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RESEARCH ARTICLE

TECHNO-STRESS AMONG LIS PROFESSIONALS: STUDY OF THE ACADEMIC AND RESEARCH INSTITUTES OF KARACHI, PAKISTAN

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ABSTRACT

Purpose:-This study focused on the Effects of techno stress on LIS professionals in terms of Physical, Psychological, Emotional and Behavioral aspect, how these librarians cope with their stress and recommend the ways to manage with techno stress. **Design/Methodology**: The survey method was used. . The entire population (N=70) was selected as respondents. A structured questionnaire was used to collect data. Cronbach Alpha used to check the reliability of the questionnaire. All four-hypothesis tested by linear regression analysis. Collected data were analyzed by Social Science Software SPSSv23.0. **Findings**:-This study revealed that librarians affected physically, psychologically, emotionally and behaviorally by the stress coming from technology. Further results demonstrate that most librarians felt backache, eyestrain, headache, professional jealousy, demotivating, depression, negative attitude towards computer, isolation, irritability anger. Based on linear regression analysis the entire four hypotheses are supported. On the other hand, the result revealed that librarians are not well aware to cope with techno stress. Improved ICT training/workshops, give technical support, and stress management interventions were recommended as an important process for reducing its effects and to avoid possible stress factor completely as much as possible. **Originality/value:** Credited to the findings from this study, majority of librarians and libraryassistants experience technostress and certain degrees of negative influence on theirHealth and productivity.

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INTRODUCTION

Today, ICT's such as the internet, the advanced wireless technologies and mobile communications networks are becoming increasingly essential in many aspects business and everyday life. People can have vocal and pictorial connection with their family and friends; indeed, this is just one aspect of these technologies, with a quick glance at our environment we found out that we are surround by entirety of technologies that are changing so fast. This phenomenon has negative results in the organization named Techno stress that reduces employee's turnover arduously. The techno stress problem is more evident in information technology (IT) professionals, who simultaneously create new technology and are affected by it. Today, the IT professionals must continually learn and apply new technology into their projects as quickly as possible. Due to shortage of time they are forced to update their knowledge and skills. They are subjected to workload increases due to the complexity of new technology systems. So they faced techno-stress.

Techno stress is also labeled by researchers with various terms like; technophobia, cyber-phobia, computer-phobia, computer anxiety, computer stress, negative computer attitudes, and other similar terms. Technology was introduced to save the time and provide better result than manual system. "technological revolution in any organization has not only improved efficiently but also helps reduce the predicament of tediousness in the workplace. Moreover, the technological trends and challenges have also been a leading force in improving and enhancing library services." (Lapines,2015) The incessant expansion of information technology and its application to library, information environment and changing of information needs of library user. The uses of ICT's are creating stress in organization, such stress is experienced by individuals who are unable to manage with the challenges of organizational ICT's usage. Craig Brood (1984), "a leader in the field of techno stress research, states techno stress as"... a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner". Work place stress has a harmful effect on the health in terms of physical, psychological, emotional & behavioral aspect.

Employees experience techno stress when they are unable to adapt or cope with information technologies in a free healthy manner. The most symptoms of technostress by the library staff like (1) eyestrain; (2) back pain; (3) headaches; (4) professional jealously; (5) job security; (6) demotivation; (7) nervousness; (8) isolation (9) frustration; (10) depression. Through ICT's offer indefinite benefits, the fact that the ICTs also cause stress which cannot be ignored.

Objective of the Study: The study designed to determine the level of technology related stress 'techno stress' among librarians who are Master degree holder in Library and Information Science (MLIS)working at different institutes, school & universities of Karachi. Specifically, it goals to answer the following:

The effects of techno stress on LIS professional in term of physical, psychological, behavioral and emotional aspect.

Hypothesis:

H_1There is a significant relationship between effects of techno stress and LIS professional librarian's Physical health.

H_2There is a significant relationship between effects of techno stress and LIS professional librarian's Psychological health.

H_3There is a significant relationship between effects of techno stress and LIS professional librarian's Behavior.

H_4There is a significant relationship between effect of techno stress and LIS professional librarian's Emotions.

Usefulness:

This research effort has been carried out to attain the following benefits;

- To decrease the level of techno-stress of LIS professionals.
- To enhance the LIS professionals' level of awareness, knowledge, skills about the stress coming from ICT's usage.
- To suggest recommendations to overcome the resistance (if any) and envisioning better ways regarding the techno-stress among LIS professionals and their respective libraries in order to cope with techno-stress in terms of physical, emotional, behavioral and psychological aspects.

Literature Review: Lapines, Marilyn L. (2015**)** examined the level of technostress of librarians in terms of physical, emotional, behavioral and psychological. She also revealed that how did librarians cope with technostress. The study employed descriptive survey method with the total 29 professional librarians. The finding from study demonstrated due to too much load of work affecting their health like eyestrain, backaches, irritability, and frustration and isolated otherwise, seldom experienced anger or paranoia in her study.On the other hand, librarians slightly affected psychological by stress coming from the technology. While to cope with technostressfew librarians perform exercise, frequent breaks & job rotation. Marilyn suggests knowledge managers should organize technology-based training for librarians to make them comfortable with new technologies.

Ranjna (2015) focused on technostress among library professionals at the workplace in ICT era. He studies the technostress and its creators. He determined different types and causes of stress in library. In detailed study of Ranjna found two sides of technostressi.e. on the job stress and off the job stress. He determined the ways of managing withtechnostress. At last he concluded that if individual understand technostress and ways to control, it might decrease the potential of physical and psychological harms. Harper, Stephen (2000) analyzed in detail a familiar disease by technological stress. Harper articulated solution for technostress and how it can be manage. His study opined that heavy use of computer technology may result eyestrain, headache, backache, as well as RSI and somewhat heart disease. On the other hand psychological factors include information overload, underwork & demotivation, job insecurity, uncertainty and frustration. Harper also gives suggestion how to manage technostress. Clute (1996) studied Techno-stress: A content Analysis he focused on reasons relatedtechnostress and its symptoms. The findings of research result that professionals experienced negative attitude toward computer, anger, anxiety, burnout, depression, frustration, fear and isolation due to ICT usage. He also found way to reduce technostress i.e. training, communication skills among staff, user friendly interfaces and better technical support.

Tarafdar, et. al. (2007) analyzes the relationships among technostress, role stress and productivity and also found how the factors that create technostress can increase role stress by increasing role conflict and role overload hence indirectly affect productivity. Data collected from two public-sector organization with 233 populations. A result demonstrates that productivity and technostress inversely related and there is a relationship between technostress and role stress. At last he also describes implication for managers. A study conducted by Ahmed, Torfi (2013) in which he observed technostress, its components, causes and symptoms of stress. He also examined coping strategies for technostress. Thus, this is an analytical descriptive survey of 80 employees of control room section of ShahidTondguyan Petrochemical Co. he used simple regression to analyses the hypothesis. His research reveals the employees work in a centralized environment have more technostress. Also existence of innovation and expectation of them increases Technostress. Job stress is one of the significant obstacles of employees' mental health in organization. However, technological jobs cause stress which can be control to take managing strategies.

Design/Methodology: This study explores the effects of Techno stress on LIS professionals in terms of their physical health, psychological, behavioral and emotional stress. This study used quesionnier-based survey method.

Population Sampling: The population of this study is contained on MLIS degree holders. The total population size of the study was of 70 numbers of librarians. Of 70, 20 were from different selected institutes, 6 librarians were from different selected schools and other remaining 44 librarians were from different selected universities of Karachi.

Table 1. List of respondents from both education systems

S.no.	Education System	Respondents
1.	Public sector universities	24
2.	Private sector universities	30
Total		54

Table 2. List of respondents from each university

S.no.	Public Sector University	Respondents
1	DOW medical university	4
2	FederalUrdu university Karachi	3
3	NED university of engineering and technology	8
4	University of Karachi	7
5	Jinnah Sindh Medical University	2
Total		**24**
#	**Private Sector University**	**Respondents**
1	Aga Khan university	6
2	Bahria University	4
3	Benazir Bhutto Shaheed University	1
4	Hamdard University	2
5	Habib University	5
6	Iqra University	5
7	Sir Syed University of Engineering and technology	2
8	Ziauddin University	5
Total		**30**

Sampling: The sample consists of 54respondents. The respondents were selected from 18 universities of both education systems. The university is Higher Education Commission (HEC) recognized universities. These universities belong to public and private sector; 24 respondents were from public sector and 30 respondents were from private sector. The respondents were selected from 13 universities i.e. five public and eight private universities. The distribution according to each sector is equal. In Karachi, public sector universities are only five which were selected for study i.e. DOW medical university, Federal Urdu university Karachi, University of Karachi, NED university of engineering and technology and Jinnah Sindh Medical University. The private sector universities are Aga Khan University, Bahria University, Benazir Bhutto Shaheed University, Hamdard University, Habib University, Iqra University, Sir Syed University of Engineering and technology and Ziauddin University. Out of total 54 respondents, only 43 respondents were ascertained as suitable after discarding 10 questionnaires as incomplete data for further statistical analysis.The respondents were selected from10 institutes that are Aligarh Institute of Technology, State Bank of Pakistan, Area Research Center, AERC, Commecs Institute of business and science, HEJ, ICMAP, IBA, SZABIST and Usman Institute of Technology. Total respondents from ten institutes were 20; all were ascertained as suitable for further statistical analysis.

The respondents were selected from 6 schools i.e.Beconhouse School, CAA model school, City School, Fatimiyaboy's school and Mama Parsigirl's secondary school. Only these 6 schools were selected because only in these schools ICT's usage other than all schools. Total respondents from seven schools were 6; all were ascertained as suitable for further statistical analysis.

Questionnaire Construction: Questionnaire was comprised of two parts.In the first part of questionnaire, the demographic questions were asked from respondents for analyzing the collected data. The demographic questions were name of respondents, institution, library name, job experience, educational qualification, area of work, gender, designation, working hours, time spend on using technology.The second part of questionnaire is the principal part having 5 questions of techno creators these questions were asked with yes/no options and further second part is divided into four sections i.e. a) physical stress b) emotional stress c) psychological stress d) behavioral stress. Questions were asked with scale (always; often; sometimes; seldom; never).

Data Collection: This study was focused on LIS professionals. The respondents were selected from public and private Sectors universities, schools or other organizations the entire population (N=70); and data was collected by researcher herself. For fair response, researcher explain the term "techno-stress', techno-creators (techno-complexity, techno-insecurity, techno-overload, techno-uncertainty) to the respondents so that they could easily understand the nature of questions that were asked in the questionnaire.

Data Analysis: Data were analyzed by using SPSS statistics software version 23.0. All the questions were analyzed by SPSS software to investigate the effects of techno-stress among LIS professionals of Karachi, Pakistan. Frequency, percentage, mean score as well as standard deviation were calculated. To check the reliability of questionnaire Cronbach Alpha also found by using SPSS. Regression analysis was performed to test the four hypotheses.

RESULTS

To explore the effects of techno-stress among professional librarians in different institutions of Karachi, all data were analyzed by using SPSS statistics 23.0 software. Table 5 shows the demographic data of respondents, the gender distribution are 28 (40.0) male and 42 female (60.0). The job experience out of 70 respondents; Less than 5 years are 13 (18.6); Up to 5 years are 7 (10.0); between 6-10 years are 15 (21.4); between 11-15 are 17 (24.3); between 16-20 are 9 (12.9); above 20 years are 9 (12.9), out of 70 respondents a majority of respondent have between 11-15 years job experience. The qualification of the total respondent was MLIS i.e. (100.0). The designation distribution of respondents are, out of 70 respondents 17 were Chief librarian with (24.3); 5 were Deputy Librarian with (7.1); 35 were Assistant librarian with (50.0); 8 were Library officer with (11.4); and remaining 5 were Library incharge with (7.1).

Table 6 shows the Techno creators, respondents were asked about five techno creators. As shown in table 2; A big majority of the 46 respondents are said 'No' with the percent of (61.4) and remaining 27 are said "Yes" with the percent of (38.6) with mean score 1.6143; which indicates there is no techno-overload. 43 respondents are said "Yes" with the percent (61.4) and remaining 27 said "No" with the percent (38.6) with mean score 1.3857; which indicates there is techno-invasion. While Techno-complexity result shows 40 respondents are said "Yes" with the percent of (57.1) and remaining 30 are said "No" with the percent of (42.9) with mean score 1.4286; which indicates there is techno-complexity. For techno-insecurity 36respondents said "Yes" with the percent of (51.4) and remaining 34 are said "No" with the percent of (48.6) with mean score 1.4857; which indicates there is techno-insecurity. In the last 44 respondents said "Yes" with the percent of (62.9) and remaining 26 said "No" with the percent of (37.1) with mean score 1.0857; which indicates majority are feel techno-uncertainty. In table 7 the questions were asked to measure PS on respondents. As shown in table 3 majority of respondents feel Eye strain with mean score 2.9714; Backache with mean score 3.1000; Headache with mean score 3.4000; Neck pain with mean score 4.3714. After that, less majority feel Muscle tension with mean score 4.1571, Joint pain with mean score 4.3857, while remaining i.e. Tunnel vision, Blood pressure, Dizziness and Rapid heartbeatare not highly felt by respondents. In table 8 the questions were asked to measure PSS on respondents.

Table 4. List of respondents from each Selected Schools

S.no.	Schools	Respondents
1.	Beconhouse school system	1
2.	CAA model school	1
3.	City School	2
4.	Fatimiya boys school	1
5.	Mama parsigirls secondary school	1
Total		6

Table 5. Respondents Demographics Details

Demographic	Parameter	Frequency (No. of responses)	Percentage
Gender	Male	28	40.0
	Female	42	60.0
Job Experience	Less than 5 years	13	18.6
	Up to 5 years	7	10.0
	Between 6-10 years	15	21.4
	Between 11-15 years	17	24.3
	Between 16-20 years	9	12.9
	Above 20 years	9	12.9
Qualification	MLIS	70	100.0
Designation	Chief librarian	17	24.3
	Deputy librarian	5	7.1
	Assistant librarian	35	50.0
	Library officer	8	11.4
	Library incharge	5	7.1

Table 6. Techno-stress creators

#	Techno-stress Creators	Y	N	Mean	St. Dev.
1.	Techno-overload	27 (38.6)	46 (61.4)	1.6143	0.49028
2.	Techno-invasion	43 (61.4)	27 (38.6)	1.3857	0.49028
3.	Techno-complexity	40 (57.1)	30 (42.9)	1.4286	0.49844
4.	Techno-insecurity	36 (51.4)	34 (48.6)	1.4857	0.50340
5.	Techno-uncertainty	44 (62.9)	26 (37.1)	1.0857	0.48668

Note: Y= Yes; N= No; St. Dev. = Standard Deviation.

Table7. Physical Stress

#	Factors of PS	AL	OF	SO	SE	NE	Mean	St. Dev.
1.	Eye Strain	5 (7.1)	22 (31.4)	22 (31.4)	12 (17.1)	9 (12.9)	2.9714	1.14172
2.	Backache	4 (5.7)	20 (28.6)	21 (30.0)	15 (21.4)	10 (14.3)	3.1000	1.14398
3.	Headache	1 (1.4)	15 (21.4)	22 (31.4)	19 (27.1)	13 (18.6)	3.4000	1.06866
4.	Tunnel Vision	0.0 (0.0)	4 (5.7)	7 (10.0)	18 (25.7)	41 (58.6)	4.3714	1.06866
5.	Neck Pain	0.0 (0.0)	6 (8.6)	17 (24.3)	25 (35.7)	22 (31.4)	4.3714	0.95021
6.	Joint Pain	0.0 (0.0)	3 (4.3)	7 (10.0)	20 (28.6)	40 (57.1)	4.3857	0.83913
7.	Muscle Tension	0.0 (0.0)	3 (4.3)	9 (12.9)	32 (45.7)	26 (37.1)	4.1571	0.81000
8.	Blood Pressure	0.00 (0.0)	0.00 (0.0)	6 (8.6)	9 (12.9)	55 (78.6)	4.7000	0.62206
9.	Dizziness	0.0 (0.0)	1 (1.4)	4 (5.7)	20 (28.6)	45 (64.3)	4.5571	0.67321
10.	Rapid Heart beat	0.0 (0.0)	0.00 (0.00)	2 (2.9)	10 (14.3)	58 (82.9)	4.8000	0.46935

Note: PS= Physical Stress; AL= Always; OF= Often; SO= Sometimes; SE= Seldom; NE= Never; St. Dev. Standard Deviation.

Table 8. Psychological Stress

#	Factors of PSS	AL	OF	SO	SE	NE	Mean	St. Dev.
1.	Face difficulty to find, analyzes, evaluate information& apply it in right context.	1 (1.4)	2 (2.9)	22 (31.4)	25 (35.7)	20 (28.6)	3.8714	0.91559
2.	fear about job security that computer may replace human roles	2 (2.9)	10 (14.3)	12 (17.1)	23 (32.9)	23 (32.9)	3.7857	1.14072
3.	Professional jealousy	0.0 (0.0)	10 (14.3)	11 (15.7)	29 (41.4)	20 (28.6)	3.8429	1.00196
4.	Uncertainty about job role caused by an increased time working with new technology	0.0 (0.0)	8 (11.4)	16 (22.9)	20 (28.6)	26 (37.1)	3.9143	1.03199
5.	De-motivation due to prolong period of any technological activity	0.0 (0.0)	5 (7.1)	18 (25.7)	29 (41.4)	18 (25.7)	3.8571	0.88932

Note: PSS= Psychological Stress; AL= Always; OF= Often; SO= Sometimes; SE= Seldom; NE= Never; St. Dev. Standard Deviation.

As shown in table 4 majority of respondents feel face difficult to find, analyzes, evaluate information & apply it in right context with mean score 3.8714, fear about job security with mean score 3.7857, Same as respondents also felt professional jealousy with mean score 3.8429 and demotivated with mean score of 3.8571.

While uncertainty about job role felt less than all other factors with mean score of 3.9143. In Table 9 questions were asked to explore the BS among respondents. Majority of respondents felt nervousness using computer with mean score4.6143, negative attitude towards computer with mean score 4.5000and irritability anger using computer with mean score 4.1857.

Table 9. Behavioral Stress

#	Factors of BS	AL	OF	SO	SE	NE	Mean	St. Dev.
1.	Insomnia	0.0 (0.0)	1 (1.4)	7 (10.0)	9 (12.9)	53 (75.7)	4.6286	0.72575
2.	Negative attitude towards computer	0.0 (0.0)	8 (11.2)	15 (21.0)	18 (25.7)	29 (40.6)	4.5000	0.73721
3.	Irritability anger	0.0 (0.0)	9 (12.9)	24 (34.3)	21 (30.0)	16 (22.9)	4.1857	0.76694
4.	comfortable with computer	42 (60.0)	26 (37.1)	2 (2.9)	0 (0.0)	0.0 (0.0)	1.4286	1.4286
5.	Uncooperativeness of unwillingness	0.0 (0.0)	0.0 (0.0)	8 (11.4)	33 (47.1)	29 (41.4)	4.3000	0.66703
6.	Nervousness in using computer	0.0 (0.0)	11 (15.4)	16 (22.9)	21 (29.4)	22 (30.8)	4.6143	0.62073

Note: BS= Behavioral Stress; AL= Always; OF= Often; SO= Sometimes; SE= Seldom; NE= Never; St. Dev. Standard Deviation.

Table 10. Emotional Stress

#	Factors of ES	AL	OF	SO	SE	NE	Mean	St. Dev.
1.	Loss of Temper	1 (1.4)	1 (1.4)	3 (4.3)	22 (31.4)	43 (61.4)	4.5000	.77553
2.	High state of anxiety	0.0 (0.0)	0.0 (0.0)	3 (4.3)	19 (27.1)	48 (68.6)	4.6429	.56558
3.	underwork and routine jobs lead to frustration	0.0 (0.0)	0.0 (0.0)	19 (27.1)	31 (44.3)	20 (28.6)	4.0143	.75167
4.	Paranoia (that leads to avoidingcomputers	0.0 (0.0)	6 (8.6)	18 (25.7)	21 (30.0)	25 (35.7)	3.9286	.98277
5.	Depression	0.0 (0.0)	5 (7.1)	18 (25.7)	29 (41.4)	18 (25.4)	4.1000	2.34150
6.	Feeling of isolation	4 (5.7)	28 (40.0)	18 (25.7)	20 (25.7)	20 (28.6)	3.7714	.93517

Note: ES= Emotional Stress; AL= Always; OF= Often; SO= Sometimes; SE= Seldom; NE= Never; St. Dev. Standard Deviation.

Table 11. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.731	32

Table 12. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.240[a]	.058	.044	4.08800

a.Predictors: (Constant), TS

Table 13. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.375	1	69.375	4.151	.045[b]
	Residual	1136.396	68	16.712		
	Total	1205.771	69			

a. Dependent Variable: PS
b. Predictors: (Constant), TS

Table 14. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.956	3.172		10.704	.000
	TS	.877	.430	.240	2.037	.045

a. Dependent Variable: PS

Table 15. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.258[a]	.067	.053	2.36589

Predictors: (Constant), TS

Table 16. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.217	1	27.217	4.862	.031[b]
	Residual	380.626	68	5.597		
	Total	407.843	69			

a. Dependent Variable: PSS
b. Predictors: (Constant), TS
Null hypothesis Ho: Model is not good fit
Alternative Hypothesis Ha: Model is good fit

Table 17. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.271	1.836		8.318	.000
	TS	.549	.249	.258	2.205	.031

a. Dependent Variable: PSS

Table 18. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.252[a]	.063	.050	4.13877

a.Predictors: (Constant), TS

Table 19. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.684	1	78.684	4.594	.036[b]
	Residual	1164.801	68	17.129		
	Total	1243.486	69			

a. Dependent Variable: BS
b. Predictors: (Constant), TS
Null hypothesis Ho: Model is not good fit
Alternative Hypothesis Ha: Model is good fit

Table 20. Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.284	3.212		5.070	.000
	TS	.934	.436	.252	2.143	.036

a. Dependent Variable: BS

Table 21. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.262[a]	.069	.055	1.91425

a. Predictors: (Constant), TS

Table 22. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.325	1	18.325	5.001	.029[b]
	Residual	249.175	68	3.664		
	Total	267.500	69			

a. Dependent Variable: ES
b. Predictors: (Constant), TS
Null hypothesis Ho: Model is not good fit
Alternative Hypothesis Ha: Model is good fit

Table 23. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21.835	1.655		13.195	.000
	TS	.482	.216	.262	2.236	.029

a. Dependent Variable: ES

While slightly felt uncooperativeness of unwillingness. Majority of respondent felt comfortable with computer in their working environment and seldom respondent felt insomnia due to ICT usage. In Table 10 questions were asked to explore the ES among respondents. Majority of respondents suffer in isolated condition with mean score 3.7714, Paranoia with mean score 3.9286 and Depression with mean score 4.1000. Slightly felt frustrated and loss of temper. Otherwise, Level of anxiety among respondent is very low with mean value 4.6429. Andy Field (2009) said that "Reliability analysis can be used to measure the consistency of a questionnaire. Cronbach's Alpha indicates the overall reliability of a questionnaire and values equal or more than 0.7 are good".

The value of Cronbach's alpha of all factors of questionnaire is more than 0.7 which approves reliability of questionnaire. (Table 7.4). In Table12 the R= 0.240 indicated relation of independent variable with dependent variable and thus model has week & direct effect on PS. The value of adjusted R^2= 0.044 signifies that 4.4% of variance is explained in the model.

Rejection & Acceptance rule of Sig Value: If the Sig value is < 0.05 we accept the Ho otherwise we reject it.

- In the table of Anova regression the Sig value is 0.045 which is less than 0.05, so it means we reject Ho & accept Ha. Hence, Ha is Model is good fit.

- The result of enter method analysis was significant F (4.151), where p = 0.045. This indicates that a predictor variable significantly predicted Physical stress on Library professionals.

Rejection & Acceptance rule of Sig Value

If the Sig value is greater than 0.05 we accept the Ho otherwise we reject it.

- In the table of Coefficient the Sig value is 0.045 which is less than 0.05, so it means we reject Ho & accept Ha. Hence, Ha is there is a relationship between variable.
- The value of Beta is 0.877 i.e. coefficient is positive; which means, the values of predictor variable increased by 1 so outcome increased with the increase in predictor variable. Hence, if we change TS by 1 unit, the value of PS changes by 0.877.
- Therefore, hypothesis (H_1) is supported.

In Table 15 the R= 0.258 indicated relation of independent variable with dependent variable and thus model has week & direct effect on PSS. The value of adjusted R^2= 0.067 signifies that 6.7% of variance is explained in the model.

Rejection & Acceptance rule of Sig Value

If the Sig value is < 0.05 we accept the Ho otherwise we reject it.

- In the table of Anova regression the Sig value is 0.031 which is less than 0.05, so it means we reject Ho & accept Ha. Hence, Ha is Model is good fit.
- The result of enter method analysis was significant F (4.862), where p = 0.031. This indicates that a predictor variable significantly predicted Psychological stress on Library professionals.

Rejection & Acceptance rule of Sig Value

- If the Sig value is greater than 0.05 we accept the Ho otherwise we reject it.
- In the table of Coefficient the Sig value is 0.031 which is less than 0.05, so it means we reject Ho & accept Ha, Ha is, there is a relationship between variable.
- The value of Beta is 0.549, i.e. coefficient is positive; which means, the values of predictor variable increased by 1 so outcome increased with the increase in predictor variable. Hence, if we change TS by 1 unit, the value of PSS changes by 0.549.
- Therefore, hypothesis (H_2) is supported.

In Table18 the R= 0.252 indicated relation of independent variable with dependent variable and thus model has week & direct effect on BS. The value of adjusted R^2= 0.050 signifies that 5% of variance is explained in the model.

Rejection & Acceptance rule of Sig Value

If the Sig value is < 0.05 we accept the Ho otherwise we reject it.

- In the table of Anova regression the Sig value is 0.031 which is less than 0.05, so it means we reject Ho & accept Ha. Hence Ha is Model is good fit.
- The result of enter method analysis was significant F (4.594), where p = 0.036. This indicates that a predictor variable significantly predicted Behavioral stress on Library professionals.

Rejection & Acceptance rule of Sig Value

- If the Sig value is greater than 0.05 we accept the Ho otherwise we reject it.
- In the table of Coefficient the Sig value is 0.036 which is less than 0.05, so it means we reject Ho & accept Ha, Ha is, there is a relationship between variable.
- The value of Beta is 0.934, i.e. coefficient is positive; which means, the values of predictor variable increased by 1 so outcome increased with the increase in predictor variable. Hence, if we change TS by 1 unit, the value of BS changes by 0.934.
- Therefore, hypothesis (H_3) is supported

In Table21 the R= 0.262 indicated relation of independent variable with dependent variable and thus model has week & direct effect on ES. The value of adjusted R^2= 0.055 signifies that 5.5% of variance is explained in the model.

Rejection & Acceptance rule of Sig Value

If the Sig value is < 0.05 we accept the Ho otherwise we reject it.

- In the table of Anova regression the Sig value is 0.029 which is less than 0.05, so it means we reject Ho & accept Ha. Hence, Ha is Model is good fit.
- The result of enter method analysis was significant F (5.001), where p = 0.029. This indicates that a predictor variable significantly predicted Emotional stress on Library professionals.

Rejection & Acceptance rule of Sig Value

If the Sig value is greater than 0.05 we accept the Ho otherwise we reject it.

- In the table of Coefficient the Sig value is 0.029 which is less than 0.05, so it means we reject Ho & accept Ha, Ha is, there is a relationship between variable.
- The value of Beta is 0.482, i.e. coefficient is positive; which means, the values of predictor variable increased by 1 so outcome increased with the increase in predictor variable. Hence, if we change TS by 1 unit, the value of ES changes by 0.482.
- Therefore, hypothesis (H_4) is supported.

DISCUSSION

Using Regression analysis, the result of this research study indicated there are significant relationship between techno-creators and PS (Physical Stress), PSS (Psychological Stress), BS (Behavioral Stress) and ES (Emotional Stress) among LIS professional of Karachi Thus, all the four hypothesis (H1, H2, H3 and H4) are supported. Linear regression analysis

demonstrated that PS table explained that PS (R=0.240) is the week contributor and the F value (4.151) with significance level of p =0 .045 determined the regression model as statistically significant. PSS table explained that PSS (R=0.258) is the week contributor and the F value (4.862) with significance level of p = 0.031 determined the regression model as statistically significant. While BS table explained that BS (R=0.252) is the week contributor and the F value (4.594) with significance level of p = 0.036 determined the regression model as statistically significant. On the other hand, ES table explained that ES (R=0.262) is the week contributor and the F value (5.001) with significance level of p =0 .029 determined the regression model as statistically significant.

The finding of the study confirmed that stress caused by technological stress i.e. techno-stress have a significant effect on physical, psychological, behavioral and emotional aspect on LIS professionals of Karachi. It is derived that techno-stress is a predictor of PS, PSS, BS and ES i.e. technology developed the level of stress among LIS professionals of Karachi. The librarian who are working for long hours on technological instruments are forced to learned, update and use their knowledge in their working environment to cope with stress coming from technology. Likewise, technological inrushes into librarianship have created the feeling of fear, anger, negative attitudes towards computer, nervousness, frustrated, isolated and paranoia, which demands that there is a need to be connected with technology constantly. Thus, they are facing stress in the form of emotional or behavioral aspect. The almost same results found like this research result in Marilyn L. Laspinas (2015) that most of respondent experienced irritability, negative attitude towards computer, frustration, isolated otherwise seldom experienced anger or paranoia in her study. Furthermore, the somewhat same findings in Clute (1998) that they are experienced negative attitude toward computer, anger, anxiety, frustration, fear and isolation. Similarly, the results of this research study explained that technology oppression on librarians in terms of their physical and psychological aspect like mostly librarians experienced eyestrain, headache, backache, joint pain and muscle tension due to continuously ICT usage. Same findings discussed in Stephen Harper (2000) he also analyzed that those who regarded technology as threat, rather than a challenge, showed 'the highest amount of health related complaints'. Secondly, LIS professionals also experienced psychological form of techno-stress i.e. demotivation due to prolonged period of any technological activity, job insecurity, and professional jealously by technological competency, and somehow encountered job uncertainty about job role. Same findings of this research are matched with on Marilyn L. Laspinas (2015) and Stephen Harper (2000) research study. This research study results also reveal that librarians are worried about their job security and culture of keeping informed themselves about new technology. Thus, they are feeling techno-uncertainty and techno-insecurity. While techno-overload does not affects the librarians. Otherwise techno-complexity bothers librarians to find analyzes, evaluate information from internet. The findings of Tarafdar (2007) express the same result that all 5 techno-creators are the predictors and formed Techno-stress. Finally, the present research study can generalize that in context of Karachi's LIS professionals Techno-stress (techno-creators) are the predictor of PS, PSS, BS and ES. The possible reasons (Rajna, 2015) may be their attitude towards the adoption of technology, lack of skills required by ICT according to library environment, lack of CPT regarding LIS education, no standardization of software, changing role of library profession.

Conclusion

The fast –paced library environment has called for more than what the professionals did in the past in their professional lives, coupled with the fast development of IT now being introduced in the profession. These has turned the library and information professional a stress high risk profession. Techno stress is the trends and challenges of the librarians in the 21stcentury. It is also the angst and the pessimistic impact on thoughts, behaviors, attitudes, and body when a person is expected to deal with technology. Sitting in front of computers all day can result into techno stress which put effects on their physical, psychological, behavioral and emotional aspect. Librarians need to keep pace with the changing environment; new formats of technologies develop new skills and know how's in handling different metadata available in the library. This is very important because the library environment will keep changing to keep pace with technological developments. It is necessary to create awareness about technostress and its effects and possible ways to manage it. Librarians should be given proper training on how to handle new technologies. Furthermore, understanding techno-stress and the ways in which computer affects a person individually might decrease the potential physical, psychological, behavioral and emotional harm.

Recommendation

Following the recommendations can be considered to enhance the knowledge of librarians towards techno stress and its effects on LIS professionals of Karachi.

- Knowledge managers should organize technology based trainings for librarians to make them comfortable with new technologies.
- They should also learn relaxation techniques - this can help them to sleep better and relieve stress-related physical pains such as neck pain, headaches and backaches.
- For the physical stress they can do exercise, walk during a day, frequently break and give rest to their eyes.
- Library managers should as a matter of duty encourage and allow library personnel to attend conferences, training workshops, seminars and go for further studies in order to make them comfortable with new technologies and be more aware of their dangers.
- The library management should endeavor to provide the needed ICTs resources which the staff are to work with and make use of their newly acquired knowledge and skills
- Introduction of ergonomic devices and facilities for ease of use and healthy approach to work.
- Proper job supervision and support system should be put in place.
- There should be technical support provision means assistants and technical support provides professionals in the context of their use of IS. Such support can reduce techno-complexity and techno-uncertainty.
- Use of stress inoculation training (SIT); Stress inoculation is a three stage process; education,

rehearsal and application. During the first stage (education) the person is given a framework for understanding her or his response to stressful events. During second stage (rehearsal), the person learns how to make cognitive self-statements as a form of coping and problem solving skills. The third stage (application) has the individual use the information and skills learned during the first two stages (education and rehearsal) in actual stressful situations. Stress inoculation training has been shown to be an effective stress management technique in a variety of circumstances (e.g., control of anger, test anxiety, phobias, pain, etc.) and could be effective in treating techno stress.

REFERENCES

Ajala, Emmanuel Babatunde. 2011. Work-related stress among librarians and information professionals in a Nigerian university. *Library Philosophy and Practice (e-journal)*, 450.

Brod, C. 1984. *Techno Stress*: *The human cost of the computer revolution*. Reading, MA:Addison-Wesley.

Clute, R. 1998. *Technostress: A content analysis*. Unpublished Master's thesis. Kenth state University.

Dictionary.(n.d.).*Dictionary.com*. Retrieved Jan 20, 2017 from:

Harper, Stephen. 2000. Managing technostress in UK libraries: A realistic guide. *Ariadne*, 1(25).

http://www.abc-clio.com/ODLIS/odlis_l.aspx

http://www.dictionary.com/browse/technostress

Joan M. Reitz (Ed.) 2010. *Online dictionary of library and information science*. RetrievedJan 20, 2017 from:

Laspinas, Marilyn L. 2015. Technostress: trends and challenges in the 21st century knowledge management. Eueopean Scitific Journal.11(2), 1875-7881.

MedicineNet.(n.d). *MedicineNet.com*. Retrieved Jan 15, 2017 from: http://www.medicinenet.com/script/ main/ art.asp? articlekey=20104

Merriam-Webster's. 1993. *Webster's encyclopedic unabridged dictionary of the English language*. New York: RHR Press.

Merriam-Webster's. 2002. *Webster's third new international dictionary of the English language unabridged*. New York: RHR Press.

Oxford university press.(n.d.).*English Oxford living dictionaries.* Retrieved Jan 18, 2017 from:https:// en.oxforddictionaries.com/definition/technostress

Prytherch, R. 2005. *Harrod's librarians' glossary and reference book: A directory of over10, 200 terms, organizations, projects and acronyms in the areas of information management, library science, publishing and archive management* (10th ed.). Aldershot:Ash gate Publishing.

Ranjna. 2015. Techno-stress among library professionals at the workplace in ICT era: An overview.*International journal of Multidisciplinary Research and Development*, 2(4), 532-536.

Tarafdar, M., Ragu-Nathan, T.S., Ragu-Nathan, B. and Tu, Q. 2007. The impact of techno stress on productivity. *Journal of Management Information Systems*, 24(1), 301-328.

Torfi, Ahmed. 2013. The effect of organizational environment on technostress of employees. *International Journal of Conceptions on Management and Social Sciences*.1(1), 2357-2787.

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