semester
OPAC	–	Online Public Access Catalogue
P-E Fit Model	–	Person-Environment Fit Model
Sem	–	Semester
SCT	–	Social Cognitive Theory
TAM	–	Technology Acceptance Model
WWW	–	World Wide Web
Wi-Fi	–	Wireless Fidelity

LIST OF TERMS

Application	–	A software designed to fulfill a particular purpose
Bibliography	–	A list of sources referred to in a particular work
Cardiovascular Disorders	–	Diseases relating to the heart and blood vessels
Database	–	A structured set of data held in a computer
Electronic Format	–	Readable materials conveyed over computers or using internet
Gastrointestinal Disorders	–	Diseases related to the stomach and intestines
Hyper places	–	Places where things are done unusually faster
Network	–	A group or system of interconnected people or things
Neurological Diseases	–	Diseases related to the nervous system
Print Formats	–	Physical paper copies produced
Psychic Diseases	–	Relating to the soul and mind to be telepathic or clairvoyant
Technostress	–	Gap between people and introduction of new technologies
Techno-complexity	–	Complexity related to information and computer technologies
Techno-insecurity	–	Threat felt in relation to job loss due to lack computer skills
Techno-invasion	–	Invasion of privacy due to infusion of technologies at work leading to work-family conflict.
Techno-overload	–	forcing people to engage in more work and at faster rates

Techno-uncertainty	–	The short and rapid change of technologies due to obsolescence.
Web 2	–	Websites that emphasize user-generated content, ease of use
Website	–	A collection of related network web resources, such as web pages with common domain name, published on web server.
Wi-Fi	–	A facility allowing computer or other devices to connect to the internet or communicate with one another wirelessly.
World Wide Web	–	Network of online content that is formatted in HTML and accessed via HTTP, refers to all the interlinked HTML pages.

ABSTRACT

University libraries have experienced the infusion of technologies in their processes due to the advancement in technologies and also as a result of the information age that has transformed traditional methods in almost all academic libraries as well as other human institutions. The introduction of the library integrated software and OPAC has resulted in the need for library staff to be well equipped in the use of ICTs in order to remain relevant in the library profession. Hitherto librarians rendered manual services from start to finish. Currently, ICT has brought with it anxiety and the phobia for technology. This has made library work stressful.

The study investigated the extent of technostress among the staff of College of Health Sciences Library, University of Ghana, causes of technostress among the professional librarians and paraprofessionals of library and the coping strategies used in an attempt to control or eliminate it, with the view to making recommendations for improved service delivery. Nineteen (19) staff members which comprised professional and paraprofessional library staff of College of Health Sciences Library were participated in the study. A semi-structured interview was used in collecting data with regards to sources of technostress.

It was shown from the study that professional librarians and paraprofessionals of College of Health Sciences Library perceived challenges encountered on the job, unfavourable library environment, work overload**,** inadequate resources**,** job dissatisfaction, complex job demands, user challenges as the main causes of their technostress. Power outages and interruptions in internet connectivity were also identified to be some unique causes of technostress. Effects of technostress were identified to be unrelenting stress, heart diseases, brain damage, low job commitment, computer anxiety, as well as rigidity of workflow. In spite of the challenges related to library work, respondents were aware of benefits derived from the infusion of technologies in library processes

and attested to the efficiency added to their daily routines. As such they had adopted technostress minimizing strategies such as positive thinking, resistance to prolonged sitting, meditation, isolation, sleeping, time management, watching movies and listening to music. It was also evident that staff had undergone some levels of training and had gained some form of experience on the job which helped them manage technostress.

The study recommended the employment of skilled staff to support existing staff. Other recommendations are; adequate training for staff through seminars and conferences in the use of these infused technologies, the reinforcement of the counselling unit, provision of a restroom and last but not the least, the creation of a congenial environment for staff.

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Technology continues to change the world, and has made life easier because of how it has become integrated into the existence of individuals that it is almost impossible to do without. The advent of technology with the development of the Internet has permitted the progress of humanity; the World Wide Web has revolutionized organizations and institutions such as the College of Health Sciences (CHS), University of Ghana, into embracing the digital world. Due to this, all including staff of College of Health Sciences Library (CHSL) have become both users and content authors. Institutions such as libraries have become hyper-places where the flow of information and data generated by electronic devices, have exceeded the boundaries of the physical environment.

Technology is a remarkable instrument with which social, political and cultural beliefs have been transformed (Isman, 2004). That is to say, majority of human challenges are tackled better and effectively through the use of Information and Communication Technology (ICT). 'ICT' seems to have replaced the term 'technology' and 'information technology'. It is characterized by constant and continuous change as new technologies are invented. This constant and rapid technological change due to obsolescence poses threats to especially library staff as regards acceptance and thereby leads to their resistance to adoption of emerging technologies and subsequently causes technostress. The infusion of new ICTs in academic institutions such as the College of Health Sciences Library, University of Ghana, and other higher educational centres the world over have changed user-librarian and teacher-student influence.

The term Technostress was first introduced by the American psychologist Craig Brod in his book published in 1984 by Addison Wesley: "Technostress: the human cost of the computer revolution". The psychologist referred to the stress associated with the use of technologies and their impact on the psychological level. Brod (1984a) first defined Technostress as "a modern disease of adaptation caused by inability to cope with new computer technologies in a healthy manner", this is relative to both computers and software. Technologies evolve too quickly, therefore adaptation to the location of individuals, brings about psychological pressure which is characterized by discomfort and frustration. Some symptoms of Technostress are anxiety, mental fatigue, depression, nightmares. This particularly causes anger resulting from the difficulties of computer software use and management of faults which interrupted the workflow.

With the introduction of Internet network, technostress acquired a new meaning with the transition to the era of connections or networking, where information is everywhere. In the new sense, individuals are immersed and absorbed into huge amount of information which they manage on daily basis leading to a cognitive overload and also referred to as "information overload" in psychology **(**Chiappetta, 2017). In these cases the individual experiences a state of anxiety, characterized by a widespread fear of being overwhelmed by an immense amount of material that cannot be organized in order and under control. Champion (1988) also revealed in her study as she bluntly described technostress as "the result of technology". Brod (1984b) again defined technostress as a condition caused by the difficulty of people and professional areas to adapt to rapid changes in technology.

Technological advancement however, has advantages such as providing libraries such as the college of Health Science Library and other organizations easy access to information and has made previously impossible work arrangements feasible, for example the ability to work efficiently in

virtual environments without physical presence in the library or office for that matter. It has as well enhanced timeliness and connectivity hitherto would have brought about bottlenecks, taking into consideration geographical boundaries since in reality institutions are dispersed, such as exists in University of Ghana's Balme Library which has under its umbrella college libraries like the College of Health Sciences Library (CHSL) and the School libraries under it.

Aina (2004a) refers to a library as an organized collection of sources of information and similar resources, which are accessible to a defined community for reference or borrowing. He asserted that libraries provide physical or digital access to materials and may be a physical building or room, or a virtual space or both. An academic library such as the CHSL is one that is situated in higher educational institutions such as universities, polytechnics, colleges and which supports the objectives of the institutions in the areas of learning, teaching and research and service provision. The Librarian has inadequate time to reason critically and reflect on actions any more. Everything is instantaneous (Kinman & Jones, 2005b)

Academic libraries are among the sectors of the Ghanaian economy that is developing vigorously. The provision of easy access to tertiary education has brought about this development (Atuahene & Owusu-Ansah, 2013). A typical example is the CHSL where its patrons are lecturers, students, researchers and support staff (non-teaching staff) and members of the local community within the geographical location of the university.

Johnson (2004) is of the view that the library is used by undergraduate students for learning whereas postgraduate students use the library mostly for research. Graduate students of CHS patronize to a great extent the electronic resources on the UG OPAC as well as other researchers

and lecturers. Ellis & Oldman (2005) opined that electronic resources are tools that assist in conducting research. E-resources are therefore important tools in the academic process of higher education learning. This enables university libraries to influence teaching, learning and research in higher educational institutions (Bature, 2009). Aina (2004b), emphasized that the services provided by academic libraries can be categorized as follows: lending, reference services, current awareness service, inter-library loan services and document delivery, reservation service, exhibition and displays, provision of seating and study facilities, library publications, information literacy programme, user education, translation service, referral service, selective dissemination of information, literature search, rental of premises, extension and outreach services. This is all made possible by professional librarians with the assistance of paraprofesionals.

Fennel & Mitchell (2013) pointed out that librarians have traditionally been associated with book collections, as practically shown by the etymology of the word "librarian" (Latin*Liber,* 'book'). However, modern librarians also package information in many formats like books, magazines, newspapers, audio recordings, video recordings, maps, photographs and other graphical materials, digital resources and bibliographic databases. Other services such as computer provision and training, basic literacy education, coordination of public programmes, as well as helping with the identifying and using community resources are all part of the librarian's responsibilities.

According to Melchionda (2007), ICTs which are undisputedly advantageous to providers and users of information, have over-ridden traditional approaches. However, there has been an eye-opener with respect to the negative side of the infusion of these electronic devices into library processes mainly because ICT is characterized by constant and continuous change as new

technologies are invented. This constant and rapid technological change due to obsolescence poses threats to especially library staff as regards acceptance and thereby leads to technostress and consequently resistance to adoption of emerging technologies and subsequently causes technostress.

Kinman & Jones (2005a) argued that the high level of technostress is due to the ever increasing workloads. The repercussions are increasingly lean academic and supporting staff resulting from burnout, such that library workers are engaged longer hours at work and connected to their offices 24/7 via ICTs (Korac-Kakabadse, 2000). Salanova, Llorens & Cifre (2013) in their research work also questioned and expressed doubt as to whether ICTs or modern technology was fashioned out to empower the library and its stakeholders, in order to liberate librarians from the never ending demands that each day presents in the work place, or leave them stressed.

Diverse roles played by information professionals in their provision of services are monotonous and also tedious and leads to discomfort, anxiety and health troubles. These have been specifically traced to have originated from the continuous use of ICTs. The cost of technostress to organisations or institutions in the form of absenteeism, cost of productivity as well as medical expenses has been estimated to between fifty to seventy-five billion dollars per year, asserted by Farish (1987) cited by Acquaye et.al (2012).

1.1 Statement of the Problem

Techno-stress is the inconvenience faced by staff as a result of adoption and use of new technologies. A study by Jena and Mahanti (2014) on techno-stress revealed that the inability to adapt or cope with information technologies in a healthy manner creates techno-stress. As such, studies in the area of Technostress have become necessary because the use of technology is inevitable in the information age and with all the advancements in technology. Ennis (2005)

indicated that technostress is a non-specific reaction of the human body when exposed to an unfamiliar system, which could endanger lives if not properly managed. Technotress has a measurable effect on the individual and has a direct or indirect effect on the individual's work efficiency and relationship with others (Szilagyi and Wallace, 1980). Rowden and Conine (2005) also defined technostress as a state of mental and physical imbalance, which has a negative effect on an individual's health and quality of work life and ultimately deprives him or her work satisfaction.

Kupersmith (2005) asserted in his study that major sources of technostress include information overload, networking problems as well as computer hardware. This assertion was reinforced in Ennis (2005) that academic librarians are faced with challenges such as rapid technological change, lack of proper training of the librarians, increased workload, lack of standardization of hardware and software as well as changing role of librarians leading to technostress. Additionally, Ofua and Tiemo (2011) investigated the effects of techno stress among librarians in University libraries in Nigeria and found out that technology infusion is in a way detrimental to academic librarians.

Several researches have been done internationally by Philips (2014), Parker & Jones (2008), Moore (2000), Nwana (2008) on technostress and the management of technostress. These researches focused on users, staff of organizations, university librarians in certain institutions, lecturers and others.

In Ghana, few researches have been undertaken on technostress (Alemna1989; Isaac Nyarko Adu 2012, Acquaye et.al 2012). These also focused on workers of institutions including librarians.

None of these researches has been conducted on the College of Health Sciences Library, University of Ghana. This is the motivation this research has been done to fill that void.

1.2 Purpose of the Study

The purposes of this study is to examine the causes of technostress and the coping strategies used by information professionals in the College of Health Sciences Library, University of Ghana with the view to making recommendations for improved service delivery and quality of work life of employees.

1.3 Objectives of the Study

The following are the objectives of the study:

1. To find out perceptions of technostress by professional librarians and paraprofessionals at the College of Health Sciences Library, university of Ghana.
2. To examine the major causes of technostress among professional librarians and paraprofessionals in the College.
3. To find out the effects of technostress on professional librarians and paraprofessionals in the College.
4. To examine technostress' managing strategies adopted by the professional librarians and paraprofessionals in the College.
5. To suggest feasible solutions and coping strategies in the work of professional librarians and paraprofessionals in the College.

1.4 Scope of the Study

The study focused on technostress among the staff of College of Health Sciences Library, University of Ghana. The topic is broad and as a result demarcation of a boundary was needed.

Technostress within the context of this study was limited to perceptions of its nature, causes, effects, management strategies by the staff of the college, as well as needed feasible solutions.

The study focused on CHSL because it is one of the oldest libraries in University of Ghana library system and because of its early adoption library management software.

The interviews that were conducted to collect data for the study were restricted to professional librarians and paraprofessionals directly involved in the use of the library management software and all other ICTs used in cataloguing, acquisition, electronic resources, digitization, reader services, periodicals, circulation and referencing procedures in their various units in the library.

1.5 Theoretical Framework

The framework adopted for the study is Person-Environment (P-E) Fit model of stress by Edwards & Cooper (1988). In most cases, stress is said to occur when there is a gap between individuals' anticipation or what they looked forward to and their present environment. Edwards and Cooper (1988) explains emphatically in their Person-Environment (P-E) Fit model of stress that the gap is the consequence of an individual's perception of a situation which has the tendency to result in stress. Ayyagari et al. (2011a) and Fox et al. (1993) reinforced that assertion and categorised the consequences of stress into psychological and physical conditions. They went on to explain that the signs of psychological state of stress is evident based on the manner in which cognitive perspective from a person brings understanding or leads to acceptance of surrounding needs. Typical examples are opposing new ideas and frustration. Additionally, the tangible reactions from the inability to live up to expectation or being equal to the task as regards the demands on the job, are all shown in the consequences of stress, clearly from the excessive uneasiness or anxiety to the coronary heart-disease.

ICT development is rapid in nature in that it tends to be obsolete in no time. As such, it has brought into existence stress to most of its patrons or users. The nature of stress in question is related to the failure of an individual to be abreast with computer technology, this is widely known as technostress as indicated in Brod (1984). An in-depth work by Tarafdar et al. (2007a) fashioned out five dimensions that results in technostress: techno-overload, techno-invasion, techno-complexity, techno-insecurity and techno-uncertainty derived from an individual perception in adopting the ICT in work routines. Subsequently all two models of technostress brought in to being by Brod (1984) and Tarafdar et al. (2007b) are more complicatedly and in details treated by Ayyagari et al. (2011b) with the objective of developing the antecedents of computer related-stress using the P-E fit model of stress. All the aforementioned authors asserted that a person's preferences, influenced by the assessment of the computer technology subsequently had a negative impact on users leading to negative reactions on the use of ICT.

Another investigation on the effect of a person's preferences towards technostress was also revealed in the work of Shu et al. (2011a). They came out with a conceptual model that connected an individual's awareness on the computer technology with technosstress. This study referred to the Social Cognitive Theory (SCT) perspective aligned by Bandura (1984) and Jones (1989). The authors indicated that the individual's demeanour in relation to the deploying and existence of ICT did not originate from the situation that compel them to approve or accept ICT. Bandura (1986) defines SCT as a "theoretical framework for analysing human motivation, thought, and action" that "embraces an interact model of causation in which behaviour, cognition and other personal factors, and environmental influences all operate as interacting determinants that influence each other bi-directionally". Consequently, Shu et al. (2011b) finalized that the individual's reaction in

respect of the adoption of ICT resulted from the individual's subjective understanding or influenced by personal feelings.

The main factors which were discussed in the work by Shu et al. (2011c) are technology dependency and computer self-efficacy. The outcome of the study further reinforced the view point shown in SCT outlining that an individual with firmly established confidence and higher computer self-efficacy has the tendency to exhibit low level of technology related-stress. The implicit conclusion of this study also regarded SCT with much attention implying that a person with higher level of self-assurance or better still confidence on the ICT can defeat and overcome the sense of job insecurity. Additionally, the authors were emphatic that difficulties and shortcomings over the use of ICT resulted in technostress or more technology overload on the individual which makes one technophobic.

It was however posted by Ayyagari et al. (2011c) and Sami and Pangannaiah (2006) that the use and application of ICT nowadays is unavoidable. In spite of the fact that individuals might have a contrasting view on the applicability of the distinctive attributes or features of ICT, they have no choice than to use the ICT in their work environment against their will. Consequently, the individual prone to be affected due to the subjectivity towards the existence of ICT, is likely to be coerced to work harder, leading to an increase in workload (Aborg & Billing, 2003 in Ayyagari et al., 2011d). Mostly, employees experience work overload resulting from their inability to meet work deadlines and end up not living up to the expectation of employers, resulting from low convergence between their stressful job demands and computer self-efficacy. This means the greater the amount of work, the higher the probability of individuals being affected negatively or experiencing ICT-related stress referred to as technostress.

1.6 Significance of the Study

To a very large extent, studies on technostress will be very relevant in this era referred to as information age. The study will be relevant to the staff and management of the College of Health Sciences Library, University of Ghana, all public and private university libraries, all professional librarians and paraprofessionals in Ghana.

Firstly, in respect to management of institutions or organizations, this study would foster a better understanding of worker-work environment so as to uncover all positive avenues for higher performance.

Secondly, the literature on technostress inducing factors on ICT use and managing strategies linked to the library profession in academic libraries in Korle-bu, Ghana and the world at large are realities, and as credited to the findings from this study, majority of librarians and library assistants experience technostress and certain degrees of negative influence on their use of ICTs.

It is hoped that the findings will support existing literature on improving and addressing the issue of technostress and its managing strategies among professional librarians as well as the paraprofessionals in Ghana in particular and the whole wide world.

Thirdly, to professional Librarians and paraprofessionals, technostress may be perceived to be one of numerous preventable but dangerous situations and thereby the need to provide possibilities for intervention. The study will also bring to bear sources of mental and physical disorders. Such sources may be understaffing, work overload, job dissatisfaction, unfavourable working conditions and environment, lack of resources and inappropriate devices.

The study will serve as a source of reference for researchers in the field. The findings will go a long way to help governments, non-governmental organisations and all stakeholders of libraries

and other organisations to fashion out plans and policies for addressing technostress related issues and also map up strategies to help alleviate or curtail the canker among workers in Ghana and the global village we currently abode in.

1.7 Organization of the Study

The study was organized into six main chapters.

Chapter one covered the introduction which contains the background to the study, statement of the problem, purpose of the study, objectives of the study, theoretical framework, scope or limitations of the study, significance of study.

Chapter two of the study reviewed literature relevant to the study. Here both published and unpublished works were reviewed on technostress in the information service environment from the world view, African view and narrowed down to Ghanaian context.

Chapter three highlighted the methodology adopted. It includes the research design or strategy employed, the selection of case(s) or study setting, selection of subjects that has to do with population and selection of sample (size and techniques), data collection instrumentation, and presentation of data analysis.

Chapter four focused on analysis of the data analysis and presentation of results.

Chapter five dealt with discussion of findings of the study.

Chapter six captured the summary of findings, conclusion and recommendations for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter of the study reviewed related works that contributors have written on the subject. Literature review is a text of a scholarly paper, which includes the current knowledge as well as substantive findings and also theoretical and methodological contributions to a particular topic. It uses secondary sources and does not report new or original experimental work (Baglione, 2012). Its main objective is to situate the current study within the body of literature and to provide context for the particular reader. Literature reviews are a basis for research in nearly every academic field of study (Lamp, 2013). Key issues underpinning Technostress among the staff of College of Health Sciences Library, Korle-bu were discussed under the following subheadings:

ICTs in Information Provision

Technostress

Sources of Technostress

Technostress in the Workplace

Effects of ICT use and Technostress

Management of Technostress by Organisations and Employees

Technostress in Information Service Environment

2.2 ICTs in Information Provision

Information and Communication Technology (ICT) is defined as an instructional program that prepares individuals to effectively use technology in all spheres of human activity, especially in learning research work, communication and life skills (Parker & Jones, 2008). ICT also refers to technologies that provide access to information through telecommunications. This includes the Internet, wireless networks, cell phones, and other communication mediums (Techterms, 2010).

Many computers are connected together using various kinds of communication lines to form networks. Networking enables individuals and institutions or organizations to link together as has been introduced in academic institutions today. According to Curtin et al. (1994), information communication technology could be defined as the creation, dissemination, storage and delivery of information and all devices that make all these possible. Without the basic functions of creation, dissemination, storage through the use of technology, ICT was not complete in itself. These technologies include computers, internet, telephony and broadcasting technologies (radio and television).

ICT creates information when data is fed into the computer (garbage in garbage out). In order to save data or information for a later date, it needs to be stored on devices like, hard drives, CDs, DVDs, pen drives etc. As Haag & Keen (2001) noted, ICT includes seven building blocks. Together these blocks are called IT systems and they enhance and facilitate client or user services in the workplace. The seven building blocks Include input, output, software, communication devices, the processing engine (CPU, memory), storage devices (CD-ROM, flash discs), information and people.

Libraries have witnessed significant changes in recent years. This change is as a result of the impact of ICTs' on the mode of providing information services. The traditional methods relative to the dissemination of information have become unattractive and as such have paved way to electronic means of communication. While the developments and application of ICT in library operations have improved and facilitated the dissemination of information and access, it has equally provided new roles in information provision, dissemination and transfer. The librarian assumes an active role in terms of information delivery. Librarians are no longer custodians of books, but they have become the gate way to a myriad of information sources. Haber (2011) posits that while in the past few years the provision of books was the main role that libraries play, their services have evolved with the digital age to meet the sophisticated needs of their patrons.

Academic libraries as information providers, are under constant pressure to provide relevant sources of information to their immediate users or communities. Technology enables change and technology enforces change. According to Bales (1999), librarians and patrons must adjust in order to adopt library automation projects, be it an original implementation or migration. The relationship between people and technology is imperative. Librarians have to change in order to behave, think and work effectively in an automated environment. Meaning, academic libraries are compelled to incorporate digital sources in order to remain at the fore of information provision and dissemination. The increased availability of digital information has caused students to find alternative means of study and research with the aid of laptops and cell phones. Ugah (2007) asserts that the acquisition of information online using PC's such as laptops and palmtops and even phones is proving to be detrimental to academic libraries in terms of patronage. It has become crucial for Libraries to strive to retain their patrons and be at the peak of providing information sources that suit the demands of present day information seekers through automated library systems, by

ensuring that the academic library continues to soar high in information generation, provision and dissemination.

The meaning of knowledge has changed. Knowledge is no longer stored in the minds of experts, represented in books and classified in disciplines. Knowledge is now perceived as a form of energy, a system of networks that flow into each other and that make things happen. In the knowledge age, change not stability is given. Knowledge age workers need to be able to locate, assess and represent new information quickly. They need to communicate information to others effortlessly. They need to be adaptable, creative and innovative and be able to comprehend happenings in the work environment as a system.

The emergence of ICT has redefined the library‘s functions. Print materials have become inadequate in the storing of information. CD-ROM databases, electronic document delivery, automated cataloguing, circulation systems and online information retrieval (OPAC) have become the order of the day. Eguavoen (2011) citing Ostrow (1998) admits that the advent of the internet , digitization and the ability to access library and research materials from remote locations have also created dramatic changes by the end of the 20th century. Ramzan (2004) asserts the development of expert systems, wireless networks, virtual collections, interactive web interfaces, virtual collections, interactive Web interfaces, virtual reference service and personal web portals have collectively brought about greater changes in the library, and has led to a dramatic change in users‘information seeking pattern. Byamugisha (2010) adds that the patrons' expectations for a distance service delivery across library services has increased, as such patrons have come to expect a wide variety of automated push and pull services from libraries and from a distance.

2.3 Technostress

The American psychologist Craig Brod was the originator of the word ‘Technostress’ which he first used in his book "Technostress: the human cost of the computer revolution”, published in 1984. He first referred to the stress associated with the use of technologies and their effect on the psychological level as technostress. In his definition, Brod, (1984) indicated that Technostress was "a modern disease of adaptation caused by inability to cope with new computer technologies in a healthy manner", where computer technologies are meaning, whether networked or not and software such as Library Integrated systems.

This concept was revised and given a more detailed view by two American psychologists, Rosen & Weil (1997), in their book "Technostress: Coping With Technology @ Work @Home @Play", which resulted from a research lasting 16 years. In their analysis the meaning of technostress become broader while stressing the negative impact on attitudes, thoughts, behaviours or psychological diseases caused directly or indirectly by the use of ICTs. Technology, evolves too quickly, fails to adapt to the geographical location of individuals, therefore develop a psychological pressure characterized by discomfort and frustration. There were concerns and symptoms due to the syndrome of Technostress. It was recognized that anxiety had taken a toll on people, not to mention mental fatigue, depression as well as nightmares. This turn of event in particular, resulted in many people becoming subject to frequent bouts of provocation caused by the difficulties emanating from the use of computer software and the management of hitches which interrupted the work.

In recent times, technological advancements and changes have occurred in ICT and this has given rise to transforming the Internet network into a universal tool for information and digital technology with the advent of smartphones, tablets, Wi-Fi and digital TV. In this light, the term

Technostress has attained a new meaning in the era of connections. Information is needed in libraries and basically everywhere, this is the major reason why large amounts of data are created. Employees the world over are immersed in loads of data, which is processed and managed. This norm currently leads to a cognitive overload**.** This phenomenon is known as information overload in psychology, where the brain receives information, then communicates it to the psychic level and ends with a mental input **(**Chiappetta, 2017b). This requires a response which results in activation of neuronal connections. When inputs are in large quantities and constant, as in the case of the information overload and management of multiple digital devices such as the scanner, photocopier, printers, and the personal computer, there is a state of confusion and stress, or an abnormal response, to both the mental and physical parts of the body that is shown by an intense production of adrenaline and cortisol. Strain is generated by the huge chunk of information that goes beyond what employees can reasonably absorb. In these cases, one can experience a state of anxiety, characterized by a widespread fear of being overwhelmed by an outrageous amount of information that cannot be put in order or impossible to managed **(**Chiappetta, M. 2017c).

2.4 Sources of Technostress

The term technostress was coined in 1984 by clinical psychologist Craig Brod, who described it as a modern disease caused by failure to cope or deal with ICTs in a healthy manner. Stress in the workplace the world over is acknowledged as contributing to a health syndrome and institutional challenges that could have far-fetched consequences (Cooper et al. 1996; Sutherland & Cooper 1990; Tennant 2001). The World Health Organisation (WHO) argues that present work place routines have changed partly due to the increased use of ICTs. They uncovered that most of the institutional or organizational responses to "prevent and eliminate health risks at the workplace were primarily directed at physical risks and largely ignored psychosocial risks and the effects of

work on mental health" (p.3), and proposed that trained personnel such as professional librarians and tools are required to develop preventive measures to reduce the risks posed to workers' mental health.

Computerization of libraries especially and other places of work environment is confirmed to have higher levels of stress among librarians and other supporting staff and employees in other organizations (Kinman & Jones 2005; Korunka & Vitouch 1999). Whereas some have argued that this increase is due to heavier workloads (Aborg & Billing 2003, Sandblad et al. 2003), it is strongly believed to be a combination of effects.

Several factors contributing to technostress within the job environment such as libraries have been identified and these sources of technostress have been categorized and proposed by Cartwright & Cooper (1997). These categories identified are characteristics of the job or the role played by professionals such as librarians and paraprofessionals, organizational factors, career concerns, relationships within the organization or institution, and work-home interface. In addition, invasion of privacy is also discussed as a potential stress factor (Malhotra et al. 2004). Five stress factors eminent here are components of stress due to the use of ICTs. Managing chunk of information leads to work overload and the perception that assigned work exceeds the librarian’s or the worker’s individual capability or skill level (Cooper et al. 2001; Moore 2000). Role ambiguity is the unpredictability of the consequences of one's role performance and lack of information needed to perform the role (Cooper et al. 2001; Jex 1998; Kahn et al. 1964). Job insecurity is the perception of the threat of job loss (Ashford et al. 1989; Burke and Cooper 2000; Cooper et al. 2001). Work-home conflict means the perceived conflict between the demands of work and family (Cooper et al. 2001; Kreiner 2006; Netemeyer et al. 1996). Lastly, invasion of privacy involves the perception that an individual's privacy has been compromised (Alge 2001).

The use of ICTs has produced a constant urgency and anticipated by many that its use is inevitable, or as a compulsion, to work faster (Hind 1998). Straub & Karahanna (1998) argue that technostress likely comes from the fragmentation of work. Globalization and fierce competitive nature of business has created lean organizations that applaud workers such as librarians who work extremely hard, at times working late into the night, and are stuck to the libraries or offices 24/7 via ICTs (Kouzmin & Kakabadse 2000). Stressed professionals are linked to issues of organizational commitment, turnover intentions, and work exhaustion (Ahuja et al. 2007; Moore 2007).

2.5 Technostress in the workplace

Davismilis (1998) defined technostress as a condition whereby a person has to cope with a new technology especially when there is insufficient equipment support, or the technology itself in the workplace. Other terms that were synonymous with technostress used by other researchers include technophobia, computer anxiety, computer stress and digital depression (Darndell & Haag, 2002; Mustaffa, Yusuf, & Saad, 2007).

With the introduction and use of computer and internet in organizations and educational institutions such as College of Health Science Library (CHSL), the use of technology has become the trend in the 21st Century, with former being one of the early adopters both on the job relating to academic and non-academics. With the emergence of technology, came along this menace**.** Technostress in these organizations and places of higher learning in mostly African countries, especially in Ghana was found to originate from organizational factors such as inadequate staff and insufficient number of printers and work stations causing staff to share equipment were subsequently leading to frustration. According to Harper (2000) who discovered two forms of technostress tormenting academic staff particularly, these are the physical form and the

psychological form. The non-academic staff complain of headache, back strain, eyestrain and muscular dysfunctions were some of the physical forms of techno-stress while psychological forms experienced by both librarians and lecturers includes feeling drained, there is also information overload which was also brought to bare with technology, under work and undertaking routine jobs which end up being monotonous in nature. In the case of universities such as CHS, fears were harboured in relation to the taking over of the University by the use of computer which consequently led to feelings of job insecurity, loss of motivation and team spirit**.**

Boadu (1998) asserted that work-related stress is recognised as a major productivity hazard just as the fear brought about by the phobia for technology. He indicated emphatically the occurrence of six hundred thousand deaths per year from heart attacks. Several million Ghanaians have some form of heart and blood vessel disease, hypertension, strokes etc. which could be attributed to job related stress and burnout or physical and mental collapse. He reinforced that a United Nation report entitled "job stress, a global phenomenon" records that stress has become one of the most dangerous health issue in the contemporary world of technological advancement, and its presence in the work place is real and inevitable (Awake March 22, 1998). The national academy of science institution of medicine noted that, stress, especially resulting from the use of ICTs was the leading causes of serious illness and death in the United State of America. Based on similar study conducted in United Kingdom, researchers identified that 50% of the annual 360 working days are lost due to stress as cited by Ndego et. al. (2011). According to them, Ross (1994) discovered that 60-80% of accidents can be linked with the suggestion that stress factors contribute to poor organisational performance resulting from the loss of innovative ideas that may have emerged in a relatively high stress environment, taking into consideration the kind of skills needed by

professionals such as librarians when the need to accept and adapt to rampant technological change arises.

Ahmad, Amin and Ismail (2009) quoting an online survey by Kupersmith (2006), in confirming that technostress existed in the organizations as well as the academic setting, also revealed in his study that the leading causes of technostress were information overload, networking problem, security issues and computer hardware and ergonomics.

Ergonomic originated from two Greek words, "ergos" (work) and "nomos" (natural laws). It is the scientific study of people, their work and their environment. Ergonomics is particularly about "fitting work to people", that is to say fashioning out technology for people or workers for that matter to fit into. It is the process of creating or programming workplaces, products and systems so that they fit the people for which it was intended to suit.

2.6 Effects of ICT Use and technostress

A Study that was conducted to explore the effects of ICTs on employees such as professional Librarians and users can be broadly categorized into three main parts**.**

Firstly, computer systems embedded in the libraries or other paces of professionalism (such as visual display units, computer aided design, computer numerically controlled machines, flexible manufacturing systems, and library integrated systems) as found in most academic libraries the world over as well as in Ghanaian Libraries transform work routines (Turner & Karasek 1984, Korunka et al. 1993). Use of computer numerically controlled machines has been shown to result in an increase in the number of work shifts (Love et al. 1989). Computer-integrated systems cause the work environment to be strictly regulated by software programs, resulting into rigidity in workflow (Corbett et al. 1989). The secret placement of electronic performance monitoring system

at vantage points in libraries and other places of work has been identified to minimize interpersonal interaction and social support (Carayon 1993).

Secondly, users of ICTs such as the staff of CHSL have shown negative psychological and cognitive reactions and attitudes toward these technologies. Consistently there exists computer anxiety, fear, apprehension, and a sense of agitation among employees as and when they interact with these computers and computer software. (Gaudron & Vignoli 2002). Typical examples, are the fear of tapping a wrong key and which may lead to information loss or hesitation in respect of using computers, for fear of causing a blunder (Compeau et al. 1999). In the end employees tend to be technophobic. Technophobia (Brosnan 1998) or computer phobia (Rosen et al. 1987) happens when individuals are frightened when the need arises to use technology. It is a combination of anxiety about interactions with computer-related technology, negative attitudes about computers and their impact, and negative cognition during actual computer use (Weil and Rosen 1994). Computer anxiety and computer phobia means employees' instant resentment, physical reactions to ICT which are exhibited in behaviours such as excessive caution about the use of computers, a sensation hassled when using them, negative comments about computers, and attempts to decrease or totally prevent the necessity to use computers (Abdul Gader & Kozar 1995).

Third is the analysis of antecedents of stress related outcomes for Information System (IS) professionals. This comprises of, programmers, system analysts, database administrators, and project managers). IS professionals experience high absenteeism, low job commitment, and high turnover (Igbaria & Siegel 1992). Studies have indicated that these effects stem from particular aspects of their work (Sethi et al. 2004). Considering the nature of their work, librarians as well as

other IS professionals have to come to terms with the constant upgrade of technology as well as skill obsolescence, unexpected user demands, while meeting short deadlines. Each of the aforementioned points leads to stress (Ivancevich et al. 1985).

Kahn et al. (1981) also outlined that rapid technological obsolescence, and its resulting experience of inculcating these acquired skills are prone to frequent devaluation, this leads to anxiety and stress, and Cooper et al. (2001) also indicated that "tele working" is a potential cause for stress. McGrath (1976) in a study on “Stress and behaviour in organisations in Chicago”, cited by Ndego, Asante, & Arhin (2011), discovered a reworking of relationship through his process model. This model contends that employees are caught up in organisational situations such as the adaptation to new technological changes, which cause them to assess the conditions and take decisions as regards the nature of their responses. The original situation automatically has a bearing on the response. A negative perception about the situation at hand indicates the presence of a stress factor, and possibly results in a negative behaviour, for example, lower effort which translates to lower output. From the psychological perspective, inordinate and prolonged stress can adversely affect personal factors such as motivation, moral, and the ability to relate to others. All these factors are major contributor to effective work output in the work place such as academic libraries. The cost of stress to organisations or institutions in the form of absenteeism, cost of productivity as well as medical expenses has been estimated to fifty to seventy-five billion dollars per year, or (seven hundred and fifty dollars)750 dollars per employee as asserted by Farish (1987) cited by Acquaye et.al (2012). The persistence of high stress levels are outrageously dangerous for several reasons. Firstly, the complex change they make in life and work profile can go unnoticed by the individual affected. Second, the unending nature of stress may inhibit normal adjustment; and individuals may never have the opportunity to decompress in order for their mind to function to its fullest

potential. Thirdly, unrelenting stress resulting from ICT use may gradually damage the body or mind, with age and bodily wear and tear, the nervous system breaks down or the heart fails (Quick & Quick, 1984).

(Cooper et al. 2001, Burke and Nelson 1997) have both pointed out that it is crucial for institutions or organizations to understand the origins and effects of ICT induced stress on users, yet this area of inquiry needs further investigation.

2.7 Management of Technostress by Organizations and Employees

Agbonlahor (2006b) in his study of universities indicated that throughout the world over, Academic Libraries are among the major work places where ICT facilities are highly utilized with the intent of maximizing productivity. Library and information science profession in particular has greatly benefited from the adoption and utilization of ICTs and the ICTs has tremendously enhanced such information work activities as information collection, processing, organization, storage, packaging and dissemination. As a result, Popoola & Olalude (2013) concluded that librarians have no choice than to apply ICTs in their operations and services in the 21st century.

However, while the benefits of ICTs adoption and utilization are not disputable, it is also factual that the acceptance and rapid diffusion of ICTs in librarianship and other related information science professions have given rise to a number of demands and challenges such as technostress. Organisations must therefore, endeavour to reveal hidden realities of technostress and also map up strategies to curtail technostress in libraries or other work places.

The first step in managing technostress is to rise up to the occasion and take the bull by the horn. Be equal to the challenge of technology by keeping abreast and face the reality that computers are a part of the library profession (Champion, 1988). Effective management skills reduce

technostress, and one of the most ideal things managers must do in reducing technostress is to present positive strategies, for example, coping with stress is a highly individual matter; different people react to stress in different ways, and therefore the techniques to reduce stress will be individualized. Champion (1988) discovered that there are three basic stages to successful technostress management which must be taken into consideration in respect of the adaption to change:

1) "how one perceives techno change and how one interprets it, 2) how one feels about techno change, and 3) how one copes with techno change". Failure to recognize that every change imposed by technology generates variations in the levels of technostress subsequently results in the failure to effectively manage change.

Sharma and Sareen (2015) also revealed some ways of controlling technostress as follows: Acquire appropriate, sufficient and user friendly software, Create better communication within the environment, Create an adequate level of reassurance, tolerance, and stability within the environment, Maintain continuous system of training and staff development towards new and old technologies, Encourage the constant use of technology, Foster sharing of computer related knowledge within the library or organization and finally Maintain a responsive and easily reached help-desk to address managers' anxiety and concerns, guide them in using and familiarizing with new computer applications.

2.8 Technostress in Information Service Environment

Academic libraries have been the key access points for information or knowledge by both staff and students in the bid for quality teaching, learning and research. The primary role of university libraries in this respect cannot be achieved without the infusion of technology in the contemporary

library, and a typical example is the CHSL. This is done to enhance information service delivery. Information Communication Technology is a term used to describe the various technologies that are used in the processing of information including coding, creation, storage, retrieval, manipulation, dissemination and transmission (Zulu, 2011).

Agbonlahor (2006) is of the view that university libraries the world over are among the major organizations where ICT facilities are being used on a large scale with the intent to enhance teaching and learning. Librarians and paraprofessionals in particular have greatly benefited from the adoption and utilization of ICTs and the ICTs have tremendously improved library routines as information collection, processing, organization, storage, packaging and dissemination, and acquisition. This has led to better management of library operations such as the College of Health Sciences Library (CHSL) and has improved services to meet their patrons' information needs beyond their traditional printed materials. With internet connectivity, the services provided by majority of the academic libraries in Ghana transcend their confines to provide patrons with electronic resources in support of print formats available on their libraries' shelves.

Social media are increasingly becoming part of libraries and they are tools for enhancing library services and resources (Tiemo & Edewor, 2011). Librarians in academic libraries work in an ever-changing technological environment. As noted by Al-Qallaf (2006) "today, librarians provide access to eclectic e-collections, create and maintain digital content, support e-learning, provide real time e-reference, negotiate contracts and licensing agreements and struggle with the economics of electronic information".

The use of ICTs in libraries such as CHSL, has chalked many positives, yet the explosive growth of ICTs and its use in libraries by information professionals lead to technostress and this is

affecting ICT potentials. As a result of the rapid development in the area of ICTs, librarians have to keep abreast with latest developments. This is the root cause of technostress because it raises serious issues as to how these professionals forcefully need to adapt to new tasks and activities in a global and new world of technology. It has therefore become crucial for university libraries to critically address issues related to technostress resulting from the use of ICTs in information services environments, especially dealing with these processes and user services. The librarian's reaction to technological changes, their perceptions, beliefs and opinions with regards to the implications of technology in libraries and the ability to adapt with new technologies in a healthy manner must also be delved into, in order to control levels of technostress.

2.9 Conclusion

Academic libraries have been the key access points for information or knowledge by both staff and students in the bid for quality teaching, learning and research. The primary role of university libraries in this respect cannot be achieved without the use of technology for library and information service delivery.

To some librarians, it would appear that technology is increasing the workload rather than lightening it, which is contradictory to its original intent. This stance is not to condemn the introduction of technology as a negative infliction on library services. The perception of "too much, too soon" can seriously upset a librarian's self-assurance of resource awareness. The overwhelming nature of technology can, at times, leave librarians feeling frustrated and helpless in the face of constant change and therefore generate a high level of stress.

However, while the benefits of ICTs adoption and utilization are not disputable, it is also factual that the acceptance and rapid diffusion of ICTs in librarianship and other related information

science professions have given rise to a number of demands and challenges such as technostress. Institutions as well as Organisations must therefore, endeavour to reveal hidden realities of technostress and also map up strategies to curtail technostress in libraries or other work places.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter looks at methods, tools, procedures, mode of data collection, presentation and ways in which data is analyzed. Research methodology refers to strategies surrounding the use of various methods in the conduction of a research study as required by different attempts to attain a higher degree of reality and validity (Powell & Connaway, 2004). Similarly, Rajasekar (2006) defines research methodology as the procedures by which researchers progressively conduct their work, by describing, explaining and predicting phenomena. Irny & Rose (2005) also described methodology as the systematic, theoretical analysis of methods and principles associated with a branch of knowledge. Particularly, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques. Additionally, research methodology is a strategy or plan of action that links methods to outcomes and govern their choice of use. The chapter discusses the research design, selection of case or study setting, population, selection of sample size and technique, data collection or instrumentation, presentation of data analysis and ethical considerations.

3.2 Research Design

Creswell (2008a) describes research design as “plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis” (p. 3). In other words, the research design represents how data is going to be effectively gathered to meet the objectives of the study outlined.

A Qualitative method was adopted to explore the perceptions of technostress among CHSL professional librarians and paraprofessionals, causes, effects, managing strategies and to suggest measures to mitigate technostress. A qualitative descriptive design was preferred since it is known to facilitate in-depth interviewing and yield worthwhile narratives from respondents. Qualitative research or methodology has been explained by several authors including Kavulya (2004), Creswell (2008b) and Vasileiou & Rowley (2011). According to Creswell (2008c), the qualitative approach involves a more natural setting where data is collected by researchers at the site which makes it very advantageous. Qualitative research design provides multiple forms of data collection for researchers by way of observation, interviews and other documents rather than depending solely on a single source of data: as such, researchers are able to scrutinize large amount of data and organize them into the right categories. Qualitative research also maintains the opinion of respondents by generating detailed data thereby presenting different ways of understanding the problem under study (Labaree, 2013)

3.3 Selection of Case

The researcher purposively selected one academic library for the study, namely College of Health Sciences Library (CHSL), formerly known as the University of Ghana Medical School Library, This library is situated in Korle-Bu. CHSL, is one of the satellite libraries of University of Ghana and established in 1967. It is a predominantly science centred library and it is the reason behind their choice of a medically inclined Classification scheme known as the (NLM) National library of Medicine, although some insignificant total number of books had been catalogued using the Library of Congress Classification Scheme. This library is mainly for medical students, doctors, nurses, researchers and lecturers. It is well established with its services automated for timely

retrieval and dissemination of information. Almost all services provided are automated and this makes the CHSL an ideal setting to understudy the traits of technostress relative to library staff.

The selection was based on the following factors:

- Age of the University and Infusion of ICTs – It was assumed that older universities would have better equipped and well-established libraries. The selected academic library was chosen because it has been in existence for a long time and has been automated, meaning the CHSL uses a library integrated software and other computer peripherals in its service delivery and it is rubbing shoulders with other university libraries in the country for academic excellence.
- Accreditation of the University or Institution – The National Accreditation Board (NAB) of Ghana is mandated to accredit both public and private tertiary institutions based on contents, standard of their programmes and adequacy of infrastructure/facility including libraries. A preliminary investigation of the researcher revealed that the selected institution has put up modern, functional and a well-established library that seeks to cater for the educational and research needs of its patrons.
- Institutional ranking – CHS is highly reputed in Ghana. As such it is a top ranking institution, especially considering CSIC ranking of universities. College of Health sciences ranks high. CHS is one of the colleges under University of Ghana and CSIC (2018) rankings placed it among the topmost five public universities in Ghana.

- Area of Training – CHS runs degree programs in the field of Health Sciences. It trains both nurses and doctors.

3.4 Selection of Subjects

3.4.1 Population

A population may be considered as a group of individual persons from which samples are taken for statistical measurement. A population may also be described as any size which has at least one (and sometimes several) characteristics that sets it apart from any other population (Fraenkel & Wallen, 2003). Kumekpor (2002) further describes a population as referring to the entire group of individuals or objects in which researchers are interested in generalizing their findings. Nwana (2008) also indicates that, population in research could also refer to all the members of a target group as defined by the objectives of the study.

The professional librarians in College of Health Sciences Library are six (6), along with fourteen (14) paraprofessionals, adding up to twenty (20). The total population for this study was twenty (20), comprising of six (6) professional librarians and fourteen (14) paraprofessionals.

Table 3.1 Classification of population

Category	**CHSL**
Professional librarians	6
Para-professionals	14
Total	**20**

Source: Field Data, 2019

3.4.2 Selection of Sample (Size and Techniques)

No sampling was undertaken because the entire population was used.

3.4.3 Instrumentation

Instrumentation entails the whole process of preparing to collect data. It also has to do with the procedures and conditions under which the instruments will be administered and not solely the selection of design of the instrument. Several questions arise here, such as where, when, how and who will conduct the collection of data. (Fraenkel & Wallen, 2003).

Aina (2002) stated that there are different data collection instruments that one can adopt in social science research, and they are as follows: questionnaire, observation, documentary sources and interview. For the purpose of this study, the use of interview as a means to collect data was found to be the most appropriate and suitable instrument used to solicit answers to the research questions posed.

According to Kumar (2005a), an interview involves a person to person interaction between two or more people. Interviews as stated by the researcher play a very important role in any research activity because it brings to light certain facts that never crossed the mind of the researcher especially when a good relationship has been established between the researcher and the respondent (Kumar, 2005b). Minter (2003) also outlined advantages such as direct feedback from respondents, personal interaction with respondents, flexibility, opportunity to probe, opportunity to throw light or clarify questions to yield rich and detailed data and new insights. Questions asked will seek to elicit information from respondents that can be compared and contrasted.

Semi-structured interview was used to elicit primary information from the respondents. Semi-structured interview made it possible for the researcher to prepare her questions before the

interviews. Secondly, semi-structured interview was preferred because each of the respondents was unique, and needed to be approached differently. Although face-to-face interviews can be time intensive and sometimes one-sided, they provide visual cues or aids to the discussion (Woods, 2011). An interview guide was designed based on the specific objectives of the study. The guide approach was intended to ensure that the same general areas of information were collected from each interviewee. That is to say in developing the factors that cause technostress and technostress prevention, questions were conceptualized based on the literature discussed in chapter two.

Relevant questions were asked them and all questions were within the context of technostress situations in academic libraries. Interviewees were encouraged to speak openly, frankly and give as much detail as possible.

3.4.3.1 Pilot Test of Interview Guide

A pilot interview with two library staff at College of Health Sciences Library was conducted to establish the efficiency of the data collection instruments and recording devices. Few questions found to be a bit confusing, irrelevant and misleading were revised.

3.4.3.2 Data Collection Procedure

The researcher asked questions and stimulated discussions based on an outline she had adopted. Notes of responses such as hand gestures, facial expressions, body language, and tone of voices of the interviewees were also taken by the researcher. An audio recorder was used in recording the interviewees' verbal responses. A research assistant was hired to assist the researcher during the interview. The period of interview spanned fifteen (15) days in interviewing 19 (nineteen) respondent, all at College of Health Sciences Library. The researcher also observed the library by going round the whole premises to familiarize before conducting the interviews.

Data transcription was done immediately after the interview while the interaction was still fresh in the researcher's thoughts. These written transcriptions which consist of the materials gathered from the interview will help the researcher interpret the verbal responses (Hodges &Videto, 2005). Using an audiotape to record the interviewees helped the researcher to capture the interviewees' responses completely, allowed the researcher to review the transcription to ensure accuracy, and allowed the researcher to transcribe the information accurately, which provided written evidence of the interviewees' words. The researcher read the written transcripts over several times in order to submerge herself into the data. This allows the researcher get a sense of the interview as a whole before breaking them into smaller parts (Creswell, 2007a).

As the researcher read the transcripts, she wrote memos in the margins. Memos are short phrases, ideas, or key concepts that are important to the researcher (Creswell, 2007b). The researcher moved from reading to describing, classifying, and interpreting the transcripts. This process is referred to as coding. During the coding process, the researcher describes in detail, developed themes, and provides an interpretation of the transcripts (Creswell, 2007c). These codes represent core concepts, central categories, or themes related to stress in relation to technology use by professional librarians and paraprofessionals Crosby, DiClemente, & Salazar, 2006). Every code used defined and was kept in a codebook, which was a complete description of every code and how it related to the research.

3.4.4 Data Analysis and Presentation of Data

Data was analysed through the method of general analytical strategy developed by Miles and Huberman (1994). The major phases of data analysis consisted of data reduction, data display and conclusion drawing and verification. During the analysis of data collected, the frequency of certain

patterns were studied, patterns were combined, and recorded. Data was divided into three categories:

a) Technostress perceptions and assessment. (typical burdens, sources and symptoms of technostress)
b) Technostress management (individual level)
c) Technostress management (Institutional level)

Conclusion was then drawn. The data was presented using themes. Themes resulted from the researcher dwelling on important responses obtained and grouped into larger units. Themes when used in data representation provided a complete description of the information and allowed the real meaning of the technostress phenomenon of both professional librarians and paraprofessionals of College of Health Sciences Library to be discovered.

3.5 Ethical Consideration

Ethical aspects in research work represent the issues relating to ways in which researchers have to treat respondents during the process of research or how to maintain equality between the researcher and respondent. (Bryman & Bell, 2011; Sekaran & Bougie, 2010). Several ethical issues were considered in all the stages of the research and especially during data collection. Several people were involved during the research period, such as the researcher who was the interviewer as well as the respondents.

Permission was first sought from the head of the institution for the purpose of research and interview appointments were fixed. As an ethical view, the respondents' consents were also obtained prior to the collection of data for the purpose of the research work. Their confidentiality was assured. Respondents trust was developed and the researcher guarded against impropriety and

misconduct that could have had negative implications on the institution. During the first stage of the data collection exercise, the objectives of the process were explained to each of the respondents for the research. The researcher emphasised that the study is intended for academic work and under no circumstance would the information provided be used otherwise. It was a major responsibility of the researcher to keep the information obtained from respondents strictly confidential. The respondents were fully assured their involvement was strictly voluntary and their contributions to the study would forever remain confidential. To this light the researcher would in no way disclose all personal issues mentioned as well as issues of privacy, instead they would be protected. As a result, the respondents' identities were not disclosed in the research work for the same reason. The research was conducted in line with the Code of Ethics for research outlined by University of Ghana (UG Research Ethics Policy, 2014). The researcher duly acknowledged all the sources which were consulted. The research work is therefore credible and authentic.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter presents the analysis of the data collected from participants included in this study which seeks to investigate tecnostress among professional librarians and paraprofessionals of College of Health Sciences (CHS), University of Ghana. Interview was employed as data collection instrument and was analysed using a qualitative approach. Tables, have been used where necessary. The researcher presents the findings under the following themes: challenges encountered on the job; work overload in the library; sources of technostress; effects of technostress; and managing or coping strategies.

4.2 Response Rate

Response rate could be described as the rate at which people respond to questions posed to them. Interview was conducted in an attempt to unearth the causes, effects, strategies used to manage or mitigate technostress**.**

Interviews were conducted with both professional librarians and paraprofessionals of College of Health Sciences Library (CHSL). CHSL had six (6) professional librarians and fourteen (14) paraprofessionals. In all, five (5) professional librarians and fourteen (14) paraprofessionals were interviewed. One of the professional librarians was not available during the interview period. The total number of respondents for the interview was nineteen (19).

4.3 Demographic data

The professional librarians are staff with Master's degrees in Information Studies whereas the paraprofessionals hold first degrees in Information Studies or Diploma in Information Studies and in some cases diploma in Librarianship. The professional librarians played managerial role while the paraprofessionals performed the technical and routine duties.

The findings show that work experience of respondents ranged from two (2) years to over twenty (20) years. 1 of the professional librarians had less than five (5) years work experience, again 1 had worked for five (5) to ten (10) years, 1 had worked for eleven (11) to fifteen (15) years, sixteen (16) to twenty (20) years work experience was also 1 and lastly more than twenty (20) years working experience was also 1. Each of the professional librarians had a different wealth of experience as revealed by the study.

The work experiences of the paraprofessionals ranged from five (5) to ten (10) years and eleven

(11) to fifteen (15) years. 11 out of the 14 paraprofessionals had five (5) to ten (10) years work experience as compared to the remaining 3 who had worked from eleven (11) to fifteen (15) years.

4.4 Perception of Technostress by Staff of College of Health Sciences Library

The first objective of the study was to find out the perception of technostress by the respondents as such they were asked whether they had an idea of the term 'technostress'. This was to ascertain their level of awareness and if indeed they understood the term. The term was first introduced by an American psychologist by name Craig Brod in 1984 in his book titled "Technostress: the human cost of the computer revolution". The psychologist referred to the stress associated with the use of technologies and their impact on the psychological level as technostress.

It was therefore revealed that some paraprofessionals mentioned stress but did not relate it to technology, while others said they had never come across the word technostress.

The professional librarians confidently answered they knew what technostress meant but wanted the researcher to give a brief introduction of the topic.

The same responses emerged as follows:

> "*A professional librarian said she vividly understands what tecnostress was all about but to be on a safe side the term should be explained briefly. (C1)*

> *"It has to do with stress on the job but please explain it well first". (C2)*

A brief introduction to the term and how it came to existence was done by the researcher, after which the interview took off since respondents had a better understanding of the topic and were forthcoming with all the information needed for the research.

4.5 Sources of Technostress

The second objective of the study was to investigate some of the major causes and sources of technostress among professional librarians and paraprofessionals. Computerization of libraries especially is confirmed to have higher levels of stress among professional librarians, paraprofessionals and employees in other organizations.

The study sought to find out from the respondents their opinion of what the sources of technostress are.

The respondents were required to indicate in their opinion what the sources of technostress were. The findings of showed the sources of technostress mentioned by the respondentsof CHSL. It was revealed that majority of the respondents indicated that compulsion to work faster was a major problem. Lack of needed information as well as level of skill were all identified as major sources of technostress to them since majority of the respondents asserted that. This is the case because majority of the respondents, described the respective sources as being the most predominant sources of technostres.

Few of the respondents also described Library computerization, job insecurity as well as invasion of privacy as some of the sources of technostress respectively.

4.5.1 Unique sources of technostress

Respondents were asked a follow up question whether they were faced with some unique sources of technostress associated with the library work. As a result, some unique sources associated with library work also emerged. These unique sources were power outages, retrieval of information from academic databases, long hours in terms of computer usage, introduction of online courses, level of experience and user sophistication.

Almost all the professional librarians and paraprofessionals of CHSL were unhappy with the frequent break in terms of power supply to the library. It was extensively explained by both professionals and paraprofessionals that almost all the activities in the library needed electricity to thrive.

A professional librarian and a paraprofessional both affirmed that during book processing, all entries in terms of data must be completed before saving. Therefore, power outages during processing bring the whole process to an abrupt end. They indicated that it is quite a difficult task to work with the library software. It was further revealed that retrieving information using academic databases which in itself is complex in most cases, is made impossible during power outages that subsequently resulted in a breakdown of internet connectivity in the process of searching. They stated that they always had to start these processes all over again when power is restored and that they said was indeed stressful and led to technostress.

> *…Instability of power also leads to interrupted internet connectivity and this makes information retrieval from the academic databases impossible when we are already in the process of searching, because the library software itself is complex to use. (C1)*

> ***…****Whenever there is power outage, work comes to a standstill because The standby generator is not working well and that is a major problem Once the power goes off we cannot save data during book processing Since you can only save after completion and this is indeed very stressful. (C15)*

Another paraprofessional who had challenges with electronic resources registered his difficulty in respect of the database searches and the queries formulation. He sounded very troubled and said was always at his wits end when users are bent on receiving information from them. He too had this to say:

> "*The e-resources or database searches are very frustrating when in the end you realize that they have not been subscribed to, but then users want to receive information from these sources by hook or crook". (C10)*

The professional librarians and paraprofessionals mentioned the importance of the internet to the library in all the services it renders to its patrons. It was glaringly obvious as portrayed by all the library staff that most of the activities in the library needed internet connectivity, therefore the internet service provider's inability to provide constant power retarded effectiveness and efficiency in the services rendered to its patrons. A frustrated paraprofessional at CHSL said that:

> *"the inability of the internet service providers' to provide constant connectivity affects us greatly and in a long run makes our services to library users very poor", he asserted. (C11)*

It was also revealed from the study that the prolonged hours of the use of the computer was also very stressful to the eye and this had resulted in various degrees of eye problems to some retired staff and to one paraprofessional who remarked that close contact with the computer had had negative effects on her personally.

> *…Negative effect of computer use to the eyes had affected most of the retired staff. I have also started suffering the same problem with my eyes. There is no protection from the effects of the radiation that results from prolonged use of the computer. (C3)*

A professional librarian also made mention of the advent of online causes as being a unique source of technostress. He emphatically explained that management in most universities are adamant when it comes to the introduction of online causes such as edX because staff find it very uncomfortable and also feel they will be pressured in the area of research data. This he said was

very strenuous and a lot of skill was needed to respond to patrons questions, and makes it very stressful. This is the more reason professional librarians are made to handle this area of research.

> *...Because of the advent of online courses, example edX and the introduction of research data also leads to technostress because it involves a lot of work and requires a great deal of skill to respond to patrons questions and this can take a whole day. Most library staff are not comfortable with their introduction. It behoves always on us the professionals to engage in this area of research. (C7)*

It was also gathered from the study that an individual staff's level of experience in the usage of technology is a cause of worry sometimes and in this regard a paraprofessional indicated it leads to technostress. He claimed that one must be experienced to be able to work at ease with technology. He claimed that technology is good in a sense but has brought with it too much stress.

He stated affirmatively that:

> *"An individual's level of experience in the use of ICT can lead to Technostress, when your level of experience and skill too is low. Technology is both good and bad". (C5)*

It also emerged from the study that library users have become very sophisticated and pleasing them had become a very difficult task. One of the professional librarians at the CHSL stressed that there was unrelenting pressures resulting from their expectancy level in terms of the information providers' spontaneity in their delivery. It was revealed that most of their users are very knowledgeable when it comes to ICTs and well-endowed in terms of skills, as a result are intolerantly impatient and give the CHSL workers a lot of trouble whenever they are not forthcoming with relevant information that they need for their literature review. This is overwhelming and gives one constant headache.

He said in his response to whether they are faced with some unique sources of technostress that:

"Pressures from users and their level of knowledge in terms of computer skills make them very sophisticated and fault finding". (C19)

4.5.1.1 Challenges Encountered on the Job

The professional librarians and paraprofessionals of CHSL were asked to mention some of the challenges they encountered on the job. Themes which emerged from their responses with respect to challenges on the job included: lack of teamwork, lack of skill needed, excessive workload, rapid technological changes as well as lack of motivation. Majority of the staff were of the view that lack of motivation was a challenge to them because that compounded their stress levels after all the anxiety that emanated from their use of the library software, rapid technological changes.

4.5.1.2 Lack of teamwork

It appeared from the interaction with the respondents that lack of teamwork was also eminent. Some of the respondents stated that there was lack of teamwork and it was obvious from their facial expression in their responses to this particular question, however, most of the respondents were very economical with the responses they gave in this regard.

...There is no teamwork, the setup is more of each one for himself. (C4)

Further interaction with the respondents also presented an additional view from one of the professional librarians which opposed the opinions of the rest and especially differed from the

other professionals. In this particular respondent's view lack of teamwork was not a major cause of the challenges he faces on the job.

> *"I assist the head librarian and she in turn involves me in everything she does and so it is as if I do everything with her here so there is much team-work". (C7)*

> *...There is no teamwork, the setup is more of each one for himself. Said a a paraprofessional. (C4)*

All the remaining professional librarians also indicated in a similar manner, that teamwork among staff was non-existent. One of them indicated that the work would have been less tiring and they would have been more productive than they are now.

> *"You know two heads are better than one, we have to collaborate more but that is not the case over here. It is more of a self-sufficient kind of dispen-sation all the way". (C19)*

4.5.1.3 Inadequate Information

In the process of interaction with the respondents, it was also revealed that lack of information was a cause of worry for all professional librarians and for majority of the paraprofessionals as well. It was obvious that majority of the staff were of the view that there was inadequate information, it sounded more of a major problem faced by most of the library workers. One of the professional librarians in CHSL had this to say in respect of inadequate information:

> *"Sometimes some of the topics that users need information about to help in the development of their literature review are very unpopular and as a result very scanty information is retrieved. In such cases clients feel let down and the disappointment written all over their faces makes you feel you are like a loser when in actual fact you are not the problem". (C16)*

One paraprofessional made a strange face when in the course of the interview the lights went out and work came to a standstill because the plant had a shortage of fuel and it took a long time to regain power. He complained bitterly out of frustration said he had to close for the day.

He was very blunt in his response and he said:

> *"Internet connectivity is often interrupted whenever there is power outage. The internet is always slow and this makes it very difficult to retrieve information sometimes for users, but we have no choice than to work with it just the way it is. I get terribly frustrated when it is down completely because then what it means is we are unable to provide information and the requests keep piling up". (C9)*

4.5.1.4 Lack of skill

Lack of skill also emerged to be one of the challenges mentioned by most of the paraprofessionals when asked to mention some of the challenges they faced on the job. Some respondents indicated that they lack the needed skill to work effectively. One of them stated that typing skill was needful in data entry and that was a problem for most of them who were a bit older.

> *...I find it difficult when students come with their requests and I have to retrieve some information to satisfy an immediate need. Oh my God, that is something else. A paraprofessional answered worriedly. (C3)*

They asserted that they are hardly given the chance to attend most of the training programs organized by Balme library, College of health science, CARLIGH and other renowned institutions. These workshops and conferences were mostly attended by professional librarians in CHS since the slots given are mostly few. There was no time given within which an employee is allowed to make all the mistakes and be corrected. Everyone seems to be busy and are left alone to learn on the job as they engaged in the daily routine assigned to them. It was clear from the observation made during the interviewing processes that the remaining three paraprofessionals who said they had no issues relating to lack of skill worked manually more often than not. They predominantly did paperwork and hardly did anything using the computers or the software.

One paraprofessional said this in desperation:

> *...We work with a library management software and when the need to Input data arises, most of us get confused and are subsequently stagnated with the exception of only two or three of us who are able to complete the procedure. (C9)*

4.5.1.5 Excessive Workload

It was also revealed from the study that excessive workload was another source of stress although it was not the case always for both professional librarians as well as paraprofessionals of CHSL. They attributed the problem mostly to examination periods as well as acquisition of books.

Majority of the staff were bombarded with the duties which were supposed to be performed by two or more people throughout this period.

It also emerged that all the professional librarians and paraprofessionals in the acquisitions unit, cataloguing unit, referencing as well as the graduate research unit at CHSL use the library management software, let alone those in-charge of the electronic support unit. They also work mostly on computerization. These they indicated were all very laborious tasks for them, reason being slow internet connectivity, broken down computers, power outages, interruption in terms of internet connectivity and poor networking.

> *...We have no option than to work extra hours because of the existent workload, the few members of staff available were forced to do overtime in order to meet deadlines. The paraprofessional in charge of cataloguing indicated. (C4)*

Some respondents said there was excessive workload in the library sometimes but not always. Few of them were professional librarians. One of them had this to say:

> *"We are burdened with satisfying these sophisticated users, some have been taught a whole topic on information retrieval but still want to be spoon-fed, we carry all their burden and in addition we have to deal with issues in relation to cataloguing". (C10)*

> *...Once a while work is very stressful, especially when some of my col-leagues proceed on leave and few of us are left behind to do all the work. What I mean is workload is sometimes manageable and at other times too*

very tedious. (R16)

A paraprofessional also expressed his frustrations with regards to excessive workload that is accumulated at certain points in time in the library.

> *"Workload is normal when there are no materials to work on. Once books are cleared then overload is gone until new materials are brought again to be processed. The lazy staff leave all the burden for some of us. Some don't want to work and this leads to work overload in most cases in this library". (C4)*

4.5.1.6 Rapid Technological Changes

The interaction with the respondents also unraveled an additional challenge from respondents which was also devastating to them. In the respondents' view rapid technological changes was a major challenge they faced as library workers. To be more precise**,** majority as compared to the total number of respondents mentioned rapid technological changes as a major challenge faced on the job. It was realized from their responses that the library management software being used in CHSL currently was changed from the Millennium Software and has been replaced with the Sierra Software and this is what management expects staff to work with. It was deduced from all indication that this new software had different functions and staff had to find ways of getting accustomed to its use in order to be able to continue being useful or needed in the library. Scanners they indicated were also an addition which was introduced in data entry using the sierra. Most of them harbored a lot of fear with the turn of events in terms of technology because they indicated that most of the users are well advanced in terms of technological knowledge and this gave them a lot to worry about because otherwise librarians would become obsolete if they were left behind in this era of technology.

One paraprofessional said in desperation as he threw his hands in the air, that technology changes very often and elaborated further that:

> *"Librarians are in deep trouble now because we have to keep abreast and try as much as possible to conform". (C8)*

A professional librarian also said that when the library management software was changed, it came with a lot of work and he wished it was never going to happen again but that cannot be promised. He sounded overwhelmed and said that:

> *"These things cannot be helped. If I had my own way I would have held every-thing constant. No changes in technology whatsoever but no, technology keeps changing, today it is Dos tomorrow Windows. Today we have had to train all our staff to adopt to Sierra but these things keep changing and we too are being forced to move along. We have no choice". (C14)*

4.5.1.7 Lack of Motivation

All the respondents in their responses to the question posed on some of the challenges they encountered on the job unanimously agreed that motivation was totally absent. They were all quick to mention it as they all enumerated the major challenges they faced individually. Almost all of the respondents said bluntly that there was lack of motivation. However, one respondent who also raised the issue of lack of motivation said although it was non-existent, he felt it was relative but did not elaborate.

One of the paraprofessionals in the reprographics unit said plainly that if he were to be asked to award marks to management in relation to motivation, he would award only minuses.

> *...I will give them minuses, three of them, 3 minuses, absolutely nothing, We are not motivated in any way to do more. (C3)*

A paraprofessional working at the cataloguing unit said he would have rated lack of motivation the highest of all his challenges if he was asked to rate all his challenges.

> *"I will rate lack of motivation the highest challenge, given the chance in fact I would, we work our hearts out but no thank you. Motivation is very important but absent". "How could this be". (C4)*

> *(C5) who is also a paraprofessional who worked at the reference section also raised the same concerns in respect of motivation. He too said there was no motivation whatsoever and that he too would have rated it very high if he had his own way.*

It was therefore revealed form the responses that the entire staff were in the affirmative, with the exception of one professional librarian who said it was relative and that their work was recognized. However, the remaining four professional librarians indicated there was no motivation but they always encouraged themselves to carry on doing what they knew best.

They indicated that they were normally promoted when they were due. However, they did not get any incentive. A paraprofessional CHSL said that:

> *"whenever my promotion is due I get promoted. I am not given any incentive though, no two ways about that". He remarked. (C1)*

4.5.2 What makes you feel there is work overload?

Staff of CHSL were made to answer to what made them feel there is work overload in the library. Some CHSL staff which comprised of majority of the professionals and more than half of the total

number of paraprofessionals said emphatically that inadequate resources was a major problem for them. Some of the staff which also comprised of few professional librarians and some paraprofessionals also indicated that understaffing made them feel overloaded with work. Majority of the professional librarians and few paraprofessionals indicated that the job demands were very complex, whereas few of the staff comprising of one professional librarian and few paraprofessionals also mentioned that there was too much administrative and paper work.

A professional librarian in CHSL responding to a question in relation to work overload had this to say:

> *"I was transferred to CHSL last month, formerly I was working in Balme library but although I have been assigned duties since I came here, I have not been given excessive work here yet, however, some of my colleagues tell me the workload can be stressful sometimes. I am yet to experience that". (C7)*

4.5.2.1 Inadequate Resources

Inadequate resources translated to work overload for most professional librarians as well as paraprofessionals as unearthed from the study. The lack of some technological gadgets such as, computers, printers, scanners and photocopiers they said, was a source of stress for them and most often resulted in work overload.

A worried professional at CHSL had this to say regrettably:

> *''In the absence of the needed resources to work with, that alone is enough to get me worriedly sick. I get the feeling I'm not working hard enough to attain that potential in me''. (C1)*

Another professional librarian said mostly there is work overload which he attributed to inadequate resources and at other times too some resources delayed. He too had this to say:

> *"Yes and no. There is always delay in the provision of resources which leads to inability of meeting deadlines. Especially when you serve on committees as a secretary like myself, this is coupled with loads of administrative and paperwork. Attending meetings outside and preparing minutes make my work way too loaded in the library".C14)*

A paraprofessional in CHSL responding to a question in relation to work overload had this to say:

> *"Most of the resources are not available to work with and so what, we normally do is to laze about till we are furnished with materials and that is when work piles up in the library for most of us and sometimes the workload becomes unbearable". (C13)*

4.5.2.2 Understaffing

Understaffing was also identified as one of the causes of work overload. It was explained by one paraprofessional that workers are not many and so it makes work difficult especially when some staff proceeded on leave and new books are acquired.

> *"We need more hands on deck when the pressure in the library is up especially when new materials are received". (C10)*

It emerged from the study that the College of Health Sciences paraprofessional staff on a whole are occasionally bombarded with loads of work only when new arrivals or acquisitioning in terms of books is brought in. Otherwise most of the routine work is done by the professionals who have to deal with online conferences, courses as well as responding to client requests via email. One professional sounded very troubled as he explained the complexity of their work in the area of e-library and its benefits, but was quick to say that staff are unwilling to get on board.

> *"Online courses involve a lot of work but help librarians to provide library instructions to clients far and near. However, it is more intensive in terms of skill base. Most librarians are unwilling to bring them on board. The reason is that it takes a long time to produce videos and short but informative pieces. Answering questions from users who have watched and are interested in the courses is also very tedious" (C7)*

One of the professional librarians was of the view that they don't feel they are understaffed until colleagues are given study leave and annual leave. It was clearly stated in this particular response that it becomes very critical especially during mid-semester and end of semester exams as well.

> *"It is when our colleagues proceed on leave that we feel that there is shortage. Most importantly when it's exams time, both mid-sem and end of sem, these periods are so hectic for the rest of us left behind". She said. (C16)*

One paraprofessional said, "to be honest with you, we are not many at all, all the units are understaffed and this leaves more to be desired".

Another paraprofessional also explained that the workload seems to be normal when there are no resources to work with, otherwise the workforce is not enough. This is how he too went about his answer:

> *"Workforce is always normal when there are no materials to work with, once books are cleared the shortage is gone. As soon as new materials are received there is so much work to do and then you are challenged in terms of staff numbers because the pressure has gone up". (4)*

It came to light from the interview also that owing to understaffing both professional librarians and paraprofessional staff worked for extra hours. A professional librarian who complained about the extra working hours as a result of understaffing said:

> *"The work is occasionally demanding and the staff are also not many. Although we are not remitted for extra hours we engage in it in order to lessen the workload, one will meet the next day". (C2)*

4.5.2.3 More Administrative and Paperwork

Administrative and paperwork did not seem to be much of a problem as revealed from the study. The general disagreement to more administrative and paperwork giving rise to the feeling of work overload in the library was apparently revealed since only few respondents attributed it to the reason for the feeling of work overload in the library. Majority of the respondents were of divergent views.

It was obvious from all observation during the interview that the secretary engaged almost all of the administrative and paperwork in the library. She had loads of documents to type for the head in response to some letters received at the library. The secretary to the head of the library handles almost every administrative duty and professional librarian and paraprofessionals who sometimes had to deal with paperwork all mentioned it was only when there are power cuts and outages that manual work is done. This they indicated as being the only time the library relied on manual cataloguing and also reverted to rendering its services manually, and that resulted in the use of paper.

One out of the professional librarian confirmed that the library has a library management software and so very little paperwork is done but for some librarians who serve on committees, that he indicated was the only time they engaged in any form of paper work.

He indicated that:

> *"There are committee meetings also to participate in too together with all our 'wahala' in the library". (C14)*

> *...For instance, I serve on different committees and as such, I am mandated to attend meetings outside the library, and so administratively, there is a lot of work done there on my part. (C14)*

Very few of the respondents who mentioned there was a lot to do administratively and loads of paperwork were made up of paraprofessionals, they were not happy with the way power suppliers took away the main source of power which is electricity. And with the current state of their plant, claimed they were faced with the challenge of cataloguing manually which seemed burdensome to them. They were all quick to mention that it was not the case always.

Below are some of the responses given by two of the four ((4) paraprofessionals:

> *...I resort to manual cataloguing when 'dumsor' comes and so I use lots of paper to capture bibliographic data of all the books I process, but it doesn't happen often and makes the work slow and overloaded. (C17)*

> *...Whenever there is 'dumsor' I have headache because I have to do manual work with plenty papers without the sierra. This makes the work more loaded than using the computer, you know. Well, not always. (C13)*

4.5.2.4 Complex Job Demands

Some complex job demands associated with library work also emerged. Respondents were of the view that these pertain to processing of books, shelving, unstable internet connectivity, long hours of working with the computer and inability to serve users well.

One of the professional librarians and all the paraprofessionals at CHSL perceived book processing as a very complex task. They indicated that the library software was difficult to work with. They were all of the affirmative that data entries must be completed before saving and sometimes this is made impossible by power outages or interruptions in terms of internet connectivity during processing. The process is halted and this meant work had subsequently been brought to a close. As such we are unable to meet deadlines and this made the work very complex and very stressful.

A paraprofessional said:

> *''The current power outages make book processing very complex and stressful". (C13)*

The professional librarians as well as paraprofessionals perceived that a lot is demanded of them in terms of productivity. But this they all said could not be realized with the kind of slow internet speed they all have to work with. All the professional librarians and paraprofessionals of CHSL were unhappy with the unstable internet connectivity in the library and related it to the complexity of the roles they all played. Most of the activities in the library needed internet connectivity, therefore interruptions in terms of internet connectivity undermined the beauty of their work and took all the shine out of it. The service provider's inability to provide constant

access they said affected most of the services they rendered to their patrons. A frustrated paraprofessional said:

> *"The internet is mostly very slow and at other time down completely. That is to say the internet service providers' inability to provide uninterrupted access affects us greatly and makes our services to clients unprofessional". (C6)*

One other paraprofessional also was of the same view point and stated that internet connectivity was not constant accompanied by computer breakdowns and lack of needed skill made their work in the library very complex.

> *"Internet connectivity is not constant, computers also breakdown often. Accessibility of the internet too is a major problem as well as knowledge in the use of computers and the ability to type a bit fast", he lamented. (C8)*

4.5.2.5 Challenges in Relation to Library Users

The study revealed that all the professional librarians as well as majority of the paraprofessionals of CHSL had problems with the users' behaviour, whereas minority of the respondents who were all paraprofessionals indicated they had no challenges in this regard whatsoever. However, professional librarians and some paraprofessionals had problems with the power and internet services providers in this regard because they strongly argued that the challenges, they faced in relation to users partly emanated from them. A professional librarian remarked that it was very worrisome for patrons to visit the library for their needs not to be satisfied by library staff. They indicated that most of these patrons are already very fastidious to deal with since they have themselves become very sophisticated.

One of the professional librarians when narrating their challenges in relation to users said:

> *…Users have become very sophisticated in terms of their knowledge and skill in ICT use. Most of them are highly skilful with technology and this makes it very difficult satisfying their information needs. This also makes them very very impatient when internet is slow and then they say all sorts of things. (C19)*

Another professional librarian also remarked to the same question in a very bad taste and said:

> *…. When users came seeking for urgent information and librarians are unable to To make provision for that, there is dissatisfaction, however, when library satff are able to meet their demands then there is relief because you try to match their sophistication with library skills or experience. This is mostly not the case and it dampens the spirit of the library staff. (C14)*

It also emerged from the study that some of the patrons out of laziness or reluctance rely heavily on library staff for every little detail of information. Majority of CHSL patrons are students who have been taught a course in information retrieval by the professional librarians but in spite of all the hands-on training they are given, are still not familiar with the university off-campus access registration because most of them are unable to use the OPAC effectively.

A paraprofessional candidly stated in his response to the challenges they encounter in relation to library users that:

> *"When users are provided with information for their research work, they are never satisfied. Lazy patrons refuse to practice information retrieval skills thought them by professionals". (C4)*

On this same issue of challenges encountered in respect of users, another paraprofessional had this to say:

> *…Most users are not familiar with knowledge of university off campus access in terms of registration and they stress staff because they find it difficult to even use the OPAC and burden staff with everything. (C13)*

Some of the paraprofessionals also blamed their plight with regards to users on management for not providing adequate computers to replace those that have broken down and also the demand for digitizing machines which they said had all broken down.

A paraprofessional who lamented over some machines that had broken down in the library in his frustration said that:

> *"Digitizing machines are not working well and computers often develop problems, because of that we are unable to provide users with such digitized information". (C15)*

It was also revealed from the study that more often than not when patrons visit the library without laptops, there are no available computers set aside for research work and are therefore left with no option than to use the ICT lab to engage in their research work.

One of the paraprofessionals disclosed that:

> *"Sometimes there are no computers for library users and they are forced to go to the ICT lab and this makes them very unhappy and lose some confidence in us". (C18)*

A professional librarian and a paraprofessional in the CHSL both indicated in response to the question posed about the challenges faced in relation to users bluntly said that there had always been challenges with the server which subsequently made the Sierra break down and this slows down productivity. It was revealed also that most students were not conversant when the need arose for them to use the Sierra.

These were the information gathered from them:

> *"Because of the challenges with the server the Sierra is mostly down and we resort to manual, users feel professionals are not up to the task and leads to lack of confidence". (C1)*

> *"There is always misunderstanding as a result of breakdown in Sierra. Students are not aware of the new system and so lack understanding. Formally we did everything manually". (C8)*

It was revealed from the study that slow internet speed and rampant interruption in internet connectivity makes the library very unpleasant to both staff and users. The internet providers are not visible to users, as such all the blame goes to the library staff. It further emerged that passwords for students sometimes changed without prior knowledge. This resulted in denial of access. The displeasure of users always resulted in dissatisfaction and made them crossed with staff for no fault of theirs.

A paraprofessional when confronted with the question of challenges resulting from users confided in the researcher that:

> *"Interruption in internet connectivity, changing of passwords without informing students, slow internet speed make our users very angry*

at the little thing". (C2)

This is the response gathered from another respondent in relation to challenges from users:

"Complaint about how fast the internet is, especially when the internet is slow. That is the major challenge and this brings about users' challenge". (C5)

It came to light in the research that staff are mostly pressured to fish out information for users, especially for students literature review for their project work. Students wait till time is far spent and when they themselves are experiencing pressure from their supervisors, come disturbing every library staff. Whenever downloading of e-books failed due to subscription issues, its repercussion was the difficulty in retrieving information relevant to the requests made.

This is what a paraprofessional had to say in this regard:

"We are pressured to find information for users' project works and downloading e-books become unsuccessful because of subscription issues. (C10)

One of the paraprofessionals maintained that students who use the library are troublesome and sometimes disrespectful but pointed out to the fact that some staff lack confidence and also lack customer service relations abilities and is evident in the lukewarm attitude to patrons and work as a whole.

"*There is lack of confidence among some of the staff, lack of customer relations also and lukewarm attitude to work of some staff. Students are as a result are troublesome and disrespectful". (C3*

It was also disclosed by another paraprofessional that users come to the library unprepared and in need of calculators, multi-sockets for laptops which should have been adequately fixed at vantage points. This sometimes resulted in misplacement of laptops when users went round in search of these gadgets, and they ended up pointing accusing fingers at paraprofessionals for their misplaced laptops, chargers and phones. This he said is very worrying and made them more stressed.

> "*Users are unprepared in need of calculators, multi-sockets for laptops and when they misplace these laptops, chargers and phones they trouble staff about it". (C9)*

It came as a surprise when a professional librarian also expressed shock at an experience she had had with a library patron who negatively described ICTs as being useless and that close contacts with them endangered the health of users and further said that at every given opportunity she tried as hard as she could to dissuade people from using them. This patron in question is a doctor in the making, he exclaimed incredulously.

Additionally he indicated that some professionals who are also instructors, out of fear of being recorded by users as well as for privacy concerns did not permit the use of ICTs in their facilities.

> "*Some users feel ICTs are not useful and are dangerous to their health. Some instructors don't permit the use of ICTS 'cause of fear to be recorded by users and for privacy concerns too". (C7)*

In spite of all the enumerated challenges encountered by all the professional and majority of the paraprofessionals who dealt directly with library users, the few paraprofessionals who said they had no challenges in relation to users do not deal directly with them. They explained that they worked in the cataloguing unit and hardly rendered direct services to users, unless they were

designated to relieve some staff in the circulation or reference section who are on sick leave or off duty.

.... I don't have challenges in relation to users. (C17)

"Not faced with much challenges from users, I am in the cataloguing unit unless I relieve someone on leave in circulation or reference". (C6)

4.6 Effects of Technostress

The third objective of the study was also to find out the effects of technostress on professional librarians and paraprofessionals in College of Health Sciences Library.

Majority of the respondents perceived unrelenting stress to the most critical effects of stress respectively, few respondents were also of the view that heart diseases and brain damage are respectively very severe and severe effects of technostress, low job commitment and computer anxiety and fear were also identified to be some effects of technostress as indicated by few respondents, whereby recording very highly ratings by respondents. Absenteeism or low productivity were also mentioned to be some of the effects of technostress by few respondents also. Lastly, rigidity of workflow which was also perceived to be an effect of technostress in the workplace, were also revealed from the study.

This is indicative that unrelenting stress, heart diseases or brain damage as well as computer anxiety and fear were rated by majority of the respondents to be very prvalent effects of technostress. One professional librarian remarked that:

"Heart diseases although rampant among library staff who frequently use computers, but for some of us heart diseases or diseases of the

brain don't affect us due to our faith in God. We don't fall sick, even when we did, we just laid hands on the affected part and we are okay". (C14)

4.7 Is Library Work Stressful

A follow up question was posed to the respondents. They were asked if library work was stressful or not. It was revealed from the interview that few of the respondents indicated that library work was very stressful while the remaining majority found the library work not stressful if everything they needed to work efficiently was provided by management. That is to say almost all the professional librarians and paraprofessionals at CHSL declared that library work was stressful, particularly when required resources were not available to work with. They declared that library work was stressful particularly when they were unable to satisfy patrons but they believed they performed their services efficiently only to be let down by power and internet service providers, and also when processing of books is due actually. Regardless of resources, all the respondents, except two paraprofessionals were of the opinion that library work was indeed very stressful.

"Somehow very stressful because it comes with its own troubles when the link becomes slow and there is much information to be retrieved to give or make available to students in terms of academic articles for their thesis, but not forthcoming". (C19)

In a follow up question respondents were asked to describe the library profession with the introduction of ICTs in its processes in their own words and these were the description given by one of the professional librarians:

…ICTs have come to help and are very good. Hitherto without the LMS we had to do a lot of repetitive tasks but ICTs have come to help with multi-tasking.

taskinsWe have to be well vested in the usage in order to enjoy using them. We were formally forced to do laborious tasks and repetitive tasks now ICTs have brought relief. (C14)

This is how a paraprofessional also described ICT introduction into the library's processes:

…Very stressful 'cause of rampant technological changes, they become obsolete in no time. Technologies are changing very fast. Today you realize you have to change your software when at the time you bought it, was the most current. New ones come with upgraded functions and then you realize yours is backward. (C7)

Some of the paraprofessionals were also not left out as they also poured out their hearts regarding ICTs in their attempt to describe in their own words the changes it has infused into the library profession. Below are some of the descriptions they gave:

"*ICT comes in to take away the manual process and has updated a lot of issues in the Library of congress Classification Scheme. The other satellite libraries of University of Ghana also provide us with information all because of the use of ICT. Sierra and OCLC has made cataloguing easier instead of manual cataloguing". (C10)*

...ICTs have made helped staff to be efficient because of the Sierra installed on the computers. This makes it easier for clients to have access to information

for research work. Also helps staff finish their work in no time. (C3)

"ICTs make information retrieval very fast to users, also helps in serving clients faster in terms of sending literature reviews via e-mails faster and efficiently". (C9)

4.7.1 Use of Technology in Relation to Library Duties

It emerged that all the professional librarians and paraprofessionals of CHSL are comfortable and very relaxed with the introduction of technologies in the performance of their duties with the exception of one professional librarian who seemed to be in charge of user request in terms of e-resources. She had loads of request to handle and it was glaring that she was overburdened. The rest did not lodge any complaints regarding the use of technology in the performance of their duties. They all stated in affirmation that they were comfortable and rather pointed at the breakdowns in computers and slow internet speed as factors that made them feel overburdened as well as overloaded. They said power outages also made them feel overburdened. The smooth running of the library as revealed here depended on good computers and constant power supply as well as fast internet speed.

It was obvious that they preferred working with the Sierra if necessary measures like staff trainings are given to equip them. This was said in reference to the library management software, they said previously they did everything manually. This revealed from the findings gathered that almost all professionals and paraprofessionals were in agreement with the fact that they did not in any way feel overburdened neither did they in any way feel overloaded by the use of technologies in the performance of their duties. All these revelations came up when they were asked if technologies had brought with it a burden in their daily routines in the library. However, the only professional librarian disagreed and this was her remark:

...Workload is outrageous, I deal with e-resources and I have loads of students' request to handle. (C1)

"I am not overburdened but management must give us the needed training since ICTs are helpful when one is confidently using them, also both power and internet must not be interrupted". (C19)

4.7.2 Comfortableness and Technology Infusion in Library Processes

In a follow up question, both professional librarians and paraprofessionals were asked if they were comfortable with the technologies infused in the library process. It appeared that majority of the respondents confidently answered that they were comfortable with technology infusion in all the library processes. However, only few paraprofessionals said they were uncomfortable with technology infused into the library processes. That is to say that majority of the respondents, comprising all professionals as well as majority of the paraprofessionals were all comfortable with the library's infusion of technology in its processes.

One professional librarian who had a mixed feeling in respect of the technologies infused in the library processes in his response also claimed that:

"Yes and no. Yes because technologies save time of the librarian especially in the duplication of efforts in providing library instructions. Example, if users want to know about Mendeley, all you have to do is to refer them to Reference Managers' Course. No because some library staff, both professionals and paraprofessionals don't have adequate skills". (C7)

Another professional librarian also in the CHSL when posed with the same question positively indicated that she was very comfortable with the introduction of all the technologies they have been introduced to so far and subsequently remarked that:

> "*I am comfortable with the technologies because we are exposed to some degree of training held by consortiums like CARLIGH and at other times by Balme Library which makes me feel at ease using them. I personally keep myself abreast with library processes using these technologies by listening to Webnar sessions that I have subscribed to online. Personally I feel ICTs have made our work easier but we need more trainings and workshops to equip all our staff" (C19)*

A paraprofessional also while responding to whether staff were comfortable with the infusion of technologies in the library processes or not indicated in a very bold manner that:

> *"The era in which we are is a computer one and so we have to embrace the use of computers. If there is fear and anxiety then it will lead to technostress". (C13)*

4.8 Methods of Coping with Technostress

The fourth objective of the study, this was to analyse technostress' managing strategies adopted by the professional librarians and paraprofessionals in College of Health Sciences Library. The

first step in managing technostress is to be equal to the challenge of technology by keeping abreast and face the reality that computers are a part of the library profession (Champion, 1988).

It was apparent from the interview that the professional librarians and the paraprofessionals in the CHSL practiced various coping strategies in the management of technostress. Walking, around the workplace, speaking with likeminded people, meditation, sleeping, time management touring, appointment with a counsellor, watching movies and dancing are some of the coping strategies practiced by both professionals as well as paraprofessionals to help reduce their technostress levels among them. It was realized that most of them practiced three or more of the coping strategies mentioned.

Only one respondent declared that the only coping strategy he uses is sleeping.

> *"I sleep for long hours to reduce technostress. That is the only Strategy I have been practicing". (C6)*

These ways of coping and reducing technostress could be either appropriate or inappropriate, however, to the best of their knowledge these strategies had kept them going.

Some of the respondents indicated that spending long hours behind the computer had affected their sight and in order not to have a telling effect on other parts of their bodies, sometimes resorted to stretching in between working hours and went round monitoring the patrons or users.

Majority of the respondents said they practiced positive thinking to help them reduce their technostress levels. That is not to say it was the only strategy used. They practiced some of the aforementioned strategies as well.

> *"I try as much as possible not to think of any negative things when I feel tensed in the library. I try to think of some programs*

I have been invited to and all the fun I will be having over there", disclosed, a professional librarian. (C1)

Most of the respondents claimed they retire after long hours behind the computer and engaged some of their like-minded colleagues in other departments in conversations in order to ease off some of the stress related to the use of computers. They candidly explained how they shared a lot of their computer challenges with their colleagues and never kept them to themselves.

"Usually I move away from library staff to ease myself from long hours of technostress and chat with likeminded people in other departments" another paraprofessional at CHSL said. (C5)

A professional librarian declared that as a Christian, he sought divine intervention as a way of managing stress. Other respondents also mentioned meditation in their remarks. Some respondents also mentioned they listened to cool music as well as gospel music and those were the measures they took to help them reduce technostress.

"I love music so I listen to music in order to distress. I also gossip small small about issues that will ease technostress" a paraprofessional said. (C8)

Most of the younger respondents also remarked that they watched humorous movies as a way of managing their technostress levels. One paraprofessional stressed that sometimes he watched Christian movies as a way of reducing technotress.

"I watch some humorous movies to laugh off the stress or listen to cool music, after I just drink a lot of water and sometimes too take a stroll" a paraprofessional remarked. (C9)

"I usually take a break from the library to listen to gospel music since I'm a Christian to ease myself off technostress", another paraprofessional indicated. (C3)

Some of the professional librarians and majority of the paraprofessionals also proposed some strategies that when adopted could help them cope with the stresses that are related to the use of technology which is termed technostress. These they explained as some strategies that staff themselves must engage in that could bring a great relief to them when adhered to.

These are some suggestions made in order to be able to cope effectively with technostress by some of the paraprofessionals:

...Watching documentaries and videos on the library profession brings a great deal of relief sometimes. In addition you can listen to music. (C10)

...By cracking jokes with colleagues, conferring with colleagues as to how to solve all challenges on the job. (C8)

"You have to take intermittent rests to help relieve eye stresses and headaches". (C18)

"Changing of environment, by travelling" (C16)

A professional librarian also made mention of regular visits to the gym and that as one engages in exercises, a lot of technological stress is gotten rid of.

"Gymming also brings relief, we all need to exercise to get rid of technostress". (C1)

4.8.1 Steps taken by Management to Help Employees Cope with Technostress

It was revealed from the responses of the professional librarians of CHSL that management had not done much in the area of helping employees manage their technostress levels effectively.

It was evident that much attention had not been given to management in respect of technostress. A professional librarian indicated that a counseling unit had been established for both students and staff. Some of them said they had heard that management of CHS had made provision for a counselor to counsel both staff and students in order to help in cases related to depression, accumulated technostress and other issues that needed the attention of a counselor. They made mention of the counseling unit in question that had been situated around their main administration according to hearsay but had not visited the facility.

A professional librarian when questioned in relation to the steps that had so far been taken by management to assist employees cope with stress in his answer said:

> *"Not really, there is now a counsellor for staff and students, But this depends on the individual". (C14)*

> *"We have heard that a counsellor is around to help staff but I have not visited that office yet" (C19)*

Some of the paraprofessionals stated that they had also heard of a counseling unit but regrettably indicated that not much had become of that unit because staff did not make use of their services, since they had not reached out to them. One paraprofessional remarked that he doubted if management was aware staff had issues relating to technostress.

> *"I'm not sure management is aware of staff technostress levels ooh". (C13)*

> *"I heard something is being done but nobody has come to*

explain what goes on there. (C3)

It also emerged during the interview that management had annexed the Legon hospital adjacent the CHS premises so in a way that could be said to be one of the steps management had taken to help them reduce technostress. It was revealed that the clinic provided the health needs of the entire staff, their spouses and two children each, who were below eighteen years old. They said that perhaps by taking away some of the burden of hospital bills we are a bit de-stressed in so doing. A professional librarian said that:

"We also have the Legon Clinic aside the counselor, that's all". (C7)

...okay maybe the clinic will help us. The Legon Clinic. (C9)

All the respondents of the two CHSL also pointed out that their management had set aside some off days but that was not enough to help them cope with technostress. They were of the view that like annual leave, they were all entitled to them and felt that more effort must be put in by management to help them cope with technostress.

"I think we are all entitled to annual leaves so management must look sharp 'cause they can do better for us". (C15)

4.9 Propositions of Steps that Management Could Take to Control Technostress

The study revealed the opinions of both professional librarians and paraprofessionals of CHSL and the inferences made were the fact that managements must make adequate provision for all the necessary resources for the smooth running of the library. The main proposition captured from the interviews had to do with lack of training programs or seminars for staff which they wanted to be organized frequently. Other constraints had to do with places of rest for staff represented. Comfortable rest rooms they indicated, must be fashioned out for staff.

It was proposed by all the respondents representing that management should organize seminars on technostress for staff regularly, while making room for a proper location where the presence of the counsellor will be felt. Counsellor must also be compelled as part of its responsibility to reach out to staff through sensitization programs relating to technostress. It was indicated that most often than not management turned a blind eye to the plight of staff regarding pressures from users that resulted in technostress and these pressures were mostly given rise to by the failure on the part of service providers in relation to internet speed and connectivity and at other times electricity or power.

Management should provide friendly and healthy rest or research rooms somewhere in the library also for library staff with comfortable chairs and a congenial atmosphere for staff to rest in turns. This when effected, a professional librarian indicated will go a long way to motivate as well as improve performance and subsequently increase productivity. She further suggested that if there could not be different restrooms for senior and junior staff, a common one could be put in place in the interim. Here they could watch television and read the dailies and articles, and also watch the news during break time to distress themselves.

"There must be intermittent breaks to stretch a bit, management must take steps to assist staff release technostress" (C13)

...Make the library congenial and accommodating, providing materials to ease stress and also training must be organized. (C2)

"Internet connectivity must be constant, no power outages, staff must be encouraged to use ICTs productively, staff must be encouraged to take

their breaks and come back more refreshed to give their best. But there is nowhere to rest". (C4)

...Management should ensure that ICTs are not obsolete, to always provide needed services, very often too screen savers must be put in place for staff. (C3)

It was also deduced from the responses from the interview, that too much work was imposed on individual staff during peak periods. Management must be mindful of health risks in relation to ICTs and their repercussion on staff. Staff replacement always puts pressure on staff strength and this should be avoided. For this reason they were of the view that extra work overtime must not be encouraged by management, it should be always optional.

These are some views of some paraprofessionals in that regard:

"Management must increase staff numbers to decrease workload of an individual, introduction of stress relief activities by management by providing restrooms. In so doing technostress could be eliminated completely". (C13)

"There should be a time limit with the usage of IT, education in terms of risks Risks associated with ICT use so as not to feel stressed when using ICT or our Our computers and software". (C5)

"There should be division of labour, rotation of the job, staff can be encouraged

to attend workshops and not only one person's right to training. Staff should be trained to use the library software properly". (C10)

It also emerged from the study that management needed to organize intermittent refresher training programs or tutorials on the use of computer technology in order to take staff through step by step management of the Sierra which is the library management software used in CHSL. They disclosed that staff must all be encouraged to attend these training programs or seminars to help equip them technologically in the performance of their duties in the library and must be allowed to make mistakes and be corrected. Thereby allowing staff to learn on the job, because they said some of them were slow learners.

A professional librarian said:

...There must be constant training, allow staff to make mistakes and learn on the job, some are 'BBC' Born Before Computers and so must be encouraged. Those are the technophobic staff and must be encouraged to feel free to learn steadily. (C14

Another professional who had her take on measures to be inculcated by management had this to say in exasperation:

"*The best way to overcome technostress is self-development, workshops, education, reading articles. You have to be an everyday learner. Just the awareness alone is enough. Open access information also helps you provide*

much information which releases some of the stress from patrons". (C7)

...More training programs must be organized to cater for the entire staff. There must be constant and uninterrupted internet connectivity too, power plants must be in good order, counselling programs must be organized occasionally as well as fun moments like get together or outings to places of fun with entire staff to de-stress. Also staff must be encouraged to listen to Webinars and also be encouraged to upgrade themselves academically, said a professional librarian as she sighed (C19)

"Constant training to keep staff abreast and familiar with the trends in terms of technology, because you become stressed when you are not familiar with the system, so training will help in that regard". (C9)

Some paraprofessionals also affirmed that:

…More trainings and workshops so as to make staff conversant with library processes related to ICT, by encouraging them also to further their education to make them understand the profession more and to practice better. (C6)

"Computers are good and training must be given to staff to make us Comfortable to use ICTs". (C15)

4.9.1 Summary of Findings and Observations

The researcher observed the entire floor space of the library which was quite big. Part of the space had been separated and used as a research common for graduate studies. The library space was inadequate for students and this is clearly seen from the distance between staff's sitting positions. Most of the professionals are seated so close to students and some users just too close to the shelves also. This could make shelving very stressful and make the staff who are already stressed by their ICTs very uncomfortable sometimes.

Some book shelves were very dusty and this could be attributed to open windows. Library windows could not be kept closed because there were no air conditioners in the main library. The offices of few paraprofessionals had air conditioners but some professionals too sat in the open but not with the paraprofessionals. The Library mostly depended on ceiling fans and most users loved sitting close to the windows to feel the air at least blowing in so as not to perspire because the louvers were always opened but library was warm generally. Insects and rodents could easily find their way into the library, because the main entrance to the library was always open. Library space although not too large enough to cater for future growth, had been managed efficiently and all the departments of the library were well represented except that they did not have adequate space. Especially the room allocated to cataloguing was not big enough, but well managed. Computers were few but all signs pointing out to the fact that a larger processing room would be provided sooner than later. In respect of lightning system, the library was well lit and all bulbs were in good order making the library very bright. The furniture was not bad but might need to be changed in the near future.

There were no computers for patrons in the main library and had to put in requests for information regarding articles or e-books or resorted to the ICT lab to do their own thing when the need arose.

Computers for library staff were in adequate and some had also broken down. The researcher also observed that usage of the few computers in the graduate research room were regulated. All graduate students without Identity cards were not permitted entry, but those who had access were given only sixty minutes for the usage especially during peak periods.

A security checkpoint had been erected at the main entrance of the library and all users' bags were kept safely by the security on duty. Securities ran shift as well as paraprofessionals. Morning shift commenced at 8.30am and ended at 4.00pm. Afternoon shift overlapped and also commenced at 3:30pm to 10:00pm

4.10 Conclusion

The fifth objective of the study was to suggest feasible solutions and coping strategies in the work of professional librarians and paraprofessionals in College of Health Sciences, university of Ghana. This has become necessary for institutions as well as Organisations to endeavour to reveal hidden realities of technostress and also map up strategies to curtail technostress in libraries or other work places.

This chapter therefore presented the findings of the study. Interviews conducted with respondents from CHS was presented based on the research objectives and the research framework adopted for the study. Findings revealed that, despite the importance and numerous benefits of technologies, professional librarians and paraprofessionals of CHSL experienced various levels of technostress from different sources such as, the library work itself as a result of the infusion of technology, inadequate resources and unfavourable working condition and environment, job dissatisfaction, work overload, and challenges in relation with users.

Technostress levels were generally not too high since most of them seemed to be comfortable with the use of technology but needed more training on library management software. They were always punctual and took work very seriously on a whole, although most of them suffered from headaches, tiredness, eye problems and back pains as a result of continuous sitting and uncomfortable chairs. It was apparent that coping or managing strategies that they resorted to whenever there were sensations of technostress, had proven to be effective and had been in a way helpful to them**.** It could also be due to the fact that there has been some level of training in librarianship though not consistent in terms of training and workshops organized by management, however, had equipped them with some form of professionalism that was effectively helping them manage their technostress levels.

CHAPTER FIVE

DISCUSSION OF FINDINGS OF THE STUDY

5.1 Introduction

This chapter entails the discussion of analysis and findings presented in Chapter Four. As shown in Chapter Four, the discussion followed the themes derived from the research objectives and questions and also takes cognizance of existing literature. They included:

- Library Profession
- Challenges Encountered in the Library
- Employees' Technostress Management
- Relationship of the Study to the Theory
- Conclusion

5.2 Library Profession

The findings of the study showed that the library profession is a stressful one, having taken into consideration all the processes in the library such as book processing whereby classification and cataloguing comes in, referencing, circulation, digitizing, shelving, as well as the electronic library which are all very strenuous processes. These findings were consistent with a study by Shaughnessy (1998) which reported that it was uncertain that an average person would ever perceive the librarianship profession to be a stressful one. He emphasized in his study that many librarians are experiencing a great deal of job stress as compared to minimal rates in terms of job satisfaction. However, Bunge (1987) expressed a mixed feeling on this same issue. He was of the

view that the library job could be indeed stressful, citing 'patrons' as a cause of stress, and on the other hand also categorized them as 'bringers of joy and fulfilment'.

All the aforementioned processes are automated in the College of Health Science Library (CHSL), with the exception of shelving which is done manually and are very tedious as revealed by the study. The information seeking behavior of Users was identified to be another stress factor for both professional librarians and paraprofessionals as indicated that students' behavioural traits are untoward in the library. The study also revealed through interview conducted in CHSL using professionals as well as paraprofessionals that lengthy hours of computer use as by some of the respondents was affirmatively very stressful and resulted in eye defects and technostress. Some level of inconsistency in terms of technical support was also pointed out as a stress factor. Worn tools and faulty equipment, inadequate power supply or intermittent power outages were all identified as stress factors in the library environment. However, Technophobia or fear for computer and other ICT tools although stressful, only applied to the elderly staff.

The library profession's infusion of ICT and the resultant tehnostress, can in no way revert to the manual system as was revealed in the study. This revelation is in harmony with the assertion made by Tam & Robertson (2002) that evolution of the 'digital age' has led to about intense changes in the library and information services environment. All the respondents affirmed that regular workshops and training, good equipment, constant supply of power and technical support among others will go a long way to reduce technostress and make the profession stress free, and in so doing productivity will increase.

5.3 Challenges Encountered in the Library

The challenges identified by the study include lack of teamwork, lack of skill needed, excessive workload, rapid technological changes as well as lack of motivation, to mention a few. The library profession as revealed by respondents and the ways in which professionals as well as paraprofessionals undertook their assigned duties, with the infusion of technologies into their processes were not without challenges. The opinions of the respondents were not different from the notification by Thomas, Satpathi and Satpathi (2010), as they indicated that the apparent challenges presented by the information age are in abundance and the challenges posed by the infusion of ICT appear in different forms.

The study also revealed that there was lack of teamwork among the staff of College of Health Science Library staff, it was obvious that they all worked independently and as it were they did not consult each other. This attitude by staff is inconsistent with the study by Phillips (2014) which reported that, whenever people interactively worked together, there is generally the need to co-ordinate abilities so as to realize their desired goals. Both leadership and subordinates must work together. This he indicated was necessary for the growth and success of the library.

It was apparent that there existed the survival of the fittest attitude among the staff of CHSL, in that none of them wanted their colleagues to have the feel that he or she had a constraint in the duties they had been assigned to if they did. As a result there is lack of confidence and a feeling of job insecurity which eventually results in high levels of absenteeism and turnover and in the end library becomes understaffed and user satisfaction diminishes. This revelation is consistent with an earlier study on technostress undertaken by 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”.

In the absence of skill needed to use technologies effectively, there is always lack of confidence as revealed from the study. Staff lacked the needed training in order to match their sophisticated patrons' needs. All these compounds the technostress level of library staff. Inconsistency in terms of services provided by technical support team and power supply unit resulted in excessive workload as explained during the interview by both professional as well as paraprofessional staff. Aramide & Bolarinwa (2010) asserted that there is always a decrease in productivity when staff experience stress associated with technology and this is clearly shown from the study, in that, ICTs were essentially intended to enhance productivity but if technostress becomes an impediment, there would always be the likelihood of retrogression in productivity.

Rapid technological changes also emerged as a major challenge to staff. It was revealed that there had been changes in terms of library management software change which at various stages brought activities in the College of Health Sciences Library to a halt, in that staff had to be trained to make use of a new software known as the Sierra that had been brought in to replace the millennium software which staff had grown accustomed to at the time. This is also in line with the study by Fourie (2004) who opined that the libraries are part of a global world, that are constantly being fashioned by electronic networks and information technology. In this instance staff had to make do with inadequate training as they encouraged themselves to adjust as they learned on the job. The elderly staff at CHSL, were also not left behind, they already had a phobia for technology and were left with no option than to also adapt to these technological changes. With this software came the use of scanners which was also employed in the feeding of metadata into the system.

In spite of all the challenges enumerated by the respondents in College of Health Sciences Library, one may perceive that motivation would be adequate in order to alleviate some of the tension surmounting among the staff, however from all indication that was completely absent. All the staff

were in total affirmative that there existed nothing like motivation in the library, with the exception of one paraprofessional who said motivation was relative.

5.3.1 Unfavorable Library Environment

The library environment as revealed from the study was presentable but it was found out that some professional librarians and paraprofessionals felt there is more to be desired of management. They said they had no issues with their lightening system, but they were unhappy with their work environment. They had no air conditioners and that made it impossible to keep their windows shut, allowing dust to enter. It was also observed that the main entrance to the library was also always wide open. They indicated that computers as well as their sitting areas are always dusty and this they said could be the one of the reasons for constant breakdown of computers and other peripherals. The dust that resurfaced periodically was offensive to staff as revealed from the study. The whole environment they said was mostly very dusty. Almost everything in the library, from books to computers must be cleaned at short intervals. Staff from the ICT support unit, were regularly called upon to service the computers. This contravenes the study by Oyedum (2011), which pointed out that for the desired use of academic libraries to be realized, preservation of information resources for all categories of users should not only be adhered to, but must constantly keep the entire library congenial. This in their view was a source of technostress. The unavailability of air conditioners made the library uncomfortable for users' studies as well as for staff during the performance of their duties. Chairs did not give the kind of relaxation and comfort needed to concentrate, an indication a professional librarian claimed made them suffer orthopedic problems. The inadequacy of computers in the library also came with no screen savers and as such a paraprofessional also said posed sight problems from the direct rays from the constant fixation of the eyes on these computers. The reading space was simply manageable, but indicative of the fact

that, it became crowded during peak periods. The cataloguing unit had inadequate space and looked crowded with books, quite stuffy as indicated by the paraprofessionals stationed there. Such environmental factors as free ventilation, serene reading environment, comfortable furniture, well fitted air-conditioners as well as clean curtains, are all needed for continuous use of university libraries by patron. The findings are harmonious with Ajala (2011) who opined that libraries' working environment are sources of stress to staff. He was of the view that an ergonomic problem that has to do with poor design of instruments used in the workplace affects the physical health of library staff. This is exactly what was revealed by the respondents from their expressions of displeasure with regards to their working environment in College of Health Sciences Library at Korle-Bu.

5.3.2 Work Overload

The professional and paraprofessional librarians narrated that work overload was a major source of technostress to them especially during examination periods as well as when new stock of materials are received. The reference as well as reprographics section is always overburdened right from revision through to the end of the semester with students' constant request of past questions. During this period, final students are in urgent need of information to embellish project works, special topics or dissertations and as a result there is a lot of pressure on the staff at the graduate research section. Professionals had to critically search for authentic and current information with the influx of information overload that has given rise to a chunk of information from all sorts of non-accredited sources all over the internet. This is in confirmation with the study by Janes (2002) who notified that academic librarians' jobs have transformed with the adoption of technology. He maintained that as a result of these transformations, there is the underpinning that reference librarians in university libraries are challenged with information overload, and deducing relevance

portrays a feeling of anxiety. There is always the feeling of technostress during peak periods because of the pressure that came with it, the speed of the internet is mostly reduced and this affects the efficiency of the sierra. Retrieval then becomes very slow and the work load seemed to have escalated, especially when some of our staff were not on duty as a result of ailments or had proceeded on annual or study leave.

It was also pointed out by the staff in the cataloguing section that they were often overloaded with the processing of books. They indicated that they always had to make do with few staff. Staff numbers they said mismatched the workload. This they explained was the case because they had to run shift to make up for extensive library operation. This reduced the staff numbers for the various shifts run in the library. They were left with no choice than heavy work schedules of two or more staff each whenever they were on duty.

Both professional librarians and paraprofessionals pointed out that they were confronted with too much work. They mentioned some routines on the job, such as serving as secretaries on boards, chairing meetings, writing of memoranda, correspondence and reports, training both staff and students attending to students. These they reinforced had exceeded their humanly possible capabilities of the schedules they could deal with. There was a great deal of workload at certain calendar times of the semester, with few staff to deal with all the excessive workload as revealed from the study.

A paraprofessional made mention of the fact that there were instances when they worked late without considering they had to hand over to staff who run the afternoon or evening shifts because they had a lot of students' requests and if care was not taken, more would trickle in the next day. Break is omitted to get their work done to meet deadlines and all these were done with the help of

the computer and this always led to technostress among them, as indicated. Whenever technostress set in there seemed to be a lot of errors and the next day they reverted to correcting these errors as indicated by a paraprofessional. They indicated that most of their retired staff also faced similar challenges and currently have health issues to deal with after retirement. This statement is in affirmation with the study by Galinsky et al (2008) which opined that when employees are overloaded on the job the tendency to make mistakes remains are very high, feelings of annoyance or resentment toward their superiors, management as well co-workers sets in and as a result technostress levels rise up of stress, resulting in health risks. More hands were needed but management claims clearance had not been given to employ more staff. This clearly shows down work. As such the Ghana Labour Law (2003) which requires staff to work for at most eight hours per day is contradicted.

Excessive workload constraints some staff of CHSL to go beyond their regular overtime. The finding is in harmony with the study conducted by Chartered Institute of Personnel and Development (CIPD), based in the United Kingdom, which reported in their publication that the major reason for going the extra mile in terms of work schedules was the existence of work load in the working environment. The professionals and paraprofessionals in acquisitions also felt overloaded with work just as their other colleagues in the other units of the library. They felt overburdened whenever new arrivals were received. They shared the same working space with the cataloguers and the inadequate space seemed burdensome to them not to mention the challenges with the interruptions in terms of internet connectivity, power outages and the sierra software as well. It was revealed from their responses that some lazy staff members absented themselves when the workload increased and few of them were burdened with excessive workload to deal with. This is in accordance with a study by Ighodaro (2010), who was of the view that the constant supply of

power or electricity impacts the effectiveness and success of every organization as well as every social activity and is also crucial in the case of university libraries and the services they render. His study further explained that electricity is the life wire of a resilient electronic library by all standards and as such, its uninterrupted supply together with high internet speed as well as access provides an efficacious electronic service in the 21st century academic library.

It was gathered from the professional librarians and paraprofessionals also that they sometimes felt overwhelmed by the workload when their colleagues were on study leave or absented themselves from work, resulting in severe headaches, sometimes back or waist pains. This finding is in conformity with the work by Hick (2015) and which ascertained that high pressures, headaches, bodily pains moodiness, are all symptoms of excessive workload. He further elaborated that high levels of stress, as a result of work overload is tantamount to depression, brain damage, high blood pressure and other related diseases. However, the professional librarians and paraprofessionals of CHSL had a way of managing their technostress levels in order for it not to escalate to extreme levels. This probably is the case because they all have library science backgrounds in terms of education and are knowledgeable in their field of work. This may have given them technostress managing abilities and as a result has kept them going throughout their existence in the library environment.

5.3.3 Inadequate Resources

The findings as gathered from the study showed that both professional librarians and paraprofessionals received inadequate supplies of resources needed to help them meet the demands of library patrons that they needed to work with. It is the primary duty of academic libraries to facilitate services that enhanced teaching and learning. In the absence of resources such as current information materials, good and adequate computers, printers, scanners, digitizing machines,

photocopiers right down to trolleys to help convey materials from the cataloguing unit for shelving were all sources of technostress to staff. This conformed to the finding by Fayose (2000) indicating that information resources refers to all the devices as well as prints or electronic formats which bring help to librarians in meeting the needs of patrons professionally at the right time and place. Reports from the study recorded slow internet speed as well as intermittent breaks in internet connectivity which made it very difficult to meet the ever sophisticated demands of most users. The power plant the library fell on whenever they experienced power outages was always out of order and this stagnated their processes in the library especially in cases where one had to start all over the entering of bibliographic data since the sierra had been programed to end entries before permission is granted to save or enabled**.**

Staff ratio to patrons and workload is inadequate. Being on top of issues and the ability to meet the demands of patrons are crucial to library patronage and the success of research strength of the university. Less staff numbers in relation to workload translated extra duties for staff members and subsequently caused work overload. This finding affirmed the work by Bunge (1998). He opined in his study that the absence of adequate resources to adequately meet the increased demands of patrons could be a cause of worry leading to stress. He elaborated further that keeping the levels of stress in individual lives under control entails every effort geared towards realizing equity between impediments and necessities of one's life and the resources at their disposal to meet these impediments. In conclusion he indicated that too many demands in relation to inadequate resources to handle the ever surmounting demands of patrons, leads to excessive stress and in this case technostress. This confirmed the frustrations expressed by the professional librarians and paraprofessionals whenever they were at their wits end in respect of user demands.

5.3.4 Job Dissatisfaction

Davis & Nestron (1985) defined job satisfaction as the extent to which employees appraised the work environment in fulfillment of their desires. The term as indicated in their study refers to the behaviour and sentiments of people with regards to their work. Optimistic and pessimistic expressions towards the job portray job satisfaction and dissatisfaction respectively. However, the findings of the study opposed this posture. It was uncovered from the respondents that that they were unhappy on the job because they were not tapped on the shoulder for the hard work. There is nothing like extra duty allowances, they further said that there was no reward for working extra hours and they are also remunerated poorly at the end of every month, lack of resources to work with was also a major concern to them as was stated clearly that resource mostly delayed and as a result work is brought to a standstill during certain periods.

Staff numbers was also not encouraging and this challenge is experienced when some of the staff were on leave. It was explained by the professional librarians that promotions were effected when request are sent but not done spontaneously, they said they always had to move heaven and earth before their promotion came. Most of them said they were still working with their junior staff status years after attaining second degrees. A study by Luthan, (1998) opined job satisfaction as the employee's awareness of how pertinent it is to make provision for all essentials in the work environment, particularly the profession itself, promotion, salaries, monitoring and peacefulness. This conforms to Kaya (1994a) study which portrayed numerous members of library workers in academic libraries of Ankara, Turkey as being displeased with their physical work environment, also being denied some institutional rights in respect of the conduct of management, typical examples are job security , salaries, social services, promotion, wages, social services and responsibility. However, the finding is in contrast with another finding by Kaya (1994b) which

stresses that academic libraries in Turkey are comparatively in reasonable standing in respect of job satisfaction. This notwithstanding, he finalized that job satisfaction in public libraries were way too low, whereas special libraries in Turkey boasted of the best conditions of service for staff relative to other researchers who opposed with this finding.

Most of the staff both professional and paraprofessionals were dissatisfied with the power outages which brought work schedules to their knees with the standby generator also begging to be changed. They complained that whenever that happened, the workload piles up and gave them a feeling of technostress after working long hours behind the computer. This confirmed the finding by Weil & Rosen (1997), as well as Brod (1984), both asserting that there is practical proof to show that technostress is the end product of envisaged work overload. This they said discourages and prevents workers from reaching their target and in the end are overwhelmed by information, ill- motivated, and are dissatisfied at work.

5.3.5 Complex Job Demands

Library work has become very complex in the computer age, and it has become necessary for library employees to move along with the advancement in technologies. This complexity was further identified in relation to the use of ICTs which have become the bedrock of almost all the processes in the library, and the lack of knowledge of emerging technologies by librarians in CHSL and the needed skill with which to use these technologies in order not to lose their relevance in the library in the information age in which librarians find themselves has become alarming. This finding conforms to the study by Friedlander (2002) which identified that library practitioners as well as the university community are constrained with complex academic and informational conditions.

Most university teachers and graduate students who patronize the libraries, have become indiscriminate in devouring all sorts of information they chanced on, this is because they have become very skillful in terms of search strategies for seeking and acquiring information in all forms, and have become self-sufficient, he further elaborated. The librarians in this era must be ahead of the users and this makes the expectation of users very demanding of both professional and paraprofessional librarians. The library management software which is called the Sierra helped the respondents classify and catalogue books, it became evident from the study that that the shelving of books could not be done efficiently without the computer. Reason being that CHSL is automated, as such all bibliographical data were entered using ICTs, searching and retrieval, referencing, circulation just to mention few of these processes in the library are all achieved using ICTs. This confirmed a study by Adeyinka (2004) which expounded that advancement in the area of ICTs is steadily transforming the processes in university libraries globally, and this has paved ways for the unmatched strides in the area of technological dynamism, advancements in information networks and electronic services in this era. He further opined that automation of library processes has made the extensive role of the university libraries very possible.

Majority of the paraprofessionals indicated they needed enormous skillfulness presently in order to be well-equipped to function professionally and confidently in the CHSL for that matter. In the absence of skill, respondents said they became technophobic and the zeal to be at post to render services to users diminished. This is because users tend to lose confidence in both the professionals as well as paraprofessionals whenever their requests are not met with the spontaneity that they feel they deserved.

Other complex job demands being experienced by CHSL staff were also revealed to be productivity in relation to the internet support as well as power or electricity supply. This is because the country has been experiencing inadequate power supply for some time as a result of load shedding and black-outs intermittently in all parts of the country on few occasions. These black-outs always resulted in the lack of internet accessibility since CHSL just as well as other university libraries in the country are not able to regularize the constant operation of good stand-by generators or because of the very high cost of fuel. In a study by Bao (2002), dwelling on findings from 1998 and 2001 surveys, it was revealed that the Internet will continuously be an essential element of services rendered by libraries presently and in future libraries as well. His study vindicates the respondents in CHSL who affirmed that internet access is always needed to spearhead networking in the library environment as well as other equally important uses it was put to. Work they said was stagnated and it became impossible to even send information to users. This finding is consistent with that of Islam & Habiba (2015) who asserted that uneven power supply was a major constraint to rendering library services using social media in libraries in Bangladesh.

Lack of privacy was also mentioned by some of the professional librarians. This they say is as a result of the use of electronic mailing system and the use of mobile technologies like the mobile phone. They complained about work-home issues, this they said compounded their technostress levels.

5.3.6 User Challenges

The findings of the study expounded that both professional librarians and paraprofessionals at CHSL faced challenges in relation to library patrons. They indicated that their patrons who are mostly medical students and medical practitioners have become very fastidious in respect of their

information seeking behaviours and this always increased their technostress levels. Most of their users have become very sophisticated in term of ICT know how and this has subsequently led to their impatience whenever their information needs were not met in a timely manner. The study by Kouzmin & Korac-Kakabadse (2000) is in line with this finding. They stressed that library patrons were mostly impatient and troubled library staff about their anticipation for instantaneous results with regards to information provision. They indicated that information providers are expected to provide immediate and spontaneous response in the area of email and the like. Kinman & Jones (2005) reinforced that there is no time to analyze or contemplate on any performance. Everything is quick and instantaneous.

Library users were always adamant when it comes to library regulations which must be observed to help maintain the congenial atmosphere for studies, and this was very worrisome to CHSL professional librarians as well as paraprofessionals. This is in line with a study by Bunge, (1987a) which outlined the fact that still remained that library staff must facilitate information resources and services to meet the information needs of library users, however, it was the responsibility of the library users on their part to also abide by the rules and the regulations of the specified library. In the case of CHSL, most students chose to do their own thing without observing library rules. Students shelved books in spite of the rules emboldened that read contrarily and end up mixing up book shelving which resulted in book loss. This makes work more stressful for the already technostressed staff. Students in turn write the opposite of the instructions on the notices in ink, as observed by the researcher. This observation is in conformance with the finding by Bunge (1987b) which referred to the behavior of students as uncouth because they always did the opposite of what the library rules spelled out. Farler & Broadly-Preston (2012) had mixed feelings about students' behavior in the library. In their work, they opined that the librarian's experience with students

could be dicey, sometimes interesting and at other times very stressful depending on the research area at stake. Users' behavior was nervy most of the time and made professional librarians and paraprofessionals very crossed. The findings clearly showed that in spite of how vast users have become with emerging technologies their interactions with CHSL staff had not caused serious troubles that led to high technostress levels because they have learned to manage them strategically.

5.4 Employees' Technostress Management

Coping strategies adopted by paraprofessionals at CHSL in their management of technostress levels was also scrutinized by the study. This had become necessary having taken into consideration a study by Roskies (1991) which explains that "technostress has become a trendy ailment of the information age, and the curative measure of technostress is well known and a lucrative function. In order to be able to manage their individual stress levels to the barest minimum, they made the effort to figure out their stress factors first, weighed them so as to be able to control them effectively. Technostress can be very harmful and could pose very serious health risks to individuals, it is therefore crucial to pay critical attention to how much healthy CHSL staff could continue to still remain in the midst of all the technological stress. All humans are made up of different chemistries. As such, staff needed to take precautionary measures in order to also sensitize themselves into the foreknowledge of the level of technostress. This may appear to be too much for individual staff because what may be comfortable for one may be harmful to the other. This finding is consistent with the report of Harper (2000) who emphasized that there are two different kinds of technostress related issues that are hazardous to librarians which he identified to be the physical and the psychological. This is also in accordance with the research by Bunge (1987). He indicated that some library staff could endure severe attacks, whereas others

could not withstand the weakest forms of attack directed at them. Few of the CHSL professionals and paraprofessionals mentioned some coping strategies peculiar to themselves and few others too in addition that they practiced in common with their colleagues.

5.4.1 Thinking Positively

Positive thinking was found to be a major strategy that was used by majority of the respondents in their management of technostress. They indicated that they had developed an optimistic attitude towards the use of the sierra and all the other technologies in the CHSL. They said they had it at the back of their minds that the end result is greater than the challenges or huddles they encountered, and ensured that they endured to the end. In a study by Simpson & Weiner (1989), they asserted that positive thinking is an exercise or the effect of focusing an individual's mind harmoniously on what is purposeful and pleasant, thereby completely removing from it negative or unhelpful ideas and instincts. This assertion is in affirmation with the practice by the staff of CHSL as revealed in the study. They indicated through their responses that they mostly focused on the satisfaction they derived whenever sophisticated user needs were met. Whenever there were setbacks in their service delivery, they looked at the bigger picture, which were their professionalism and the users' experience. They quickly responded positively in spite of all the pitfalls that came with the challenges they encountered. Challenges such as the rapid emergence of technology, information overload, complex job demands and the like. They always thought of a successful ending and they were always good to take up subsequent challenges.

5.4.2 Resistance of prolonged sitting

One of the strategies used by staff of CHSL to inhibit technostress is the resistance of excessive sitting. This is constituted in a study by Tarafdar, Ragu-Nathan, & Tu, (2008) who expounded that

some measures employed to assists in the curtailing of employees technostress levels are termed technostress inhibitors.

Both professional librarians and paraprofessionals at CHSL indicated they tried as much as possible to resist sitting for long hours behind their computers. They stressed that they strolled round the library in order to monitor user activities or took short breaks and moved away to other offices within the compound to relieve themselves off some technostress. By so doing, they interacted with colleagues in other departments as they shared jokes and sometimes discussed political issues. This view in relation to coping strategies of technostress was also shared by Monat & Lazarus, (1991) as part of some examples they gave as less to no deep thoughts with regards to challenges, learning to believe that all is well and jokingly move away, forgetting about the challenges that led to technostress as you moved from your setting. This finding is in agreement with Levine (2015) who opined that information professionals as a result of lengthy sitting hours, developed health related issues including high blood pressures, orthopedic problems, obesity, to mention just a few. Levine elaborated that excessive sitting could eventually lead to loss of life and stressed that taking intermittent strolls minimized the risks associated with the long and frequent sitting when using these technologies. This he said could neutralize the harm that had already been caused.

Moving away from one's sitting position to a different unit in the library was also revealed to be a strategy used by some of the paraprofessionals. They conferred with their colleagues sometimes as a way of de-stressing through the sharing of ideas, this they said brought some relief to them since they were not exposed to rampant training programs. This also confirmed the study conducted by Sharma and Sareen (2015) who were of the view that acquiring user friendly software and the encouragement of healthy interaction within the library, helps build confidence

and tolerance in the library. They elaborated that this goes a long way to eliminate burnout when technological knowledge is shared among staff in the library environment.

Prolonged sitting has been revealed by many researchers to be hazardous to library staff the world over. Thosar (2011) in his study also maintained the same posture. He asserted that it is medically proven in the area of epidemiology that sitting for a long time makes individuals prone to acute ailments, as such intermittent breaks to stretch around is necessary and serves as a preventive measure against cardiovascular diseases, although there is inadequate scientific proof relatively.

5.4.3 Meditation as a means to reduce Technostress

A study conducted by Greenberg (1990) showed that meditation is a strategy that has relaxation tendencies. In his work he described meditation as a psychological practice that makes a difference in the functions of one's body. The essence of meditation as expounded by him was to out-power all considerations, in order to decide where an individual's attention is directed at rather than being skewed towards the dictates of what pertains around that particular individual. This finding confirms the findings of CHSL because meditation was found to be one of the strategic measures taken by some professional librarians and paraprofessional at CHSL. They indicated that they meditated on the word of God and this they practiced overwhelmingly without focusing their thoughts on technologically related anxieties. It was revealed that they practiced the acknowledgement of God and focused their attention on the things of God as a strategy to manage technostress. It was their belief that God is the author and finisher of their lives and only depended on the plans of God, meaning that It was Him who directs their path so they focused on God through meditation to provide relief. They believed that God furnished man with the technological knowledge and as such solutions to technological challenges will be derived from Him, because they believed that God was all-knowing. This finding is in conformity with the assertion by

Bauwens (1995) who indicated that spiritual strategies could be employed to minimize technostress. He stressed that whenever such strategies were practiced an intrinsic understanding of technology could be achieved. In so doing man comes closer to God spiritually, but in the context of man's own world.

The respondents believed so much in God's intervention through prayer, they indicated that for those of them who believed in the power of God, they carried all their burdens to their maker through prayer and this they said they believed God came through to them through meditation and technostress is kept under control. The finding confirms Fairchild's (2015a) opinion in that all Christian belief could not be boxed in a common posture, yet he had strong feelings that most Christians envisaged God as sovereign and in absolute control of their entire lives. They as well trust God as the giver of long life and had provided their every need. This is because he is the giver of wealth and has given them everything they needed in life. Stress sometimes overwhelmed the lives of Christians, and they forgot about their faith. Fairchild (2015b) explained that life is complex, and humans are emotionally weak most often than not, and this makes it impossible for humans to completely eliminate their stress related challenges. It is the belief of the respondents that rather than overburdening and bothering themselves over their technostress or any other issues and worsening their anxiety , they believed the Bible contained all the knowledge they needed to overpower technostress and would rather direct all their attention to God in prayer and through meditation.

5.4.4 Isolation as a Means to Reduce Technostress

The study showed that professional librarians and paraprofessionals at CHSL also controlled technostress by isolating themselves from the library environment and entirely from the workload.

Some said they sometimes took days off and travelled to travel to their hometowns just to be alone and away from all the stress in the library and Accra. They indicated that even if they stayed in the office, they alienated themselves from their units as well as colleagues just to be alone and tried as much as possible to free themselves of all the encroachment that came from their mobile phones as well. This practice by the respondents construes the study by Good Therapy organization (2014) in which they emphasized that social isolation is not the same as being solitude. The latter expression means being deserted or one's own decision to be alone. They further explained in their study that a sense of reflection is brought to bear in isolation, which allows an individual to re-strategize one's own aspirations to meet desired goals. The respondents indicated that workload in the CHSL did not in any way correspond with the abilities of employees and it was ideal to isolate one's self to de-stress. This was clearly reflected in a study by Tu et al (2005) which asserted that ICTs have apparently led to workloads that were not equal to the abilities of library employees.

5.4.5 Sleep as a Means to Reduce Technostress

Technostress is inevitable with the strides or technological advancements that we have seen in our times as well as the pace at which these technologies emerge. Employees the world over must position themselves to adopt emerging technologies. This aim could be achieved through the acceptance of the fact that they are part of the information era and rather fashion out ways to minimize technostress.

Long sleep is very hygienic as well as important to help one de-stress. Sleep can be hygienic when practiced constantly because it is only through consistency that it would translate to health benefits. According to a study by the National Sleep Foundation (2011), whenever an individual sleeps, all the damage that had occurred to the cells during the day, are restored. It was explained that sleep

must be adequate and irregular routines of sleep is unhealthy. Sleep also aids retentive memory and not only that, but revitalizes the brain and prevents brain diseases. This study is consistent with the finding of this research because some of the professional librarians as well as the paraprofessionals depended on long sleep as a means of controlling their technostress levels. They reported that after a long day's work they became very exhausted and their last resort is long hours of sleep. They further explained that they woke up refreshed and fully energized to face the day's hurdles that lied before them. The finding also supports the study by Rapoport (2012) who was also of the view that sufficient sleep is what healthy lifestyle is about and this is what the heart needs to function properly. He indicated also that it helps the maintenance of healthy and normal weight and a normal state of mind. He elaborated that the shortest form of sleep keeps the brain busily at work. Memories are heightened and practical abilities are mastered after sleep, this he termed as consolidation.

Amen (2008) reinforced that whenever the body is stressed as a result of excessive workload and in the absence of sufficient sleep or relaxation or both, the brain refuses to create fresh cells namely neuroplasticity. It is against this backdrop that CHSL staff have taken sleep so seriously as a means of controlling their technostress levels and this could be attributed to their curtailed or low technostress levels.

5.4.6 Time Management to ease Technostress

Time management can be defined as the end result of a systematic arrangement or order of skill that would be used as a measure in administering various specifications of routines based on the limitations in terms of abilities and capability of staff, Nandhakumar & Jones (2001). This strategy was also identified to be one other strategy practiced by professional librarians and

paraprofessionals as a means of controlling technostress. It was apparent from the respondent's responses that a technique that worked for a paraprofessional may not be effective for another professional or may work for one paraprofessional but the opposite may work for other paraprofessionals. This finding is in agreement with Hackworth (2007) who claimed that steps taken in time management vary consistently and as such must be monitored and kept in check by individuals practicing it.

Time management seemed to be one of the strategies practiced by majority of the CHSL professionals and paraprofessionals. They indicated that they practiced this strategy alongside other minimizing strategies which they said worked for them. Most of them mentioned that the effective use of time also helped them keep technostress levels under control. They had scheduled their time such that they were able to make time for intermittent breaks which enabled them spend quality time socializing, took short walks or breaks and ensured that they completed duties they had been assigned to on time. They indicated that they devoted much more time to their daily routines in the library but tried as much as possible not to be rooted to their seats during the entire hours they spent in the library. This they said was all about setting priorities right and ensuring that the most important duties such as dealing with users were attended to first before others followed. Plans for managing time changed according to the tasks at hand, each day had its order of priorities in terms of duty that had to be completed first and foremost. They indicated that managing their time properly by sometimes turning their attention off their phones and dedicating all their attention on the day's duty plan helped them complete the day's activities in a timely manner.

5.4.7 Watching Movies to ease Technostress

Some professional librarians and paraprofessionals of CHSL claimed that they de-stressed a lot by watching movies. They elaborated that although all kinds of movies they laid hands on helped, the most effective of them all are comic movies because they are humourous and as such are very good stress reliefs. This is because it made them laugh a lot and the end result is they forget about all their troubles associated with technostress which they had encountered during the day. This assertion corroborates the finding by Barkdull (2011) which brought to light the fact that humour is an uncomplicated and inexpensive way to easily minimize emotional stress and which produces the desired results. He further explained that movies of this nature often assist individuals to come to the realization that in spite of their distasteful circumstances others are undergoing worse situations**.**

A research conducted by Mayo Foundation for Medical Education and Research (2019) also explained that although it is impossible for humor to serve as remedy to all sicknesses, research has unearthed that the positive side of laughter far outweighs all odds**.** Laughter does not only decrease the stress factor of individuals mentally, it also transforms it physically in the body. An amusing laughter, they stressed, lightens the individual up and the end result is all stresses are reversed to a more relaxed feeling. This assertion is in line with the findings at CHSL.

The professional librarians and paraprofessionals indicated that making humour a part of their life was one of the most effective strategies they had adopted in coping with technostress. By watching comic movies they explained they had succeeded in keeping their technostress levels at the barest minimum. They maintained that they always diverted their attention from all challenges encountered in the library and treated themselves to good laughter by watching such movies and in the end all anxiety is swept under the carpet.

5.4.8 Music and Technostress

Listening to music was also identified as a minimizing strategy for technostress by the respondents of CHSL. It was affirmed by some that gospel music did a perfect job whenever they felt down mentally as a result of technostress, others too were of the view that cool music or love soul songs did the trick. It was apparent from their responses that music had an amazing effect on their emotions. This confirms the press releases of a research by Stanford University Press (2006) which stated that listening to music transforms brain into performing extensive kinds of function just as medication does. They explained further that music is accessible to all and as such, a simple measures for stress release. It is in accordance with this finding that Nechama (2011) also claimed that programmes such as music therapy are effective when it comes to the elimination or reduction of depression as long term symptoms.

The respondents were of the view that they were able to fit music into their daily schedules as in listening to cool or gospel music as they engaged in their tasks for the day. A study conducted by Michigan State University (2013) also placed music on the top as a stress relief strategy. It was confirmed by the study that the frequency of the occurrences in terms of staff and student burnout is reduced by music. The assertion by Abbe, Pharr & Balnin (2007) also confirmed that music decreases both physical as well as psychological effects of technostress.

The American Music Therapy Association based on a study also reinforced that listening to cool music reduces pressure in the blood and calms down the nerves and slows down the pulse, the body's stress hormones decreases as a result. This is the main reason for the choice of music by some of the professional librarians and paraprofessionals of CHSL, be it soul or gospel, as a strategy used in managing their technostress level.

5.5 Relationship of the Study to the Theory

The Person-Environment (P-E) Fit model of stress by Edwards & Cooper (1988) which explained that stress sets in whenever there is a gap between individuals' expectation and their existing environment., and Tarafdar et al. (2007a) indepth development of the model into five dimensions that results in technostress, namely techno-overload, techno-invasion, techno-complexity, techno-insecurity and techno-uncertainty has a bearing on the findings at CHSL and also corroborates with detailed study into the (P-E) model as treated by Ayyagari et al. (2011) and Fox et al. (1993 who also maintained the assertion. Shu et al. (2011) also came up with the Social Cognitive Theory (SCT) perspective aligned by Bandura (1984) and Jones (1989).They were also of the view that a determinant force such as environmental influences, compelled individuals to use ICTs.

From the findings of the study, all the aforementioned dimensions that resulted in technostress as stated by Tarafdar et al (2007b) were identified and captured among the professionals and paraprofessional staff of CHSL. They were faced with several challenges such as work overload, inadequate resources, unfavourable working conditions, complex job demands, job dissatisfaction, job insecurity and the like, yet they had no choice but to tow the lines of modern academic libraries where library processes are automated, with e-library services in full force. These challenges were the sources of technostress. Users have become so sophisticated and library staff must be abreast with the information era in order to be able to satisfy users. This also vindicates the STC, whereby the individual anticipate pressure being produced from the external environment. The inability to cope and adopt to the changes that had occurred in the individual's existing environment then creates a gap which is termed technotress.

An intervention was then needed to help them cope because from the findings, all the staff lauded the infusion of ICTs in the library processes in spite of the issues relating to technostress. This they said among many other positive reasons is why they have fashioned out ways of managing their technostress levels and have been very successful at that.

5.6 Conclusion

All discussion in respect of the findings was executed in relation to the literature reviewed. The objectives of the study as shown from the findings of study had been adequately met. Facts gathered from respondents' responses during the interview indicated that the technostress factor was not a new concept although most of the respondents were not fully aware of the term. In spite of that, they had fashioned out strategies to address their challenges that resulted from stresses associated with the use of ICTs in order to be more productive within libraries to benefit patrons. What seemed to be lacking is constant training and knowledge of ICTs on the part of library staff to stay abreast with latest trends and the timeliness in terms of intervention by management to assist staff with coping strategies.

The need to reinforce the use of current technological tools is also needed to enhance application and the confidence level of staff so as to be equal to the task, no matter the dictates of the job or the level of sophistication of users. Also, challenges such as power outages, breaks in internet connectivity and inadequate motivation need to be curbed for the library to serve the purpose for its existence and operation.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter provides a summary of findings which depended on the objectives of the study outlined in Chapter One. It also gives a conclusion and recommendations which were also based on the findings to suggest the best strategies that libraries can adopt in order to help employees curtail or better still eliminate technostress as well as address the challenges related to the infusion of technology in library processes in the College of Health Sciences Library and other academic libraries in Ghana. Pertinent areas for further studies have also been suggested.

The purposes of the study was to examine the causes of technostress and the coping strategies used by information professionals in College of Health Sciences Library to control technostress with the view of making recommendations for improved service delivery. The main objectives of the study included:

- To find out the perception of technostress by professional librarians and paraprofessionals at the College of Health Sciences Library at Korle-Bu.
- To investigate the major causes of technostress among professional librarians and paraprofessionals at College of Health Sciences library at Korle-Bu.
- To find out the effects of technostress on professional librarians and paraprofessionals in College of Health Sciences Library at Korle-Bu.
- To analyse technostress' managing strategies adopted by the professional librarians and paraprofessionals in College of Health Sciences Library at Korle-Bu.

- To suggest feasible solutions and coping strategies in the work of professional librarians and paraprofessionals in College of Health Sciences Library at Korle-Bu.

The results are summarised below.

6.2 Summary of Findings

It was shown from the study that professional librarians and paraprofessionals of College of Health Sciences Library perceived the library profession itself, challenges encountered on the job, unfavourable library environment, work overload**,** inadequate resources**,** job dissatisfaction, complex job demands, user challenges as their main sources of technostress.

6.2.1 Library Job

In respect of the library job, the findings of the study showed that it was a stressful one considering all the processes in the library such as book processing where classification and cataloguing comes in to play. Referencing, circulation, digitizing, shelving, as well as the electronic library services were all identified to be very strenuous processes. Patrons' dissatisfaction, interruption in power supply and internet connectivity were also identified as factors that made the library profession very stressful.

6.2.2 Challenges Encountered in the Library

Infusion of technologies into library processes was revealed to be a major challenge in the library. The lack of teamwork, lack of needed skill, excessive workload, rapid technological change as well as lack of motivation, to mentioned only few also surfaced as challenges. As a result there was lack of confidence, feeling of job insecurity, absenteeism and turnover which led to

understaffing. It also led to the decline in user satisfaction. There existed lack of training to equip staff to match rapid technological changes, whereas staff motivation was totally absent as detected from the study.

6.2.3 Unfavourable Working Environment

The library was revealed from the study as a presentable one but some professional librarians and paraprofessionals felt management could do more. The lightening system was found out to be in good order, however, staff were unhappy with their work environment. There were no air-conditioners and staff had issues with dust, uncomfortable chairs and computer breakdowns. Staff needed spacious working areas as revealed from the study.

6.2.4 Work Overload

It was disclosed from the study that library staff were overloaded with work, specifically during examination periods as well as during periods when new stock of materials were received. They were left with no other choice than to work overtime and also omitted their break periods due to the heavy work schedules and always retired home extremely stressed.

6.2.5 Inadequate Resources

The study revealed that the library lacked current information materials, good and adequate computers, printers, scanners, digitizing machines, photocopiers right down to trolleys to help convey materials from the cataloguing unit and subsequently to the shelves. It was also recorded from the study that slow internet speed as well as intermittent breaks in internet connectivity made it very difficult to meet sophisticated demands of users. During power outages, the power plant the library fell on malfunctioned or was completely out of order. Staff ratio to patrons was also

found out to be inadequate. These made staff experience orthopedic problems, headaches and heart diseases resulting from technostress.

6.2.6 Complex Job Demands

It was recorded from the study that library work has become very complex in the computer age, and employees are compelled to move along with the advancement in technologies. Librarians were expected to be ahead of users and as the study showed, users' expectation had become very demanding. Respondents used the library management software which is called the Sierra, this helped them in classifying and cataloguing books. They indicated that shelving of books could not be done efficiently without the computer aiding in their arriving at appropriate call numbers.

6.2.7 Job Dissatisfaction

The study uncovered that respondents were unhappy on the job because they were not tapped on the shoulder for the hard work done or given extra duty allowances. There were also concerns in relation to lack of resources to work with as aforementioned. Staff numbers was found not to be encouraging and staff promotions were often delayed. It was also realized from the study that workload piled up as a result of intermittent power outages and interruptions in terms of internet connectivity and resulted in technostress.

6.2.8 User Challenges

The study found out that library users were mostly medical students who were very sophisticated in terms of computer knowledge. As a result they are very fastidious and very impatient in their dealings with the library staff. They were almost always adamant when it came to library rules and this was very worrisome to library staff.

6.2.9 Effects of Technosrtess

The findings recorded that the professional librarians and paraprofessionals of CHSL suffered from emotional as well as physical symptoms of technostress. They were mostly frustrated and had issues relating to moodiness and annoyance, headache, orthopedic problems, problems with the sight as well as few cases of hypertension. This made it impossible for them to deliver the best of service to users sometimes, especially when blunders were committed. It was also revealed however, that their technostress levels were not high. They were not fully aware of the services rendered by a counseling unit that few of them mentioned had been set up with the help of management. It was realized that they occasionally visited the Legon Clinic in Korle-Bu whenever they fell sick. All the staff had library Science backgrounds and this made them very efficient and had effectively equipped themselves with ideal strategies which assisted them manage technostress which resulted from the technologies used in the library. They have successfully managed to keep their tecnostress levels very low as shown by the study.

6.2.10 Managing Technostress

The study revealed that the professional librarians and paraprofessionals of CHSL employed managing strategies such as positive thinking, resistance to prolonged sitting, meditation and depending on the help of God for divine intervention, isolation, sleeping or relaxation after hectic work schedules, time management, watching movies, especially comic ones and listening to music. Having examined these strategies, it was shown clearly that all the strategies used were ideal in helping decrease technostress with the exception of isolation which adversely escalates technostress when practiced for a long period of time. It was also apparent that they had all undergone some form of training in addition to the experiences gained on the job as well as their professionalism, these together with the good coping strategies helped them reduce their

technostress levels**.** Almost all the staff of CHSL were comfortable with the infusion of technologies in the library setting. Management had also established a counseling unit for both staff and students of CHS and strategies had been rolled out to help curtail psychological issues, although sensitization must be done by the unit in question in order to be able to tackle issues relating to technostress which is very crucial, since most of the staff were not aware is existence. The Legon Clinic which staff were all aware of was also close by the library and catered for issues relating to staff ailments. Although the institution has these facility in place library staff indicated that management needed to do more than that. Staff of CHSL were entitled to days off as well as annual leave once in a year for staff to distress. Staff raised concerns for restrooms and TV rooms to rest in turns during break.

6.2.11 Suggestions of steps to be taken by management to relieve employees of Technostress

The findings showed that the professional librarians and paraprofessionals of CHSL suggested that their managements must be forthcoming with all requisite resources needed to work with in the library. Mention was made of constant electricity supply as well as internet connectivity. They were also of the view that training programs and workshops must be organized by management frequently. Staff must also be encouraged to attend workshops and such rights or privileges must not be reserved for senior members or senior staff only. Self- development through the pursuance of higher degrees in library Science was also said to be a plus and management should encourage this by awarding study leave to deserving staff. Management must constantly pay heed to concerns of staff so as to spontaneously tackle some of the challenges they faced. The staff also revealed that the provision of a restroom for staff will help them de-stress as they took turns to watch movies, read the dailies or simply relaxed. A healthy working environment if provided by

management would present a congenial atmosphere for staff and would have made library accommodating to users. Similarly, management should occasionally convey staff from the library to pubs or restaurants to have some fun and back to work or back home. These steps when taken by management, they strongly believed would reduce technostress to the barest minimum. They finally suggested that sensitization must be done by the counseling unit to explain what they stood for while creating awareness of their existence in the college. Management must see to it that these psychologists purposefully educated staff on the management of technostress.

6.3 Conclusion

Technostress in the library can in no way diminish the importance of ICTs to the library profession. Although rapid technological changes give rise to challenges with regards to information provision, however, it has become very critical in recent times for librarians to be abreast with technology in order to continue to be relevant in their profession or in the library. Information is readily available to patrons courtesy ICT irrespective of their location and without paying regular visits to libraries and librarians must be well vested in order to match their sophisticated users else accept to be relegated to the background.

Current generation of librarians must be skillful in technological knowhow by availing themselves through proper training. This could only be achieved with the help of management by organizing thorough and regular workshops, seminars, training programs and for library staff. Awarding hard working staff sponsorship to pursue further education provides a highly efficient workforce while curtailing or minimizing technostress levels due to quality IT skill based empowerment programs. These programs kept library staff abreast with the latest trends in technology and for those staff who for some reason some library have not had the opportunity to go back to further their

education, this creates avenues of help to them to also upgrade their performance in terms of service delivery. This will also help prevent the resistance to changes in technology or the adoption of latest trends in technology.

Additionally, the use of modern tools and resources must be encouraged through adequate provision, power outages must be absent, internet connectivity must be constant with a congenial atmosphere created for work and for perfect user experience at all times

6.4 Recommendations

To eliminate technostress completely or keep it in check and at its barest minimum in College of Health Sciences Library, the following recommendations informed by the findings of the study, were made in the areas of provision of adequate requisite resources, availability of favourable library environment, recruitment of staff, computer training programs for staff, reinforcement of counseling unit, reinforcement of student orientation, performance based promotion, seminars and conferences for library staff, opportunities for further studies, payment of overtime allowances, provision of a restroom and technostress managing strategies.

6.4.1 Provision of Adequate Requisite Resources

There were challenges in relation to inadequate computers and others that were not in good order whic broke down frequently, challenges with regards to resources such as computers, scanners trolleys, electricity and internet access are very vital to the success of the role the CHSL plays. As such it is highly recommended for management of CHSL to make available all requisite resources such as a working regular electricity supply as well as a standby power plant to supply electricity in rare cases of power outages, high speed internet connectivity and adequate computers for the

professional librarians and paraprofessionals to be able to work with, scanners, trolleys and all other materials like toners must never run short in the library and must effortlessly be made available even when they run short without giving staff any form of stress.

6.4.2 Availability of Favourable Library Environment

The study revealed that the CHSL staff were displeased with their work environment. They made use of fans only without air conditioners and this left them with no choice than for windows and doors to be left ajar for ventilation. As such the environment was always dusty, and that was to say there existed ergonomic problems resulting from ill-fitting furniture and in adequate space to accommodate staff. It is recommended for glass windows to be replaced with louvered windows and good and durable air conditioners fixed at vantage points in addition to working fans. This would help keep all doors and windows shut to prevent dust from entering the library. Also, comfortable chairs should be provided in the library to give a relaxing feeling to both staff and users. The lighting system although not causing visibility problems could still be reinforced for a brighter environment especially at night. Cleaning taskforce must be increased and assigned various units in the library to keep the library spic and span. Dust could be a factor for the frequent computer breakdown in the library and this must be prevented to extend the lifespan of computers in the library. When all these are rectified, a favourable working environment will be created for the professional librarians and paraprofessionals to work efficiently without signs or traces of technostress.

6.4.3 Recruitment of Staff

It emerged from the study that the professional librarians and paraprofessionals were overburdened with workload especially during peak periods and also when some colleagues took their annual

leave or days off. This brought a feeling of technostress due to inadequate staff. It is, therefore, recommended for more staff to be employed in order to decrease the long hours of work schedules which resulted in unrelenting technostress. If it would be costly to bring on board more professional librarians as part-time staff since government had not given clearance for employment, fresh librarians from the Information Studies department could be engaged as well as national service persons to complement the permanent staff. This will help alleviate some of the work load among CHSL staff.

6.4.4 Computer Training Program for Staff

It emerged from the study that most of the staff especially the elderly ones had challenges with the use of the computer. Some staff found it difficult entering data into the computer and when the need arose to enter user queries in order to satisfy information needs of their patrons, they exhibit signs of lack of confidence. Computer knowledge in basic computer applications will be an added advantage to most of the paraprofessionals as well as professional librarians since one of them indicated he was 'born before computer'. They needed to be equipped with typing skills as well.

6.4.5 Reinforcement of Counselling Unit

The study revealed that the professional librarians and paraprofessionals faced countless challenges in the library that brought about feelings of technostress. It was realized that in such instances they always found themselves in a fix. The counseling unit must therefore reach out to staff through sensitization programs in other for staff to feel their presence as a help unit. In so doing staff technostress levels would be controlled using appropriate strategies which in turn will not be harmful to staff. The counseling unit when reinforced and made its relevance felt by staff will serve as a channel to communicate challenges in relation to technostress to management. It is

therefore in the interest of staff for programs to be rolled out to ascertain issues in respect of technostress among the professional librarians and paraprofessionals for appropriate measures to resolve or alleviate them.

6.4.6 Seminars and Conferences for Library Staff

It was apparent from the study that, library staff lacked adequate training with regards to the library management software techniques and skills and also lacked behind in the area of handling electronic services efficiently. As such, there is the need for more seminars and workshops on databases and online programs or courses and course materials to be organized for library staff in order to keep them abreast with the trending strides made in these areas of information provision. More collaboration with the Ghana Library Association (GLA) as well as the Consortium of Academic and Research Libraries of Ghana (CARLIGH) to assist through seminars or workshops on the use of databases, online programs and course materials as and when they emerge. Staff must also be retrained to effectively use all ICTs that were already in existence. CHSL with assistance from Balme library could also bring on board experienced resource persons should to train both professionals and paraprofessionals on the effective use of the Sierra as well as introduce them to current library trends. The information studies department after training its students, the expediency now rests on employers to continue the training process. This is the only way to assist complement the efforts made by the Department of Information Studies, University of Ghana in instilling professionalism and skills in students. The older staff who were 'Born Before Computers' so to speak, may in so doing benefit from these refresher courses and workshops as well as subsequently building an efficient and effective workforce devoid of technosteess.

6.4.7 Opportunities for Further Studies

Advancements in the knowledge of ICTs that has to do with library management software will help relieve staff of technostress. It is therefore recommended that staff of CHSL must be encouraged to enroll on to academic programs in that area or discipline. They could be awarded study leave or better still sponsored to take up such courses and upon completion bonded to put to use the knowledge acquired in the library.

6.4.8 Provision of a Restroom

The need for a rest room was evident from the findings of the study. Whenever staff experienced signs of technostress they needed to take rests in turns sometimes in order to feel refreshed and return to work, such as a well-furnished room to be created within the confines of the library with a television set in place, magazines and newspapers all made available to help relieve staff of technostress.

6.4.9 Technostress managing Strategies

As aforementioned based on the findings of the study that both professional librarians and paraprofessionals of CHSL did not have high levels of technostress and that was attributed to the fact that they practiced effective technostress coping strategies that helped them keep it in control. In spite of the fact that their coping strategies were paying off, it is recommended that the professional librarians and paraprofessionals must eat well that is by taking in balanced diets and also have enough rest, all manner of overtime done in the library must be curbed and staff must be made to take their leave in due time. It is also very essential for staff to proceed on break and not omit them due to excessive workload. When it is time to close they must leave the office on time

and ensure that everything relating to the library profession is brought to an abrupt end. This will go a long way to help staff maintain technostress levels very low or eliminated completely.

6.5 Suggestions for Future Research

The study examined the term technostress among one academic library in Ghana and as such findings are from the perspective of the library staff only. Further research into technostress in other academic libraries from the perspective of staff as well as students will be a vital research activity to determine whether technostress retards the productivity of librarians as well as inhibits research and learning in those libraries. Also comparative studies involving both private and public universities can be done to reveal awareness levels, causes and managing strategies used. This finding when done, will be very helpful to these public and private universities in Ghana.

BIBLIOGRAPHY

Abdul-Gader, A. H. & Kozar K. A. (1995). The impact of computer alienation on information technology investment decisions: An exploratory cross-national analysis. *MIS Quart*. 19.

Agbonlahor, R. O. (2006) Motivation for Use of Information Technology by University Faculty: A Developing Country Perspective. *Information Development, 22*(4), 263 – 277.

Acquaye, P.V, Dapaa, Y.G, Eshun P, & Armah, P. (2012).The Effect of Stress Management on Employees Performance at Ghana Civil Aviation Authority (GCAA). (Unpublished Project work.) University of Professional Studies, Accra.

Agbonlahor, R. O. (2006) Motivation for Use of Information Technology by University Faculty: A Developing Country Perspective. *Information Development*, 22(4), 263 – 277.

Ahmed-Refat, A.G.R., Abdullah, H. M., Sahar, A. E.A., & Rehab, A.E.H. (2008). Ergonomic aspects and health hazards on computer workstations operators at Zagazig University: An occupational risk management approach. *Zagazig journal of occupational health,* 1(1), 15-31.

Aina, L.O. (2004). *Library and Information Science Text for Africa*. Ibadan: Third World Information Services Limited.

Ajala, E. B. (2011). Work-related Stress among Librarians and Information Professionals in a Nigerian University. *Library Philosophy and Practice 2011*.

Alge, B.J. (2001). "Effects of Computer Surveillance on Perceptions of Privacy and Procedural Justice," *Journal of Applied Psychology*, 84 (6), 797-804.

Al –Qallaf C.L (2006). Librarians and technology in academic and research libraries in Kuwait: perceptions and effects. *Libri*, 56,168-179.

Arhin, R., Ndego M.& Opong, D. A. (2011). *The Effect of Stress Management on Performance of Police Personnel*. (Unpublished Dissertation).Institute of Professional Studies, Accra.

Aramide, K. A. & Bolarinwa O. M. (2010). *Availability and use of audiovisual and electronic resources by distance learning students in Nigerian universities*: *A case study of National Open University of Nigeria (NOUN), Ibadan study centre library philosophy and practice.* Retrieved May 2, 2019 from http://unilib.un/.edu/LPP/aramide.htm

Ashford, S. J., Lee, C., & Bobko, P. (1989). "Content, Causes, and Consequences of Job Insecurity: A Theory-Based Measure and Substantive Test ". *Academy of Management Journal*, 32 (4), 803-829.

Ayyagari, R., Grover, V. & Purvis, R. (2011). Technostress: Technological Antecedents and Implications. *MIS Quarterly.* Vol. 35 (4), 831-858.

Babbie, E. (2004). *The basics of social research* (3rd ed.). Wadsworth, Canada: Thomson Learning Inc.

Baglione, L. (2012). Writing a Research Paper in Political Science. Thousand Oaks: *CQ Press*.

Bales, A. (1999). Library automation and organizational changes: management of information environment.

Bandura, A. (1984). Recycling Misconceptions of Perceived Self-Efficacy. *Cognitive Therapy And Research.* 8, 231-255.

Bandura, A. (1986). Social Foundations of Thought and Action. *Prentice-Hall,* Englewood Cliffs, New Jersey.

Bao, X-M (2002). A comparative study of library survey of Internet users at Seton Hall University in 1998 and 2001.

Bature, I. (2009). Utilization of library resources by students of tertiary institutions in Kebbi state of Nigeria. *International Journal Research in Education*, 6(1/2).

Bauwens, J. (1995) quoted in Shoemaker, D., Whitty, M. & Drommi, T. (2012). *TechnoSpirit, the Future Cure for Technostress.* Retrieved February 15, 2019, from http://www.ru.org/spirituality/technospirit-the-future-cure- fortechnostress.html

Bernard, H. R. (2002). Research methods in Anthropology: Qualitative and Quantitative Methods (3rd ed.). California*: Altamira Press*.

Bichteler, J. (1987). Technostress in libraries: Causes, Effects and Solutions. *Electronic Library, 5* (5), 282-287.

Brod, C. (1984). Technostress: The Human Cost of the Computer Revolution. Reading, MA: Addison Wesley.

Brosnan, M. J. (1998). Technophobia: The Psychological Impact of Information Technology. Routledge, London.

Bryman, A. & Bell, E. (2011). BMethods. Oxford University Press: UK.

Bunge, C. (1987). Stress in the Library. *Library Journal*, *112*, 47-51.

Burke, R., D. Nelson. (1997). Mergers and acquisitions, downsizing and privatization: A North American perspective. M. Gowing, J. Kraft, J. Quick, (Eds.*) The New Organizational Reality: Downsizing, Restructuring and Revitalization.* American Psychological Association, Washington, D.C., 21

Burke, R. & Cooper, C. (2000). *Organizations in Crisis: Downsizing, Restructuring and Privatizations,* Oxford, UK: Blackwell Publishing.

Byamugisha, H.M (2010). Digitizing library resources for new modes of information use in Uganda. *Library Management*. Vol. 31, 1 /2.

Carayon, P. (1993) Effects of electronic performance monitoring on job design and worker stress: Review of the literature and con ceptual model. *Human Factors 35*(3) 38.

Cartwright, S., and Cooper, C. 1997. Managing Workplace Stress , Thousand Oaks, CA: Sage Publications.

Champion, S. (1988). Technostress: Technology's toll. *School Library Journal*, 48-51.

Chiappetta M. (2017) Senses Sci 4 (1)358-361, doi: 10.14616/sands-2017-1-358361

Compeau, D., Higgins, C. A. & Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: A longitudinal study. *MIS Quart. 23*, 145-158.

Cooper, C. L., Liukkonen, P., & Cartwright, S. (1996). Stress Prevention in the Workplace: Assessing the Costs and Benefits to Organizations, Luxembourg: *Office for Official Publications of the European Communities.*

Cooper, C. L., P. Dewe, M. P. O'Driscoll. (2001). Organizational Stress: *A Review and Critique of Theory, Research, and Applications.* Sage, Thousand Oaks, CA.

Corbett, J. M., Martin, R., Wall,T. D. & Clegg, C. W. (1989). Technological coupling as a predictor of intrinsic job satisfaction: A replication study. *Organ. Behav*. 10(1) 91-95.

Creswell, J. W. (2008). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (3rd ed.). California: SAGE Publications. Inc.

Davis, K. & Nestrom, J. M. (1985) *Human Behavior at work: Organizational Behavior*, vol.7, pp.109. New York: McGraw-Hill.

Davis-Millis, N. (1998). *Technostress and the organization: A manager's guide to survival in the information age.* Paper presented at the 67th Annual Meeting of the Music Library. Association, Boston, Massachusetts. Retrieved February 15, 2019, from

http://web.rait.edu/ninadm/www/mla.htm

Dumdell, A., & Haag, Z. (2002). Computer self-efficacy, computer anxiety, attitudes towards the Internet and reported experience with the Internet, by gender, in an East European sample. *Computers in Human Behaviour*, 18, 521-535.

Edwards, J. R., & Cooper, C. L. (1988). The Impacts of Positive Psychological States on Physical Health: A Review and Theoretical Framework. *Social Science and Medicine.* (27) 1447-1459.

Eguavoen, O.E.L. (2011). Attitudes of library staff to the use of ICT: The case of Kenneth Dike Library, University Of Ibadan, Nigeria. *Ozean Journal of Social Sciences.* 4(1),1.

Ellis, D. & Oldman, H. (2005).The English literature researcher in the age of internet. *Journal of Information Science, 31*(1), 13-21.

Fairchild, M. (2015). How do Christians deal with stress? : How do Christians deal with stress? Retrieved on March 09, 2015, from http://christianity.about.com/od/faqhelpdesk/f/

Farler, L. & Broadly-Preston, J. (2012).*Workplace stress in libraries: a case study. Aslib Proceedings. 64* (3), 225-240.

Fayose, O, (2000). *Library Resources and their roles in education in education, Ibadan: The centre for External studies.* University of Ibadan.

Fennel, G. & Mitchell, E. (2013). *Academic Librarian Job Description*. Retrieved October 4th, 2018, from http://www.prospects.ac.uk/academic_librarian_job_description.htm.

Fourie, I. (2004). Librarians and the claiming of new roles: how can we try to make a difference? *Aslib Proceedings, 56* (1), 62 – 74.

Fox, M. L., Dwyer, D. J., and Ganster, D. C. (1993). Effects of Stressful Job Demands and Control on Physiological and Attitudinal Outcomes in a Hospital Setting. *Academy of Management Journal.* Vol. 36, No. 2, pp. 289-318.

Frankel, J. R. &. Wallen, N. E. (2000). How to Design and Evaluate Research in Educating. 4th ed- Boston: Mcgraw-Hill High Education.

Fraenkel, J. R., & Wallen, N. E. (2003). *How to Design and Evaluate Research in Education* (5th ed- New York: McGraw-Hill.

Galinsky, A. D., Gruenfeld, D. H., & Magee, J. C. (2003). From power to action. *Journal of Personality and Social Psychology*.*85* (1) 453–466.

Gaudron, J. P. & Vignoli, E. (2002). Assessing computer anxiety with the interaction model of anxiety: Development and validation of the computer anxiety trait subscale. *Comput. Human Behav.* 18, 315-325.

Greenberg, J. S. (1990). *Comprehensive stress management,* (3rd ed.). Dubuque, IA: Wm. C. Brown Publishers.

Haber, S (2011). *The changing role of libraries in the digital age*. Retrieved January 20th, 2019, from www.huffingtonpost.com/steve-haber/.

Hackworth, J. (2007). The neoliberal city: Governance, ideology, and development in American urbanism. New York: Cornell University Press. 248 pp.

Harper, S. (2000). Managing techno stress in UK Libraries: A realistic guide. Retrieved October 4th, 2018, from http://www.ariadne.ac.uk/issue25/technostress/intro.html.

Hick, M. (2015).*What is Stress Overload?* Retrieved on May 4, 2019, from http://1st4stress.com/Stress/What-Is-Stress-Overload.html

Ighodaro, C. (2010). Co-Integration and Causality Relationship between Energy Consumption and Economic Growth: Further Empirical Evidence for Nigeria. *Journal of Business Economics and Management*, 11(1), 97-111.

Irny, S. I. & Rose, A. A. (2005). Designing a Strategic Information Study Methodology for Malaysian Institute of Higher Learning.

Islam, M., & Habiba, U. (2015). Use of Social Media in Marketing of Library and Information Services in Bangladesh. *DESIDOC Journal of Library & Information Technology*, *35*(4), 299–303.

Isman, Aytekin (2004) " Attitudes of students towards Internet" .*Turkish Online Journal of distance Education (TOJDE)*, Vol.5, No.4.

Ivancevich, J. M., Napier,H. A. & Wetherbe, J. C. (1985). An empirical study of occupational stress, attitudes, and health among information systems personnel. *Inform. Management 9*, 77-85.

Janes, J. (2002). Digital reference: reference librarians' experiences and attitudes. *Journal of the American Society for Information Science and Technology*, *53* (7) 549-66.

Jex, S. (1998). Stress and Job Performance: *Theory, Research, and Implications for Managerial Practice* , Thousand Oaks, CA: Sage Publications.

Jones, W. J. (1989). Personality and Epistemology: Cognitive Social Learning Theory as A Philosophy of Science. *Zygon*. 24 (1), 23–38.

Kahn, R., Wolfe, D., Quinn, R., & Snoek, J. (1964). Organi zational Stress: *Studies in Role Conflict and Ambiguity*, New York: John Wiley.

Kahn, R., Wolfe, D., Quinn, R. P. & Snoek, J. D. (1981). Organizational Stress: Studies in Role Conflict and Ambiguity. Krieeer, Malabar, FL.

Kakabadse, N. K. & Kouzmin, A.K. (2000). Technostress: Over identification with information technology and its impact on employees and Managerial Effectiveness in creating futures. *Leading change through information systems*, N. K. Kakabase and A.K. Kakabase (Eds.), (pp. 259-296). Hampshire, UK: Ashgate.

Kavulya, J. M. (2004). Marketing of Library Services: A Case Study of Selected University Libraries in Kenya. *Library Management*, 25(3), 118-126.

Kaya, C. (1994). *Job Satisfaction and career commitment of librarians in the federal university libraries in Nigeria.* 61st IFLA General Conference.

Korunka, C., Weiss, A. & Karetta, B. 1993. Effects of new technolo gies with special regard for the implementation process per se. J. *Organ. Behav*. (14) 331-348.

Korunka, C., & Vitouch, O. (1999). "Effects of the Implementation of Information Technology on Employees' Strain and Job Satisfaction: A Context-Dependent Approach," *Work & Stress* 34(4), 341-363

Kouzmin, A., & Korac-Kakabadse, N. (2000). ""Mapping Institu tional Impact of 'Lean' Communication in 'Lean' Agencies: IT Literacy and Leadership Failure," *Administration and Society* 32(1), 29.

Kreiner, G. E.(2006). "Consequences of Work-Home Segmentation or Integration: A Person-Environment Fit Perspective," *Journal of Organizational Behavior (27),* 485-507.

Kumar, R. (2005). *Research Methodology: A step-by-step guide for beginners* (2nd ed.). Sage Publications.

Kumekpor, T. K. (2002). *Research methods and techniques of social research*. SonLife Press & Services.

Kupersmith, J. (2006). Library technostress survey result. Retrieved October 7, 2018 from http://www.jkup.net/tstrcss-survey-2003.html

Labaree, R. (2013). *USC Libraries*. Retrieved February 14, 2019, from http://libguides.usc.edu/writingguide/qualitative.

Lamp, D. (2013). The uses of Analysis: Rhetorical Analysis, Article Analysis, and the Literature Review". *Academic writing Tutor*. Retrieved on September 25th, 2018 from htt://en.m.wikepedia.org/wiki/Literature_review.

Levine, J. A. (2015). 1998-2015 Mayo Foundation for Medical Education and Research.

Retrieved on March 11, 2015, from http://www.mayoclinic.org/healthy-living/adulthealth/ expert-answers/sitting/

Lewis, J. L. & Sheppard, S. R. (2006). Culture and communication: Can landscape visualization improve forest management consultation with indigenous communities?. *Landscape and Urban Planning*, 77(3), 291-313.

Love, J. H., Simpson, D. R. E. &Walker, J. (1989). The impact of new technology on labor flexibility and working practices: A management perspective. *J. General Management 14*(3) 13-25.

Luthan, F. (1998). *Organizational Behaviour.* Mayo Foundation for Medical Education

Research (2019) McGraw-Hill: Irwin, Boston. Retrieved on April 22, 2019, from https://www.mayo.edu/research

Malhotra, N., Kim, S. and Agarwal, J. (2004). Internet Users' Information Privacy Concerns (IUIPC). *Information Systems Research* (15:4), pp. 336-355.

Melchionda, M. G. (2007). Librarians in the age of the Internet: Their attitudes and roles. *New Library World, 108* (3/4), 123-140.

Miles, M. B. & Huberman, A. M. (1994). *Quantitative data, Analysis, and Design*. Sage Publications. Retrieved on October 1, 2018, from www.sagepub.com/upm-data.

Minter, E. (2003). *University of Wisconsin-Extension, Program Development & Evaluation.* Retrieved February 8, 2019, from https://www.google.com.gh/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&cad=rja&uact=8&ved=0CFUQFjAHahUKEwi4myV1MTIAhUCTBQKHYFwDtA&url=http%3A%2F%2Fwww.uwex.edu%2Fces%2Ftobaccoeval%2Fpdf%2FProConInt.pdf&usg=AFQjCNEe4DgwDKW_rzRr2DpMlUGjU4kz3Q

Monat, A. & Lazarus, R.S. (1991). Stress and coping: Some current issues and controversies. In Alan Monat & Richard S. Lazarus (Eds.) *Stress and Coping, 3rd ed*. (pp. 1-15), New York: Columbia.

Moore, J. (2000). "One Road to Turnover: An Examination of Work Exhaustion in Technology Professionals," *MIS Quarterly* (24 (1), 141-168.

Nandhakumarr, J. & Jones, M. (2001) *Accounting Organizations and Society* *26*(3)193-214 · Retrieved January 20, 2019 from http://www.researchgate,net/journal/0361-3682_accounting_organizations_and_society

National Sleep Foundation (2011), Amen (2008)

http://www.humankinetics.com/AcuCustom/Sitename/DAM/097/65se1_Main.png

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996) Development and Validation of Work-Family Conflict and Family-Work Conflict Scales. *Journal of Applied Psychology* (81), 400-409.

Nwana, O. C. (2008). *Introduction to Educational Research for Student-Teachers*. Nigeria: Heinemann Educational Books.

Oyedum, G.U. (2011). Physical facilities as determinants of undergraduate students' use of Federal University Libraries in Nigeria. *Library Philosophy and Practice. 2011, p16.*

Parker, R., & Jones, T. (2008). *Information and Communicatio Technology*. Research Curriculum Unit for Workforce Development Vocational and Technical Education. Missisippi, USA.

Philips, A. (2014). What do we mean by library leadership: Leadership in LIS Education. *Journal of Education for Library and Information Science 55*(4), 336-344

Popoola, S.O. & Olalude, F.O (2013) Work Values, Achievement Motivation and Technostress as Determinants of Job Burnout among Library Personnel in Automated Federal University Libraries in Nigeria. *Library Philosophy and Practice (ejournal).Paper 919.* Retrieved 7th September, 2018 from http://digitalcommons.unl.edu/libphilprac/919.

Powell, R. R. & Connaway, L. S. (2004) Basic Research Methods for Librarians. 4th ed. Libraries Unlimited: Westport.

Ragu-Nathan, T. S., Tarafdar, M., & Ragu-Nathan, B. S. (2008). The consequences of technostress for end users in organizations: conceptual development and empirical validation. *Information Systems Research*, *19*(4), 417-433.

Ramzan, M. (2004). *Does level of knowledge impact librarians' attitude towards Information Technology (IT) applications?* 2nd International CALIBER- 2004, New Delhi, 11-13 February.

Rapoport (2012). NYU Langone Medical Center. Retrieved on March 2, 2015, from http://www.medicardlimited.com/11-surprisinghealth-benefits-sleep

Rosen, L. D., Sears, D. C. & Weil, M. M. (1987). Treating technophobia: A longitudinal evaluation of the computerphobia reduction program. *Comput. Human Behav. 9*: 27-50.

Roskies, E. (1991). Stress management: a new approach to treatment. In Monat, A. & Lazarus, R.S. (Eds.), *Stress and Coping*, 3rd Ed., (pp.411-431) New York: Columbia University Press.

Ross, R. & Altmaier E. (1994). Intervention in occupational stress. *Journal of Traumatic Stress*, (10), 154-155.

Sahin, Y. L., & Coklar, A. N. (2009). Social networking users' views on technology and the determination of technostress levels. *Procedia Social and Behavioral Sciences* (1), 1437–1442.

Salanova, M., Llorens, S. & Cifre, E. (2013). The dark side of Technologies: Technostress among users of information and communication technologies. *International Journal of Psychology*, (48) 3

Sethi, V., King, R., & Quick, J. (2004). What causes stress in information system professionals. *Comm. ACM 47*(3) 99-102.

Shaughnessy, T. (1998). Job Stress / Plateauing / Professional Isolation / Balance.

Simpson, J. A., & Weiner, E. S. C. (1989). *Oxford English Dictionary*. 2nd Ed. Clarendon Press: Oxford.

Sinha, C. (2012). Factors affecting quality of work life: Empirical evidence from Indian organizations. *Australian Journal of Business and Management Research*, 1(11), 3-40.

Sivakumaren, K.S., Geetha, V. & Jeya Prakash, B. (2011). ICT facilities in university libraries: a study. *Library Philosophy and Practice*. Retrieved Oct. 28, 2018 from http://un//lib.un/.edu/ipp/.

Shu, Q., Tu, Q. & Wang, K. (2011). The Impact of Computer Self-Efficacy and Technology Dependance on Computer-Related Technostress: A Social Cognitive Theory Perspective. *International Journal of Human-Computer Interaction.* Vol. 27, No. 10, pp. 923-939.

Straub, D., & Karahanna, E. (1 998). "Knowledge Worker Commu nications and Recipient Availability: Toward a Task Closure Explanation of Media Choice," *Organization Science.* 9/2,(pp. 160-175).

Sutherland, V., & Cooper, C. L. (1990). Understanding Stress , London: Chapman & Hall.

Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The Impact of Techno stress on Role Stress and Productivity. *Journal of Management Information Systems.* 24, (1), 301-328.

Techterms. (2010). *Definition of ICT.* http://www.techterms.com/definition/ict http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/tdlearn.html, Last Modified: 06/18/2014 Retrieved September 5, 2018.

Tam, L.W.H. & Robertson, A. C. (2002). Managing change: Libraries and information services in the digital age. *Library Management, 23* (8/9), 369 - 377. http://hdl.handle.net/10722/48727.

Tennant, C. (2001). "Work-Related Stress and Depressive Dis orders," *Journal of Psychosomatic Research* (51), 677-704.

Thomas, V. K., Satpathi, C. & Satpathi, J. N. (2010). Emerging challenges in academic librarianship and role of library associations in professional updating. *Library Management, 31* (8/9), 594 – 609.

Thosar, S. (2011).*Walking can reverse damage done by sitting.* Retrieved on March 09, 2015, from blog.anklefootmd.com/2014/09/09/walkingcanreverse-damage-done.

Tiemo A. P. & Edewor, N (2011). ICT Readiness of Higher Institutions Libraries in Nigeria. *International Journal of digital library systems, 2* (3) 29 – 37, July – September.

Tu, Q., Wang, K., & Shu, Q. (2005). Computer-related technostress in China. *Communications of the ACM* (48:4) 2005, pp 77-81.

Turner, J. A., & Karasek, R., (1984). Software ergonomics: Effects of computer application design parameters on operator task performance and health. *Ergonomics* (27) 663-690.

Ugah, A.D. (2007*). Information sources variables and the use of library services in the university libraries in the south eastern zone of Nigeria*. Unpublished PhD Dissertation, University of Uyo, Akwa ibom.

Vasileiou, M., & Rowley, J. (2011). *Marketing* and Promotion of E-books in Academic Libraries. *Journal of Documentation*, 67(4), 624–643. http://doi.org/10.1108/00220411111145025.

Weil, M. M., & Rosen, L. D. (1994). The psychological impact of tech nology from a global perspective: A study of technological sophistication and technophobia in university students from twenty-three countries. *Comput. Human Behav.* (11), 95-133.

Weil, M. & Rosen, L. (1997) *TechnoStress: Coping With Technology@Work@Home@Play.* John Wiley & Sons, New York.

WHO. (2005). Facing the Challenges, Building Solutions in WHO *European Ministerial Conference on Mental Health* , Helsinki, Finland, January 12-15.

Woods, M. (2011). Interviewing for research and analysing qualitative data : An overview. *School of Humanities and Social Sciences, Massey University*, 1–8. Retrieved from http://owll.massey.ac.nz/pdf/interviewing-for-research-andanalysing-qualitative-data.pdf

Zulu, S.F.C (2011). Communication technology policy framework for Africa. In: Adomi E.E (ed) *Framworks for ICT policy: government, social and legal issues. Hershey P.A: IGI Glob.*

APPENDIX A

UNIVERSITY OF GHANA
DEPARTMENT OF INFORMATION STUDIES
SCHOOL OF INFORMATION AND COMMUNICATION STUDIES

March 26, 2019

Ref. No.:.....

The Librarian
College of Health Sciences Library
Korle-Bu

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you **Ms. Hannah Okine**, an MPhil student of the Department of Information Studies. She is researching on the topic: **"Technostress among the staff of College of Health Sciences Library, University of Ghana". Hannah** is expected to submit her Thesis as part of the requirement for the MPhil programme.

We would appreciate any support you can give her.

Yours faithfully,

Dr. Emmanuel Adjei
(Head of Department)

COLLEGE OF EDUCATION
P. O. Box LG 60, Legon, Accra, Ghana.
• Tel: +233 (0) 303 937 957 • Email: dislegon@ug.edu.gh • Website: www.coe.ug.edu.gh