Technology and Stress (Techno-stress): A Vicious Circle of Work-Life Imbalance Among Youth.

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ABSTRACT

In this paper we have tried to find the impact of technology advancement and automation, on the growth of organization performance. There is a special component within any enterprise or organization, the human which is a must for the overall development of the organization from holistic view. This does not merely entail the technical usage of the equipment, but most specifically the qualitative one .Both individual and group resistance to the implementation of such proposed ideas are very likely to occur, which cannot be said about the acceptance of cultural change. The results will definitely reflect some major findings which may be further researched by academicians, industrialist and psychologists. This research may be extended to various specific services along with specific target groups. The study will reflect the present status of techno-stress management approaches and their impact on the lives of youth. In this research, factor analysis will be used to exact the key determining variables. The psychological and behavioral alterations as well as disorders (at larger extent of the tech-stress), heightened the importance of tech-stress so as to curb the technological dominance over the human senses particularly at this age of maximum optimization and productivity. The data will be primary in nature with convenience sampling.Keywords: Digital depression, informatics culture, worklife balance, stress.

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INTRODUCTION

Human needs never die and their wants transcends to impossible desire. This gave rise to innovation to fulfill the wants and desire of millions and to achieve it people had to take help of technology. Now the technology is advancing at such a pace that it is the human who has to reach up to the speed of technology and if one cannot, it leaves them behind the knowledge society and cut them from rest of the world. We have tried to establish relationship between human and technology in terms of their impact on human attitude, thought, behavior, or body physiology that is caused either directly or indirectly by technology through this paper. As the importance of computers and the Internet is growing in our society, people may experience negative emotions in actual or anticipated interactions with computers. Technology in itself is self-sufficient and it is the human who has to adapt to technology nowadays rather technology overpowering them. Due to this adaptation behavior, the person who has less adaptability or understanding of ICT (information and communication technology) feels stress and we term it "TECHSTRESS" i.e. stress caused by technology due to inability to use or adapt it.

In the changing world where technology plays major role in shaping up the economy, human contribution cannot be overlooked. It is the human who develops the technology for people comfort and need but it impacts them in negative ways also , like a person who is either aware of the usage of technology or a person ignorant about technology has to adopt to the working environment where technology is changing everyday and learning it fast is a challenge it may also be required to work extra hours hence this lead to stress amongst employee in the form of mental fatigues , frustration , lowering emotional quotient , productivity and efficiency and lastly fear of technology. This paper takes care of all the stress developed in human being through the different usage of technology and ICT

(information & communication technology) in youngsters who is directly or indirectly attached to it. It is also now forcing employees into state of "digital depression". As modern day workforce constantly tries to cope up with the day-to-day stress at work they are often confronted with additional stress arising out of technology. The objective of is to study the tech-stress in context of youth and also how the stress level varies to different genders .For this purpose, we have studied the mutual relationships among information technologies (IT), IS and organizational culture.

LITERATURE REVIEW

The term "technostress" was first proposed in 1984 by psychologist Craig Brod in his book Technostress: *The Human Cost of the Computer Revolution.* He defined technostress as "a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner" (p. 16). The construct most frequently confused with technostress is computer anxiety, although there are important differences between the two concepts. Computer

anxiety usually is defined as a fear of computers when using one, or fearing the possibility of using a computer (Barbeite & Weiss, 2004; Chua, Chen, & Wong,1999; Howard & Smith, 1986; Maurer, 1994)Weil and Rosen, in their 1997 book *TechnoStress: Coping With Technology @WORK @HOME @PLAY,* expanded the definition of technostress to include "any negative impact on attitudes, thoughts, behaviors, or body psychology caused directly or indirectly by technology" (p. 5). In other words Techno stress is defined as any negative effect on human attitudes, thoughts, behavior, and psychology that directly or indirectly results from the use of computer-based ICTs (Tu, Wang, & Shu, 2005).

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Technostress has been observed in many different industries. The most common industry is the informational technology field. Within this field, technology is constantly being implemented, integrated, and used by its workers. Businesses are continually reengineering their work processes in order to be more productive and efficient especially with the downturn of the economy. IT professionals in the informational technology field are not immune to technostress. These workers are both implementers as well as sufferers of the technology they create and are impacted similarly as other workers in other industries. These IT professional learn how to cope with the technostress by identifying the root cause of the stress and implementing coping strategies such as learning the functionalities and increasing training on the technology to help mitigate the technostress (Scott and Timmerman, 2005).

Clear symptoms of technostress include the inability to concentrate on a single issue, increased irritability, and the feeling of loss of control (Ibrahim, Bakar, & Nor, 2007). By contrast, computer-related technostress always refers to a kind of fallout of an individual's inability to deal with constantly evolving ICTs and the changing cognitive and social requirements related to their use (Tarafdar et al., 2007). Technostress can be defined as a personal stress that occurs because of a reliance on technology or the constant anxiety of being "connected" with technology (Brillhart, 2004; Tarafdar et al.,2007).

The use of technology can create tension and anxiety for workers. This anxiety manifests itself when individuals become overwhelmed about using technology. If they do not understand the technology, it can frighten them and can lead to work tension. The anxiety and tension can also come from the inability to use the technology that leads to a disadvantage over other workers who do use the technology effectively. The non-users become less competitive compared to their counterparts (Brillhart, 2004; Tarafdar et al., 2007).

Applications of new technologies in the workplace are implemented in order to create a competitive advantage and reduce operating cost. The use of the technology initiates re-engineering of business processes that were more manually-intensive and replace them with more automated processes. This creates a new framework within an organization that removes the decision-making and power from the workers and places the authority into the hands of newly-automated processes which is usually controlled by management. Not only does the application of technology can alter an organization's function groups, but it can also alter the individual's roles in an organization which in turn can create stress (Tarafdar et al., 2007).

At the same time, it may inhibit an individual's further learning or using computer and information technology (Wang, Shu, &Tu, 2008).

In other words, it is a general construct that describes the direct and indirect impacts of ICTs. Computer anxiety typically refers to one's emotional reaction toward using computer (Heinssen et al., 1987),which is regarded as an affective response (Barbeite & Weiss, 2004). At the same time, he or she may have high technostress about the invasion of technology into his or her personal life. Stress has been a major issue for organizations, and employers must deal with it in order to be productive at work. In the past decade, technology has grown tremendously, and many new job-related stresses have arisen. A portion of this job stress can be attributed to technology use. Stress induced by technology has been denoted as technostress and has become a major issue for organizations. 3

OBJECTIVE OF THE STUDY

Based on the aforementioned theoretical streams of research, this study explores the various factors leading to technostress among youngsters. This paper proposes a theoretical model, which will be further analyzed by factor analysis.
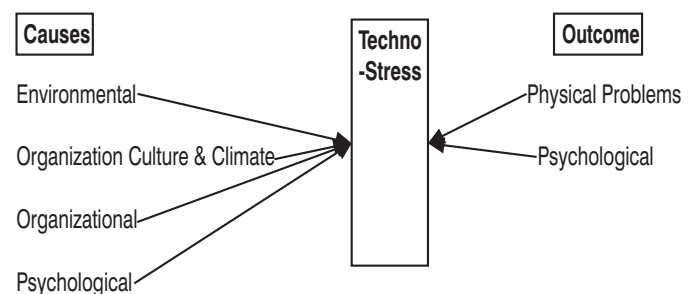
RESEARCH METHODOLOGY

The research is empirical in nature. The sampling technique was judgmental as the research problem was pertaining to specific niche. The data was collected through a structured questionnaire pertaining to 25 questions indicating various factors. These factors are constructed on the basis of literature. The data has been collected from 35 young professional both male and female of 20-27 age. The questionnaire was sent to 75 professionals, but only 35 of them have responded. All the respondents were placed in Delhi and NCR region.. The technique adopted for evaluation is Factor analysis with rotated component and scree plot. So as to identify the major factors leading to technostress. The exploratory Factor analysis is applied to reduce the data with principal component method. The questions were on five –point likert scale representing 1 for low and 5 for extremely high. The responses are further tabulated and calculated through SPSS 16.0 version.

DATA ANALYSIS & INTERPRETATIONS

On the basis of datasheet, a correlation matrix is created. With the help of which we can understand the correlation among various factors. All the values representing positive figure shows the positive relation between the two factors whereas negative figures show the negative relation or no significant association. The figures closer to .5 have strong correlation whereas figures less than .5 show weak correlation between the variables.

Correlation Matrix

		competition	culture	change	proactive	power center	taskinter depen-dency	source	cognitive	maturity	personality traits	emotions	excessive-use
Sig. 1-tailed)	competition		.065	.125	.364	.102	.060	.045	.156	.490	.494	.257	.156
	culture	.065		.311	.018	.138	.199	.416	.048	.028	.041	.312	.184
	change	.125	.311		.114	.099	.362	.009	.481	.433	.094	.179	.122
	proactive	.364	.018	.114		.002	.173	.141	.401	.186	.008	.278	.065
	power center	.102	.138	.099	.002		.152	.040	.108	.387	.042	.487	.382
	taskinter dependency	.060	.199	.362	.173	.152		.284	.248	.351	.182	.096	.005
	source	.045	.416	.009	.141	.040	.284		.405	.013	.240	.096	.324
	cognitive	.156	.048	.481	.401	.108	.248	.405		.237	.014	.008	.317
	maturity	.490	.028	.433	.186	.387	.351	.013	.237		.442	.060	.127
	personality traits	.494	.041	.094	.008	.042	.182	.240	.014	.442		.498	.004
	emotions	.257	.312	.179	.278	.487	.096	.096	.008	.060	.498		.073
	excessiveuse	.156	.184	.122	.065	.382	.005	.324	.317	.127	.004	.073	

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.490
Bartlett's Test of Sphericity	Approx. Chi-Square	101.724
	Df	66
	Sig.	.003

KMO and Bartlett's Test is close to .5, which state that the data collected is valid in terms of factors and responses.

Communalities

	Initial	Extraction
Competition	1.000	.600
Culture	1.000	.592
Change	1.000	.457
Proactive	1.000	.548
Powercenter	1.000	.531
Taskinterdependency	1.000	.573
Source	1.000	.747
Cognitive	1.000	.701
Maturity	1.000	.788
Personalitytraits	1.000	.698
Emotions	1.000	.772
Excessiveuse	1.000	.699

Extraction Method: Principal Component Analysis.
Communalities basically indicate the factor loading of the variables. Method adopted is Principal Component Analysis.

SCREE PLOT
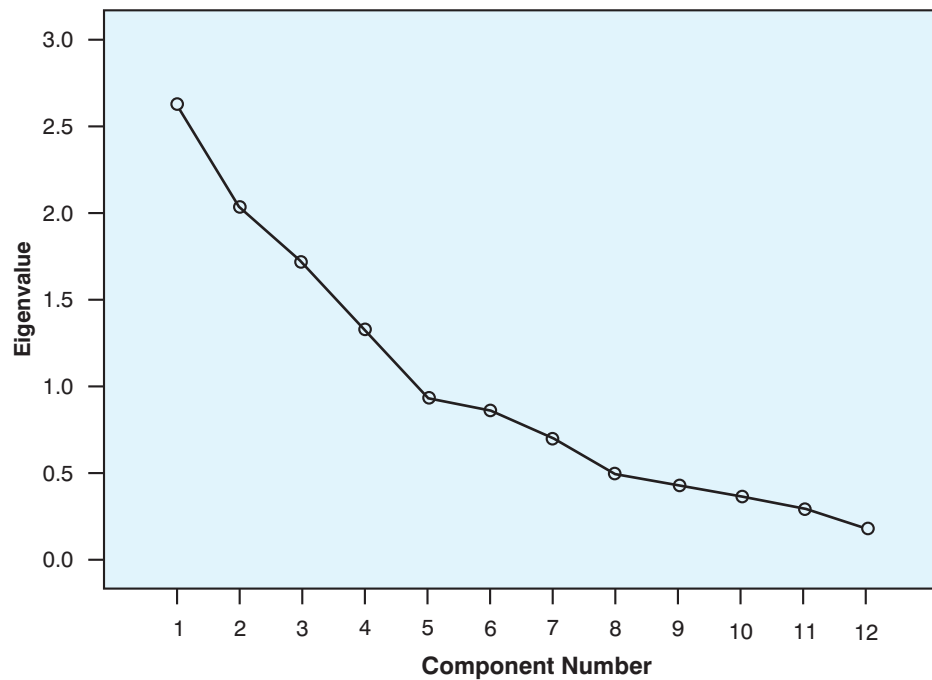
The scree plot also reflects that the component number and Eigen value are close to elbow shape which means the responses on the questions are making balance between the individual factors and overall component.

Component Matrix[a]

	Component			
	1	2	3	4
competition	.298	-.539	.055	-.467
culture	-.612	-.085	.295	.351
change	.432	-.345	.377	-.098
proactive	.731	.077	.013	.086
powercenter	-.604	.384	.036	-.128
taskinter dependency	.250	.613	.278	.240
source	.393	-.434	.602	.204
cognitive	-.306	.298	.715	-.089
maturity	-.225	-.437	.305	.673
personalitytraits	.700	.112	-.230	.377
emotions	.255	.340	.624	-.449
excessiveuse	.398	.699	-.008	.229

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
competition	.513	-.474	-.029	-.334
culture	-.249	-.158	.222	.675
change	.660	-.063	.122	-.045
proactive	.488	.448	-.177	-.279
powercenter	-.624	-.069	.360	.084
taskinterdependency	-.017	.703	.281	.008
source	.790	.019	.164	.309
cognitive	-.057	.082	.795	.242
maturity	.228	-.070	-.114	.848
personalitytraits	.346	.582	-.470	-.134
emotions	.271	.195	.741	-.333
excessiveuse	-.087	.808	.046	-.191

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a.   Rotation converged in 7 iterations.

Rotated Component Matrix with Varimax has been used to make the result more authenticated. It identifies 4 major components which will be further creating themes. Factors are like raw material whereas components are like semi finished products and Themes on the basis of combination of both will be like finished products.

Component Transformation Matrix

Component	1	2	3	4
1	.714	.476	-.245	-.451
2	-.534	.725	.344	-.266
3	.452	.077	.815	.354
4	.025	.491	-.396	.775

Extraction Method: Principal Component Analysis.

 Rotation Method: Varimax with Kaiser Normalization.

Above mentioned tables represents that there are most important factor which further defines various themes.

FINDINGS & LIMITATIONS

On the basis of factor analysis, the factors can be classified into four major themes:

Informatic Culture	Work Relationship	Organisation System	Support System
Competition Change Proactive Source of Technology	Task Interdependency Personality Traits Excessive Use of Technology	Power Centric Cognitive	Culture Maturity

These themes are further given a named as- Informatic Culture, work relationship, Organization and Support system. Informatic Culture includes competition in the market, Change and innovation, Proactiveness of an organizational and Sources of Technology. All of them are environmental causes. Whereas the second factor is Work Relationship on the basis of Task Interdependency, Personality Traits and use of technology. Third is Organization system on the basis of power and Cognition. Fourth are support system in terms of Culture and maturity one has.

The data collected was limited to Delhi & NCR. Moreover the time was a constraint. The data was received was almost 50% of sent.

CONCLUSION

The study is describing the factors leading to techno stress in young professionals thus leading them to worklife imbalances. This study may be further researched on the basis of finding correlation among various factors like age, gender and many more with the response. This study can be explored on other age group with different sample also. It may also be tested with other data collection techniques. The research was initially started with a proposed model of factors leading to technostress. These factors were further tested through questionnaire further leading to the proportion of impact of each factor on the technostress. On the basis of correlation among various factors, it was identified, that all these factors are leading to four major categories. The post research model, reflects that the prime causes of technostress are Informatic Culture, work relationship, Organization and Support system among youngsters.

SCOPE OF STUDY

The research can further be added on various outcomes of technostress. Since this study is more about antecedents of technological stress, it may be further researched on many multidimensional factors. The research also focuses only on youngster which may be further tested on children or aged population. Although the findings do provide insights into groups of similar characteristics but it can be adopted in diverse groups.

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