

**A STUDY OF TECHNOSTRESS IN RELATION TO JOB  
SATISFACTION, JOB PERFORMANCE AND MENTAL  
HEALTH AMONG IT PROFESSIONALS**

Thesis Submitted for the Award of the Degree of

**DOCTOR OF PHILOSOPHY**

**In Psychology**

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## DECLARATION

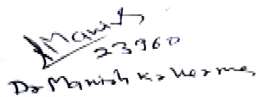
I, hereby declared that the presented work in the thesis entitled “**A study of Technostress in relation to JobSatisfaction, Job Performance and Mental Health among IT Professionals**” in fulfilment of degree of **Doctor of Philosophy (Ph. D.)** is outcome of research work carried out by me under the supervision Dr Manish Kumar Verma working as Professor (Psychology) & HOD, Psychology and Sociology, in the School of Humanities of Lovely Professional University, Punjab, India. In keeping with general practice of reporting scientific observations, due acknowledgements have been made whenever work described here has been based on findings of other investigator. This work has not been submitted in part or full to any other University or Institute for the award of any degree.



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## CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled “**A study of Technostress in relation to Job Satisfaction, Job Performance and Mental Health among IT Professionals**” submitted in fulfillment of the requirement for the reward of degree of **Doctor of Philosophy (Ph.D.)** in the School of Humanities, is a research work carried out by Vivek Bhuchar, 41400120, is bonafide record of his original work carried out under my supervision and that no part of thesis has been submitted for any other degree, diploma or equivalent course.

  
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## **ABSTRACT**

Digital technologies have become a universal concept in almost every branch and type of job that exists. All organizational frameworks, communication, working methods, business models, and interpersonal and intrapersonal interactions have been impacted by digital technology. Life in today's world, which represents modern life, has been so complicated in nature, crowded with so many stressors, that survival is becoming difficult. The use of technology in today's world has put so much strain on it that it has become a concern in today's society, particularly for those who are consistently expected to use technology. Digitalization has had unavoidable consequences in the form of technostress in the lives of each and every individual employee. A person experiences technological stress when they feel overwhelmed by the constant changes in technology in a positive way. Rabia et al., (2010) explained Technostress in negatively way which is influenced as a connection between the people who work and handling the technology as demanded in the world today. The current study was intended to ascertain the effects of technostress on mental health, work performance, and job satisfaction. Therefore, the present investigations looks deep into Technostress as a variable, and then see how positive technologies can help in lowering down the negative impact of Technostress and enhancing the positive work experience and to increase the level of general well-being by effective organizational safe culture. The sample for the study comprised of 478 IT Professionals both males and females. These IT professionals had different educational background i.e. B.Tech, MCA. And M.Sc-Computer science/IT. The age of the participants varied between the age range of 30-40 years. In order to assess Technostress of employees Technostress Scale (constructed by Ragu-Nathan et al., 2002) was used. By using the Job Satisfaction scale designed and standardized by Mishra, Tiwari, and Pandey (1977), job satisfaction was evaluated. Job Performance (Shokrkon and Arshadi, 1990) was applied for the assessment of Job Performance of the employees. In order to assess mental health of the participants, Mental Health Inventory (MHI) (Jagdish & Srivastava, 1983) was chosen. As per the objectives and hypotheses, descriptive statistics, t-test, coefficient correlation and regression were applied on the obtained data.

Findings revealed significance difference between males and females among IT Professionals on Technostress (t-ratio = 2.47,  $p < 0.05$ ) and job performance (t-ratio = 3.25,  $p < 0.05$ ). However, there was no statistically significant difference between men and women among IT professionals in terms of job satisfaction or mental health. The statistical significance of the association between technostress and work satisfaction ( $r = -0.23$ ,  $p < 0.01$ ) revealed that there was a negative relationship between the two. It was determined that there was a strong link between technostress and job performance ( $r = -0.13$ ). Thus, it was shown that the relationship between technostress and work performance was negative as well as low.

Similar to this, there was a weak negative connection ( $r = -0.11$ ,  $p < 0.01$ ) between technological stress and mental health.

Each of the substantial relationships between job satisfaction and performance ( $r = 0.25$ ,  $p < 0.01$ ) as well as the relationships between job performance and mental health ( $r = 0.26$ ,  $p < 0.01$ ) and job satisfaction ( $r = 0.19$ ,  $p < 0.01$ ) were found. As the interpretation of the results of the multiple regression analysis were observed, it was calculated for the column as being labelled R, which stands for the multiple correlation coefficient between the predictor and the criterion variable. Technostress had an  $R^2$  value of 0.017. Additionally, it was shown that technostress contributed 1.7% of the variation in the criterion variable Job Performance. Thus, further it can be explained that technostress makes an insignificant contribution in predicting job performance. The R value for the only predictor variable Job Satisfaction has come to be as 0.251 and the  $R^2$  value for the predictor Job Satisfaction came out to be 0.063. It was discovered that the criterion variable Job Performance's variations had been explained by Job Satisfaction to a degree of around 6.3%. The predictor mental health has a multiple correlation (R) value of 0.262. According to the  $R^2$  analysis, the criterion variable Job Performance's variation is explained by mental health to the tune of 6.8% (R squared value multiplied by 100). The F-ratio for the Technostress was found to be 8.188, which was determined to be inconsequential. The F-ratio for the predictor Job Satisfaction was 31.934, which was judged to be significant with a p value of 0.01. The F-ratio for the predictor "Mental Health" was 34.983 and was determined to be significant with a p-value of

0.01. The research's conclusions have shown partial support for the proposed hypothesis of the research.

Lawrence et al., (2021) performed studies on the psychosocial determinants of Nigerian uniformed personnel's mental health, finding that occupational stress, age, social support, and job satisfaction were all significantly related to mental health. It has also been demonstrated that workplace stress and job satisfaction might predict workers' mental health. Nadinloyi et al. (2013) found that women are happier at work than males are. Long-term employees of the same business were discovered to be content. As people work more, their job satisfaction rises. Work satisfaction has a significant impact on employees' health and well-being, according to several studies (Caplan et al., 1980; Keon et al., 1982).

Ansari et al., (2019) technostress producers have a considerable detrimental impact on job satisfaction. Whereas, job satisfaction is significantly improved by technological stress inhibitors. Karimi et al., (2018) showed a substantial negative correlation between the characteristics of technostress and work satisfaction. Technostress has a number of characteristics, including overload, inflow of technology, unpredictability, complexity, and insecurity with regard to technology. The best indicator of work happiness was the intricacy of the technology. According to Pullins et al. (2020), among sales professionals, technostress lowers work satisfaction and raises role stress. They talked about the use of technostress inhibitors by organisations to lessen the impact of technostress and lessen the stress experienced by sales staff. According to Marchiori et al. (2020), technostress negatively affects commitment while favourably affecting satisfaction.

Raimi et al., (2021) Executive-level performance has a significant impact on effective performance at higher levels in an organisation. According to the study's findings, executive job performance is positively correlated with mental health and workplace ergonomics. Effective mental health intervention techniques have the potential to have a significant impact on executive job performance. Obrenovic et al. (2020) investigated the impact of work-family conflict on psychological security and wellbeing. In today's modern working environment, where technology plays a major

role, personal time has been overshadowed by work assignments, and employees have numerous responsibilities to suit themselves while still maintaining job productivity. The work-family conflict has an unfavorable impact on psychological safety and well-being. The mental fitness, psychological safety and well-being of workers have an influence on how successfully they execute their jobs; as a result, when these factors are insufficient, job performance declines.

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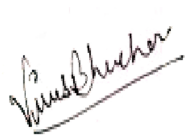


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**Vivek Bhuchar**

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# CHAPTER I

# INTRODUCTION

## **CHAPTER I**

### **INTRODUCTION**

The role of technology has evolved to be significant as well as inseparable part in everyone's life nowadays. The task, which used to take hours and hours, is done in a minute because of the technological advancements. In different organisations, the use of technology has its relevance. Any message that needs to be conveyed at different hierarchical levels is done in seconds through the use of technology. Therefore, in different organisations and industries the use of technology has made the tasks to be done in quickest possible way and with fewer efforts which has become a possibility because of internet. The speed of work has changed as a result of the usage of technology in almost every aspect of life. Technology has undoubtedly expedited up processes, but it has also created significant issues for IT personnel, particularly in underdeveloped and developing nations. The working environment, work demands, structure of an organization in present time has so much changed. It had a negative effect on the Mental Health where huge amount of pressure and work load is given to an employee. The shift work is also an important factor for the stress as employees had to compromise their health and effect with disturbance in their sleep timings has also been observed. All these factors when collaborated, affects the Mental Health. This means that one is not able to control and manage over the emotions. The negative thoughts when influence over the mental state, it effects the Mental Health.

The technological stress called Technostress is now seen in all organisations especially among the IT professionals who need to work on the updating the software all the times. They are responsible for all the staff members who need help for software updating in an organization. The change in regular technology is responsible for the stress among IT professionals. They need to be updated in regards to knowledge about the latest technologies, and associated limitations and advantages to use such technologies. The factors like technological overloading, invasion, complexity related to the technologies used, insecurity due to technology and uncertainty are related to technology.

Technology is basically described as the technique, skills and methods used to

achieve targeted goals. The technology is used not just to carry out goals but it is also used for scientific investigations too. The Greek terms *techne* and *logos*, the former word signify skill or art and the latter implies "to speak of," respectively, are the building blocks of the English word technology. In an article by Waddell (2013) titled "What is technology" the definition of technology by Merriam-Webster as expertise to changing and modifying the human environment or to the practical goals of human life. Technology is the use of materials, equipment, procedures, and power sources to enhance productivity at work and make living easier or more enjoyable. Technology focuses on making things happen, which is interested to understand as how and why things happen.

According to Stolterman et al., (2004), the concept of digitalization is a process where transformation has taken place at a very rapid pace. Therefore, digitalization is a technological driven process at the present time and the increasing level of technological advancements in all the spheres and domains of life. Work is said to be done majorly in the field and area of digitalization. It has been observed in Europe, for example, that between the year 2005 and 2015, the digital usage increased because of the technological advancements as the number of workers increased because of the digitalization.

Up to the revolution and transformation in the digital work style, the research for work-related stress did not specifically address technology as a source of stress. In practically every industry and type of employment there is now, digital technology have become a universal notion. The digital technologies have put an impact on the all the organizational structures, communication, working style of the organization, business models and the inter and intra relationships. The digitalization has put the unavoidable consequences in life of each and every employee. It is more beneficial to study and comprehend that, from a point of view of health and safety, every organisation must identify the factors and procedures that contribute to stress in the workplace as a result of digitization and harm employees' Mental Health (Stacey et al., 2018).

Therefore, the present investigation looks deep into Technostress as a variable, and

then sees how positive technologies can help in lowering down the negative impact of Technostress and enhancing the positive work experience and to increase the level of general well-being by effective organizational safe culture.

When a person is unable to adjust to technological developments in a healthy way, it is claimed that they have an ailment called Technostress. Technostress is then seen among the IT workers since it is said to be caused when a person is unable to cope positively with the frequent technological developments. Technostress was characterized as a condition of excitement seen in some workers who rely significantly on computers in their jobs by Arnetz & Wiholm (1997).

Research was done by Tarafdar et al. (2019) to explain how social networking site addiction and Technostress are related to technology. The study focuses on how technology becomes a point of distraction and at times technology becomes as a coping behavior. The study was done by doing a survey of 444 Facebook users which was collected at three points of time. An empirical inquiry was conducted as part of the study to examine the psychological impact of using distraction as a coping mechanism. The study revealed that social networking sites act as a link between Technostress and technology.

Young people are in considerable demand for IT positions in this day and age, yet the jobs are temporary in nature, provide little in the way of job stability, are competitively paid, and are highly competitive in nature (Lim & Teo, 1999).

An online website, computer world (2006), the environment at the IT sectors deals with software professionals who have high strain, job uncertainty, low level of social proximity and less level of personal development and high level of imbalance in work related activities.

## **1.1 TECHNOSTRESS**

The term Technostress is said to be the stress that an individual experiences because of the use of information systems. It is an emerging component that needs investigations. It is regarded as an important characteristic not only in psychological sense but also in regard to the information technology. The technological advancements had made this stress called Technostress as a component which requires immediate response from managements.

In the present life an individual is always in a hurry of exploring the different opportunities to be able to grow in life. In order to fulfill those demands an individual finds itself in the working environment which is full of challenges and also life in general. Demand may occasionally act as an unnecessary burden and cause someone to feel stressed. An individual while working experiences different level of stress and it does give a negative and serious effect on the working behavior and therefore also the organization where an individual works (Mohan, 2004).

The life in today's modern world is found to be so complicated in nature, crowded with so many stressors that it has made it difficult for survival. The use of technology in today's world has put so much of strain and it has become a concern in the present society specifically for those who are always expected to use technology. Hulbert (1998) is of the opinion that the emergence of the computer software and hardware, which is said to be the databases for many organizations, though internet has affected the society so much in a real term especially in the higher education where the productivity options have been increasing by the way the people work. In the present age called "Information Age" where the technology has been such an important instrument for the people to work, learn and play (Drake, 2000).

The information age of technology and communication has led to the enhancement of the changes which tend to increase the level of stress of employees. Thus there are people who get well versed with the technological changes and there are people who do not get use to the rapid changes in the technology. The people who do not find it comfortable to the changes in the technology or find it difficult to adjust adapting to the new, innovative changes of technology results in the responses and one of the

responses is called Technostress.

Brod (1984) defined Technostress as follows in his book 'Technostress: The Human Cost of the Computer Revolution', A current adaptation disorder brought on by an incapacity to successfully adjust to emerging computing technologies and further distinguished between two types of technology use: 1. Users who find it difficult to accept the technology and 2. Users, who excessively identify the technology. The changes due the change in technology at times become a struggle for the people to accept the changes of technology and find it difficult to cope with it and there are some who are smart enough and categorized to be over identified with the computer technology.

People have become overwhelmed and clutched with worries about how the use of technology is affecting their jobs due to the increase and rapid pace in technology. The users in the present world expect that the services provided should be given at a greater level because of the technology and perhaps this usage at a greater level to a greater extent is becoming a major issue, giving birth to technology stress, also known as Technostress.

Rabia et al., (2010) explained Technostress in negatively way which is influenced as a connection between the people who work and handling the technology as demanded in the present world. Therefore, people do experience the Technostress when they are not in a comfortable position to handle and Interacting and utilizing technology in an effective sense. The people feel that because it is their task to work and to share updates by being connected with the technology always and they feel being forced to work.

Lisa and Ennis (2005) had talked about the causes of Technostress as: 1). Change in technology in a rapid way 2). Technostress is because of inadequate training 3). Increased workload, 4). No reliability of the hardware and software being used.

Brod (1984) proceeded on to outline in more detail the signs of Technostress: Anxiety is the main symptom of those who are hesitant, scared, or ambivalent about computers. Numerous symptoms of this anxiety include irritation, migraines, nightmares, reluctance to learn about computers, and open rejection of technology.

People who feel compelled to embrace and utilise computers by their employers, classmates, or the culture at large are most likely to suffer from techno-anxiety.

Brosnan (1998) refers to the term Technostress as a three-dimensional syndrome and it is further divided into:

1. Evaluative dimension, 2. Emotional dimension, and 3. Cognitive dimension.

**Table 1.1: Dimensions of Technostress**

S. No.	Technostress dimensions
1.	<b>Evaluative dimension:</b> Negative attitude about ICT
2.	<b>Emotional dimension:</b> anxiety towards usage of technology
3.	<b>Cognitive dimension:</b> lower self-efficacy

The evaluative dimension includes high negative attitude towards ICT, emotional dimension includes anxiety related to the computers and cognitive dimension includes low level of computer self-efficacy. According to Rosen and Weil (1990), individuals who are techno stressed have a negative attitude towards the usage of computers and they disregard any kind of technology development because they do not feel comfortable discussing or simply even carrying a thought process about computers. The changes in the technology had led to the feeling of anxiety where employees start to have the negative views and attitudes about the computers and technology. The anxiety starts from the present and it creates the feeling of negativity for the future in regards to problem faced by employees in handling the technological changes.

The studies have shown the percentage of incidence in both the gender. So there are studies done on gender differences and it was seen that the rate of syndrome is different among males and females. A study by McIlroy et al., (2001) and Ogletree and Williams (1990) discovered that women had relatively few favourable viewpoints towards technology. Therefore in a study by Brosnan (1998); McIlroy et al., (2001)

added further to the study that females have fewer competencies than males. Weil and Rosen (1997) explained Technostress as the stress that is seen among employees because of the rapid use of the technology and changes due to technology at the workplace, for example a stress that is caused when employees are asked to acquaint themselves with the new technology. The Information System researchers have concluded the Technostress as a negative kind of psychophysical effects and that the use of technology at the workplace causes Technostress. Technostress is an effect of technology which is negative in nature and it does affect the attitude, behavior and thought process of an individual. The Technostress starts with its effect because of the reaction that an individual gives because of the changing behavior of an individual and its influence over the other things. According to Genco (2000), Technostress manifest in many different ways, firstly as a stressful condition because a struggle of an individual to accept any change that has happened with computer technology and then to identify oneself with the change in the computer technology. Hemby (1998) is of the viewpoint that adults and students who are sensitive over the Technostress does go for an avoidance strategy where they try to avoid work that involves the use of the technology. Figueiredo (1994) concluded out the symptoms that include experiencing Technostress as headaches, increase in the heart rate, irritability, strain in eyes, muscle tension etc.

Harper (2000) explained the concept of an innovation and creativity in terms of the technology as it has given the rise to the stress; therefore, the stress arousing due to the change in technological aspects among employees is termed as Technostress.

According to Weil and Rosen (2004), Technostress is the way we react to our technology and the way it influences and changes the behavior of individuals. The impact and reactions of technology on people could possibly vary depending on who we are as individuals and whether we see it positively or negatively. The Technostress influences and effects the personal lives, and also at their workplace, i.e. effect on the working environment. Therefore, the humans are changing both internally as well as externally because of the rapid change of the technology effecting physical, social and emotional capabilities.



Goss (1994), explained how Technostress have an effect on both organizations and individuals as well. The effect of Technostress can be seen on organizations when the staff members are seem to be absent and there is a complete change of staff in an organisation. The managers of an organization suggest that employees either cope up with the stress or they leave the job without understanding the organization has spent so much on them to help them to learn the things in an organisation and if they leave the job then they need to teach the required skills to the new employees sothat they learn the essential technological skills.

According to Ayyagari et al., (2011) talked about the transaction theory of stress leading to the Technostress. The reality that stress is discovered when there is an unfavorable relationship between the person and the requirements made by a job environment in terms of technology. If an individual is not ready to accept the challenge but the environment and the demand of the job wants that challenge to be accepted and the ability of person declines, it leads to the Technostress.

Cooper et al., (2001) elaborated further four components as stressors, factors that affect the situation, strain and the outcomes. The first one is the stressor, the stressors related to Technostress would be rapid changes in the work habits and frequent alerts through emails related to job, job related text messages and other social networking sites where the organizational setups are made. The situational factors would be training, changes of processors in relation to the technologies. The other component, i.e. strain would be related tothe exhaustion, fatigue, and discomfort from the use of technologies. The regular strain among employees would result in dissatisfaction that would lead to absenteeism, threat and turnover at the workplace.

Therefore, on the basis of the meanings given by different researchers, it can be said that technology thoughhad made the things easier in every way but still there is stress among the workers because of one or the other reason depending on the individual factors. The stress created because of technology hampers the life mentally which effect the working environment of an employee.

### **1.1.1 DIMENSIONS OF TECHNOSTRESS**

There are different conditions at workplace and home that are increasing the level of

Technostress among IT Professionals:

**a). Techno-overload:** Techno-overload describes where Information system forces the IT professionals to work at more rapid pace and to work at much faster rate. The usage of different applications results in the information overload increases the number of interruptions and increases the multitasking processes. Weil and Rosen (1997) explain that in information overload, the users are expected to be exposed to information beyond their efficiency and effectiveness to use, which further lead to “information fatigue”.

**b). Techno-invasion:** This denotes the situation where professionals can be asked at any time and from anywhere, thus there seems to be a constant connection with the technological changes by the professionals.. The constant and regular workdays are further converted by in to the family hours, which further include putting up hours even working while on vacations. The individuals, because of continuous connectivity, experience a kind of interference and experience high level of frustration and stress.

**c). Techno-complexity:** This dimension of Technostress illustrates the situation where professionals are bound to spend in the hours by understanding and getting conditioned to the new applications is itself a complex task. The professionals are adhered to use and have the knowledge of updated usage of hardware, software. It also includes updating of all new technologies and increase in the level of abilities to cope up with latest technologies also becomes more complex. It takes about weeks and even up to months to learn new applications and their manuals. Sometimes it is very difficult to understand the new updated applications and professionals feel stressed.

**d). Techno-insecurity:** Workers are worried about losing their current positions and being replaced by those who have greater understanding of modern information technologies. There is always a probability that young professionals are found who are even more passionate, full of enthusiasm and have better coping ability with the new technologies and have good amount of work experience. The professional who works presently in an organization feel insecure which in turn leads to the tension and

stress about Information Systems.

**e). Techno-uncertainty:** It refers to the change and up-gradation of the information systems. The changes are so regular that it does not give the IT professionals to develop any base for any new application and this has further led to the stop of the learning as their knowledge gets outdated. The professionals at an initial level may be very enthusiastic to learn new updating and software, but regular and constant refreshing leads to the increase in the level of anxiety and frustration. The new applications require configurations and customizations at the time of implementation which is also stressful process. The stress and worry increase as the professionals take time to stabilize themselves with the new applications but it can be a possibility that the support of an IT department is poor.

### **1.1.2 TYPES OF TECHNOSTRESS**

Harper (2000) elaborated the types of Technostress and they are:

**a). Physical Form of Technostress:** This form of Technostress is caused by using tough computer technology that may result in the headaches, eye strain and backache among employees. The physical form of Technostress includes:

**b). Strains and injuries:** The repetitive strains and injuries which further include pain and numbness felt by employees because of the regular use of the fingers on the keyboard.

**c). Overexposure to Visual Display Units (VDU):** Coghill (1990) explained the causes of Technostress and it is seen that the exposure to the visual display units do call for the headaches, muscular dysfunctions, miscarriage and other serious medical illness including cancer. Graham and Bennett (1974) concluded out that employees feel fatigue because of the exposure to the heat and electricity produced by the terminals. The older Visual Display units produce more radiations than the new VDU's.

**d). Psychological Forms of Technostress:** The psychological form of Technostress is more complex in nature than physical form of Technostress. The Technostress can also be due to environmental conditions, inefficient people therefore not able to work

because of the rapid change in technology. The employees might also have problems in coping up with the skills that are required for the new updated technology, e.g. libraries at the rural places which have now become automated and there are many other factors leading to the Technostress and they are:

**e). Excessive Information:** In most of the libraries which are overloaded have catalogue systems for storing information at larger level, CD-ROM and technologies such as emails, teleconferencing where employees have a fear of being overwhelmed with an excessive information.

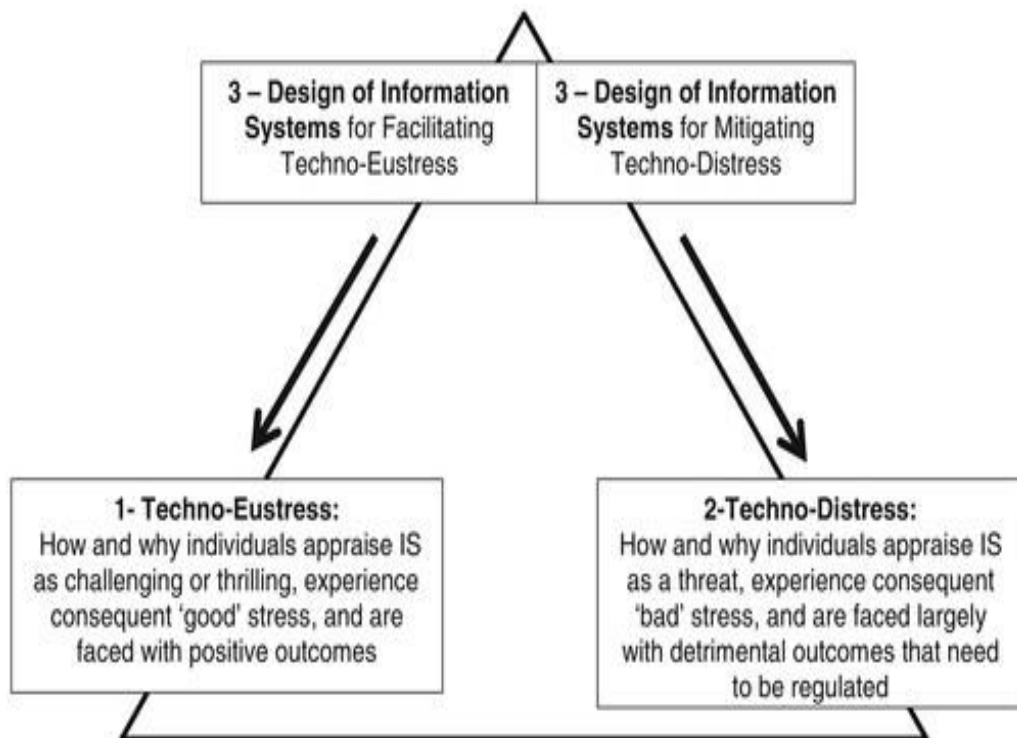
**f). Underwork and Routine Jobs:** Employees inadequate utilization or circumstances where they are performing merely regular tasks can become irritating and this occurs when they spend more time occupied with the systems. When a certain routine amount of work is expected from employees, it is also important for manager to know as in how much time an employees will take up in finishing that single task.

**g). Insecurity at workplace:** Insecurity at the workplace can be aroused when employees come to know that computers are taking over the work from humans. The job insecurity increases among employees. This can lead to the decrease in the level of motivation among the workers and it can affect the productivity of an organization.

**h). Uncertainty:** The work functions of employees may also be impacted when other forms of technology replace automation. There are employees who are putting so many of hours on working on different new technologies may all of sudden lead to the uncertainty about the job role.

In research corrected by Tarafdar et al., (2019) after the corrections were done in the paper published in 2017, came up with a term known as “Technostress trifecta”. Information systems, often referred to as "techno-eustress, techno-distress, and Technostress", are its governing concepts. These terms have been taken from the already existing types of stress called eustress and distress. The emergence of the environmental demands has increased the demand to join eustress and distress with technology. This means that employees or engineers working as system engineers may fall under techno-eustress or techno-distress as individual differences can be

accountable for such variations among Technostress. The first component, techno-eustress leads to the positive outcomes leading further to a greater level of positive effects and innovation because of the technology. The second element, techno-distress, reduces the harmful consequences of Technostress by using the right design. The third aspect emphasizes the necessity for multidisciplinary effort to lay the basis necessary to improve and enhance not just information systems but also psychological stress levels.



**Figure 1.1: Tarafdar et al., (2017). The “Technostress Trifecta”**

### 1.1.3.FACTORS OF TECHNOSTRESS

There are many factors that can contribute towards Technostress, for example, age, supervising factors during usage of technology and the working environment (Brod, 1982). Champion (1988) elaborated main factors that induce Technostress:

**a). Environmental factors:** The environmental factors include all working conditions in the workplace for example, inappropriate conditions, inadequate light, not sufficient equipment with security measures, issues related to the compatibility of software, noise, software limitations, insufficient technical staff or personnel are some of the

environmental factors.

**b). Social factors:** The social factors includes the variables in liking or disliking towards work, role conflict, role changes, anxiety over losing job, may give the adequate reasons to have stress related to the technology.

Enis (2005), more as listed above adds six more important factors of Technostress and they are rapidchange in technology, lack of education, increase in the amount of work (workload), standards set up, reliability of technology and role alterations.

In a 2009 the paper on Technostress, Hemp (2009) stated that professionals experience high levels of Technostress when they are unable to manage and balance their personal and professional lives, for example, or when they are unable to easily adjust to or even deal with the most recent technology in a healthy way. There is a phenomenon called as “continuous partial attention”. This is a state in which a person is responding continuously to office emails and also to the text messages and is interrupted and distracted in such a state. The anecdotal studies done on business professionals find out that the immense increase of the use of technologies at workplace and at home had led to the increase in the standard working hours. Approximately 80% of the sample size in the field believes that the information system has increasedworkplace stress due to system issues and mistakes, which has an impact on higher workload.

#### **1.1.4 EFFECTS OF TECHNOSTRESS**

There are some of the consequences of the conditions that influence the Technostress:

**a). Role overload:** when the IT professionals find their work to be too much to handle or too difficult, it leads to experience of role-related overload and conditions that create Technostress influences the perception. For example, techno-complexity, where putting up an effort plays an important role and the efforts by the professions has to be regular and to be implied on frequent basis. The process of techno- overload influences the professionals to do the task in less possible time.

**b). Increased role-conflict:** the role related conflict is when there are contradictions related to the work at the workplace. For example, in techno-invasion, the increased working hours creates work-home imbalance or because of frequent changes of software or information systems lead to techno-uncertainty. Techno-insecurity may lead to learn with updates or skills that are contradictory to the ones that are already been learnt. Therefore, the factors like role-conflict and role-overload are associated with the Technostress (Kahn et al., 1964).

**c). Technostress reduces Job Satisfaction:** Professionals who encounter technological stress and make an effort to manage what they create are certain to develop a poor opinion of their professions.

**d). Technostress lead to decrease in innovation in the task while using technology:** Technological overload, for instance, causes a hasty and inadequate information processing, and as a result, professionals lose out on the creative aspects of utilising Information System to carry out their task. The component called techno-complexity, increases inability and decrease the level of willingness, which act as a hindrance in accomplishing task using innovation by using Information System.

**e). Technostress reduces productivity while using IS in their work:** The Technostress creators which is, techno-complexity forces professionals to keep themselves updated with an application whereas techno-uncertainty, might require trouble shooting and technical assistance all of the sudden and it will result in shut down of the IS enabled work. Techno-overload lead to spending time for an unnecessary information and task and that time can be put up for some important tasks.

**f). Technostress leads to dissatisfaction with the use of Information system (IS) among Professionals:** The professionals who are deprived of techno-overload make it difficult for the professionals to find out relevant and important information due to dissatisfaction. Techno-invasion involves deprivation of privacy, techno-uncertainty can lead to the loss of data and the system can also crash which can lead to high Technostress among the professionals. The lack of pleasure with information systems and numerous applications may result from any one of these characteristics. The

success of an IS has been generally agreed upon and recognized by the users' happiness with it (Smith et al., 2009).

**g). Reduced level of commitment of the professionals towards their organization:**

The goals and values of an organization can be hampered to a larger extent. The dissatisfaction and decreased level of commitment at the workplace can disrupt employee's overall functioning and which is an important asset to the firm.

### **1.1.5 MECHANISMS FOR REDUCING INSENSITIVITY OF TECHNOSTRESS**

**a). Increasing and facilitating through education and training:** it is an important mechanism that sharing and educating the knowledge of IS to the professionals becomes very important. This includes giving training to the professionals on applications and systems so as to increase the awareness about the Information system. This can in turn lower down the techno-complexity so that the users and professionals can be helped to cope up with the new system. This will help in reducing the effects that are produced because of Technostress creators and can help professionals in learning the systems in a rapid pace and decrease in the errors in terms of IS use.

**b). Technical support:** Another crucial tool for somewhat lowering the amount of Technostress IS can offer technical assistance when used. Technology complexity and unpredictability may be significantly reduced with support. A knowledgeable and experienced help desk, for instance, may help the professionals become acquainted to the recently established information system by managing IS-related concerns and inquiries. The support can also be of assistance during the troubleshooting or where there is any error in the system, or any critical situation that is encountered during important work can also be assisted by the technical support team so that any important work is not affected. Therefore, this can actually help a lot in reducing the Technostress and can increase the productivity level.

**c). Support in terms of innovation:** This mechanism describes encouraging the professionals to do more of experiments and to learn from such experiments, which



can increase the level of creativity among professionals. This factor can be useful where the support of the employees is high, communication and discussion should be healthy and effective so that the level of confidence can also be raised to some level. The new and innovative ideas should be welcomed and professionals should be encouraged through rewards and incentives which can help in building healthy environment at the work place. This will help in reducing techno-complexity and professionals will be high on risk taking behavior. The techno-insecurity to some extent can also be decreased and habit of using innovative ideas will be influenced positively.

**d). Assistance for involvement in technology:** This mechanism helps in adoption and development of information system. This mechanism includes the information and advantages of using the new applications as “Why new applications are adopted” and also the planning processes are facilitated to the professionals. This mechanism also includes an encouragement to the professionals to use new applications. The techno-complexity can be reduced to a level wherein professionals be well familiarize with the use of new system before using it by giving appropriate and enough training. This can probably influence and increase the level of satisfaction.

#### **1.1.6. VULNERABILITY TOWARDS TECHNOSTRESS: DEMOGRAPHIC FACTORS**

The two demographic factors have major influence on the Technostress, that is, gender and confidence in using system. In gender, men are prone to be high on Technostress than women, that is, men are likely to experience high level of technological stress than observed in women. Therefore, in a general term, as compared to males, women perceive technology to be more challenging to consume. (Gefen & Straub, 2000). The men use information system when they “want to” but females use information system when they “have to” (Venkatesh & Morris, 2000). Men are more likely than women to freely use information systems, and as a result, men feel greater levels of Technostress.

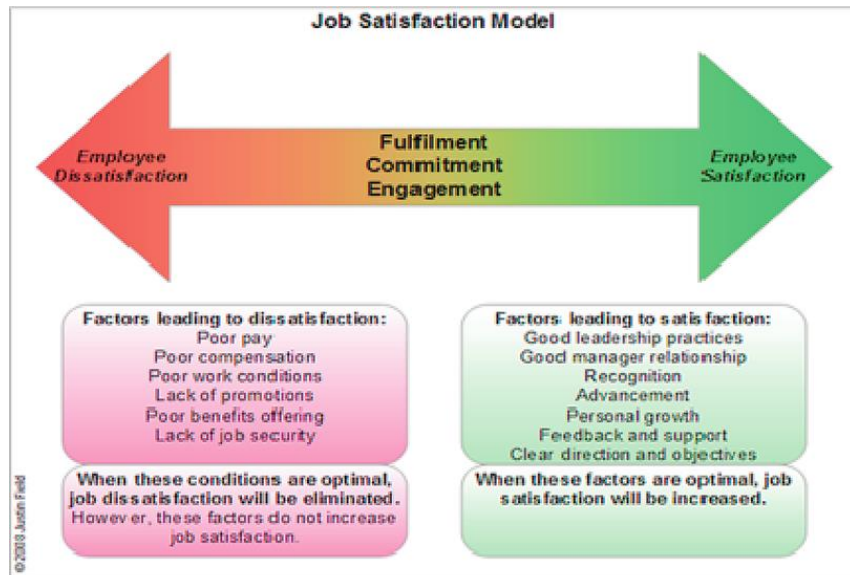
Professionals who have more computer expertise are less susceptible to technological stress. These professionals have more faith in their work and capacity in handling different errors or any kind of disturbances that may arise because of creation of Technostress conditions.

The other demographic factors include age, educational background and experience that have impact on Technostress. The professionals with higher experience may have less Technostress. The other argument contends that because young professionals are more used to technology. They might feel less stress from technology. However, it is also true that senior employees, who have a longer tenure in an organisation, would have better experience and the ability to handle stress associated to IS. The position in hierarchy is also an important factor as the professionals in power will have more choices in the use of information system and will be high on IT related change as they learn from such exposure and thus experience low level of Technostress.

Professionals with higher learning will be more comfortable with computers and have undergone less technological stress. Those with formal technical education would find it easier to adjust to technological stress through their learning and experiences. Professionals who have had greater exposure to computers across a greater amount of time may feel less technological stress since they are more aware of potential system interruptions, upgrades, and changes. Professionals with greater experience will have seen more mistakes and interruptions, and they will be less stressed by technology. Such professionals who understand the culture of an organization to the changes that can take place in relation to IS, the Technostress will tend to be less among such professionals.

## **1.2. JOB SATISFACTION**

Job Satisfaction is the level of contentment workers claim to experience at work. This can actually go beyond of what their daily work at the job and it can include the organisational policies, rapport formation with the colleagues or team members, managers and all these factors influences the lives of the employees in a healthy manner and it in turn influences the Job Satisfaction level of an employee.



Popovic (2021). Job Satisfaction Model, accessible at:  
[https://www.researchgate.net/figure/Job-satisfaction-model\\_fig1\\_283710007](https://www.researchgate.net/figure/Job-satisfaction-model_fig1_283710007)

The term Job Satisfaction is a variable that cannot be quantified and it is said to be a positively created attached emotional response that an individual experience at the workplace or when an employee or individual is present at the workplace. The organizations now are trying to measure this variable by conducting a survey at the rapid pace.

It is right to say that every employee will have variations on Job Satisfaction and it differs from employee to employee. Employees at a company who work in comparable environments may differ in their perceptions of Job Satisfaction. Therefore, it is important though to have multidimensional approach to study Job Satisfaction which could cover mainly the following areas:

- a. Working in challenging situations and taking employees to new heights at workplace.
- b. Level of convenience
- c. Appreciating the work of employees on regular basis
- d. Competitive pay so that employees can have and lead good quality of life
- e. Promising career progression aligned to employees' targets.

### **1.2.1 FACTORS THAT DETERMINE THE LEVELS OF SATISFACTION**

These ten components can significantly contribute to raising employee satisfaction levels in organisations, in addition to providing remuneration, benefits, and other perks.

**a). Care of employees:** It is important here to note that its not only about the care of employees but also to communicate regularly with employees through rewards, recognition, praise, incentives etc.

Employers like Google and Starbucks are among those that are seriously worried about their workers' Job Satisfaction levels. In such organisations employees feel happy and satisfied and their stories of employee happiness and satisfaction sets an example for some organisations to include it as a communication strategies.

**b). Availability of the rooms at the workplace for employees to engage in what they like or indulge in productive hobbies:** In the present time, everyone who is working spends most of their week at the work but that does not mean that we want to ignore our likings or hobbies or in other words ignoring our interests.

It has been observed that working environment seems to be dependent upon the Job Satisfaction of employees. The place where employees can read books, watch news and have a good food lead to Job Satisfaction and where employees are not scared of losing their jobs, will have better Job Satisfaction.

**c). Intervals between the promotions:** This factor plays an important role in the Current fast paced life within the working environment. If the promotions are not there then an employee might look for something better in relation to their experience and at a better place.

The rule of the thumb should be that proper intervals need to be maintained to give the promotions to the employees. For example, if an employee is working for about 5 years, the promotions should be given after at-least every two years' time. If not, then an organisation should at least offer training programmes so that every employee has

the opportunity to investigate taking on new responsibilities inside the company or to alter the company as a whole.

Also, it is also important to inform the employees about the policies and programs about promotion so that they know what they should expect and what not.

**d). Employees' respect for each other:** It is also important that a positive environment and culture should be inculcated in every organization. The work place where employees are always criticized feel dissatisfied in their organization and have job dissatisfaction. The dissatisfaction in an organization can be detected by having a conversation with each employee or by collecting data using survey method. If needed then appropriate measures should be taken to improve the interpersonal skills of employees.

**e). Culture of having two-way feedback:** The staff eagerly anticipate receiving both criticism and positive comments to determine whether they are moving in the correct direction.

The experiences of employees can be shared with the higher authorities including managers, HR, and senior management so that steps can be taken for the future prospect. To keep employees satisfied, it's vital to have a two-way feedback process. It is also therefore very important to implement the feedback that an employee receives. The employee should always try to improve upon and move forward for their own benefits.

**f). Maintaining work-life balance:** The organizations should always try to maintain the culture of high performance and productivity and that should not be compromised with the well-being of employees. The positive work-life balance should be the primary motive of employees.

**g). Rating towards their relationship with their superiors:** It is a known fact that employees do not quit jobs but they quit their superiors, i.e., the bosses. Through a survey, a Gallup study has verified that 75% of voluntary action can be credited to the immediately apparent bosses rather than the job itself.

**h). Fair and inclusive policies followed in an organization:** It has been observed that workplace diversity has a favorable effect on the workplace culture and environment. In an organisation, the fair amount of policies must be in to the consideration irrespective of the employees age, or if any disability and also on the bases of males and females. The variable Job Satisfaction should not be limited to few employees but should be influenced by all companies for all of their employees for their well-being.

**i). Creativity among employees at workplace:** The employees who are high on creativity should have new and innovation solutions for the problems and should look towards exploring many other chances to influence innovative ideas and creativity in their jobs.

Programmes should be created to boost employees' creative abilities and encourage innovation inside the company. The employees' level of satisfaction can rise when such organisations run development programs and encourage them to learn new, creative things. If not, employees might get a little bored doing the same thing every day, which would lower their level of satisfaction.

**j). Job security:** The job security is a concern of importance today as technology turns over the existing norms as technology is something that keeps on changing overnight. Employers who are future focused understand that how technological changes are rapid in nature and transform the work environment in organizations and they should help their employees to be equipped with certain job role transformations in relation to the technology.

### **1.2.2 IMPORTANCE OF JOB SATISFACTION**

Job Satisfaction is an important component at an organizational level. It is the belief and attitude of an employee which influences the behavior of an employee. The attitude and the belief of an employee may influence the behavior either in a positive way where an employee would work hard with efficiency which will indicate the employee's Job Satisfaction. On the other hand, the belief and attitude may also

influence the behavior in a negative way and in turn it affects the behavior in a negative way which leads to the dissatisfaction among employees.

A few justifications for understanding the significance of Job Satisfaction were provided by BasuMallick (2020). Job Satisfaction is seen as a crucial factor in any workplace. The employees' Job Satisfaction can be well explained when employees who seem to be more participative, involved, willing and engaged in their organization, do work for even extra miles if required.

Following are the factors which are essential to measure Job Satisfaction

**a). Employees who are satisfied make satisfied customers:** If employees are not found to be happy at their work place, it will be seen when they interact with the customers. The interaction of an employee will be different depending upon whether they are satisfied or not at their work. The contact centers of large organizations, cannot afford to have unsatisfied employees. The jobs where there is no interaction with the customers, the low satisfaction among employees could create errors in their work, for example defect in manufacturing and coding error during the software development can create the errors. That is why it is seen that employee satisfaction is important especially for the organizations which are customer-centric.

**b). Lowering of voluntary turnover:** It is seen sometimes that the turnover is good for any business, but when the voluntary turnover takes place, an organization might lose the top talent and may lose workers who have trained with your company and have worked there for a long time. The employees who are satisfied have less probability to leave the job.

**c). Increase in the number of referrals:** When a worker is happy at work, there is a higher likelihood that they will recommend the company. The healthiest form of hiring is said to be employee recommendations. It is discovered that 7% of hirings come from referrals. An employee who appears content with the working environment and pay scale is also helpful since they are more likely to refer friends to the company than a dissatisfied employee.

It is also seen that non-compensatory factor is also considered as an important part

of the benefits given to the employees and will also assess this factor before recommending someone in the workplace.

**d). Satisfaction is associated with employee productivity:** it has been seen that organizations having positive work environment, employees tend to work hard to bring their best capacity. Research had concluded that employees who are happy at the workplace bring 20% more productivity than employees who are unhappy at their workplace.

It has also been observed that employees who are highly satisfied at their workplace found to have high probability looking after their employee wellness. Also, they look after themselves and if they have stress, burnout or any health issue, they address such issues before these psychological hazards effect and impact on their work.

**e). HR costs:** Planning both fixed and variable expenses is included in the HR budget in large organisations. The low satisfaction among employees can lead to the dent in the variable aspect of relation with the fixed aspect. The employees who are unsatisfied would go for the exact number of surveys, learning and development in the specialized area, career help.

By building and increasing the level of satisfaction, the organization can actually always look forward to increase in the curve of their profits and should always make sure that there are no causes for the poor Job Satisfaction or issues on related to the same.

Job Satisfaction is a key component in the domains of industrial and organisational psychology, according to Judge and Church (2000). The definition of Job Satisfaction is a pleasant or favourable mental state brought on by an evaluation of one's employment or experiences at work by Locke (1976). Because the people working in an organisation feel a sense of belonging to an organisation, positive psychology views Job Satisfaction as a positive variable. The satisfaction denotes the pleasure, sense of happiness while working in an organization. The satisfaction at the workplace is linked with the appraisal that one gets from their superior authorities or by the management in an organization. The more the Job Satisfaction at the



workplace more is the probability of having job experiences. Therefore, the experience at the workplace can be maintained when one enjoys the work by getting reinforced.

Armstrong (2006) explained Job Satisfaction as the degree to which the workers' appraisal is recognized for fulfilling the needs at work and though fulfilling the individual needs. It also refers to the emotions and attitudes that people carry for their work. If an employee has the positive and favorable viewpoint towards the job it indicates the level of Job Satisfaction whereas a negative and unfavorable attitude indicates the level of job dissatisfaction.

Bernstein et al., (2008) elaborated Job Satisfaction into further three components which are emotional, cognitive and behavioral. The job's emotional component includes the feelings about your employment, including boredom at work, are included in the extent of satisfaction, anxiety or the excitement regarding the job at the workplace. The cognitive attribute includes thought process in relation to the work. It includes the belief in relation to the job for example when employee feels and thinks that the work is demanding and challenging. The behavioral aspect includes the actions required at the workplace, for example staying late at the workplace, being slow, sluggish, lethargic or ill to avoid the work.

Mueller et al., (2008) discussed that the world sees the Job Satisfaction and job facet satisfaction as two different sorts of work satisfaction. When a person says, "Overall, I love my job," they are expressing their overall sentiments about their employment, which is referred to as global Job Satisfaction. The second type of Job Satisfaction, or job aspect satisfaction, relates to other elements and features of the job pleasure, such as an employee's compensation and interaction with others, such as coworkers.

According to Bourne (2020), there are many factors involved at the workplace that influences the working conditions in a favorable or in an unfavorable manner. The research carried by Dobrow et al., (2018) as mentioned in the article where the research was carried out among 21000 participants. Those participants who stayed for a longer time (40-years' time period) in the same organisation were found to be less

satisfied than those who switched to different organisations. Glisson et al., (1988) and Jex (2002) describe the approaches towards the work and they include the job attributes, processes involved in the social information characteristics and employee characteristics.

The Job Satisfaction leads to further components such as performance, absenteeism, turnover which are discussed as below:

#### **a). Job Performance**

There are numerous studies done which shows the relationship between the Job Satisfaction and the performance of an employee. According to Naidu (1996), the research can be traced back from the Hawthorne studies where it was concluded that the happiness of an employee can be seen from the productivity of that particular worker. A study done by Iaffaldano et al., (1985) on the Job Satisfaction and performance and it was found that there is a weak relationship between the Job Satisfaction and Job Performance. The correlation value was found out to be  $r = 0.17$ . An association can be seen between Job Satisfaction and Job Performance. The weak correlation can be attributed to the factors such as the organizational structure or the economic conditions of an organization as there are many jobs designed in such a way that it requires the minimum level of the Job Performance and not higher level of satisfaction. On the other hand, at times of high unemployment, employees who are dissatisfied will actually perform in a better way.

#### **b). Absenteeism**

Cheloha et al., (1980) did a study to see the relationship between Job Satisfaction and absenteeism. In industrial and organizational psychology, the important component to study is to see if employees are really satisfied at their workplace and if not satisfied, is they regular at their workplace or is there an increase in the rate of absenteeism. It is a natural phenomenon that if an employee does not like their job then it is likely that either they will look for a new job or will categorize their self under being sick. Johns (1997) found out that there is a weak relationship of 0.25 between Job

Satisfaction and absenteeism. It is also assumed that if people are satisfied with their job, they would work even if they fall ill but on the other hand, if they are satisfied or dislike their job, they will probably look for taking an off by making different excuses.

### **c). Employee Turnover**

Carsten and Spector (1987), the 42 studies included in the meta-analysis showed a modest and a weak connection between Job Satisfaction and turnover. The economic fluctuations, in which dissatisfied employees might not have alternative options or prospects for employment, might have an impact on turnover. On the other hand, a worker with higher Job Satisfaction may be requested to quit or move. Therefore, a person who is satisfied at their workplace might be least interested to search for new job as compared to the worker who is not satisfied but would definitely be looking to switch to a new job.

When you summarise it all up, Job Satisfaction is a crucial characteristic for every organisation because it is challenging to thrive in one without it. Job Satisfaction tells the level of happiness an employee has while working in an organization. If employee is satisfied, performance will increase not only on individual basis but also shows increase in the level of productivity of an organization.

### **1.2.3 FACTORS LEADING TO JOB SATISFACTION**

There are people who are always happy to be at their workplace whereas there are people who do not like to be at workplace every Monday mornings. We all do work because of the fact to have good and better life and that is why some people enjoy more than others.

The level of Job Satisfaction depends upon many factors and there are many factors which are within the control of an individual, known as individual differences on degree of Job Satisfaction.

According to surveys, demographic factors like age and wealth do have a significant impact on how satisfied employees are with their jobs. It was seen in 2014 that

employees between age 35-44, showed the highest level of Job Satisfaction at 50.3%. On the other hand, employees under the age group of 25 years had least satisfaction

Holland (2019), gave important factors leading to Job Satisfaction and they are as:

**a). Engagement:** It is true to say over here that when one is engaged completely in their work, it means one is present, doing work productively and is focused in whatever one does.

You may believe that you are not employing your skills or abilities to the caliber that one carries, which prevents you from fully immersing yourself in your task. There is probably no question that individuals are more naturally interested in work that makes use of their abilities, such as for an employer's organisation.

It is important to understand that there has to be a clear relationship between your work and the goals of the company so as to find out meaning in the work that an employee does. If an employee is aware of the fact that the job of an employee is benefiting to a larger extent, then an employee would be motivated enough to remain in that particular job without even shifting or looking for another job.

**b). Respect, praise and appreciation:** Whatever kind of job one does, an employee always wants to be appreciated and respected at their workplace. The satisfaction at the workplace is high when employees are being respected and praised for good performance, even if it's a ordinary appreciation or acceptance from the superiors.

Therefore, if an employee feels disrespected and is not appreciated for good work is likely to cause dissatisfaction among employees at the workplace.

**c). Fair compensation:** There has been a rise in the pay which is an important contributor that an employee looks for the Job Satisfaction. It will not be a wrong to say that money is a big motivator. Therefore, employees always look for at least fair compensation for the work and amount of hard work they put during work else they try for another job.

**d). Motivation:** The motivation is always a big contributor towards Job Satisfaction.

It is really worth to consider and understand that the motivation for your job that you already have or the job that one is looking for that help in increasing the Job Satisfaction. Questions like “why did I accepted this particular job” or “what actually inspired to work in the area that I have chosen” can actually predict the level of motivation.

**e). Life satisfaction:** It is unsurprisingly that people who are not happy in their life have less possibility to have Job Satisfaction or to have satisfaction at their work place. In the article by Holland (2019), it is mentioned that the meta-analysis, published by British Psychology Society in 2010, a review of 223 studies, it was discovered that there is a correlation between Job Satisfaction and life satisfaction, and that employees who are generally happy and satisfied with their lives are also happy and satisfied at work. On the other hand, people who are unhappy with their lives are not happy and satisfied at work.

Therefore, an individual needs to give sometime to themselves to nurture and should increase their well-being which will lead to the satisfaction at their working environment.

#### **1.2.4. APPROACHES AT WORKPLACE**

##### **a). Job attributes and characteristics**

The job characteristic is an important component of any organization. According to Hackman et al., (1980), the characteristics of the job would include the features that enhance the working conditions of an employee and it includes higher motivation, high satisfaction and high commitment at the workplace. These elements found to show a favourable effect on an performance level of employee, enhancing the effectiveness of the company. According to Field (2008), the employee satisfaction factors will include good relationship of an employee with their managers, personal growth, regular feedback and support, clear objectives and aims with proper direction towards achievement of the desired goals. On the other hand, employee dissatisfaction would include the factors like poor pay, compensation, working environment and conditions, poor benefits and insecurity at the workplace.

### **b). Social Information Processing model**

The social information processing model is a further elaborated model of Festinger (1954) from social comparison theory when an individual develops an attitude about their working environment and work life conditions either from the coworkers or through the environment where one works. Therefore, it means that the satisfaction at the workplace depends on the coworkers where if an employee sees their coworkers as satisfied and have positive feedback, they would also be likely to be satisfied whereas if coworkers have a negative attitude or negative feedback it will negatively influence the employees.

### **c). Dispositional factors to Job Satisfaction**

Jex (2002) came to the conclusion that at times dispositional factors like internal disposition as the latest method to explain the Job Satisfaction came out with the fact that people are satisfied with their work irrespective of the working conditions or the nature of the work. Some people have a negative view because of their genetic factors whereas some people have the innate positive disposition. Judge et al., (2001) found out that Job Satisfaction factor among employees was based on the dispositional factors.

Watson et al., (1988) talked of positive and negative affect in relation to the Job Satisfaction. Positive affect is the positive mood and positive attitude that an employee experience while working in an organization. It is a favorable experience in relation to the working conditions whereas negative affect, on the other hand, reflects the negative emotions. In a different research by Watson et al., (1988), the positive mood is linked with the positive attributes for example, enthusiasm, optimistic viewpoint, being alert and active every-time as what is going on in the workplace. The negative affect is a experience where an employee has a negative feelings like anger, guilt, fear of being fired.

### **1.3 JOB PERFORMANCE**

Workplace effectiveness is crucial to the success of any organisation. The amount of an employee's pleasure or discontent with their Job Performance is shown by their Job Performance. The Job Performance should be given an importance towards accomplishment of goals of an employee and their organization. The role of Job Performance should gain its attention as it helps in achievement of the objectives of an organization. It is also true to say that employees are the only reason behind the fulfillment of the objectives and aims of an organization and they make the highest contribution towards the success of an organization. This leads to an increase in the level of the productivity of an organization and to the assumption that Job Performance includes the satisfaction and commitment level of an employee towards the organization. It is true to say here that if employees are satisfied and committed towards their organization and its goal it will increase and influence the Job Performance positively. The Job Performance level can also be enhanced by giving proper training, benefits and programs for the satisfactory performance.

Generally, the term performance means an outcome of a task that is being achieved and action that is taken towards completion of that particular task in order to achieve an organizational goal. Viteles (1953) talked further on two components of Job Performance and they are "will to work" and "capacity to work," and they have a favourable impact on the degree of Job Performance. The notion of X and Y in relation to Job Performance was created by McGregor in 1960. According to theory 'X' negative characteristics leads to the low performance whereas according to theory 'Y' positive characteristics results in better performance. According to a research by Vroom (1964), Job Performance is the product of an employee's aptitude twice their level of motivation. Brumbach (1988) opined that performance was because of behaviors of employees and its results. Therefore, the performance of an employee is totally based on the result that is acquired through any behaviour.

Periyasamy (2020) have written a blog on employee performance and the three important factors that improve the employee performance. The employee performance is an important key to the success. It is the duty of every employee of an organization

to work for the mission and vision of an organization.

As per the report of SHRM of 2020, more than 85% of their employees were found not to be engaged at their workplace. So, the ways need to be created to increase the employee engagement which can lead to increase in employee productivity.

### **1.3.1 SOURCES OF EMPLOYEE PERFORMANCE**

Employee performance is how an employee does his duties and whether they are capable enough to meet his deadlines or not. The employee performance can be calculated from 3 different and important sources and they are as following:

**a). Employee themselves:** People are found to be critics of their own. It can be an effective source to ask an employee about their performance. Once employees finish their work, they can be asked to fill up the form to ask them how efficiently and how quick did they completed their task. By this strategy, they would be able to understand as where they are lagging behind and can actually help them to overcome their weaknesses with the passage of time.

**b). Manager:** the reporting manager measure their employees' performance by assessing and give them rating from 1-5 or from 1-10.

**c). Subordinates:** Subordinates includes the employees working under. They does also contribute towards the employee performance in one or the other way.

An online website workplace testing (2020), as updated on 2020, explains Job Performance indicates the level of employee performing his duties. The Job Performance of an employee can have an impact on environmental and external factors at the workplace and those factors include morale of an employee, healthy working conditions, decrease in the risks and possibilities of occurrence of accidents or injuries and one has to then limit for health care premiums. But the common health disease can actually put a financial strain on the organization and on different business, for example, a disease like obesity which increases the risk of developing heart diseases, and disorders like musculoskeletal disorders and even hearing problems too.



The Job Performance of an employee can be assumed by measuring the associated variables such as personality and fitness at work. However, the employees' Job Performance is seen to be impacted by many other factors and such factors are unknown but they do affect the performance of an employee.

Pervin (1968) elaborated performance dependent upon the interaction between the individual characteristics and their actions while performing in an organisation. According to Katz et al., (1978) concept of role performance is both qualitative and quantitative methods of the performance.

Job Performance is the process involved while working in an organisation. It is like an act of involvement at the workplace. According to Campbell (1990), work performance acts as a mediator towards an employee's attempts for an achievement of a goal being as a member of an organisation. Furthermore, to it, Job Performance is not a single acted approach but it is a complex activity. An employee when performs in an organization is a behavior that is involved to achieve a target that involves a success and a productivity in an organization.

Job Performance is a key dependent variable. The two types of behaviour that may occur when performing are task performance and contextual performance, according to Borman et al. (1993). The behaviour that are included in the task performance are full of rewards and reinforcing and on the other hand, the contextual performance includes the behavior that helps in shaping the organizational skills of an employee (Werner 2000).

The variable work performance is an important aspect and attribute in any organization for an employee to put the best efforts according to the ability and capability that an employee possess. An employee, like all other employees want to give and do the best in their job. To lead to good Job Performance, it is important to know for an employee as what is expected from them. To have better work performance it is also important to have an adequate and proper training to give a proper outlook of the job requirements.

The work performance or Job Performance is not a simple process or a one-time evaluation process. It is crucial to understand that Job Performance is a consistent, gratifying sort of interaction between an employee and the supervisor in order to demonstrate a good performance leading to Job Performance. It's crucial to have an employee's support and adjustment with a supervisor in order to accomplish the specified goals (University of Washington, Human Resources, 2016).

Job Performance includes the task an employee undertakes including the different activities and how those activities can be executed, if they are executed well, the employees have healthier work performance or if they do not, then the problems arise. The different organizations have different criteria of assessing the Job Performance. Some organizations assess on annual basis and some on quarterly basis. The assessment is done so that an employee working in an organization has always the scope of improvement. The areas can be assessed that need improvement so that an employee knows their weaknesses and improve upon those respective areas where ever the employee is lacking (WebFinance Inc., 2016).

### **1.3.2 FACTORS OF JOB PERFORMANCE**

Job Performance, on an individual level indicates individual performance is of greater importance both for an organization and an individual too. An employee showing high performances in accomplishing the tasks shows greater amount of satisfaction, mastery and a sense of self efficacy. The Job Performance is expected to be positive if an employee is satisfied in an organization. Therefore, higher the Job Satisfaction better will be the performance at the workplace. Therefore, decrease in the satisfaction level, can hamper the performance.

Research on organisational role stress and work performance among higher education institutions was conducted by Kumari et al., (2017) among educators. According to the report, an employee's Job Performance was affected by their compliance, effectiveness, timeliness, public speaking, job expertise, and interpersonal communication. These elements help to improve Job Performance, which further improves an organisational performance.

**a). Obedience:** The term obedience refers to an individual devotion and faith towards the rules and regulations laid down and policies and the standards that are met and also to obey the decisions made by the management of an organization and sincere efforts laid to achieve the goals that are assigned to an individual and its impact on an individual and on to the others. It is clear that an employee's level of compliance affects how well they perform their job.

**b). Efficiency:** The term efficiency refers to the solutions that an employee comes up to solve the different problems related to an organization. The efficiency includes the will that is shown by an individual and to work in a healthy manner in a pressurized situations and the probable adjustment to change itself effectively. The efficiency of an individual will increase the possibility to perform better and high on Job Performance.

**c). Punctuality:** The punctuality is an important factor to the Job Performance. The punctuality characterizes that an individual is regular in the workplace, setting out the right priorities, doing the duties well whether the tasks are completed well in time or not, is the schedule being followed or not and whether the time is completed before the allotted time or not.

**d). Public dealing:** The factor of public dealing includes the helping behaviour of an employee with the customers or the clients, the level of the queries being solved by him. The public dealing also includes the politeness that an employee shows towards the clients and the effort that is put to improve the relationship with the clients.

**e). Job knowledge:** The factor of job knowledge is also an important factor that enhances the performance at the workplace. The job knowledge indicates the knowledge that the employee possesses the clarity about his goals, knowledge about the technologies being used and the effort that an employee puts in by using his theoretical knowledge into the practical world and also an ability that an employee has in understanding the social, economic and corporate needs.

**f). Interpersonal communication:** An interpersonal communication refers to the communication of employees with others including colleagues, the superiors and the attitude an employee has with the others. The communication also includes the way of

presenting an idea and the participation that is involved in the group activities, for example, group discussions.

As discussed above, all the components play an important role and have relevance in Job Performance. It's crucial to comprehend the link between the variables Job Performance and Job Satisfaction.

### **1.3.3 JOB SATISFACTION AND JOB PERFORMANCE**

An attempt for understanding the relationship between Job Satisfaction and performance is interesting as well as challenging. It has been seen that since the last 50 years, the organizational psychologists have been struggling to understand this relationship. The academics have been working at their best possible level to see if and how Job Satisfaction and performance are closely associated; for instance, an employee who is happy is a productive employee for the organization. There has been mixture of empirical research available to support the hypothesis that there is a positive correlation between the two and their Job Satisfaction leads to the better Job Performance. There is also literature available through the research done by Hampton et al., (1986) concluded the results that it is inconclusive about the hypothesis that there exist of relationship between the two. Therefore because of such ambiguity among the studies of the two, there has always been a need to research and re-examine the variables.

There has always been discussion and disagreement around the study of the relationship between Job Satisfaction and Job Performance. According to the early human relations concept, Job Performance is a direct result of an employee's contentment at work. Judge (2001), Rehman (2009), Davar et al., (2012) did a study and found out that low connection exists between Job Satisfaction and the work output and few researches have been conducted that confirms that an employee who is satisfied will lead to productive result.

The performance of an individual depends on certain factors like the desire and the ability, circumstances, tools, and information necessary to perform well at work, as well as the intention to do the job. In case of environmental problems, the adjustments

at the workplace or an adequate training can enhance and promote the high level of performance. But in case of the lack of motivation, it becomes a challenging task to boost up the motivational level of an employee. Thus, it can be said that an individual's behaviour is complex to understand and so are the issues that study such complex behavioural aspects and hence they are required to be addressed.

It can be said that the different roles that an individual has in his or her daily life has its vital role to play both at organizational and individual level. The term satisfaction is termed as the mixture of three constructs that includes psychological, physiological and environmental factors where employees say that if he or she is satisfied at their workplace or not. The socio-economic factor at the working environment is also a contributing construct for the satisfaction level of employees. Different studies have offered varying perspectives on the connection between Job Satisfaction and performance, but it is clear that there is some connection between the two.

#### **1.4 MENTAL HEALTH**

In the present time, the period of globalization and thus privatizing everything, the behaviour, values and attitudes of people have changed so much in an opposite direction. The money has become such an important component today that people have started worshipping money which results in the increase in the consumerism, individualism and leads to the decrease in the level of sensitivity toward others. The jealousy and envy towards others is increasing at an alarming rate leading towards alienation therefore damaging the person itself. The people at present are full of physical, social and mental insecurities and had overcome the thought process by being materialistic and leading to luxurious life and putting up such impressions for the generations to come. All this have led to the feeling of anxiety, stress, tension, maladaptive behaviour disturbing the health of the people to a great extent.

In the United States, depression is the primary cause of disability for those aged 15 to 44, reported through data released by the World Health Organisation in 2004 (Thomson, 2007). It was also concluded by Thomson (2007) that absenteeism from work because of the depression was estimated to be about \$31 billion per year.

An essential and significant aspect of human nature is Mental Health. It is a

comprehensive notion that is described as a whole condition of three crucial characteristics, including physical, mental, and social well-being—rather than just the absence of one particular disease or condition.

Menninger (1945) elaborates Mental Health as being the most effective and joyful way for people to interact with the outside world and with one another. It is the capacity to behave in a socially responsible manner, keep one's temper under control, and remain intelligent and aware about the environmental factors.

MedlinePlus (2015) elaborates Mental Health as our perception, thought process and also how we act when we cope with the life. The Mental Health also affects how we handle our stressful stimulus or stressors, and whether we are able to cope up with it and how we make choices or alternatives to overcome such stress. The concept of Mental Health is an important part from the period of being childhood to adulthood.

According to The World Health Report (2001) Mental Health includes self-realization of one's mental and emotional capabilities, as well as perceived self-efficacy, autonomy, competence, intergenerational reliance, and other factors. The good Mental Health comprises of well-being, having good authoritative quality, skill, faith in self to achieve and live the life to the fullest.

According to Cramer (1995), Mental Health is the mental attitude and the adjustment of an individual to accept the behavior through the interactions with the others in a social circle or social environment.

According to Hales et al., (1995), Mental Health refers to a person's capacity for rational thought as well as their capacity to deal with the stress and changes they face on a daily basis. The individual needs to be emotionally stable and always look forward for the growth.

#### **1.4.1 WELLNESS AT WORKPLACE**

According to the online article of Mental Health America (2000), published on the topic “workplace wellness”. There are few points that are important to have good level of wellness at workplace. They are described as under:

**a). Productive atmosphere:** it is important to have a productive atmosphere at the workplace. The working conditions and atmosphere should be clean and spacious. The relationship of the staff should be co-operative with each other and all this leads to the absence of the factors like bullying, sexual harassment and fear.

**b). Livable wage:** The employees should be given handsome salary according to their work which would lead to the increase of job commitment and Job Satisfaction.

**c). Reasonable accommodation:** The employees and the employers at the workplace should work as a unit so that the employees who have any physical or mental disability should be treated equally and such employees should be accommodated at an equal level. There could be a chance that people who are disabled physically or mentally are more capable with the use of technologies or at intelligence level otherwise, as compared to the normal ones.

**d). Health and other environmental plans:** The organizations should provide proper health insurance plans so that an employee feels safe and secure while working at the workplace. The plans should include making workplace smoke free, weight loses or programs related to the substance abuse.

**e). Communication process:** The communication in an organisation should always be transparent. The communication should be clear and open so that everything is transparent so that it provides productive atmosphere at the workplace and employees feel satisfied and committed in an organisation.

**f). Work and Life Balance:** Anyone should strive to maintain a healthy balance between their personal and professional lives. In present time, the world is all about the technology and the fact that technology always keep one busy all the time because one is always connected through it. The working hours should be flexible if that could be applicable in an organization.

#### 1.4.2 DIMENSIONS OF MENTAL HEALTH

Srivastava (1983) has mentioned about six of the sub variables under Mental Health. These include having a positive view of oneself, having realistic expectations, integrating one's personality, having autonomy, having group-oriented attitudes, and being competent in the environment. They are further explained as follows:

**Table 1.2: Dimensions of Mental Health Inventory, Jagdish Srivastava (1983)**

S. No.	Mental Health Dimensions
1.	Positive self-evaluation
2.	Realistic Perception
3.	Integration of Personality
4.	Autonomy
5.	Group Oriented Attitudes
6.	Environmental Competence

**Source:** *Adapted from Mental Health Inventory (Srivastava, 1983)*

**a). Positive self-evaluation:** It includes all the aspects of self as how one evaluates himself or herself. If one evaluates and interprets in a positive way, it means that the individual is high on positive self- evaluation.

**b). Realistic perception:** It includes the real perception and not just imaginary. It also means that one is away and free from the misinterpretations and have a broad thought process of the world.

**c). Integration of Personality:** it includes the capability of an individual to understand the others' emotions and to share them as well. It also includes the ability to have a power of good concentration and to take interest in various activities in life.

**d). Autonomy:** It includes having the self-control. It means dependence of own potentialities than dependence on others.



**e). Group Oriented Attitudes:** This includes an ability to work and to progress as others do. It means that one is safe with others while in a group.

**f). Environmental competence:** It includes ability and capability to take the responsibilities to adjust as required according to the situations or an environment. It includes the efficiency of an individual to meet the requirements as needed according to the different situations.

### **1.4.3 MENTAL HEALTH PROBLEMS AT WORKPLACE**

The research done by Mancuso (1990) extracted from Centre for Psychiatric Rehabilitation explains that Mental illness interfere with the capacity of an individual at the workplace, therefore in other words it can be said that mental illnesses adversely affect the capacity and ability of an individual to perform well at the workplace. The person is already aware of the fact when mental illness hampers the person's ability to concentrate and communicate effectively. People can have different levels and types of Mental Health issues and the reasons can also vary. Some of the problems and issues are discussed as follows:

**a). Problems related to the environmental stimulus:** There can be many different environmental problems that can affect the Mental Health of the workers. The problems or environmental stressors can be sensory that can become the biggest distracter that effect and hampers the Mental Health.

**b). Concentration problems:** The problems which are environmental in nature can actually lead to the problems where employee may lose his concentration over his work. The person can start feeling restless, leading to shortening of span of attention; can be easily distracted from his work or task, difficulty in focusing on one task for longer period of time.

**c). Physical problems:** The problem with mental illness lead to lower down the stamina power. The person might have difficulty in walking for whole day.

**d). Time Pressures and multiple tasks:** An employee may face trouble in managing their assignments, setting up of priorities and meeting the deadlines for the multiple

tasks.

**e). Interpersonal relationships:** It means interacting with others, talking to the colleagues and to coworkers. For example, having positive and healthy relationships with coworkers and colleagues.

**f). Negative feedback:** It is important to accept the negative feedback as it can improve upon the performance and can lead somewhat to have positively enhanced Mental Health. It is therefore very vital to understand and have knowledge in respect to improving the Mental Health.

**g). Readiness to change:** It is also important that one should be ready to change. The rules, responsibilities need to be channelized and an employee should be trained by introducing to the task being allocated.

#### **1.4.4 IMPROVING MENTAL HEALTH**

Howley (2019) elaborated on the 5 ways to improve the Mental Health and they are as following:

**a). Healthy Diet:** A nutritious diet is essential for maintaining excellent Mental Health. It is always recommended to have a healthy and a balanced diet, therefore, it is even fine to have chocolate instead of an apple. After all we are humans and a craving to have a chocolate can always pop in. Eating healthy diet does not mean having the salad but healthy diet is to have a balanced diet. There are number of foods that do help to change the mood and they are:

**b). Chocolate:** There is a research saying that chocolate makes an individual happy specially after eating dark chocolates, consuming about 1.4 ounces every day for two weeks which tends to reduce the stress hormones, a study conducted by Nestle Research Centre in Switzerland.

**c). Carbohydrates:** Carbohydrates do not make a person fat but they boost up the mood. It has been seen that people who had low carbohydrates, experiences high level of depression and anxiety than people who are on high carbohydrates.

**d). Coconut:** When an individual is stressed, the fragrance of coconut may trigger the natural 'fight or flight' response leading to slow down of the heart rate. A pilot study was done in Columbia where it was seen that people who breathed in coconut scent saw their blood pressure recovered quickly after a challenging task given to them. The researchers have been up to the scenario that pleasant fragrance influences alertness and our response to stress is enhanced positively.

**e). Tea:** The researches have concluded out that drinking black, green tea improves the attention and focus. It is because of the amino acid that is present in the tea that can improve and increase the state of mind.

**f). Sleep:** Proper sleep is considered to be good for immunity. It improves upon the immunity system. According to the lifestyle people have at present, most of us do not get enough sleep. In an average a person should have eight to nine hours of sleep at night instead of five to six hours. So, it is very important to have enough sleep so that we feel fresh and it does not affect the Mental Health.

**g). Alcohol and drugs:** No dependence to the alcohol and drugs should be the important point to consider. It is fine to take alcohol once in a while or on any special occasion. But it is always advisable not to overdose over the alcohol. People do consume alcohol if they are depressed but remember there is a next day to the life as well. So do not be dependent over the use of alcohol. Drugs should be fully avoidable under any circumstances. People should always say no to the drugs as they are very harmful and it effects our body and our Mental Health to a larger extent.

**h). Exercise:** Exercise do not mean going to gym every day to have a healthy mind. The moderate exercise can actually help a person a lot to be healthy and improve upon the self-esteem. Whenever a person feels low, one should go out and have a walk while listening to the music. It is a proven fact that 20minutes' walk can change the mood of a person.

**i). Talk to someone:** This point is considered to be the most important one. Sometimes the above points do not work because when there is something in one's mind but we do not want to share the aforesaid things with others because of one or the other reason. It is very important to share and talk about the things and tell

someone about the feeling that one is carrying because if we do not talk, the cognitive distortions happen and it turns one into a Mental Health victim. So one should always talk to a friend, family member or anyone whom one can trust upon.

In relation to above content, we summaries at the end that technostress is said to the stress because of an inability of an individual to cope with the technology. The technological advancements and changes have no doubt led to ease the tasks at high percentage but still there are people who cannot handle it properly at their workplace. This lead to decrease in the level of the Job Satisfaction and Job performance of an individual and lead to effect the Mental Health leading to not just psychological but also lead to the physical problems as well. In the next chapter, we will be exploring the research studies on the variables as in the current research.

CHAPTER II  
REVIEW OF  
LITERATURE

## **CHAPTER II**

### **REVIEW OF LITERATURE**

The variables in the present investigation are statistically correlated according to the previous research studies. According to the literature available, Technostress is found to be negatively related to Job Satisfaction, Mental Health, and Job Performance of employees. Job Satisfaction has been positively correlated to Job Performance according to the existing literature. Employees' Job Satisfaction, performance on the job, and Mental Health are all impacted by technological stress. However, in the previous research studies available, all the variables are not collectively studied.

The current study aims to examine how Technostress affects IT workers' Job Satisfaction, performance on the job, and Mental Health. There are studies that show how technological stress impacts IT workers' Job Satisfaction, performance on the job, and Mental Health. There are also research studies that show that gender differences do exist in Technostress. Therefore, the present section showed the available literature of the variables under the present investigation.

The literature on technological stress focuses mostly on the negative effects that occur when a person cannot keep up with technology advancements and elements. The goal of this research is to build and create a strong theoretical baseline for future investigations on the degree of Technostress that people feel as well as to take additional measures to reduce it. It will also help in understanding as in what literature has been saying by looking to the different relationships and effects that other variables with Technostress can exist. It will also try to see how psychological stress and technological stress enrich and relate with one another.

Bondanini et al., (2020) reviewed the scientific studies on Technostress critically. The knowledge to this topic and subject was enhanced to fill up the research gaps and future bridges to the area. Though it is considered to be the global topic and the research aimed to manage the already existing references and knowledge and to fill up the gaps in this area. The mainstream journals from Web of Science (WoS) comprised of the journals, authors where the debate on the topic "Technostress" could be search upon. In the article, the major contribution lied to the fact that used scientific enquiry

with the scientometric meta- analysis

A review on Technostress by Torre et al., (2019) in which a qualitative analysis was done of 105 studies, 84 cross-sectional studies were carried, 8 were experimental based research studies and 13 reviews were done out of which 11 were narrative and 2 were systematic reviews. 70 studies found out to be addressed with work related Technostress, 26 studies were addressed to non-work-related Technostress, and the 8 studies could not be differentiated between work and non-work-related studies. There were about 38 studies which described the presence of Technostress and also the level of Technostress. About 53 studies described the causes of Technostress as well as its effects. The antecedent factors associated with the Technostress were found to be reported and discussed in 47 studies whereas the symptoms of Technostress were found to given only in 11 studies. The study found that technological stress has an influence on an employee's personal and professional life. It may also have a long-lasting adverse impact on Job Performance, life satisfaction, and Job Satisfaction. The Technostress is also found to be associated with the onset and occurrence of psychological disorders. The cohort studies should be done to recognize the situational factors, looking in to factors leading to high risk of symptoms of Technostress. The steps should also be taken towards prevention of the progressive percentage linked to Technostress.

Technostress was the subject of a research by Riedl et al. (2012) to determine its neurological effects on people. The study primarily focused on the finding that system failure raises Cortisol levels in computer or IT users. Information and communication technology does have certain good effects at several levels, including the individual, organisational, and social levels. Users of technological machines have been documented to sense stress, according to scientific study and anecdotal research, which has shown that human-machine interaction at both the personal and organisational level has occurred. Technostress is the name given to this form of stress. Numerous research studies have used questionnaires to examine the nature, causes, and effects of technological stress, according to a review of the literature. Laboratory tests are conducted to investigate the impact of system failure on the human stress hormone cortisol levels. The study's findings revealed that when people

engage with computers, their levels of cortisol rise noticeably as soon as the system starts to malfunction.

According to research by Ayyagari et al. (2011), technological stressors include components like usefulness, complexity, dependability, anonymity, and velocity of development. Data from 661 experts was gathered. The findings showed that intrusive technology features were the leading predictors of stresses, and that job overload and role ambiguity were the stressors that were determined to be the most prevalent ones.

Ramakrishna (2007) wrote an article about the structural equation model did prove a hypothesis that Technostress is a variable as a prediction to the job strain and also that Technostress does exist in an organization. The other stressors that lead to the Technostress is work overload and role ambiguity. The workload is a usual thing when working in any organization but though it has a connection with the stress and also to the technologies that are leading to the stress which is Technostress.

Research done by Shimoda (1988) on advanced information society. The research concerns about the technological aspects and it's concerned to psychological and physical effects. As the increase in technology is observed the factors such as usage of computer, office automation equipment have been widely in used at very rapid pace and with this usage the mental and physical fatigue have risen which turned out to be called as Technostress and health injury have now became the social issues. The paper addresses that some people address Technostress as the psychological unrest created by masses or because of regular working on the computers. There are researchers and peoples conducting research and investigations on stress caused by continuous working on different technological programs and collecting information related to the symptoms. The causes of Technostress are different depending on the kind of computer related work one is engaged in and also kind of computer related labour that a person is putting in, therefore it is important to have countermeasures against it. Therefore, Technostress is much concerned with the individuals' life style and the climate in organizations and industries too.



According to studies on Technostress done by Champion (1988), Poole and Denny (2001), Harper (2000), Kupersmith (2006), Van Fleet and Wallace (2003), Bichteler (1987), and Sami and Pangannaiah (2006), the issue of Technostress is still present in many organisations.

## **2.1 TECHNOSTRESS AND JOB SATISFACTION**

There are many investigations carried out to study the Technostress and Job Satisfaction. Pullins et al., (2020) completed study on the dark side of the sales. The study emphasized on the topic as how Technostress affects the professionals working in the sales. The study collected a data of sales professionals. The study concluded out that Technostress resulted in the decrease of level of Job Satisfaction and increases roles stress of the sales professionals. The study concentrated on the applications for sales professionals, recommending that organisations adopt Technostress inhibitors to aid in minimising its effects so that the stresses experienced by sales professionals may be reduced.

Marchiori et al., (2020) conducted a study in the Brazilian public sector to investigate the connection between technological stress, Job Satisfaction, and organisational commitment. Data that was gathered from consumers of Brazilian public organisations was analysed by the research using structural equations. The findings indicated that technological stress has a negative impact on satisfaction, which in turn has a favourable impact on commitment.

Ansari et al. (2019) undertook research on the effect of the variable Technostress on employee happiness and perceived performance. The sample of Qatari citizens was studied using the convenience sampling technique. Technostress, according to the study's findings, has a considerably detrimental impact on work satisfaction, whereas Technostress inhibitors were found to have a significantly favourable impact. It was shown that the organisational commitment was significantly positively impacted by work satisfaction.

Karimi et al.'s (2018) study focused on the relationship between Technostress and satisfaction with work for librarians working in Ahvaz public libraries. The purpose of the study was to investigate the relationship between technological stress and work

happiness. Through the use of surveys, the relationship between technological stress and work satisfaction was examined. As a result, correlation was employed to analyse the data. 71 people made up the study's whole sample size. The Raghu-Nathan Technostress scale from 2008 and the Minnesota Job Satisfaction Questionnaire from 1952 were the measures employed in the study. Multivariate regression and the Pearson correlation coefficient were employed as statistical tools with SPSS. The results showed that work satisfaction, technological stress, and its dimensions had an unacceptable statistically significant relationship. Technostress includes a number of factors, including work satisfaction, technology overload, technology inflow, technology unpredictability, technology complexity, and insecurity. The findings of the regression analysis showed a relationship between technological traits—such as technological overload, inflow of new technology, uncertainty regarding its future, complexity, and insecurity—and work satisfaction among librarians. The strongest predictor of Job Satisfaction was determined to be the intricacy of the technology. The research demonstrates that as technology became more complicated, Job Satisfaction among librarians decreased; as a result, the report makes a strong case for librarian training.

Gamst et al., (2018) did a study to investigate the Job Satisfaction in technological time and Job Satisfaction in olden days. When compared to how work was done in traditional industrial sectors, using high technology has made a significant difference. The study was done using the sample size of 1509 employees taken from Silicon Valley and no reliable differences were found in industrial sectors on the level of the Job Satisfaction. The study also concluded that the degree of Job Satisfaction was same on high technology and the traditional work but the differences were found among the different social classes at the workplace. The study also challenged the fact that high technology in future will be more satisfying.

Suh et al., (2017) conducted research on technological stress and how it affects teleworkers' Job Satisfaction. The study's findings indicate that teleworkers' usage of technology and job requirements lead to Technostress and lower Job Satisfaction. It was also shown that teleworkers with low intensity of teleworking are more susceptible to Technostress than teleworkers with high intensity of teleworking. This

relies on the intensity of teleworking.

An empirical examination on the effects of the Technostress was conducted by Chen et al. (2016). The influence of Technostress has truly developed into an issue that cannot be disregarded in today's society as the adoption of information technology in organisations grows. The truth is that technological overdependence was the root cause of Technostress, and studies have always looked at the effects of technology from the standpoint of the workforce. 221 Chinese knowledge workers participated in the study, and it was discovered that Technostress had a more extensive detrimental impact than had been shown by other studies. As a result, the impact of Technostress had a negative impact on how satisfied the employee was with using information and communication technology.

Research on the impact of information security Technostress on workers' Job Satisfaction was conducted by Park et al. (2016). The data from the employees was gathered using the survey approach. The study placed a strong emphasis on examining the impact of information security Technostress on each person's Job Satisfaction and experimentally examining the connection. The findings indicated that information security needed to be strengthened and that Job Satisfaction was adversely correlated with technological stress. The findings revealed that labour productivity decreased when information security technological stress rose.

Tak et al., (2015) carried out an investigation to determine the effect of technological stress and workplace connection on Job Satisfaction. 345 users participated in the survey. The research model was put to the test in this study based on prior studies showing that elements such as technological stress, work connectivity behaviour after hours (WCBA), and technological stress blockers have an impact on work-life conflicts, which in turn affects workers' Job Satisfaction. Technostress blockers and Job Satisfaction were revealed to be significant considering the study's findings.

Anyaku et al., (2015) did a study on technology and Job Satisfaction in academic libraries. The study used questionnaire to collect data for the study. The 124 copies from academic librarians were obtained and the result was obtained to those responses. The conclusions drawn from the study showed a strong relationship

between leadership style and work satisfaction among librarians. Additionally, the study found a link between work happiness and librarians' cheerful views about the profession's ongoing relevance in the digital era. Librarians also reported that technology has advanced quickly and created services that have allowed them to improve their own lives. The multiple regression analyses conclude out that irrespective of males or females librarians, In respect to the use of technology, their age and education were not shown to be substantially correlated with their degree of work satisfaction.

Tarafdar et al., (2014) conducted a study to determine the effect of technological stress on user happiness and performance. The paper's objective is to comprehend as how the negative effect of Technostress as how end users perceive the application that they use satisfactorily and to improve upon the performance at the workplace. The second aim is to identify such techniques to alleviate such negative effects.

A study done by Fuglseth et al., (2014) to see the effect of Technostress among employees who are used to the technology of information and communication. The study's goal was to provide management and managers with tips on how to deal with the damaging impacts of technological stress on workers. The study found out the result that when Technostress was lower down to some level, It has an impact on employee happiness and has increased employee use of information and communication technologies. As a result, the investigation produced useful finding that if strategies can be implemented to reduce the level of Technostress, the management should take into consideration so that a positive and healthy environment can be created in an organization.

Khan et al. (2013) performed an empirical study to look at the relationship between work satisfaction and technological stress. The sample size for the self-administered questionnaire used to collect data was 148 librarians from the public and private sectors. The three assumptions about how different characteristics of technological stress and Job Satisfaction were tested using multiple regression, and it was discovered that all three hypotheses were supported. The study revealed a substantial inverse link between Job Satisfaction and technological stress. The study will aid in

reducing stressed-provoking technological settings and raising Job Satisfaction among librarians at Pakistani universities.

Khan, A. (2013), quoted a research done by Ayyagari (2008) in which the relationships between technological stress and work happiness were studied, came to the conclusion that there is an inverse correlation between the two. It also elaborated that technological uncertainty is one of the strongest predictors of job dissatisfaction among employees. Sinha (2012) asserts that workers under technological stress at work are less effective and content with their positions.

Khan et al., (2013) conducted a study to investigate the relationship between technological stress and Job Satisfaction. The Pakistani province of Khyber Pakhtoonkhwa's librarians made up the sample. There were 148 people in the sample, and 120 completed surveys were returned. To determine the outcomes, the Pearson correlation technique and regression were computed. The study's findings demonstrated a negative and substantial relationship between the 3 of the Technostress constructs and Job Satisfaction.

Qiu (2013) conducted a study in New Zealand to determine the impact of technological stress on Job Satisfaction and organisational commitment. A sample size of 215 New Zealand-based employees was used for the investigation. According to the study's findings, technological stress was found to be the strong strong predictor of the variable Job Satisfaction. It will be right to say that the technology will always be changing because of the competitive nature of the organizations. The world of technology is an ongoing process where advancement is a continuous process.

According to research by Ayyagari et al. (2011) employees who experience high levels of Technostress are less productive, satisfied with their jobs, and committed to their employers, and the similar findings were also obtained by Tarafdar et al. (2007).

A research study by Ragu-Nathan et al., (2008) Technostress along with organisational commitment have been examined, and it has been discovered that Technostress blockers boost organisational commitment and work happiness, whilst

Technostress creators lower both. The study also discovered that factors including age, gender, and education had an impact on technological stress. According to the research, various elements of Technostress, such as technical complexity, technological insecurity, technological overload, technological invasion, and technological uncertainty, are correlated with job dissatisfaction.

Pors (2003) found a strong relationship between Job Satisfaction of librarians, their level of technological stress, and other demographic characteristics. In the investigation carried by Corbett et al., (1989) concluded that due to the advancements in the technology in an innovative way had led to the conclusion that employees' levels of Job Satisfaction are declining.

Jex (2002) noticed the behavior of employees that people do evaluate their experience at the workplace whether they like or dislike their work. Their work is assessed by their own self and that is how employees termed it as satisfaction or dissatisfaction towards their work and that is how employees say whether they are high on Job Satisfaction or high on dissatisfaction.

## **2.2 TECHNOSTRESS AND JOB PERFORMANCE**

Upadhyaya et al., (2021) conducted study to determine how technological stress affected university students' academic output. The study of the detrimental consequences of technology during the last two decades was done because it was urgently needed. There has been literature about the research that have been conducted to study the Technostress among the working professionals. There has been extensive increase in the digital devices used in the academics, but there aren't enough studies looking at how common technological stress is and how it's affecting students. The investigation of the effects of technological stress on students' academic performance was the main objective of the study. It was discovered that pupils' academic performance was negatively impacted by Technostress.

Wang et al., (2021) conducted a study to see the how technological stress have an effect on the productivity of university-based instructors at the higher education level. According to the findings, the university professors' ability to do their jobs effectively

was significantly impacted by the Technostress creators' technological complexity and instability. Techno-overload was found to be positively associated with their work performance. There was no gender differences found among university teachers on Technostress. The study has given policy makers evidence-based guidance for creating ICT learning and teaching methodologies for university-based instructors who utilise technology in their job.

Tagurum et al., (2017) conducted a study to determine how Technostress affected academic staff members' Job Performance and coping mechanisms in Nigeria. The general feeling of having unfavourable ideas, attitudes, and a sense of worry when a person is obliged to interact with technology, however, is connected to Technostress. As a result, it may cause poor Job Performance to occur, as well as lower staff productivity. The different coping that can help includes having user friendly software, communication and sharing of knowledge among the employees, encouraging employees to experiment and to do something innovative with the new technology. 144 academic workers from the university's 12 faculties took part in the study. The study used a multiple-stage sampling method. The research was found to be descriptive and cross-sectional in nature. The study's findings revealed that, while some respondents (78, or 54.2%) did not feel Technostress, others did. Technostress had a somewhat negative impact on Job Performance for 57 respondents (39.6%), a negligible impact for 47 respondents (32.6%), no impact for 27 respondents (18.8%), and a considerable impact for 13 respondents (9.0%). Neck pain and impaired vision were two of the most prevalent side effects of technology, according to 66 (45.8%) respondents. The respondents rated technology-based techniques (87, 60.4%) and solid time management (87, 60.4%) as the best ways to deal with Technostress. The study's conclusion was that all academic staff members at the institution ought to have access to training in technology-related stress management. All university employees should have access to the high-speed internet network. More technologically savvy staff members should be hired by the institution in order to lessen the academic staff's load of Technostress.

Wang et al., (2017) studied how technology stress and non-technical stress interact to affect an employee's performance. The organizations are introducing few technologies

at very fast pace and so is employees' sufferings. The employees keep on adapting themselves to the new technologies by understanding their functionalities and also spending their more time and efforts so that they are updated with the new technological skills that are essential for new technologies. Therefore, the sufferings are getting worse in the form of Technostress, which information system research has studied in great detail. According to the research, job stress is caused by a variety of factors, including non-technological pressures like time constraints and management expectations for increased production levels, in addition to the usage of information technology (IT). In other words, the combination of technical and non-technological stress affects employee performance.

A study on technological stress was undertaken by Brooks et al. (2017) to ascertain the impact of social media on employees' performance at work. It has been noted that Technostress because of the social media had many of its accidental results and it does negatively influence the Job Performance. The study's findings indicate that technological stress caused by social media is negatively connected with work performance. The negative effects of social media are magnified when an employee's job attributes are poor.

Ansah et al., (2016) conducted research to determine how Technostress affected the performance of the banking employees. The change in the technological aspects has changed so much in the workplace of all organizations in the present time. There is no doubt that the work is carried out at faster rate and also with more efficiency but still many employees does not feel comfortable working on technology because of rapid changes and uncertainty. As a result, to this, the employees feel technological stress (Technostress) leading to the negative results in the workplace like banks as in the study. A survey methodology wherein self-administered questionnaires were used and the sample size of 400 banking staff were employed. The survey found that employees felt mental strain and worry as a result of having to keep up with the speed of new ICTs. As a result, it may be concluded that technological stress is hazardous for employee performance. The research made the recommendation that management should offer suitable training programmes to create a better atmosphere.



Jena (2015) conducted an empirical experiment to look into how technology stress affects Job Satisfaction. The study was conducted among academicians in India. Because of the information and communication technology's fast advancement, the modern world is becoming increasingly stressful. It has been seen that the academic institutions do use and depends upon technology to do teaching, learning and for research purposes. The excessive use of technology by academicians has led to the increase in the level of Technostress among them. According to the research, technological stress has caused a decline in Job Satisfaction, which leads to dissonance in the workplace. The study has shown a negative impact of Technostress creators on the Job Satisfaction.

Suharti et al., (2014) objective of the study was to if the level of technology competence and workload effect the employee performance and though, Technostress was taken as an intervening variable. The total sample collected for this study comprises of 138 people working as engineers at production and engineering department of the company. In addition to conducting interviews, questionnaires were used to obtain the data. The data analysis employed structural equation modelling, or SEM. The study's findings demonstrated that workload and technological proficiency had a substantial impact on Technostress. The study also demonstrated a substantial association between employee performance and workload, with technological stress acting as an intervening element.

Tarafdar (2014) conducted research on Technostress and its effects on end-user performance and satisfaction. Data from 233 ICT users in two businesses was gathered, and it was discovered that the elements that raise Technostress lower satisfaction with the level of performance, productivity, and innovation that people put into their work. This paper had put its contributions into the available literature by highlighting how Technostress influences Job Satisfaction and Job Performance with information and communication technologies (ICT) users.

According to Tarafdar et al. (2014) study, the factors that contribute to Technostress, such as innovation, performance with technology enabled, and overall performance, were investigated. A survey including 237 sales professionals was undertaken. In

contrast, mechanisms like technological self-efficacy and information systems have decreased overall performance as a result of the Technostress creators. This was discovered from the study. For instance, increasing technical skill decreased the negative effects of Technostress generators on performance.

Longinus et al., (2013) conducted research on managers and accountants working in Nigerian banks and the different brewery industries. The banking and brewing sectors in Nigeria were the study's main areas of interest for middle-level and senior managers. Respondent responses were collected through point Likert scale and the opinion survey technique. The study's findings indicated that the performance of middle-level and senior managers in the banking and brewing industries had not been considerably harmed by technological stress. The result also found that there was no significant increase in the ill health of managers in Nigeria and brewery sectors. The study finally recommended the organizations should have contract with the clinical psychologists and occupational therapists so that they can deliver health lectures on Technostress and other computer trainings should also be given to employees.

An empirical study by Wang et al., (2008) on Technostress and Job Performance was done among Chinese employees. According to the study, there is a strong inverse association between technological stress and staff productivity. The study was done to see an effect of different environmental settings on different levels of employee Technostress. It was found that organizations that are highly centralized and innovative have high levels of Technostress whereas organizations having low centralization and innovation, the Technostress was found to be low. The research focused on understanding and lessening Technostress and increasing employee performance.

The use of technology had made the work easier and comfortable for employees in different organizations. Tarafdar and Ragu-Nathan (2007) concluded out that the use of ICT have increased the Technostress among the workers and there are so many factors that makes difference to the learning of the new technology and they are age, competency in handing the new technology, attitude in adopting new technology, job insecurity, programs leading to the stress management.

Salanova and Schaufeli (2000) investigated the consequences of Technostress on organisations. It was found out that the Technostress is leading to the increase in absenteeism among employees and lead to the low performance among employees. The absenteeism among employees is due to the dissatisfaction which is decreasing the quality of life among employees. The low performance among employees can be due to the misuse and abuse of technology at workplace. The research has also concluded that to remain intact with the technological usage, employees have to work for long hours by giving their time out of their personal accountabilities.

Clute (1998) concluded out that the level of Technostress is because when an employee has lack of experience to handle the technology or usage of the computers, have anxiety while performing on computers, improper training, not enough staff are some of the factors that contribute to the Technostress. In a research by Agut et al., (2001) concluded out finally that gender has nothing to do with Technostress.

According to a study by Raftar (1998), Job Satisfaction, Job Performance, and technological stress are all correlated. Technostress and Job Satisfaction have a favourable association. It further implies that higher performance is a result of employees feeling at ease with new technologies. Contrarily, a research by Pors (2003) discovered that technological stress considerably lowers workers' Job Satisfaction.

### **2.3 TECHNOSTRESS AND MENTAL HEALTH**

Borle et al., (2021) conducted research on the social and health effects of digitization on the workplace, as well as how exposure to ICT has impacted the health of various socioeconomic strata. Between 1959 and 1965, there were 3180 participants in the study, and cross-sectional data from this group of people was examined and analysed. The usage of ICT and digital work intensification with regard to mental and physical health as well as work capacity was evaluated using multiple regression. According to the study's findings, 92% of the participants said they used ICT at work. A comparable percentage of people did not experience digital work intensification, whereas 20% reported significant levels of it. ICT was not shown to be substantially connected with either Mental Health or job capacity in the study's whole sample, according to the results of the bivariate analyses. The intensification of digital labour

has a negative impact on workers' abilities and Mental Health. In the hierarchical multiple regression, increase in the digital work have shown to be negatively associate with Mental Health and work ability.

The study further concluded out that use of ICT was not found to be negatively impact the older workers. The increase in the digital work may be related to have worse Mental Health and work ability.

Castillo et al., (2020) conducted research on the teacher's technological stress in Chilean schools. Because teachers have not adapted to the technological environment, the increased use of information technology in the educational sector has resulted in Technostress. The goal of the study was to look at the levels of Technostress that 428 elementary and secondary school teachers were experiencing. According to the study's findings, 11% of Chilean instructors experienced both techno-fatigue and techno-anxiety, while 12% of teachers reported feeling either way. The results also showed that compared to their female counterparts, male teachers had higher levels of techno-anxiety and techno-fatigue.

Torrano et al., (2020) studied the stress variables affecting female academics in online universities. According to the study, the most significant risk factors are emotional tiredness, lack of a timetable, time constraints, and mental overload. Information and communication technology use and growth were shown to be connected to these risk variables. The study also emphasised the need for more research in the future in order for groups to implement programming for the Mental Health of the affected teachers and to protect them from pressures and other psychosocial risks of being impacted.

Thorsten et al., (2020) conducted research on technological stress and occupational Mental Health. Examining the role of work in the modern economy was the aim of the research project because of how deeply ingrained digitalization is in our society. Therefore, the need has arisen to see if the digitalized technologies increase the level of the stress and lead to affect the Mental Health. The research study's findings indicated that digital technologies were connected to psychosocial demands such increased workload, complexity, conflicts that arise between the job and both other spheres of life and psychobiological stress responses. However, due to the lack of

epidemiological studies, it was unclear from the research whether technological stress causes mental disorders. According to the research, properly- designed digital work may promote health by fostering and optimising more flexibility, as well as by boosting control and autonomy at work. The research was further summarised with the inclusion of the statement that possibilities and threats exist for employees' Mental Health when working in a digital environment. Further research is necessary to discuss the benefits and drawbacks in more detail because the current research is insufficient to draw any firm conclusions.

Hassan et al. (2019) conducted a study on how to handle Technostress. It is true that the advent of the modern, inventive computer era has given humans numerous advantages and conveniences, However, utilising computers has a darker side as well. Technostress, a novel form of stress, is more likely to affect workers and consumers who use information and communication technologies (ICTs) excessively. The use of artificial intelligence in evaluating Mental Health is a new approach that will help both doctors and patients in the future by transforming the diagnostic method into one that is computer assisted and makes the detection easier without the assistance of the physician's presence at all times.

Nimrod (2018) conducted research on technological stress and how it affects people's wellbeing as they age. An innovative scale created to assess Technostress in older persons was used in the study. Five major factors were examined by the scale: invasion, complexity, violation of privacy, and inclusiveness. Before being given to 537 internet users for an online survey of seniors, the 20-item scale was examined in a pilot study. The study came to the conclusion that technological stress may endanger one's health later in life. The study focused to look and explore the causes and result and to look into the intervention techniques to decrease the harmful effects of ICT users.

Beckhoff (2017) conducted a study on how older, middle-aged, and younger employees of various age groups used stress, burnout, and Mental Health in relation to information and communication technology. Age was discovered to be considered as an impact modifier in the quantitative studies on Information Communication Technology (ICT) and stress burnout that were done in various work contexts. There

were study consisted of 29 cross-sectional studies, 4 cohort studies, and 2 intervention studies. Unlike interventional studies conducted in industrial contexts, cross-sectional research does not, it was shown that ICT use was related to stress. In several of the research designs, it was also shown that there was a continuous link between ICT and burnout. Age and Technostress did not show any patterns or a linear relationship.

Atanasoff et al., (2017) wrote an article on Technostress at the workplace. There is no question that technology improves, multiplies, and multiplies the effectiveness of work at the workplace, but even so, technological tools may have adverse effects on an individual's cognitive, psychological, or physical health. They may also have negative effects on an organisation, for instance by lowering employee commitment and satisfaction. After reviewing the research, the author offers suggestions for raising awareness of ICT concerns in connection to perspectives on career growth, job stability, and health and wellbeing. The further more research is required so that an identification of the employees at higher risk or adverse risks can be helped, career related aspects and to have better coping strategies and resources for the professional development of the employees.

Kool et al., (2016) did theoretical research on titled "Behavior in the Virtual Environment". Today's environment allows us to imagine living without a cell phone, access to a computer, or a laptop. The number of smart phones, purchasing things online, for example Amazon or other portals have been increasing in today's world. The paper not only talks about the formal usage of technology but also the way people are using the technologies and its dependence for social relationships. The use of such technical elements has resulted in pathological consequences. Internet addiction, cyberbullying, technological stress, and mental overload are on the rise just as the cold and flu are now. The research also focused on the impact that technology have on the cognitive aspect, motivational aspect too.

Schellhammer et al., (2013) conducted study on technological stress and workers' Mental Health. The study's findings indicate that there is a poor link between Technostress and quality of life. The increased level of Technostress is hampering the quality of life of the workers working in different organizations. The use of information and communication technologies has increased workplace stress levels

and negatively impacted workers' health.

Salanova et al., (2013) conducted study on technological stress and Mental Health. The study tested the two factors—techno strain and techno addiction—that are two predictors of Technostress related to the usage of information and communication technology. Techno strain is a term for the emotions of worry, exhaustion, and helplessness. In techno addiction, the users feel bad on using these technologies excessively and compulsively. The study did research on 1072 ICT users out of which 675 were from non-intensive and 397 from intensive ICT users. The results of the numerous analyses of variance revealed a substantial distinction between light and heavy ICT users. The results of the multiple linear regression demonstrated that job overload, role ambiguity, emotional overload, and a lack of autonomy are all good predictors of Technostress. Work overload, role ambiguity and lack of emotional competences predicted techno addiction.

Coklar et al., (2011) did research to analyze the Technostress levels of social networking users by the use of ICT. 287 people took part in the study. The data of the study was collected through the online mode. The questionnaires were sent to the respondents through online and respondents responses were collected through the same mode. The study found that users of social networking sites have a moderate amount of technical stress, which is exacerbated by the need to remember several passwords, worry about data loss, and changes in technology in the workplace. The study also concluded that Technostress levels can differ based on the gender, age and the profession that one is into.

According to Shahnawaz (2006), doing monotonous work, working for long hours and change in shift patterns has been equated to the prisons where the employees are electronically trapped with the machines. Vowler (1995), Engler (1996) and Aziz (2003) discovered that components like overload due to work, conflict in the roles, and working with people of different personalities are significant stressors among these stressful working conditions. Apart from that the other stressors include change in technology, inadequate resources to fulfill the organizational demands, financial pressure, and budget pressure.

Tu et al., (2005) did a study and published an article on Technostress in China. Technostress is a negative effect on the behaviour, mental processes, thoughts and psychology on the people who deal with the technology. Technostress has become a severe problem for the Mental Health and job productivity of IT professionals due to the expansion of IT applications and the internet throughout China. Chinese workers were more impacted and ensnared by contemporary technologies. According to a statistic released by the Chinese Ministry of Information business in 2002, China has around 380 million phone customers, making it the world's largest market for the phone business. A survey was done in 2004 where about 87 million Chinese use internets frequently of about 19 million users which is about 27.9% over 2003.

Vowler (1995), Thong and Yap (2000) conducted research among BPO employers and discovered that, despite the pay structure in the IT sector being relatively higher than others, working in the area of information and communication technological systems is now becoming very stressful with an average working hour that has increased to 50 hours per week. The longer workdays have put up so much effect on employees' Mental Health and also continuous hours of sitting for on the computers dealing with the transformations due to technology lead to the Technostress and affecting the Mental Health.

Emmanuel et al., (1983) did research among IT professionals and concluded that some of the work stress due to the technology is the fear that workers are not able to catch up with the IT, long hours in front of the computers, lack of competence level, concern in relation to the career and job opportunities, workloads, pressure to perform etc. are the observed causes that impacts upon the Mental Health of workers from IT background.

## **2.4 TECHNOSTRESS AND DEMOGRAPHIC PROFILE**

The individual characteristics do influence the Technostress as well. In a study by Marchiori et al., (2018) conducted to see if the individual characteristics does influence the Technostress. The study's objective was to ascertain the effects of gender, age, formal education, and work experience on the level of Technostress experienced by regular employees. The study was conducted on 14 different Brazilian



organizations. The analysis of the result was done using the structural equal model by collection of data of 927 respondents through the use of questionnaires. The results have shown that all the demographic variables do relate to each other differently. The workers who had longer duration of professional experience were found to have greater level of difficulties, for example high levels of technological complexity (techno-complexity). Men were shown to have higher degrees of techno-overload and techno- invasion than women, whereas women reported higher levels of technological complexity and uncertainty. There were no results found in differences in terms of the formal education of the employees.

In a study by Setyadi et al., (2017), ICT (information and communication technology) has grown in popularity and has been shown to improve human lives, but it also has a negative side. The adverse effect of ICT is the stress that results from a worker's failure to adjust to the advancements of technological breakthroughs. The factor like age and gender plays an important role as it has been mentioned in the research studies that as the age increases, it tends to increase in avoidance towards the Technostress. Because they are constantly eager to learn about and experiment with new technological aspects, men experience a higher level of technological stress. The result of this study has proved through the empirical investigation that more the cognitive age of the person, it has the tendency to reducing the influence on people who experience Technostress. The study did prove that Technostress affects the satisfaction and performance but didn't talk about whether positively or negatively. According to the study, technological overload, technological uncertainty, and technological insecurity are the elements that affect Technostress.

## **2.5 JOB SATISFACTION AND JOB PERFORMANCE**

Prihadini et al., (2021) conducted an investigation to study Job Satisfaction in enhancing employee performance. The study was conducted utilising case study methodology, especially qualitative research. The interview was conducted and semi-structured method of interview has been designed to gather the respondents' data. Ten individuals who work for private universities in Jakarta were interviewed. The two HRD directors were interviewed for the study, and the findings revealed that work

satisfaction is an inseparable and important element in raising an employee's level of performance.

Fachri et al., (2021) conducted analysis on the impact of leadership, organisational culture and human resource quality on Job Satisfaction and performance. The explanatory and descriptive based research design was carried out to meet the proposed objectives of the above mentioned study. The data analysis was done using structural equation modeling-partial least square. The data was collected using survey as a technique of 103 employees. According to the research study, organisational culture and leadership style both significantly influence Job Satisfaction. The findings of the investigation also revealed that Job Satisfaction, organisational culture, leadership style, and quality of human resources all significantly affect an employee's performance.

Sofyandi & Nursiti (2021) undertook a study to investigate link between Job Satisfaction and employee performance. The goal was to observe and evaluate how a leader's stance and Job Satisfaction affected a team member's performance at Yogya Plaza Cimahi. The research was conducted using a descriptive methodology, and questionnaires were used to collect primary data. The data was collected from the 57 respondents. According to the survey, poor leadership and low Job Satisfaction were cited as causes of low employee performance. Employee performance was found to be significantly impacted by the leadership style and Job Satisfaction, either partially or concurrently.

A research study by Jorge et al., (2020) investigated the long-term connection between the variables Job Satisfaction and creative output. The study mainly examined elements that affect both intrinsic and extrinsic Job Satisfaction. The study's sample size included 209 workers from nine different Spanish organisations. The findings showed that for one of the time intervals, only internal Job Satisfaction (IJS) could predict creative performance. The study concluded out that the relationship between the internal Job Satisfaction and creative performance might be fake or limited. It is crucial to examine intrinsic and extrinsic Job Satisfaction separately since the outcomes of both variables will differ significantly. The obtained

relationship indicated that the intrinsic Job Satisfaction and creative performance are not inversely related.

Akbar et al., (2016) conducted a research on the traits and elements that affect the degree of Job Satisfaction among IT workers. The survey was carried out among the major Chennai-based IT firms. The study was done using the stratified random sampling and 960 respondents were chosen from the total of 1472 respondents. The factors that were taken to study were working conditions, scope of career developments, rewards, relationships to identify the Job Satisfaction of IT professionals comprising of small, medium and large-scale companies. The structured equation model was used and it was found that all the variables have positive relationship with Job Satisfaction among IT professionals. In order to boost commitment and lower the rate of employee turnover in IT organisations, it is crucial that the relationship between management and employees be strengthened.

Indu Bhushan Lal (2015) investigated how satisfied employees were with their jobs across a variety of software sectors. There are variables for identifying the Job Satisfaction like the ability of employee, progress level of employee, wages increment, promotions, appraisals, guidance from the seniors and superiors. The factors for employee performance like quality and quantity, creative thinking, appraisal, relationship with others. The need for peace and Job Satisfaction of the employees working in that particular IT industry may really result in time savings, increased productivity, and an increase in the success rate of software products. It is also important to understand that the software development is totally a different work and is different from other products manufacturing. Therefore, for software related work, an employee needs complete attention, working at home or while traveling and software company employees does have to work 24 hours without thinking about their families. So looking into all such situations, the IT companies and industries really need to work for increasing employees' Job Satisfaction. The study concluded that absenteeism and retention of an employee is directly related to the Job Satisfaction and Job Performance.

Platis et al (2015) did a research to study connection between Job Performance and

Job Satisfaction among those working in the health services. For the study, 246 nurses made up the sample. The factors to study for the Job Satisfaction included managers level of satisfaction, working ways, working hours, job security and the factors for the Job Performance included work load, work initiative, work target and quality improvements. The research study found out that there is a strong relationship between the Job Performance and Job Satisfaction among the employees. The Job Satisfaction showed high correlation with the factors of Job Performance like the quality of job and personality characteristics at the job. The attitude and the personal feeling among the nurses contributed the highest for increase in the Job Performances in the health care services.

Lise Saari et al., (2004) did a study on the professional workers' Job Performance and Job Satisfaction. The three gaps that the study attempted to address included employee attitudes, results of good or negative Job Satisfaction, and measuring and analysing employee attitudes. The study's research revealed a significant correlation between professionals' Job Satisfaction and performance. The analysis also concluded that it is important to understand the employees and environmental conditions which further influence internal as well as external attributes of an employee attitude.

## **2.6 JOB SATISFACTION AND MENTAL HEALTH**

A research by Miodraga et al. (2021) examined many aspects of Mental Health, such as psychological discomfort and burnout with Job Satisfaction. The study's objective was to examine the levels and relationships among psychological distress, burnout, Job Satisfaction, and desire to quit among primary healthcare nurses working in both public and private practices. 173 primary health care nurses were the sample size for the cross-sectional research study that was used to conduct the investigation. Responses to the surveys for each variable were collected. The study's findings showed that nurses with greater degrees of burnout and inadequate Job Satisfaction were on high possibility of leaving the profession in comparison to those nurses who were found to be low on burnout and have high Job Satisfaction.

Lawrence et al., (2021) conducted research on the psycho-social aspects of the uniformed personnel's Mental Health in Nigeria. The quantitative research approach was used to conduct the investigation. 500 people made up the study's overall sample size, of which 311 men and 189 women. The study's conclusions showed a substantial correlation between Mental Health and Job Satisfaction, age, social support, and occupational stress. It was also found out from the research that Mental Health of the staff could also be predicted from the Job Satisfaction and occupational stress level of the workers.

Moncao et al., (2021) did a study on satisfaction and burden in the performance of the Mental Health professionals. The study was done on the 49 workers, between the age ranging from 30-39 years and working 30 hours per week. The study's findings showed that professionals had high levels of job satisfaction and lesser work strain. The survey found that although Mental Health professionals were content with their performances, they weren't satisfied with the lack of continuity of care they received. Lastly, the study pointed out that there is a need for the changes need to be done in the physical structure, acquiring more materials and human resources.

Capone et al., (2018) conducted study on teachers' Mental Health. The research placed a strong emphasis on examining the connections between Mental Health and factors including depression, burnout, and effectiveness views in the workplace. 285 high school teachers' data were gathered. The association between the study's variables was discovered using descriptive statistics and correlation. According to the study's findings, 38.7% of participants were doing well, 53.2% had average Mental Health, and 8.2% of teachers had problems. In comparison to the other two groups, the group that was thriving were found to have lower levels of depression and Mental Health issues but better levels of Job Satisfaction and efficacy. There was significant difference among the teachers who were permanent than compared to the temporary teachers. The study also focused on the interventions and therapeutic approaches to be used to improve upon the teacher's well-being, improving upon Job Satisfaction and all above improving the Mental Health among the teachers.

Nadinloyi et al., (2013) did a research to study the link between workers' Mental

Health and Job Satisfaction. Two industries' employees from the city of Abradil made up the sample. 90 employees were chosen at random to make up the study's sample size. The statistics for the data analysis included the t-test and multiple regression. According to the findings of the research, a relationship was found among depression, social activity, and Mental Health and work discontent. The survey also revealed that women were happier at work than males were. Employees with a lengthy history of employment in the same field were shown to be happier. Through this study, the importance of Job Satisfaction in enhancing social relationships and reducing depression among workers' Mental Health was confirmed. The link between anxiety and Job Satisfaction was found to be noticeably poor.

Nahar et al., (2013) performed study on the relationship between workplace stress, Mental Health, and both government and non-government personnel in Bangladesh. 100 employees made up the study's sample, 50 of them worked for the government and 50 for non-government organisations. The study discovered a gender difference. Due to lower-level positions and lower compensation, female employees were shown to be less pleased than male employees. Smith et al. (1969) found that women reported reduced work satisfaction due to lower pay than males, the placement of women in lower-level positions, and the fact that they had less opportunities for promotion than men. According to Blegen (1993), the Job Satisfaction level is found to be affected because of job stress. The meta-analysis was done among related variables of Job Satisfaction such as age, commitment, locus of control, stress and work experience. It was found from the meta-analysis that Job Satisfaction had the strongest relationship with the commitment and stress at workplace. In a study by Irvine et al., (1995), discovered the direct and adverse link between stress and Job Satisfaction.

Lee et al., (2009) investigated to study the relationship between personnel Job Satisfaction and Mental Health who were working in medical centers. The Mental Health at the workplace has been significantly related to the productivity and satisfaction at the workplace. The poor Mental Health negatively affect the performance and communication with others (interpersonal communication). As a result, it was discovered that low Mental Health has a detrimental impact on Job

Satisfaction, safety, and service quality. According to the study's findings, the study's respondents were found to be content with their work. The Brief Symptom Rating Scale (BSRS-5) was used to study different components and the results showed that insomnia found to be high at 28.63%, depression at 25.37%, hostility was found to be 24.63%, anxiety at 23.13% and lowest was inferiority at 20.15%. It was also seen that subjects who had severe psychological distress were found to be low on Job Satisfaction (JSQ-40), which measured 5 dimensions of Job Satisfaction. The study concluded out that the morbidity at the workplace found to be high. The respondents having severe psychological distress were negatively related to Job Satisfaction. Based on the study's findings, it was advised that self-administered questionnaires be utilised for the early identification of any psychiatric disease. Employees' Mental Health was urged to be addressed through Mental Health programs so that Job Satisfaction might also be raised.

Faragher et al., (2005) performed a meta-analysis that looked at the relationship between wellbeing and work contentment. With a sample size of 267995 participants, of almost 500 studies were subjected to a meta-analysis and review. The study was conducted to gauge participants' levels of Job Satisfaction as well as their physical and Mental Health. As a statistical technique, the correlation was computed, and the correlational value of all health indicators was found to be  $r=0.312$ . The association between Job Satisfaction and psychological issues was shown to be substantially connected, with the highest associations found for self-esteem ( $r=0.429$ ), sadness ( $r=0.428$ ), anxiety ( $r=0.420$ ), and burnout ( $r=0.478$ ). Though Job Satisfaction is an important characteristic and component in the health of the workers, the study came to this conclusion. The organizations should come up with the policies and programs to lower down the level of job dissatisfaction and improving upon the employee health.

Bogg et al., (1994) conducted research among gender inequalities among senior U.K. public workers by examining Job Satisfaction, Mental Health, and occupational stress. According to the survey, there are gender inequalities among top U.K. public officials. The female employees' mental and physical health were discovered to be affected, and they were reported to be unsatisfied at work. The ladies expressed

worries about their roles at work, variables related to their occupations, how their jobs relate to their home environments, and workplace restrictions. Contrarily, it was discovered that the element of how much "control" workers feel at work had a greater impact on men.

A research conducted by Caplan (1971); Keon et al. (1982) came to the conclusion that Job Satisfaction has a significant impact on employees' health and well-being. According to a research by Khaleque and Hossain from 1994, people's Job Satisfaction has a big impact on their Mental Health.

Herzberg et al. (1957) conducted a research and discovered that young workers have high Job Satisfaction levels and high drop-out rates right away. But as workers put in more hours, their Job Satisfaction percentage rises. Job Satisfaction has been linked to employee health and wellbeing, according to studies (Kornhauser, 1965; Gardell, 1971; Singer & Rutenfranz, 1972; Caplan et al., 1980; Keon & McDonald, 1982). Job Satisfaction has a strong negative correlation with psychoneurotic syndrome, sadness, boredom, and anxiety, according to a 1975 study by Caplan et al. that investigated the association between Job Satisfaction and employees' Mental Health. Another same type of research was done by Khaleque (1981) found out that employees who were dissatisfied were found to be high on stress and strain than satisfied workers.

## **2.7 JOB PERFORMANCE AND MENTAL HEALTH**

Raimi et al., (2021) did a study on Mental Health and Job Performance among the executives working in the private organizations in the Northern Malaysia. The effective performance at the higher level in an organisation is significantly influenced by the Job Performance at the executive level. The results of the study have demonstrated a favourable significant relationship between Mental Health and office ergonomics and executive Job Performance. The study also revealed that successful Mental Health intervention strategies can lead to a profound effect on the executive Job Performance.



Obrenovic et al., (2020) carried out analysis of the Work Performance Model. The study also aimed to find out if psychological safety and wellbeing were impacted by work-family conflict. The personal time has been surpassed by work assignments in the current modern workplace, where technology is playing a significant role. As a result, employees have many responsibilities to suit themselves while also preserving the productivity of their job. An empirical study was conducted using a sample size of 277 Bahraini workers. The questionnaires used Likert scales with five points. The study's conclusions indicate that work- family conflict is harmful to people's psychological safety and wellbeing. The findings also showed that workplace psychological safety and well-being has an effect on Job Performance, i.e., when workers' psychological protection and well-being increase, their work will suffer. Hennekam et al., (2020) did a study on coping strategies on Mental Health conditions and its impact on the perceived Job Performance at the working environment. A sample size of 257 replies, which were gathered through questionnaires, was used for the research. People with Mental Health disorders participated in the 17 in-depth interviews. The study's results showed a negative relationship between Mental Health and perceived Job Performance, which manifests itself in poorer levels of work quality, slower productivity, and more errors. Additionally, the results showed that coping mechanisms have a positive and negative impact on work performance. Substance misuse, self-harm, hiding and suppressing symptoms, and being made to work while ill are all methods that have a detrimental impact on one's performance. On the other hand, the strategies affecting one's performance positively include acknowledging one's circumstances and taking time from work when necessary, medication and counseling, therapies including mindfulness activities, proper communication and compensation strategy.

Chu (2017) conducted a study to determine the connection between workplace compassion and Job Performance and Mental Health. The study also sought to understand how interpersonal interactions influenced these correlations. The study's findings indicated that while interpersonal ties acted as a moderator in the association between compassion and Job Performance and Mental Health, compassion itself was an efficient predictor of both outcomes. A person's performance and Mental Health

will increase when they are compassionate towards others, especially when compassion is shown by superiors or management. According to the study's findings, nurses' Job Performance and Mental Health will both improve when they are ready to listen and comprehend the pain of their coworkers.

Armandi et al., (2015) conducted research to determine the connection between Mental Health and Job Performance. Shahrekord Refah Bank personnel were used in the study. Understanding employees' Mental Health as well as other areas of the workplace is crucial. The study involved 140 workers of the Shahrekord municipal Refah Bank. The statistical analysis for the study was performed using correlation and regression. The correlation was utilised to investigate the connection between several aspects of Mental Health. The aspects of Mental Health were employed in the regression to forecast Job Performance. According to the research's findings, there is a substantial connection between Mental Health, including aspects like self-esteem, interpersonal harmony, and personal development, domination on environment, purposiveness in life and Job Performance.

Cheung et al., (2015) completed a research on how organisational nurturing cultures might improve Job Performance and Mental Health. A survey of 765 workers from 14 units of social service organisations in Hong Kong was conducted to examine the role that culture plays in an organisation. The findings demonstrated the anticipated effects of organisational nurturing culture on improving workers' job performance and Mental Health. The findings also indicated that workers with greater incomes or levels of education displayed lower levels of nurturing culture.

Ahmadi et al., (2012) undertook a study to determine the effect of managers' and employees' Mental Health on Job Performance. The study investigated the link between Mental Health and Job Performance. Iranians who work at Iran's city's natural gas refinery make up the study's sample. The 42 employees received the surveys on Job Performance and Mental Health. The statistical study employed the descriptive and Pearson's product moment correlation. The results of the study showed a strong relationship between worker productivity and Mental Health, with an improvement in Mental Health having a comparable effect on Job Performance. This

indicates the substantial positive correlation between occupational success and mental wellness. The study's findings on the connection between gender and Job Performance also revealed no appreciable variation in the Mental Health of staff members between male and female. It was concluded out from the research that low level of Mental Health can reduce the performance of employees. The managers should try to overcome the negative outcomes which can be the result of the lack of Mental Health in workplace. The proper training should be given to all employees who are working in different hierarchy.

Chirumbolo et al., (2010) conducted research on work insecurity's impact on Job Performance and Mental Health in order to determine how the urge for closure moderated these effects. 287 workers made up the study's sample size. The surveys were given to each of them. According to the study's findings, job instability, work performance, and Mental Health are all negatively correlated. People who scored highly or poorly on the need for closure indicated improved Job Performance and Mental Health.

Ashtari et al., (2008) conducted a survey to determine the link between job burnout and staff performance in the field of Iranian Mental Health. The respondents of the study were 100 Mental Health professionals from Raazy Psychiatric Centre, Iran. The result of the study showed that 45.6% of the sample had high level of burnout at the workplace, 42.5% of the subjects experienced high level of exhaustion and 65.5% experienced higher level of depersonalization whereas 21% experienced the feeling of failure as an individual.

Hourani et al., (2006) Department of Defence health workers conducted a research on stress, Mental Health, and Job Performance among active military members in 2002. 12,576 active-duty individuals were used as the study's sample size. The study's findings showed that employees with high levels of stress experienced more Mental Health issues and productivity losses than those with lower levels of stress. Therefore, it was recommended that intervention techniques should be used for the personnel who reported high levels of stress should be given the priority.

Monfared et al., (2002) did a study to see the relationship between the prayers, Mental

Health and Job Performance. The study comprised of workers who were hired on technical posts worked at Tehran Ammunition Industries. 304 individuals were randomly chosen to make up the study's sample. The average age of the personnel was 38.9 years, and the length of service was 18 years on average. Descriptive statistics, Pearson product moment correlation, the t test, and one-way ANOVA were all used in the statistical study. The study's conclusions indicate that there is a strong connection between prayer practice and mental wellness. Their degree of Mental Health grew as prayer frequency increased. The increased use of prayers led to the decrease in the anxiety and depression. The research study found no relation between the prayers and Job Performance and no relationship could be found between the Job Performance and Mental Health.

## **2.8.RESEARCH GAP**

The current study examines the effects of technological stress on IT professionals' Job Satisfaction, Job Performance and Mental Health. As the increase in the advancement of the technology, IT professionals are working in the stressful environment.

In today's world, the more percentage of work is handled through technology than manually, therefore the role of technology becomes very important to be acquired to. The regular updates, due to increase in the demands of so many applications have made it compulsory to understand the technology, as a result, technology is now a crucial aspect of everyone's life.

Therefore, as a result of a significant contributing factor, stress among IT professionals has also increased. This has an impact on their Job Performance and Job Satisfaction and degrades their Mental Health, which prompted the current study to shed light on its significance. In the field of Technostress, there is a shortage of empirical data. The researches have been done in different countries but only few researches have been done on Indian population.

## **2.9 RATIONALE OF THE STUDY**

The technology brings about certainly stress among people in large amount as it is the pre requisite to be acquainted with the technological changes in the modern world. The employees because of the technological ease found themselves to be dependent upon it so much that we have become forgetful and the overload has stimulated the brain so much that the individual no time feels relax. Therefore the Technostress is felt.

The technological developments in the industrial and organizational world have made so many changes in their organizations so that organizations can survive in the competitive world and also win competitions (Poole & Denny, 2001). The impact on every employee in every organization is so much that to produce the best result and to perform continuously both in quantity and quality. There are many organizations that use high technology in their productions and in order to maintain its productivity, the employees need to be expert in order to operationalize such machines (Quinn, 2007). This change in the productions and operational technology will change the working system in all organizations (Brillhart, 2004).

Years of investigation have shown that 85% of people are uncomfortable using technology. According to expert Larry D. Rosen, PhD, professor of psychology at California State University, "Technostress captures all the ways technology causes annoyance, frustration, stress, and lack of sleep." Technology is evolving rapidly and will continue to do so, which is worrisome. We now have a wide range of possibilities for completing our task thanks to computer and communication technologies. Nevertheless, we feel overrun by technology.

It has been observed that with the advancements in the technology, the people have to work anytime and anywhere understanding the need of an hour of any organization. This has the effect of distorting the work-life balance due to technological stress, such as technological complexity, technological unpredictability, technological overload, etc. (Tak et al., 2016). The Job Satisfaction, performance, and Mental Health of IT professionals have all been impacted by these developments.

The current study primarily examines how technological stress affects Job Satisfaction. The people who are high on Technostress would result in lower down of the Job Satisfaction as because of the technological changes again and again, it lowers down the satisfaction level whereas employees who could handle Technostress in a healthier way would be high on Job Satisfaction. The research study also emphasises how well people perform on the job. If employees are satisfied at their workplace, it will positively relate to the Job Performance of the workers because the performance will automatically boost up if there is satisfaction among employees. It will therefore lead to the productivity but if Technostress led to dissatisfaction, it will affect the performance of employees which lead to hampering an organization.

The current study then focuses on examining the impact of technological stress on Mental Health. The Mental Health of the workforce would be impacted by the rise in technological stress. Technology's fast change would put people under stress, and that stress would then cause Technostress, which would have an adverse effect on Mental Health.

There have been less studies that relates the Technostress to other components like Job Performance, Satisfaction with Job, and Mental Health of an IT employee taken together. There are no similar studies that were located on this similar topic among the engineers.

## **2.10 OBJECTIVE OF THE PRESENT STUDY**

The present research has been designed keeping in mind the following objective:

1. To study the gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals.
2. To investigate the relationship between Technostress and Job Satisfaction among IT professionals.
3. To examine the relationship between Technostress and Job Performance among IT professionals.
4. To investigate the relationship between Technostress and Mental Health among IT professionals.
5. To investigate the relationships among Job Satisfaction, Job Performance and Mental Health in IT professionals.
6. To study the combined role of Technostress, Job Satisfaction and Mental Health as a predictor of Job Performance among IT professionals.

As discussed in the above research studies, Technostress was found to be negatively related with the Job Satisfaction, Job Performance and Mental Health. Also, positive association between the Job Satisfaction, Job Performance and Mental Health was found among different research studies. There were Indian and some research studies from other countries as well which studied the variables of the present research study. There were studies keeping demographic variables like gender and educational qualification to study Technostress, Job Satisfaction, Job Performance and Mental Health among IT Professionals. On the basis of the research studies, the hypotheses were framed and the results have been discussed in the chapter ahead.

# CHAPTER III

## METHOD



## **CHAPTER III METHOD**

### **3.1 RESEARCH DESIGN**

The goal of the current study is to examine the effects of Technostress on IT workers' Mental Health, Job Performance, and Job Satisfaction.

The ex post facto research approach was explored in the research investigation. The literature that is previously accessible in relation to the current study variables was taken into consideration when formulating the research objectives and hypotheses.

### **3.2 HYPOTHESES**

The following hypotheses are proposed for the present research study:

1. There exist no significant gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals.
2. There exists no significant relationship between Technostress and Job Satisfaction among IT professionals.
3. There exists no significant relationship between Technostress and Job Performance among IT professionals.
4. There exists no significant relationship between Technostress and Mental Health among IT professionals.
5. There exist no significant relationships among Job Satisfaction, Job Performance and Mental Health in IT professionals.
6. Technostress, Job Satisfaction and Mental Health do not significantly predict the Job Performance of IT professionals.

### 3.3 SAMPLE

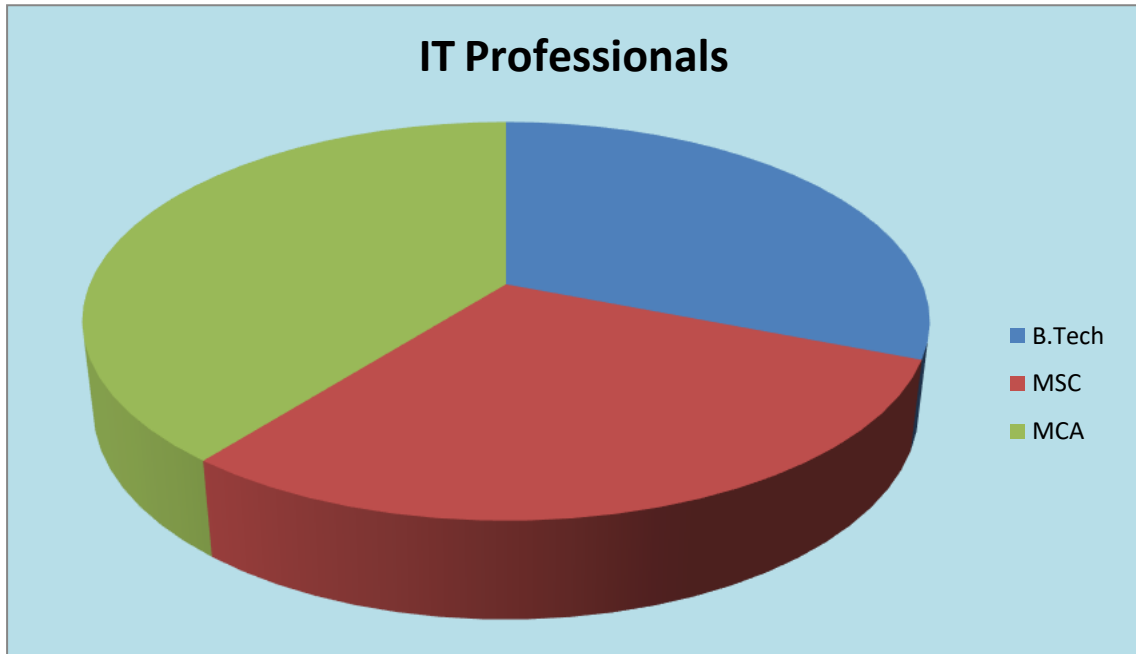
The goal of the current study was to examine how Technostress affected IT workers' Job Satisfaction, performance on the job, and Mental Health. 478 IT professionals, both male and female, with a B.Tech, MCA, or M.Sc. in computer science or IT make up the study's sample. The age range of IT professionals was 30-40 years. The sample was selected randomly from different IT organizations. The data was collected keeping in view the system engineers working in different IT companies in and around tri-city, that is, Chandigarh, Panchkula and Mohali to maintain homogeneity.

**Table 3.1: Number of participants and classification on the basis of gender and different educational qualification**

	Males	Females	Total
<b>B. Tech</b>	<b>84</b>	<b>64</b>	<b>148</b>
<b>MCA</b>	<b>71</b>	<b>117</b>	<b>188</b>
<b>MSC</b>	<b>41</b>	<b>101</b>	<b>142</b>
<b>Total</b>	<b>196</b>	<b>282</b>	<b>478</b>

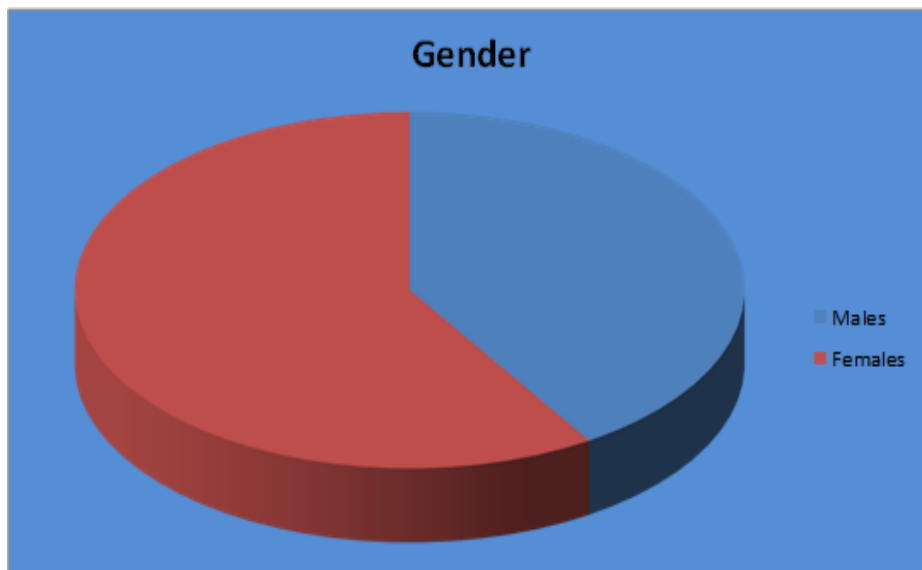
**Figure 3.1**

**Graphical presentation of number of IT professionals on the basis of each academic qualification**



**Figure 3.2**

**Graphical presentation of number of IT professionals on the basis of gender**



### **3.4 INCLUSION CRITERIA**

1. IT professionals will be taken from the different organizations in and around the tri-city.
2. The system engineers will be picked up as the sample for the present study who will be employed on the basis of B.tech/MCA/M.Sc-Computer science/IT.
3. The age range will be 30-40 years.
4. The working experience of employees would be upto 5 years.
5. Both males and females were included.

### **3.5 EXCLUSION CRITERIA**

1. Apart from the system engineers no other kind of engineers would be approached for the data.
2. No other educational requirement for the sample would be taken into consideration.

### **3.6 PROCEDURE**

The current research was conducted to study the Technostress in relation to Job Satisfaction, Job Performance and Mental Health among IT Professionals. The various organisations were visited for the data collection i.e. from Chandigarh, Panchkula and Mohali. The sample size of 487 IT Professionals were distributed the questionnaires and the responses were gathered. The data was collected in the group and each participant was given the questionnaire on visiting the organisations. The questionnaires of all the variables were given to all the respondents simultaneously. The questionnaires used for the present research study included Technostress Scale, Job Satisfaction Instrument, Job Performance Questionnaire and Mental Health Inventory. The responses were then totaled out and then an analysis using the Statistical Packages of Social Sciences (SPSS) was carried out.

### **3.7 ETHICAL CONSIDERATIONS**

1. The participants will be ensured that confidentiality will be maintained.
2. Informed consent was also obtained from the participants.

### 3.8 STATISTICAL ANALYSIS

- To achieve its goals, the current study would analyse and evaluate participants' responses using descriptive statistics, Pearson product moment correlation, t-test, and regression.

### 3.9 TOOL FOR MEASUREMENT

The following psychological instruments were utilized to measure the study's variables:

#### a) **Technostress** (Ragu-Nathan and Ragu-Nathan, 2002)

To quantify Technostress, a scale of 24 items is used. The questionnaire's items are scored on a 5- point likert scale, with 1 meaning "completely disagree," 2 "disagree," 3 "neutral," 4 "agree," and 5 "strongly agree." The respondents were instructed to check the appropriate number next to each topic based on how they felt. The possible scores range from 24 to 120. The high score denotes a high level of Technostress. For validation of the scale in Indian situations, the scale was administered randomly to both 50 senior secondary school teachers and also 50 to senior secondary school students from Panchkula and Chandigarh. Scoring was done according to specifications given. Then, a t-ratio was calculated for the higher and lower groups for each of the 24 questionnaire items to determine the discriminating power of each item. At 0.05 or 0.01 levels of confidence, it was discovered that the F-ratio of each of the 24 item was significant.

The reliability of the Technostress scale was calculated out to be 0.53 and 0.68 using the test-retest reliability test. the scale's reliability was calculated using the test-retest technique (15 days).

The scale's final version was presented to teachers and students on two different occasions and co-efficient of correlation was computed between the two sets, which were found to be significant at 0.53 and 0.68 respectively for teachers and students. So, the scale may be considered fairly reliable.

The scale's face validity and content validity were assessed, and under the direction of specialists, consultation with experts from Panjab University, Chandigarh, was conducted up till the final version of the scale.

**Job Satisfaction Instrument** (Mishra, Tiwari, and Pandey, 1977).

The scale has 41 items, each of which are graded on a 5-point scale. The responses of the respondent will be taken ranging from more disagree, disagree, average, agree and more agree. The more disagree will be given the score of 1 and more agree as 5 in case of the positive items. The negative scored items will be scored in reverse way i.e., more disagree get 5 marks and more agree as 1 mark.

**Table 3.2: Positive and Negative items of Job Satisfaction instrument**

<b>Instrument</b>	<b>Positive Items</b>	<b>Negative Items</b>
<b>Job Satisfaction Instrument</b>	2,3,4,9,15,16,18,19,22, 24,26,27,30 32,35,36,40,41	1,5,6,7,8,10,11,12,13, 14,17,20,21,23,25,28, 29,31,33,34,37,38,39

The scale has 18 items with positive scoring format and 23 items with negative scoring format. The items for positive scoring are 2, 3, 4, 9, 15, 16, 18, 19, 22, 24, 26, 27, 30, 32, 35, 36, 40, 41. The items for negative scoring are 1, 5, 6, 7, 8, 10, 11, 12, 13, 14, 17, 20, 21, 23, 25, 28, 29, 31, 33, 34, 37, 38, 39.

The interpretation of the scores will be done under three different categories as:

1. The score above 105, means fully satisfied.
2. The score between 71-105, means average satisfied, and
3. The score below 70, means dis-satisfied.

The reliability of the Job Satisfaction Instrument was found out to be reliable using the split half and test-retest reliability. The split half reliability was found out to be 0.78 and test-retest method reliability was found out to be 0.68.

Using the split-half and test-retest methods, the coefficient of reliability was determined. The test-retest method was done and administered keeping in between 3 weeks' time. The split half method was used to find out the reliability coefficient

which came out to be 0.78 for Males (N=75) and The test-retest reliability method was used to compute the reliability co-efficient, which for males (N=50) came out to be 0.68.

The validity of the test was also calculated. The validation criterion was used to correlate the scores.

The correlation coefficient was calculated on the sample size (N=50) and it was found out to be 0.68.

#### **b) Job Performance Questionnaire (Shokrkon and Arshadi, 1990)**

To assess an employee's performance at work, Shokrkon and Arshadi created the Job Performance Questionnaire (JPQ) in Persian in 1990. The 15 items that make up the JPQ are based on the Likert scale. The scale's items were scored on a four-point scale, with "Rarely Occurs, Sometimes Occurs, Often Occurs, and Very Often Occurs" as the options for each item.

The reliability test of Job Performance questionnaire was found out using Cronbach's alpha and test-retest reliability method. The reliability of the test using cronbach's alpha was found out to be 0.86 and test-retest was found out to be 0.78.

The Split-half and Cronbach's alpha tests were used to measure the reliability of the test and 0.86 was the calculated reliability coefficient using the Cronbach's alpha and 0.78 was the calculated value using split- half method. The Job Performance questionnaire was translated to the English language from Persian for English medium teachers. It was also translated into Kannada language for Kannada medium teachers.

The content validity of the questionnaire was examined with the help of 5 experts wherein the experts did not suggest for any of the further modifications or the changes. 60 teachers from Mysore were the modest sample size for the pilot project. The reliability was examined using Cronbach Alpha coefficient method which came out to be satisfactorily of 0.81 for English version and 0.82 for Kannada version.

**c) Mental Health Inventory** (Jagdish, A.K. Srivastava, 1983).

Mental Health Inventory (MHI) developed by (Jagdish and Srivastav (1983) was developed and constructed to assess the Mental Health. This test can be administered on the group or individual and the test can be used on the age group of 15 and above. There is no time limit for the test and no maximum age is being enforced for this test. It covers the following six dimensions:

**Table 3.3: Mental Health Inventory (MHI) item descriptions**

<b>Sr. No.</b>	<b>Name of Item</b>	<b>Item number in MHI</b>
<b>1.</b>	Positive Self Evaluation (PSE)	1, 7, 13, 19, 23, 27, 32, 38, 45, 51
<b>2.</b>	Perception of Reality (PR)	6, 8, 14, 24, 35, 41, 46, 52
<b>3.</b>	Integration of Personality (IP)	2, 9, 15, 18, 20, 25, 28, 33, 36, 40, 47, 53
<b>4.</b>	Autonomy (AUT)	3, 10, 29, 42, 48, 54
<b>5.</b>	Group Oriented Attitude (GOA)	4, 11, 16, 21, 26, 30, 39, 43, 49, 55
<b>6.</b>	Environment Mastery (EM)	5, 12, 17, 22, 31, 34, 37, 44, 50, 56

- 1. Positive Self-Evaluation (PSE)** – this dimension covers the positive aspects while evaluating the self.
- 2. Perception of Reality (PR)** – This dimension relates to how an individual perceives the facts in their life.



3. **Integration of Personality (IP)** – this dimension studies the different constructs of personality in a collaborated way.
4. **Autonomy (AUT)** – this dimension would study the sense of power and responsibility carried by an individual
5. **Group Oriented Attitudes (GOA)** – this includes ability to have interpersonal interaction and includes an ability to find recreational ways by forming groups.
6. **Environment Mastery (EM)** – this dimension includes an efficiency in meeting the situational demands.

The reliability index of the dimensions of the Mental Health Inventory is calculated. The Positive Self Evaluation is found to have a reliability index of 0.75. The Perception of Reality is found to have a reliability index of 0.71, reliability index of Integration of Personality is 0.72, reliability index of Autonomy is 0.72, reliability of Group Oriented Attitude is 0.74 & 0.71 and the reliability index of Environment Mastery is found to be 0.73.

With the use of the "Split half" method's odd even procedure, the reliability of this inventory was determined. The following table displays dependability coefficient.

The coefficient scores on the Mental Health Inventory and General Health Questionnaire were determined using the construct validity of the inventory (Goldberg, 1978). The result came out to be 0.54. It was therefore determined to be notable that a high general health questionnaire score is a sign of poor Mental Health. The positive correlation between the two inventory scores was 0.57, indicating considerable validity.

**Table 3.4: The norms for Mental Health are presented in the following table**

<b>Dimension of M.H.</b>	<b>Very good</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very poor</b>
<b>PSE</b>	38.32 & above	33.70 to below 38.31	29.10 to below 33.70	24.49 to below 29.10	below 24.49
<b>PR</b>	29.82 & above	25.95 to below 29.82	22.07 to below 25.95	18.20 to below 22.07	below 18.20
<b>IP</b>	44.82 & above	38.66 to below 44.87	32.44 to below 38.66	26.23 to below 32.44	below 26.33
<b>AUT</b>	22.35 & above	19.04 to below 22.34	15.74 to below 19.04	12.44 to below 15.74	below 12.44
<b>GOA</b>	37.51 & above	33.37 to below 37.50	28.23 to below 33.37	23.10 to below 28.23	below 23.10
<b>EM</b>	36.24 & above	31.36 to below 36.26	26.43 to below 31.35	21.52 to below 26.43	below 21.52
<b>OVERALL</b>	195.20 & above	176.45 to below 195.89	157.01 to below 176.45	137.57 to below 157.01	below 135.57

There are 56 items altogether on the Mental Health scale, 26 of which are true-keyed (positive) and 30 of which are false-keyed (negative). Every item on the scale receives one of four possible scores, ranging from "4" to "Always," "3" to "Most of the Time," "2" to "Sometimes," and "1" to "Never" for positive things and 1, 2, 3, and 4 for negative items, respectively.

In relation to the above discussed chapter “method”, we summarize that the method part is one of the important methods in which the hypotheses are framed. The sample and sample size were discussed and the sample size was distributed on the basis of the gender and educational qualification. The inclusion and exclusion criteria are also framed so that the sampling error can be controlled and the sample can be selected as per the design. In the next chapter the results and the discussion of the responses of the respondents will be discussed. The discussion will include if the hypotheses framed are whether accepted or rejected.

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CHAPTER IV  
RESULTS &  
DISCUSSION

## **CHAPTER IV**

### **RESULTS & DISCUSSION**

In today's world, an individual is constantly looking for opportunities for growth, taking pressures, and in order to meet those demands, an individual finds themselves surrounded by challenges at their workplaces and in their lives in general. Demand can sometimes act as a stressor, causing an individual to experience stress. An individual experiences various levels of stress while working, which has a negative and serious impact on working behaviour and, as a result, within the organization at which an individual works (Mohan, 2004). As their level of interaction with technology increases, some people find it easy to use it, but there are also lots of people who don't use technology much and find it uncomfortable. People are struggling and gripped with concerns about how the use of technology affects their job due to the increase and rapid pace in the level of technology. Users in the modern world expect that the services provided should be provided at a higher level because of technology, and perhaps this higher-level usage has become a problematic concern, giving rise to technological stress or Technostress. People who are uncomfortable with technological changes or find it difficult to adjust to new, innovative technological changes experience reactions, including the so-called "Technostress."

One sort of stress that exists in every organisational context is the Technostress. Professionals are under stress as a result of changes to accepted technologies. They must maintain its current with the newest technological advancements, how to use them, the limitations and benefits of doing so. Technology is linked to factors such as technological overloading, invasion, complexity related to the technologies used, insecurity due to technology, and uncertainty. IT jobs in the modern era are the most in demand jobs in the current scenario where the youth are working, However, the issue is that the majority of these jobs lack a regular structure, have high pay, little job security, and are extremely competitive (Lim et al., 1999).

Ayyagari, et al. (2011) discussed the transaction theory of stress leading to Technostress and the idea that a stress is there when there is a bad relationship

between the person and the requirements imposed on them by their environment at work in relation to technology. If an individual is not ready to accept the challenge but an environment or the demand of the job wants that challenge to be accepted and the ability of person declines, it led to the Technostress. The environment in the IT sectors is associated with high stress, job uncertainty, a low level of social proximity, a high level of imbalance in work-related activities and a poor level of personal development (2006, Computer World). The current study aims to investigate the nature of the link between Technostress and IT workers' job happiness, Job Performance, and Mental Health. The goal of the current study was to examine the effects of Technostress on IT workers' Job Satisfaction, performance on the job, and Mental Health. The research included the gender gap as one of its goals. The association between technological stress, Job Satisfaction, Job Performance, and the Mental Health of IT professionals has been calculated. Regression analysis has been used to investigate the relationship between an independent or predictor variable and a dependent or criterion variable.

The proposed sample for the study was 450 IT professionals in and out Tricity, including Chandigarh, Panchkula and Mohali. The total sample collected consisted of 478 IT Professionals including males and females. The samples were selected randomly which included 196 males and 282 females. All the measured variables, i.e., "Technostress, Job Satisfaction, Job Performance and Mental Health" were administered on the selected sample.

The Technostress scale, created and developed by Ragu-Nathan and Ragu-Nathan (2002) is used to quantify Technostress. The scale has several aspects, including technological overload, invasion, complexity, insecurity, and uncertainty.

A scale created and established by Mishra, Tiwari and Pandey (1977) was used to assess Job Satisfaction. The scale has 41 statements on it, both positive and negative.

Shokrkon and Arshadi (1990) conceived and built Job Performance. There were 15 things on the scale.

Srivastava and Jagdish (1983) created the Mental Health Scale. The exam is divided into several categories, including positive self-evaluation, reality perception,

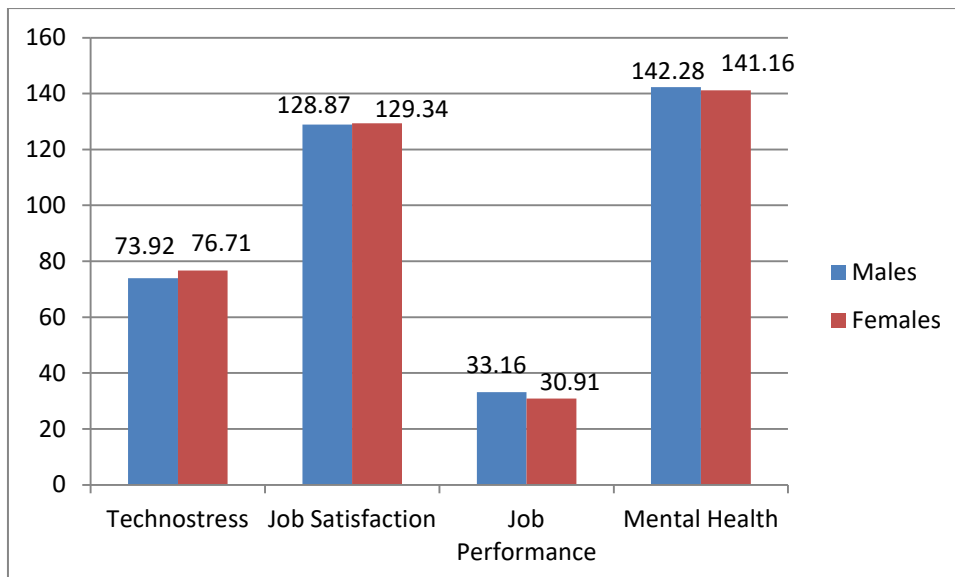
personality integration, autonomy, group-oriented attitudes, and environmental mastery.

**Table 4.1: Mean, Standard Deviations and t-ratios comparing males and females on Technostress, Job Satisfaction, Job Performance and Mental Health**

<b>Variables</b>	<b>Gender</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Mean difference</b>	<b>Std. Error difference</b>	<b>t- ratio</b>
<b>Technostress</b>	Male	196	73.92	13.16			
	Female	282	76.71	11.35	2.78	1.12	2.47*
<b>Job Satisfaction</b>	Male	196	128.87	11.96			
	Female	282	129.34	14.21	0.47	1.24	0.37
<b>Job Performance</b>	Male	196	33.16	7.19			
	Female	282	30.91	7.61	2.25	0.69	3.25**
<b>Mental Health</b>	Male	196	142.28	7.52			
	Female	282	141.16	6.68	1.11	0.65	1.69

\*\*significant at .01 level

\*significant at .05 level



**Figure 4.1: Depicts the gender differences on variables Technostress, Job Satisfaction, Job Performance and Mental Health (N = 478) referring table 4.1**

The first objective of the current research was to study the gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals. It was hypothesized that there exist no significant gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals. The t-test has been used to see the significant differences among different groups. The table 4.1 reveals difference between males and females among IT Professionals on Technostress, Job Satisfaction, Job Performance and Mental Health.

The mean of the male is 73.92 and female is 76.71 on Technostress. The standard deviation of males is 13.16 and of female is 11.35 on Technostress. The calculated t-ratio came out to be 2.47 which is significant at 0.05 level. The reason for getting significant gender differences on Technostress and most of its dimensions could be that females has to face multiple responsibilities and challenges be it at home or at workplace, hence things get piled up which might lead to higher Technostress among females than males, therefore, females need to balance the professional and personal work. According to the cultural differences, the males are more exposed to the technology world but females are less exposed, so they have less exposure of



handling the technology very well. The research was conducted which supported the result as the study found out the gender differences. Studies conducted by Zhao et al., 2022, support these findings. Among Chinese University students on Technostress and burnout which students experienced because of learning and use of the technology. The gender differences were found and the females received administrative support in lessening their burnout and males benefited from peer support in improving their level of competency in ICT than females. The another study in support is by Setyadi et al.,(2017), Stress brought on by an employee's failure to keep up with technology innovations is one of ICT's negative effects. Age and gender play an important role, as research studies have shown that as one's age increases, so does one's aversion to technological stress and that the gender differences do exist. Though some studies supported our data but some studies contradicted our data. The research by Wang et al., (2021) found out no gender differences among university teachers on Technostress. The study showed no gender difference as the study was carried in different country and on the different sample which is teachers. The working environment and the approach among the teachers is different for the IT professionals and that can be the reason that lead to the variation in the result.

The mean of the male is 128.87 and that of female is 129.34 on Job Satisfaction. The standard deviation of male is 11.96 and of female is 14.21 on Job Satisfaction. The t-ratio was computed and came out to be 0.37, which is negligible. The significant difference is not found among males and females as they found out be comfortable at their workplace. They found to have good rapport formation with their seniors and employees working at the same level. So creating a comfortable work environment has a positive impact on Job Satisfaction. At various organisations working at various levels and in various professional fields, the level of Job Satisfaction would vary. According to Feng et al.'s research report from 2020, the COVID-19 pandemic has caused the gender gap since it has affected work productivity and job happiness. There were no gender disparities in self-reported work productivity and job happiness before the Covid-19 epidemic, but during the lockdown, women displayed lower levels of Job Satisfaction and productivity than males. Hence the research supported

our results as the data was collected before the lockdown and the results have shown that gender differences were not found. Ghamsemy et al., (2022) examined Job Performance as the mediator between the positive and negative affect and Job Satisfaction among the Universities and colleges in Malaysia. The study showed significant difference among males and female academicians. There is also another study which contradicts our research study. A study by Bogg and Cooper (1994) studied the distinctions between genders in occupational stress, Mental Health, and Job Satisfaction among senior U.K. public employees. The study found that there exist gender disparities among elder British people who work as public officials. The females with the civil services were found to be significantly more dissatisfied at job and suffered poorer mental and physical health. The differences in the results could be because of the different samples and the research was carried in different countries and that is the reason that it contradicts our results.

The mean of the male is 33.16 and female is 30.91 on Job Performance. The standard deviation of males is 7.19 and female is 7.61 on Job Performance. At the 0.05 level, the computed t-ratio of 3.25 is significant. The males are found to be higher on Job Performance. Ultimately, the greater experience of stress and burden of multiple responsibilities may have negative impact on females' Job Performance. Also, the females have the personality traits to be efficient in performing well both professionally and personally. The studies have shown the gender differences that exist as differences were found in the present research. These findings are supported by the research by Asadullah et al., (2021) on gender differences and employee performance in restaurant industry. The gender differences does exist in the Job Performance as men are found to be more involved in the behavior than women like giving favors, whereas women are found to be involved in the behaviors that includes making excuses, flattery, apologies etc. The gender differences that exist may include the list of actions, behaviors and thoughts and they are different for males and females separately. The other research that supported the present results studied that gender differences on the Job Performance do exist by Lahkar et al., (2021), sought to investigate the relationship between workplace stress and Job Performance among academic librarians in North East India. The study's findings indicated that there was

a significant difference in work performance between men and women ( $p < 0.05$ ).

The mean of the male is 142.28 and that of female is 141.16 on Mental Health. The standard deviation of males is 7.52 and of female is 6.68 on Mental Health. The computed t-ratio was 1.69, which is not remarkable. The males and females have similar working conditions and environment, so the Mental Health is not in criteria to differentiate in this condition. The research study supported the results of the present research which was conducted by Ahmadi et al., (2012) investigated how managers' and employees' Mental Health affected their performance on the job for Iranian employees working in the city of Iran's natural gas refinery. The study found insignificant relationship between gender and employees' Job Performance and no significant gender difference was found on Mental Health. The other research contradicts the findings that gender differences do not exist. The research study by Getik et al., (2022) conducted research on the relationship between teenage Mental Health and peer gender and revealed that the higher percentage of females share in the classroom lead to increase in the incidence of the diagnoses on Mental Health and that too particularly among the boys. Therefore, the research concluded that the peer composition is an important, constant and continuous driver of the Mental Health. The another research study was conducted which also contradicted the results of the present research. The research was carried in Sweden. A research by Sefa et al., (2020) was done to look into the gender gap and locus of control in regards to Mental Health. The gender differences in locus of control is said to be the contributing factors to study the gender gap in the Mental Health favoring the males. The above studies contradicted our present investigation results on Mental Health because the studies were done on the countries other than in India and they are being conducted on the different sample. The working environment may be different in different organizations and employees working at different levels may effect their Mental Health differently.

As some of the calculated differences came out to be significant, thus it could be concluded that the first hypothesis of the research got partial support from the obtained findings. Hence, it is partially accepted, which means there is gender difference on Technostress and Job Performance. However, there was no noticeable

disparity in Job Satisfaction or Mental Health between men and women. The present study's findings are generally consistent with earlier studies examining gender differences in technological stress, work performance, Job Satisfaction, and Mental Health. The researchers looked at demographic factors related to Technostress as well as its effects on organisational commitment and work satisfaction.

**Table 4.2: Inter Correlation matrix of Technostress and Job Satisfaction**

(N=478)

Variables	Technostress	Job Satisfaction
<b>Technostress</b>	1	-0.23**
<b>Job Satisfaction</b>		1

\*\*correlation significant at 0.01 level

The study's second goal was to look at the connection between IT workers' Job Satisfaction and Technostress. The accompanying hypothesis was that among IT workers, there is no meaningful association between Technostress and Job Satisfaction. There is a negative substantial link between Technostress and Job Satisfaction, as seen by the correlation between the two ( $r = -0.233$ ,  $p < 0.01$ , significant at the 0.01 level; Table 4.2). Additionally, it implies that if the level of Technostress is higher, it will tend to lower the Job Satisfaction of IT professionals whereas the lower the Technostress, higher will be their Job Satisfaction. Hence, the null hypothesis is rejected. The fast changes in information and communication technologies, the modern world is becoming increasingly stressful. It has been seen that the academic institutions do use and depends upon technology to do teaching, learning and for research purposes. An employee high on Technostress will effect Job Satisfaction inversely. One possible explanation could be that stress is never perceive as desirable condition be it due to overload, conflict or technology, people always want to avoid such situations but pronged exposure to such situations lead to dissatisfaction. The research study by Osman et al., (2022) has supported the results of the present investigation to study the relationship between Technostress and Job Satisfaction among the teachers in Turkey during the Covid-19. The research's conclusions indicated that even while teachers' workloads grew throughout the Covid-19 era, their exposure to technology had a detrimental impact on their performance

and quality of life. The other research, by Aktan et al. in 2022, looked at the connection between teachers' work happiness and technological stress during the COVID-19 era. According to the findings, teachers were exposed to technology as a result of distance education, which had an impact on their performance and quality of life as their workload increased and they exerted more effort to become technologically literate. This was particularly difficult for teachers during the Covid-19 pandemic. Suh et al., (2017) performed study on the effects of Technostress on teleworkers' Job Satisfaction. The results of the study show that teleworkers' Technostress and Job Satisfaction are negatively impacted by the use of technology and job aspects. Tarafdar (2014) examined the impact of Technostress on end-user happiness and performance, which supports the same conclusions. The study found that Technostress lowers employee happiness and also causes disharmony in the workplace. The study by Jena (2015), which looked at the effects of Technostress on academics' work satisfaction, provided support for the findings of the present analysis. According to the study, technological stressors have a detrimental influence on work satisfaction. The results of the current analysis are supported by several previous research investigations. The research studies which were found old but still support our present result includes a study by Chen et al., (2016) conducted an empirical study and have shown the results that Technostress has actually decreased employee work satisfaction with regard to the use of information and communication technology. Park et al., (2016) performed research on how information security technology stress affects worker satisfaction. The results showed a negative correlation between increased information security Technostress and Job Satisfaction. Researchers Ayyagari et al. (2011) and Tarafdar et al. (2007) examined the effects of Technostress and discovered that those who encountered it had low work satisfaction, decreased productivity, and low levels of loyalty to their employers.

**Table 4.3: Inter Correlation matrix of Technostress and Job Performance**

(N=478)

<b>Variables</b>	<b>Technostress</b>	<b>Job Performance</b>
<b>Technostress</b>	1	- 0.13**
<b>Job Performance</b>		1

\*\*correlation significant at 0.01 level

The third objective of the research was to examine the relationship between Technostress and Job Performance among IT professionals. The corresponding hypothesis was proposed that there exists no significant relationship between Technostress and Job Performance among IT professionals. The findings suggested (Table 4.3) that the correlation between Technostress and Job Performance ( $r = -0.13$ ) found to be significant at 0.01 level. Thus, Technostress and Job Performance were found to be negatively correlated. The increase in the Technostress decreases the Job Performance of IT professionals or decrease in the level of the Technostress increases the Job Performance of IT professionals. The Technostress and Job Performance have inverse relationship with each other. Hence the proposed hypothesis has been rejected. The findings could be explained with the help of previous studies. It could be said that Technostress deplete persons coping resources and at the same time it also lead to confusion and wastage of time all of these are not good for work performance hence Technostress relate to Job Performance negatively. These findings are supported by studies done by Wang et al., (2021) on Technostress inhibitors and creators on the university teachers' work performance at higher education. The study emphasized on the effect of Technostress on university teachers' work performance, the techno-complexity and techno- insecurity were found to have negative effect on the work performance. Cahapay et al., (2021) did a study on Technostress, work performance, Job Satisfaction and career commitment of the teachers in Philippines during COVID-19 pandemic. The results have found out that the Technostress had a significant negative relationship with work performance. Brooks et al., (2017) researched Technostress to evaluate how social media affected employee work performance. The study's findings indicate that social media-induced Technostress

is negatively connected with job performance. Ansah et al., (2016) conducted research to determine the impact of Technostress on the performance of banking employees. As a result, to this, the employees feel technological stress (Technostress) leading to the negative results in the workplace like banks as in the study. Employees reported that ICT's cause mental stress and worry since they are expected to keep up with the speed of emerging ICTs. As a result, it is possible to conclude that Technostress has a detrimental influence on employee performance. There are old studies that still support the results of the present investigation. Salanova et al., (2000) investigated Technostress and its impact on organizations. The rise in technological stress is causing an increase in absenteeism and poor performance. Wang et al., (2008) conducted an empirical study on Technostress and work performance among Chinese employees. According to the study, there is a strong inverse association between technological stress and staff productivity. The evolution of technology has had a significant impact on the workplaces of all modern organizations. There is no doubt that the work is carried out at faster rate and also with more efficiency but still many employees does not feel comfortable working on technology because of rapid changes and uncertainty.

**Table 4.4: Inter Correlation matrix of Technostress and Mental Health**

(N=478)

<b>Variables</b>	<b>Technostress</b>	<b>Mental Health</b>
<b>Technostress</b>	<b>1</b>	<b>-0.11**</b>
<b>Mental Health</b>		<b>1</b>

\*\*correlation significant at 0.01 level

The fourth objective of the research was to investigate the relationship between Technostress and Mental Health among IT professionals. The corresponding hypothesis proposed that There is no conclusive link between Technostress and IT professionals' Mental Health. The results showed that there is a strong negative link between technological stress and Mental Health ( $r = -0.11, p < 0.01$ ) (Table 4.4). We reject the null hypothesis since the acquired results are in conflict with the suggested hypothesis. This indicates a negative correlation between technological stress and

Mental Health. It could be said that any kind of stress relates to Mental Health negatively rather stress caused due to technology has greater negative impact of psychological state of a person than physical side effects. The research study supports the results of the present investigation which is further discussed with a research carried by Zheng et al., (2022), to observe how the COVID-19 epidemic has affected teachers' Mental Health, particularly in light of the stress they have been under as a result of employing technology for online instruction. The literature of the theoretical paper has concluded out that Mental Health is affected because of COVID-19 as the teachers were found to be engaged in the online classes and other academic activities during the pandemic. Castillo et al., (2020) investigated teacher Technostress in Chilean schools. According to the study's findings, around 12% of Chilean instructors experienced techno-fatigue, 13% experienced techno- anxiety, and 11% experienced both disorders (techno-fatigued and techno-anxious). It was also discovered that male instructors had a greater frequency of techno-anxiety and techno-fatigue than their female counterparts. Torrano et al., (2020) conducted study on the stress variables of female instructors at online colleges. The study found that emotional exhaustion, time limits, a lack of a schedule, and mental overload are the biggest risk factors. It has been established that these risk factors are connected to the use and development of information and communication technology. Thorsten et al., (2020) conducted research on job stress and Mental Health. The results of the study show a connection between digital technology and psychosocial demands, including heightened workload, complexity, and conflicts between work and other spheres of life, as well as psychobiological stress responses. Atanasoff et al., (2017) published an article on workplace Technostress. There is no doubt that technology enhances, increases, and improves the efficiency of work at the workplace; Technology tools, however, can negatively affect a person's cognitive, psychological, and physical health, along with the health of an organisation, for example, by lowering employee satisfaction and decreasing employee commitment. There have been old research studies that support the present investigation. Schellhammer et al., (2013) conducted study on worker Mental Health and Technostress. The study found a link between technological stress and a lower quality of life. The growing amount of technological stress is lowering people's quality of life. Salanova et al., (2013) looked at how technology stress affects



mental wellness. The study looked at two factors—Technostress strain and addiction—that are related to the use of information and communication technology. Anxiety, tiredness, and a sense of inefficacy are all symptoms of technological strain.

**Table 4.5: Inter Correlation matrix of Job Satisfaction, Job Performance and Mental Health (N=478)**

<b>Variables</b>	<b>Job Satisfaction</b>	<b>Job Performance</b>	<b>Mental Health</b>
<b>Job Satisfaction</b>	<b>1</b>	<b>0.25**</b>	<b>0.19**</b>
<b>Job Performance</b>		<b>1</b>	<b>0.26**</b>
<b>Mental Health</b>			<b>1</b>

\*\*correlation significant at 0.01 level

The investigation's fifth goal was to look at the connections between IT workers' job happiness, performance on the job, and Mental Health. It was hypothesised that among IT workers, there are no meaningful connections between job happiness, Job Performance, and Mental Health. According to Table 4.5, there is a substantial positive link between Job Satisfaction and performance ( $r = 0.25$ ,  $p < 0.01$ ), satisfaction with one's job and Mental Health ( $r = 0.19$ ,  $p < 0.01$ ), and performance on the job and Mental Health ( $r = 0.26$ ,  $p < 0.01$ ). Therefore, the proposed theory is disproved. The findings could be explained with the help of previous studies. The reason behind this could be that Job Satisfaction, Job Performance, and Mental Health tend to related to each other positively because those who are satisfied with their job they tend enjoy working in their job which motivate them to perform better. All such positive conditions might contribute towards better Mental Health as well. There are different researches conducted that have supported our present investigation. Prihadini et al., (2021) conducted research on the significance of work happiness in improving employee performance. The results of the study show that work satisfaction significantly increases an employee's ability to perform at a high level. Research on the effects of leadership style and Job Satisfaction on employee performance was done by Sofyandi et al. (2021). According to the study, low employee performance was attributed to a lack of optimum leadership styles and a lack of work satisfaction.

Employee performance was found to be affected by leadership style and work happiness, either partially or concurrently. Miodraga et al., (2021) carried out a study to look into the various facets of Mental Health. The results of the study showed that nurses with higher levels of burnout and lower work satisfaction were more likely to quit the field than nurses with lower levels of burnout and higher levels of Job Satisfaction. Hennekam et al., (2020) evaluated workplace coping techniques for Mental Health disorders and their influence on perceived Job Performance. The study's findings demonstrated that Mental Health is adversely associated and can also have a negative influence on perceived Job Performance in the form of worse work quality, working at a slower speed, and making more mistakes. Platis et al., (2015) investigated the relationship between Job Satisfaction and performance among healthcare personnel. According to the findings of the study, there is a substantial association between work performance and job happiness. Work satisfaction was shown to have a high link with Job Performance parameters such as job quality and personality traits on the job. Ahmadi et al., (2012) conducted research to determine the influence of managers' and employees' Mental Health on Job Performance. The results of the study showed a strong relationship between employees' Job Performance and Mental Health, with a rise in Mental Health having a comparable impact on Job Performance. This suggests that work performance and Mental Health have a strong positive relationship. Lise et al., (2004) performed research on the relationship between professional performance and work satisfaction. The study found a strong correlation between professionals' work satisfaction and Job Performance. All of the variables were shown to be positively correlated with IT workers' Job Satisfaction. A contradictory research study was carried out as per our investigatory result. Rahama et al., (2021) conducted a study in Bangladesh on Mental Health and performance at work. The study sought to examine the connection between workers' Mental Health and productivity in clothing manufacturers. The analysis of the data revealed a strong and unfavourable relationship between work performance and Mental Health. According to the study, somatic issues were shown to be highly related to workers' Job Performance among complaints about Mental Health.

**Table 4.6: Enter Multiple Regression equation for the criterion variable Job Performance**

S.No	Independent Variables	R	R <sup>2</sup>	Adj. R sq	B	β coeff	t	Sig
1	Technostress	.130	.017	.015	-.080	-.130	-2.861	.004
2	Job Satisfaction	.251	.063	.061	.142	.251	5.651	.000
3	Mental Health	.262	.068	.067	.279	.262	5.915	.000

The study's final goal was to examine how factors such as Technostress, work happiness, and Mental Health interact to influence how well IT employees perform on the job. The researcher put out the hypothesis that neither technological stress nor job happiness nor Mental Health substantially predicted how well IT professionals would perform on the Job Performance. The findings of the multiple regression analysis were interpreted in Table 4.6 in order to support the aforementioned hypothesis. The value was determined for the column in the table with the label R, which represents the multiple correlation coefficient between the predictor and the criterion variable.130, with an R<sup>2</sup> value of 0.017 for the predictor Technostress. Additionally, it is revealed that 1.7% of variance by the technological stress was explained in the criterion variable Job Performance. Thus, further it can be explained that Technostress makes an insignificant contribution in predicting Job Performance. The R value for the only predictor variable Job Satisfaction has come to be as 0.251 and the R<sup>2</sup> value for the predictor Job Satisfaction came out to be 0.063. It was discovered that the criterion variable Job Performance's fluctuation was explained by Job Satisfaction to a degree of around 6.3%. The predictor Mental Health has a multiple correlation (R) value of 0.262. According to the R<sup>2</sup> analysis, the criterion variable Job Performance's variation is explained by Mental Health to the tune of 6.8% (R squared value multiplied by 100). The F- ratio for the Technostress in the table above was 8.188, which was determined to be inconsequential. The F-ratio for the predictor Job Satisfaction was 31.934, which was judged to be significant with a p value of 0.01. The F-ratio for the predictor "Mental Health" was 34.983 and was determined to be significant with a p-value of 0.01. The research's conclusions have shown partial

support for the proposed hypothesis of the research.

Hence, the proposed hypothesis is partially accepted. According to research, satisfaction with work is the second most important predictor of Job Performance, while technological stress is the third. It could be said that overall Mental Health of a person is something that always matter in every situation, Job Performance is also gets affected by Mental Health than any other variable of the study. Job Performance and satisfaction with work are somewhat related. The Matagi et al., (2022) investigations to look into the age, job participation, and Job Satisfaction as the predictor of Job Performance of local government employees in Uganda also discovered comparable results. The study's findings revealed no connection between work happiness and performance on the job. Hennekam et al., (2020) undertook a study on coping mechanisms for Mental Health issues at work and their effect on how well employees were judged to be performing their jobs. The results of many qualitative research studies showed a negative correlation between Mental Health and perceived Job Performance, which might manifest as poorer levels of work quality, a slower rate of work, and more errors. Additionally, the results showed that coping mechanisms have a positive and negative impact on work performance. Substance misuse, self-harm, hiding and suppressing symptoms, and forcing oneself to work through illness are all methods that negatively impact performance. The tactics that improve performance, on the other hand, include embracing one's problems, taking time off from work when necessary, receiving therapy and medicine, engaging in mindfulness exercises, having effective communication, and employing a compensation approach. Obrenovic et al. (2020) looked at models of work performance. The results also imply that psychological safety and well-being of employees have an influence on Job Performance; hence, when psychological safety and well-being of employees are insufficient, Job Performance is negatively impacted. Chu (2017) conducted a study to determine how Job Performance and Mental Health are related to compassion at work. The study also sought to understand how interpersonal interactions influenced these correlations. The study's findings demonstrated that compassion is a potent predictor of both Job Performance and Mental Health, while interpersonal interactions act as a modifying factor in that relationship. A person's performance and Mental Health will increase when they are

compassionate towards others, especially when compassion is shown by superiors or management. According to the study's findings, nurses' Job Performance and Mental Health will both improve when they are ready to listen and comprehend the pain of their coworkers.

In relation to the above results it can be summarized that some of the hypotheses supports the research studies and some hypotheses are not accepted. There are some results that have come in line with the literature available whereas some results have shown the contradictions to the research studies. Therefore, the summary and conclusion to the results have been elaborated in the next chapter.

CHAPTER V  
SUMMARY &  
CONCLUSION

## **CHAPTER 5**

### **SUMMARY & CONCLUSION**

The digitalization has become the universal concept in almost all the branches and in all the kinds of jobs that exist. The task that use to take so much of time is now can be seen to be accomplished in the seconds which is found to be possible only through this technological advancements. The technology has change the pace of the tasks to be completed in every sphere of life and for the completion of the tasks, the transformation in the digital work style came into existence. The digital technologies have put an impact on the all the organizational structures, communication, working style of the organization, businessmodels and the inter and intra relationships.

The life in today's world which is a modern life has been so complicated in nature, crowded with so many stressors that it has made it difficult for survival. The use of technology in today's world has put so much of strain and it has become a concern in the present society specifically for those who always or expected to use technology. The digitalization has put the unavoidable results and consequences in the form of Technostress in life of each and every individual employee. Technostress mostly results from the belief that one cannot manage the ongoing developments in technology in a healthy manner. According to Rabia et al., (2010), Technostress is a negative variable which is seem to have a connection between the people who are at work and using advanced technologies in the present world.

Technostress is described as a sickness brought on by a person's incapacity to make a healthy adjustment to technology. Brod (1984) defined Technostress as “modern disease of adaptation caused by an inability to cope with new computer technologies in a healthy manner” and “state of arousal observed in certain employees who are heavily dependent on computers in their work” (Arnetz & Wiholm, 1997).

No doubt the technology has made things fast but it has become a major problem and an issue for IT professionals especially in the developing countries. The working environment, work demands, structure of an organization in present time has so much

changed. It had a negative effect on Mental Health where huge amount of pressure and work load is given to an employee. The shift work is also an important factor for the stress as employees had to compromise their health, sleeping patterns and timings. All these factors when collaborated, it affects the Mental Health. This means that one is not able to control and manage over the emotions. The negative thoughts when influence over the mental state, therefore it effects the Mental Health. IT jobs in the modern era are most demanding jobs in the present scenario where the youth are working but the problem is that the jobs are contractual based jobs with less percentage of job security with high pay and has a strong level of competitiveness (Lim & Teo, 1999).

## **5.1 SUMMARY**

The present investigation aims at studying the Technostress in relation to “Job Satisfaction, Job Performance and Mental Health” among IT Professionals. To study the above variables, the sample size of 478 IT Professionals from different organisations from tricity, for example, Chandigarh, Panchkula and Mohali. The sample collected consisting of the IT Professionals consisting of employees based on males and females.

The questionnaires of the variables, i.e. “Technostress, Job Satisfaction , Job Performance and Mental Health” were administered on the sample. The following is the description of the scales that were used in the present investigation:

- **Technostress** (Ragu-Nathan and Ragu-Nathan, 2002)

24 items make up the scale used for determining Technostress. The questionnaire's items are scored using a 5-point likert scale, with 1 denoting "completely disagree," 2 denoting "disagree," 3 denoting "neutral," 4 denoting "agree," and 5 denoting "strongly agree." The respondents were asked to tick on the appropriate number as he/she feels with each item. The range of the scores can be from 24 to 120. The high score indicates the high Technostress.



- **Job Satisfaction Instrument** (Mishra, Tiwari and Pandey, 1977).

The scale consists of 41 items and each item can be rated on the 5-point rating scale. The responses of the respondent will be taken ranging from more disagree, disagree, average, agree and more agree. The more disagree will be given the score of 1 and more agree as 5 in case of the positive items. The negative scored items will be scored in reverse way i.e., more disagree get 5 marks and more agree as 1 mark.

- **Job Performance Questionnaire** (Shokrkon & Arshadi, 1990)

The Job Performance questionnaire (JPQ) was developed in 1990 by Shokrkon and Arshadi in Persian in order to look at the employee's performance in their job. The JPQ consist of 15 items which are based on the Likert scale. The items in the scale can be rated on the four-point scale and the options for each item is "Rarely Occurs", "Sometimes Occurs", "Often Occurs" and "Very Often Occurs".

- **Mental Health Inventory** (Jagdish & Srivastava, 1983).

Mental Health Inventory (MHI) developed by Jagdish and Srivastav (1983) was developed and constructed to assess the positive aspects of the Mental Health. The inventory consists of 56 items. The items were based on positive and negative items and scoring was done accordingly.

**Table: 5.1: Results Interpretation on Research Hypotheses**

<b>S.No.</b>	<b>Hypotheses</b>	<b>Significant/ Insignificant</b>	<b>Accepted/Rejected</b>
1.	There exist no significant gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals.	Significant gender differences (Technostress and Job Performance) and Insignificant gender differences (Job Satisfaction and Mental Health)	Hypotheses accepted for Job Satisfaction and Mental Health and hypotheses rejected for Technostress and Job Performance.
2.	There exists no significant relationship between Technostress and Job Satisfaction among IT professionals.	Significant	Hypotheses rejected.
3.	There exists no significant relationship between Technostress and Job Performance among IT professionals.	Significant	Hypotheses rejected.
4.	There exists no significant relationship between Technostress and Mental Health among IT professionals.	Significant	Hypotheses rejected.
5.	There exist no significant relationships among Job Satisfaction, Job Performance and Mental Health in IT professionals.	Significant	Hypotheses rejected.

6.	Technostress, Job Satisfaction and Mental Health does not significantly predict the Job Performance of IT professionals.	Significant	Hypotheses accepted for Technostress and hypotheses rejected for Job Satisfaction and Mental Health
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Keeping in view the objectives and hypotheses of the study, descriptive statistics, Pearson product moment correlation, t-test and Multiple Regression were used to analyze the data. The findings have been mentioned below:

The first objective of the current research was to study the gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals. It was hypothesized that there exist no significant gender differences in Technostress, Job Satisfaction, Job Performance and Mental Health among IT professionals. The t-test has been used to see the significant differences among different groups. The calculated t-ratio on Technostress came out to be 2.47 which is significant at 0.05 level. The females are found to be high on Technostress than males. The reason for getting significant gender differences on Technostress and most of its dimensions could be that females has to face multiple responsibilities and challenges be it at home or at workplace, hence things get piled up which might lead to higher Technostress among females than males, therefore, females need to balance the professional and personal work. According to the cultural differences, the males are more exposed to the technology world but females are less exposed, so they have less exposure of handling the technology very well. The calculated t-ratio on Job Satisfaction came out to be 0.37, which is insignificant. The significant difference is not found among males and females as they found out to be comfortable at their workplace. They found to have good rapport formation with their seniors and employees working at the same level. So establishing comfortable working environment can influence the Job Satisfaction level positively. The calculated t-ratio on Job Performance came out to be 2.25, which is significant at 0.05 level. The

females are found to be higher on Job Performance. Ultimately, the greater experience of stress and burden of multiple responsibilities may have negative impact on females' Job Performance. Also, the females have the personality traits to be efficient in performing well both professionally and personally. The calculated t-ratio of Mental Health came out to be 1.69, which is insignificant. The males and females have similar working conditions and environment, so the Mental Health is not in criteria to differentiate in this condition.

The second objective of the research was to investigate the relationship between Technostress and Job Satisfaction among IT professionals. The corresponding hypothesis was that there exists no significant relationship between Technostress and Job Satisfaction among IT professionals. The correlation between Technostress and Job Satisfaction ( $r = -0.233$ ,  $p < 0.01$ ) found to be significant at 0.01 level which shows that there is negative significant correlation between Technostress and Job Satisfaction. If Technostress is high, it inversely correlates to the Job Satisfaction of IT professionals or if Job Satisfaction is high, it inversely correlates the Technostress of IT professionals. Hence, the null hypothesis is rejected. The fast changes in information and communication technologies, the modern world is becoming increasingly stressful.

The third objective of the research was to examine the relationship between Technostress and Job Performance among IT professionals. The corresponding hypothesis was proposed that there exists no significant relationship between Technostress and Job Performance among IT professionals. The findings suggested that the correlation between Technostress and Job Performance ( $r = -0.13$ ) found to be significant at 0.01 level. Thus, Technostress and Job Performance were found to be negatively correlated. The increase in the Technostress decreases the Job Performance of IT professionals or decrease in the level of the Technostress increases the Job Performance of IT professionals. The Technostress and Job Performance have inverse relationship with each other. Hence the proposed hypothesis has not been accepted.

The fourth objective of the research was to investigate the relationship between Technostress and Mental Health among IT professionals. The corresponding

hypothesis proposed that there exists no significant relationship between Technostress and Mental Health among IT professionals. Findings have revealed that there is negatively significant correlation ( $r = -0.11$ ,  $p < 0.01$ ) between Technostress and Mental Health. As the obtained finding is contrary to proposed hypothesis hence, we reject the null hypothesis. That means there is negative relationship between Technostress and Mental Health. It could be said that any kind of stress relates to Mental Health negatively rather stress caused due to technology has greater negative impact of psychological state of a person than physical side effects.

The fifth objective of the investigation was to investigate the relationships among Job Satisfaction, Job Performance and Mental Health in IT professionals. It was hypothesized that there exist no significant relationships among Job Satisfaction, Job Performance and Mental Health in IT professionals. The results have revealed that there was significant positive relationship between Job Satisfaction and Job Performance ( $r = 0.25$ ,  $p < 0.01$ ), Job Satisfaction and Mental Health ( $r = 0.19$ ,  $p < 0.01$ ), Job Performance and Mental Health ( $r = 0.26$ ,  $p < 0.01$ ). Hence, the proposed hypothesis is not accepted. The findings could be explained with the help of previous studies. The reason behind this could be that Job Satisfaction, Job Performance, and Mental Health tend to related to each other positively because those who are satisfied with their job they tend enjoy working in their job which motivate them to perform better. All such positive conditions might contribute towards better Mental Health as well.

The final objective of the research was to study the combined role of Technostress, Job Satisfaction and Mental Health as a predictor of Job Performance among IT professionals. The researcher hypothesized that Technostress, Job Satisfaction and Mental Health does not significantly predict the Job Performance of IT professionals. In order to meet the above hypothesis, the multiple regression analysis was carried out and the results were interpreted. The column in the table labeled R as the value of the multiple correlation coefficient found between the predictor and the criterion variable and the value came out to be .130 and  $R^2$  value for the predictor Technostress came out to be 0.017. It is also revealed that Technostress explained

1.7% of the variance in the criterion variable Job Performance. Thus, further it can be explained that Technostress makes an insignificant contribution in predicting Job Performance. The R value for the only predictor variable Job Satisfaction has come to be as 0.251 and the R<sup>2</sup> value for the predictor Job Satisfaction came out to be 0.063. It is revealed that Job Satisfaction explained about 6.3% of the variation in the criterion variable Job Performance. The multiple correlation (R) value for the predictor Mental Health came out to be 0.262. The R<sup>2</sup> have shown that the Mental Health explained .068, which means that Mental Health accounts for the 6.8% (R squared value multiply by 100) of the variance in the criterion variable Job Performance. In the above table, the F-ratio for the Technostress came to be 8.188, found to be insignificant. The F-ratio of predictor Job Satisfaction came out to be 31.934, found to be significant,  $p < 0.01$ . The F-ratio of the predictor Mental Health came out to be 34.983, found to be significant,  $p < 0.01$ . The findings of the research have revealed partial support for the proposed hypothesis of the research.

Hence, the proposed hypothesis is partially accepted. As Mental Health was revealed the most significant predictor of Job Performance followed by Job Satisfaction and thirdly Technostress. It could be said that overall Mental Health of a person is something that always matter in every situation, Job Performance is also gets affected by Mental Health than any other variable of the study. To some extent Job Satisfaction also relates to Job Performance.

## **5.2 CONCLUSION**

The present research aims at studying Technostress, Job Satisfaction, Job Performance and Mental Health among IT Professionals. For this purpose the sample size of 478 IT Professionals from different organisations were collected from Chandigarh, Panhckula and Mohali.

The life in today's modern world is found to be so complicated in nature, crowded with so many stressors that it has made it difficult for survival. The use of technology in today's world has put so much strain and it has become a concern in the present society specifically for those who are always expected to use technology. Due to the

rapid and sudden changes in the technology, it has led to decrease in the Job Satisfaction, Job Performance and Mental Health of IT Professionals. Individuals who are found to be high on Technostress will be effected inversely to the Job Satisfaction, Job Performance and Mental Health of IT Professionals.

It is very important for an employee to understand their own strengths and weaknesses so that they can work over their self. When an employee uses their skills at work, they perform to the best of the abilities that they possess and it increases their Job Satisfaction and Job Performances and improves their Mental Health but if employees are stress with so much of technology it impacts them negatively.

The current research study focuses on the Technostress which plays an important role in todays' world where everything is related to technology for the achievement of an organizational goals. It is important for employees to work as per their aptitude so that stress is not effecting them and their organization.

The organisational should measure the variables like Technostress, Job Satisfaction, Job Performance and Mental Health from time to time through the use of different questionnaires. The training should be given to IT Professionals who are prone to be effected negatively. The organisations should administer such questionnaires too before recruiting the employees.

The training to IT Professionals should be given so that they can be satisfied and committed to their job and be able to produce positive and effective results that help an organization to meet their organizational goals. This will help employees to have good Mental Health. Training will help in reducing the Technostress while increasing the Job Satisfaction, Job Performance and Mental Health of employees.

The study shows that the IT Professionals who have less Technostress will found to be high on Job Satisfaction, high Job Performance and the Mental Health will be good. So by lowering down the Technostress IT Professionals will show better results at their workplace through enhancing their level of Job Satisfaction and Job Performance will be high which will help them with better Mental Health.

An employee Technostress level should be assessed using Technostress scale during the recruitment process so that an optimum potential of IT Professionals can be used to achieve organizational goals by giving proper training or using psychological therapies. When IT Professionals will be low on Technostress they will be able to work properly having satisfied at the workplace and showing their commitment at work and would show good Mental Health.

### **5.3 LIMITATION**

The study was limited to studying only the gender differences. So other differences, for example, experiences, and qualifications could have been studied in the present research.

The limitation of the study is also that the research objectives and hypotheses could have been framed keeping other dimensions of the variables as well. The research objectives and hypotheses should also be framed to study the dimensions of the variables such as dimensions of Technostress and Mental Health as well.

The present investigation was limited in studying only software engineers. The research on the studied variables could have done by comparing the software and hardware engineers.

### **5.4 DELIMITATIONS OF THE STUDY**

The present investigation was carried out by studying the gender differences. The hypotheses and objectives were framed looking into the differences only in the relation to the gender only.

The differences can also be looked upon by studying experiences of work, education and other engineers where the comparison can be looked upon. Thus the wider aspect in the present investigation was missing.

The study was carried out only on the software or the system engineers. The other engineers employed were not taken and therefore the studies can be conducted on such areas as well.



The future researches can be well drawn on such concepts as highlighted above so that the depth analysis can be done on the studied variables.

## **5.5 FUTURE RESEARCH**

The present research study aimed to study the Technostress in relation to Job Satisfaction, Job Performance and Mental Health among IT professionals. The present investigation is carried out because there is no study being done which has studied all the variables taken in the present research work.

The present investigation studied keeping only those objectives and hypothesis including only gender differences and not the differences on the basis of the education qualification that engineers possess, for example, differences on the basis of B.Tech., B.Sc., BCA etc. Therefore the research studies can be conducted in future where the differences on educational qualification can be done on the studied variables.

The comparative studies can be conducted looking into Technostress in North, South, East and West. Also the comparative studies can be done looking into comparisons at country level as well on the studied variables.

The other related variables could also be studied along with the variables taken in the present investigation so that in depth study can be formulated.

The summary and conclusion highlights the concluding remarks about the research work after working on the Introduction, Review of Literature, Method, Results and Discussion of the variables under the present research work. This chapter also includes the limitation and the future research of the variables used in the present research work.

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# APPENDICES

## APPENDICES

Name:

Age:

Designation:

Gender:

Educational Qualification:

Organisation:

Experience (Years):

**Read the following statements and tick the right option that suits the best. Total Parts: 4 (A, B, C, D)**

**A**

**1 = Completely Disagree; 2 = strongly disagree; 3 = not sure; 4= strongly agree; 5 = completely agree**

S.NO.	STATEMENTS	RATING
1.	I am forced by this technology to work much faster	1 2 3 4 5
2.	I am forced by this technology to do more work than I can handle	1 2 3 4 5
3.	I am forced by this technology to work with very tight times schedules	1 2 3 4 5
4.	I am forced to change my work habits to adapt to new technologies.	1 2 3 4 5
5.	I have a higher workload because of increased technology complexity	1 2 3 4 5
6.	I have to spend a lot of time everyday reading an overwhelming amount of e-mail messages	1 2 3 4 5
7.	I have to work harder because of delays from hardware, software and network Problems	1 2 3 4 5
8.	I spend less time with my family due to this technology	1 2 3 4 5
9.	I have to be in touch with my work even during my	1 2 3 4 5

	vacation due to the Technology					
10.	I have to sacrifice my vacation and weekend time to keep current on new Technologies	1	2	3	4	5
11.	I feel my personal life has been invaded by this technology	1	2	3	4	5
12.	I do not know enough about this technology to handle my job satisfactorily	1	2	3	4	5
13.	I need a long time to understand and use new technologies	1	2	3	4	5
14.	I do not find enough time to study and upgrade my technology skills	1	2	3	4	5
15.	I find new recruits to this organization know more about computer technology than I do	1	2	3	4	5
16.	I often find it too complex for me to understand and use new technologies	1	2	3	4	5
17.	I feel constant threat to my job security due to new technologies	1	2	3	4	5
18.	I am threatened by co-workers with newer technology skills	1	2	3	4	5
19.	I do not share my knowledge with my co-workers for fear of being replaced	1	2	3	4	5
20.	I feel there is less sharing of knowledge among co-workers for fearing of being Replaced	1	2	3	4	5
21.	There are always new developments in the technologies we use in our Organization	1	2	3	4	5
22.	There are constant changes in computer software in our organization	1	2	3	4	5

23.	There are constant changes in computer hardware in our organization	1	2	3	4	5
24.	There are frequent upgrades in computer networks in our organization	1	2	3	4	5

**B**

<b>S.NO</b>	<b>STATEMENTS</b>	<b>More Disagree</b>	<b>Disagree</b>	<b>Average</b>	<b>Agree</b>	<b>More Agree</b>
1.	The working hours are not fit for me.					
2.	I feel that I have got opportunities of promotion in my job.					
3.	My job is quite interesting and according to my liking.					
4.	The present working hours though hinder in my entertainment, yet like them.					
5.	The present employment though good yet I donot get leisure.					
6.	Being on present employment I can not display good results.					
7.	I feel that I should get more pay in my present employment.					
8.	Usually, I am dissatisfied as I am not getting residence.					
9.	My service is more secure than other service.					
10.	My employment gives me all facilities but no status.					

11.	My colleagues are not very helpful in my work.					
12.	The basis of my employment is less work and more pay.					
13.	People less educated than me get more pay.					
14.	I feel that this employment is not more secure than other services.					
15.	I get more pay than others whose work is as important than mine.					
16.	My colleagues are of helping nature.					
17.	I do not see many opportunities of progress in this job.					
18.	My working hours are such that I remain too busy.					
19.	I feel satisfied with my work by working more.					
20.	My work not very attractive.					
21.	I always suffer with a feeling that I may not lose my job.					
22.	My service give me opportunities of good residence.					

23.	Quick transfers give me great trouble.					
24.	I feel that I work with full responsibility.					
25.	Leave applications are not accepted though there are facilities for it.					
26.	I get recognition for my good works.					
27.	I get very little co-operation from public in my work.					
28.	I feel that my services is not according to my taste.					
29.	I am not more able than other worker in this field.					
30.	I usually feel to change my work according to my wish.					
31.	I like to do some other work in this salary.					
32.	There are many problems in working in rural areas.					
33.	I remain very worried for not having facility of transport.					
34.	I am suppressed by my officer for not attaining the request target.					
35.	My colleagues are happy in my jobs.					
36.	I feel that I am considered					



	an indispensable person in this field.					
37.	I have given more importance in this institution than others.					
38.	I do not get co-operation when I need it.					
39.	I feel that my work is not interesting.					
40.	Sometimes transfer is not an obstacle in my work.					
41.	I feel that my work is comfortable.					

**C**

S.NO.	STATEMENTS	RESPONSES			
		Always	Frequently	Sometimes	Rarely
1.	I follow orders and administrative regulations.				
2.	Working conditions are satisfactory in my organization from the point of view of workers' welfare and convenience.				
3.	I work honestly unsupervised.				
4.	I try to present my work with best quality.				
5.	I follow up my job with encouragement for good results.				
6.	I'm serious in my work. In think it is worth preserving and try to solve the work problems.				
7.	I respect applicants and try to satisfy them.				
8.	I am self-sacrificed in urgent and human ethical events.				
9.	I try to increase the information related to my job.				
10.	I accept my mistakes.				
11.	I try to keep my job secrets.				
12.	I respect my colleagues and cooperate with them.				
13.	I try to share job information with				

	my colleagues.				
14.	I abstain dawdling and doing useless works.				
15.	I take care of work instruments (tools) and economized in using them.				

**D**

S. No	Statements	Always	Most of times	Sometimes	Never
1.	I feel lack of confidence.				
2.	I get excited very easily.				
3.	I am not able to take quick decision on anysubject.				
4.	I have affection and attachment with myneighbors.				
5.	I mould myself according to circumstances.				
6.	I feel that I am losing self-respect.				
7.	I use to worry even about trivial matter for along time.				
8.	I am not able to take decision about my nextstep.				
9.	I hesitate in meeting with others.				
10.	I do my duty well even in adverse circumstances.				
11.	I feel that I am not able to fully utilize my abilities in performing my different duties.				
12.	In adverse circumstances, I act without keepingin view of the real facts.				
13.	I feel irritation.				
14.	I feel to be insecure.				
15.	I am much worried about my responsibilities.				

16.	I feel depressed/dejected.				
17.	I play important role in social ceremonies.				
18.	I utilize my reasoning even in difficult times.				
19.	I feel that my relations with others are not satisfactory.				
20.	My responsibilities are like burden to me.				
21.	I suffer from inferior complex.				
22.	I am used to be lost in world of imagination.				
23.	I am anxious about my future.				
24.	My friends/relatives remain ready to help me in difficult times.				
25.	I make definite plans about my future.				
26.	I am enraged even by the slightest unfavourable talks.				
27.	I take decisions easily even in difficult circumstances.				
28.	I am not able to behave in such a way as my friends expect from me.				
29.	I am satisfied with most of the aspects of my life.				
30.	My friends and colleagues have respect for me.				
31.	My confidence varies highly in quantity.				
32.	I am always ready to fight the				

	problems.				
33.	I make impressions about people or issue even in absence of facts and grounds.				
34.	I am not able to concentrate fully in my works.				
35.	I feel inclined towards opposite sex.				
36.	I solve my problems myself.				
37.	I fully cooperate in the important functions of my community.				
38.	I am perplexed with my contradictory thoughts.				
39.	I take decisions on the basis of facts even though they are contrary to my wish.				
40.	I am not able to continue any task for long.				
41.	I feel myself secure amidst my friends/group.				
42.	I do not become hopeless even when I fail.				
43.	I consider myself useful for society.				
44.	I aspire for something without having in view of my short comings.				
45.	I do not get influenced even by reasonable arguments.				
46.	I am not able to take such decisions as I want to take.				
47.	I am afraid of natural calamities.				

48.	I feel that this world is a place of good enough for passing a life.				
49.	I feel full of enthusiasm to think that I will certainly achieve my objectives.				
50.	I do not get disappointed with the common worries of daily life.				
51.	My mood changes momentarily.				
52.	I myself decide what and how I should do.				
53.	I feel that my intimacy with my group community is increasing gradually.				
54.	I feel pleasure in taking responsibilities.				
55.	I feel that situations are getting against me.				
56.	I have a wide perception about life.				