

Technology related anxiety- the deepest contributor to stress

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Abstract:- People whether living in urban or rural area will undergo different types of stresses; Technology is changing so rapidly, that it is really hard to keep up with the pace, hence giving rise to an anxiety ridden society. Technology now has provided great facilities but it has left a scar on individual's life. This paper attempts to establish a relationship between technology and stress by considering the data from individuals of different age group from different cities in India. In this study an attempt is made to quantify or analyze the effects of the latest thoughts/practices and draw a conclusion on the quality of life.

A cross sectional questionnaire based study was conducted among various individuals across various regional. A total of 80 subjects participated in the study with the mean age of 24.5 ±5.5years. General linear model was employed to study the reliability of the data obtained through the developed Delphi instrument.

Key Words: Technology, Stress, Anxiety, Delphi Technique

1. INTRODUCTION

Technology in simple terms can be described as the tools that help us to solve problems using various resources or create new things; it has been evolving over years, and has transformed the world into a global village. Technology creates new life conditions and has tremendous advantages in terms of increasing productivity, efficiency, and effectiveness (Sae Bom Lee). This has provided the channel for exchange of information quickly (Kendra), which in turn has a huge influence on our lives both in positive and negative aspects. Negatively it can be addiction to technology, distraction, difficulty in concentration, isolation from the real world, lack of social bonds, health issues such as neck pain, stress, insomnia and many others combinations that can lead to notorious complexity. These conditions can lead to anxiety as well depression and other psychological or mental disturbance and disorders. This paper attempts to relate how technology can induce anxiety.

Anxiety is not an unknown or an uncontrollable illness that is developed or inherited in an individual; it is nothing but the results from certain style or change of behavior. Technology has huge influence on anxiety. Technology is changing so rapidly that people are finding it difficult to keep up with changing pace. This pace could be a critical factor to an anxiety ridden society. Anxiety is one the root cause for many mental disabilities.

According to the recent statistics, 36% of Indians are depressed at some point in their life, 371 people kill themselves everyday in India and anxiety is one of the root causes for it. Anxiety in turn leads to mental disorders and other mental conditions. Mental disorder is one of the leading causes of disability in the world, and it is predicted that, they are going to become a main cause of death in a decade or so. The impact of technology on our mental and physical health and social values are devastating. And the overuse of electronics has huge pitfalls. Anxiety is an unease feel, tension, nervousness, and panic about actual or potential problems. It is said that one in every four Indians are affected by anxiety, it affects 25% of the population and it is possible to lead to the depression if not addressed. It is found out from the researches that anxiety is something more than just fear or frustration, emotions and mere depression. It is a threatening situation or the indication of the moment's presence of danger. Quality of life is affected; the cultural context and the value system which is in communication with their goals, aspirations are changing.

In general terms, questions like, "what's going on with me", "what's happening to me" are whispered in the anxious mind. Similarly to the general anxiety phenomenon, in today's digital world we can quote a term digital phenomenon of technology called technology related anxiety or sometimes called as techno-stress. No doubt due to the proliferation of technologies we are able to overcome the obstacles of space, time and other difficulties in today's world. As an individual's we have thinking that these technology or tools helps us gaining an understanding various cultures, explore to people all over the world, maintain relationships and strengthen the bonding, help people become more socially adept. In spite of these advantageous, technological advances has caused people to be distracted, overly isolated, stressed and also a one the leading cause to anxiety. Technology has profound impact on today's world, on what it means to be social. For example social networking sites have both positive as well as negative impact and consequences. It is amazing when we can find long lost friends through social networking sites and reconnect but it can also cause a fear of dangerous pseudonym.

2. Objective:

- To develop a Delphi based instrument to capture responses of the subjects of different age groups.
- To critically analyse the responses and conduct reliability analyses
- Conduct statistical inference and analyse the pattern of anxiety.
- Arrive at decisions leading to anxiety based on the above analyses.

3. Relationship of stress and anxiety

Anxiety and stress are an amalgamation of cognitive assessment, environmental ultimatum, behavioral changes and responses, physiological arousal; hence there is the existence of corresponding relationship between stress and anxiety (Kronemyer). Undesirable noise can also have an effect on psychological health in turn leading to stress and anxiety (Dr. B Ravishankar&Shailaja). It also has a huge discrepancy between person to person due to divergent level of flexibility and defenselessness or vulnerability of handling stress or anxiety. "It is possible for a person to experience more stress with less anxiety. For example, a worker under pressure to complete a task under time, scheduling, and resource constraints will be able to do so with less anxiety if he or she is skilled in the performance of the task (Franklin TB)." This can lead to increases in worker's anxiety. Stress is a universal element at work and all human beings have to face stress in all work life (Dr. B Ravishankar&Shailaja). For instance, in work area when an individual overcome their ability to manage the challenging and constant rise in work demand, pressure which directly has it influence on both internal and external stimuli factors whereas in personal life technology can trigger the socializing and public speaking ability of an individual giving rise to stress and anxiety (Justine Corry). Self-efficacy is the belief that a person has the ability to perform an action or a function such as thinking, motivating self to carry out a particular task, which can drop down due to excessive usage of technology and this in turn can result in stress and anxiety (Martin). The efficacy of differing thought control strategies vary depending upon whether cognitive arousal elicits anxiety or not (Klára Čapková). The stressor levels appear to decrease with increasing age (EVAN W. DRYSON). The following figure represents the correlation between various factors leading to stress and anxiety.

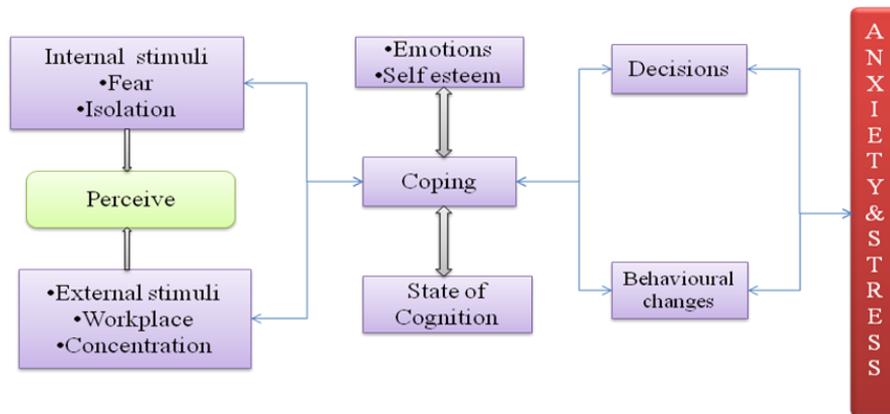


Fig 1: Relationship of Stress and Anxiety

4. Research tools

4.1 Delphi technique

Delphi technique was developed by Dalkey and Helmer in 1963. This is widely used furcating technique or a structured communication for gathering data from respondent based on the designed (Sandford). The main objective of the technique is to confluence the opinion on a specific real- world issue or knowledge within the topic of interest. This method is designed by us for conducting detailed examinations of the data obtained from the questionnaire and discussing the issue i.e., technology related anxiety, for the purpose of investigation and to statistically analyze the data Generally common survey try to identify " what is" whereas this technique is designed to address " what could be" or "what should be" (Sandford).

Delphi technique can be simply called as a feedback process, It is found out that during the Delphi process the convergence towards the right answer increases as the range of the answers decreases and after a predefined criterion the process is stopped and statistical mean/ median are determined. It follows a principle that forecast from an instructed groups is less accurate than structured groups of individuals. This has variety of applications. The process can be depicted as follows (Harold A. Linstone 4):

- Collecting current data
- Measuring the significance
- Evaluating the possibility
- Seeking the various options
- Developing plan
- Converging the structure of model
- Delineating or portray the pros and cons associated with potential options
- Distinguishing and clarifying the data obtained

4.1.1 Subject selection

Since Delphi technique focuses on eliciting opinions over a short period of time, the selections of the subject is most importantly dependent upon the disciplinary area of interest required by the specific potential problem. Our area of interest as defined earlier as “Technology related anxiety- the deepest contributor of stress.”

5. Research questionnaire

Technology Anxiety and stress are the interdependent aspect, evolutionary adaptations an organism confronts in today’s environment that includes various challenging circumstances in various environmental, physiological and behavioral aspects (Kronemyer).When any kind of anxiety exceeds an adaptive capacity, it affects ones coping strategies, health (physical and mental health), causes disturbances that leads to lack of concentration, low self esteem and various other conditions that affects our daily life. Table 1 lists the questionnaires framed.

6. Methodology

Addiction to technology in turn has its own impacts, few are health issues such as neck pain, insomnia as well as critical factors caused due to excessive usage of technology such as distraction, difficulty in concentration, obsession with social media, isolation from the real world, lack of social bonds, stress and many other or combination of all these critical factors can lead to anxiety as well depression and other psychological or mental disturbance and disorders.

Once the critical factors were identified and pooled, a set of cross-sectional questionnaire were developed using Delphi instrument. Goggle form was created for the set of questionnaire designed on technology related anxiety. The form was distributed among various age groups in various cities, so that we could get an overall view of how technology related anxiety has affected in India. Table 1.1 shows the overall percentage of different age group and gender; the first graph represents the age group which was divided into 4 categories and the second graph represents the gender percentage. The data was collected for 20 days. The target audience for the collection of data of this study on technology anxiety not only focused on engineering students, but also included professors, engineers, musicians, HRs, writers and students from various other fields that included; medical, pure science etc. Totally 20 questionnaires were sent to 80 individuals. We did not restrict our data collection to one particular area, instead it was widely spread. A combination of both quantitative and qualitative data was collected.



Fig 2: Flow Diagram of the Research Process

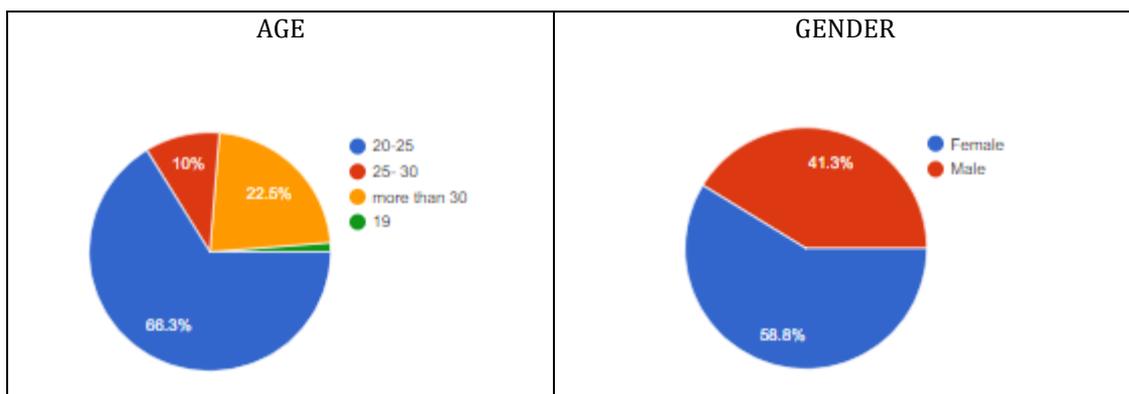


Table 2: Percentage of Age and Gender of Respondents

7. Statistical analysis

The results obtained from various respondents of a sample size of 80 was used and analyzed. After tabulating various values of the responses, general linear model analysis was

employed to compute the reliability of the questionnaire. The results of the analysis were employed to compute the reliability of the questionnaire. The results of the analysis are shown in the figure. Pearson coefficient of .8729 indicated a high value of reliability

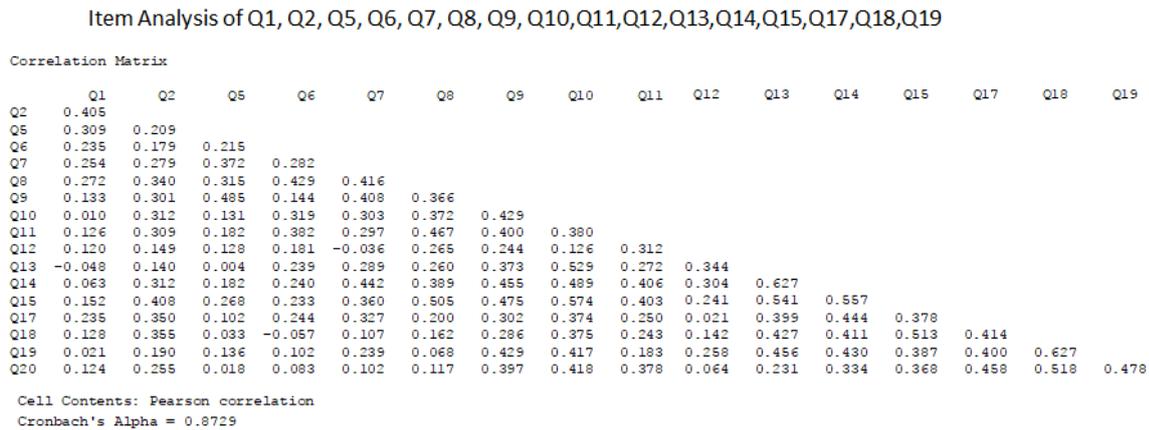
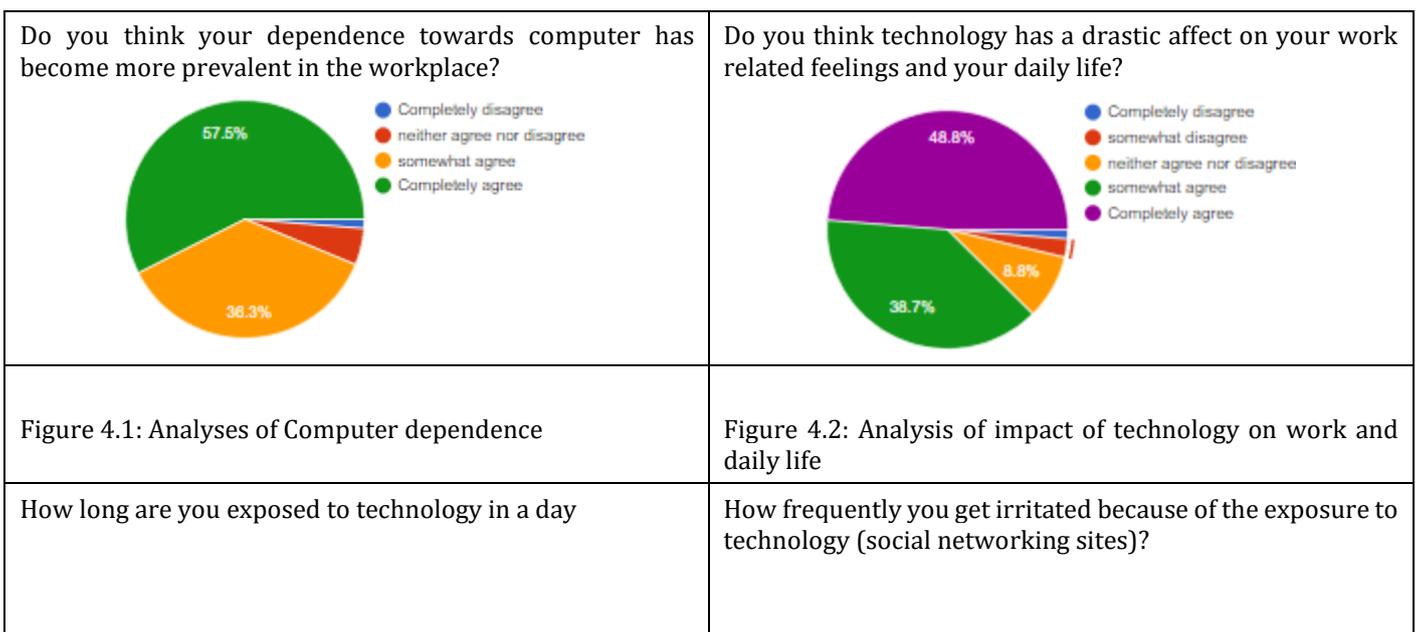


Fig 3: General Linear Model Analysis

8. Discussion

Due to the high dependence towards computer in workplace it shows that this dependence has a drastic affect on work life as well as daily life having an influence towards their feelings. Many of the respondents claim that their exposure to technology is more than 8hrs a day, this in turn makes individuals irritated and this in turn may lead to lack of sleep state. The next day of work under these circumstances will be highly disturbed this adds up to stress and anxiety. These analysis results in claiming dependence and exposure to technology is directly proportional to anxiety and stress as shown in the fig 4

Fig 4: represents the percentage of response



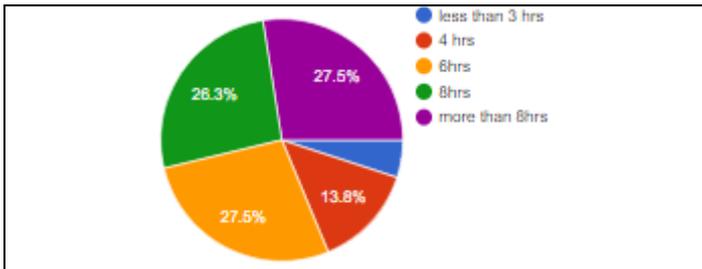


Figure 4.3: Analysis of exposure towards technology

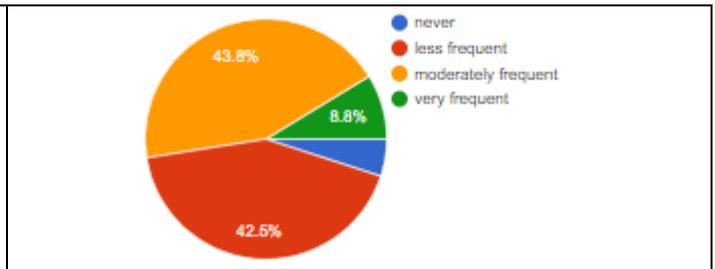


Figure 4.4: Analysis of irritation due to the exposure to technology

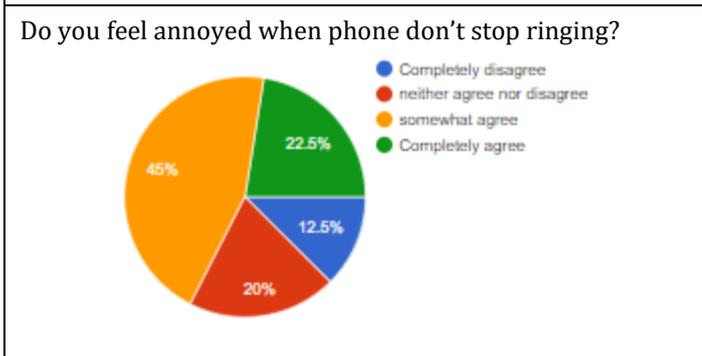


Figure 4.5: Analysis of annoyances due to instant phone calls

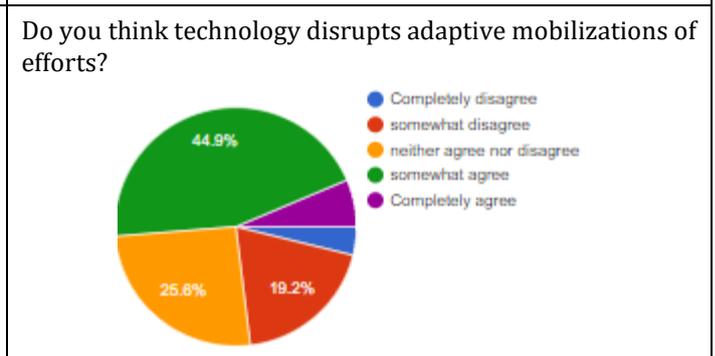


Figure 4.6: analysis of disrupts adaptive mobilizations of efforts due to technology

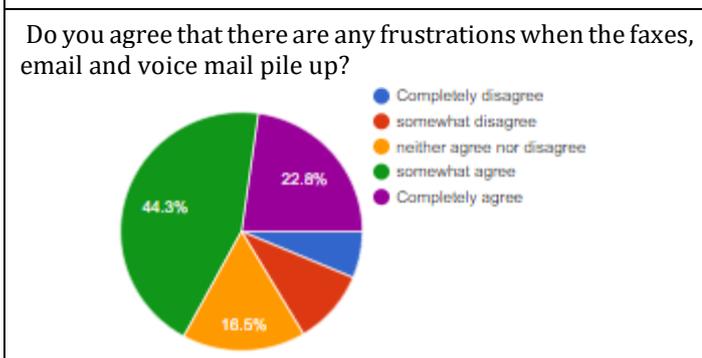


Figure 4.7: depicts the frustrations when faxes, email and voice mail pile up

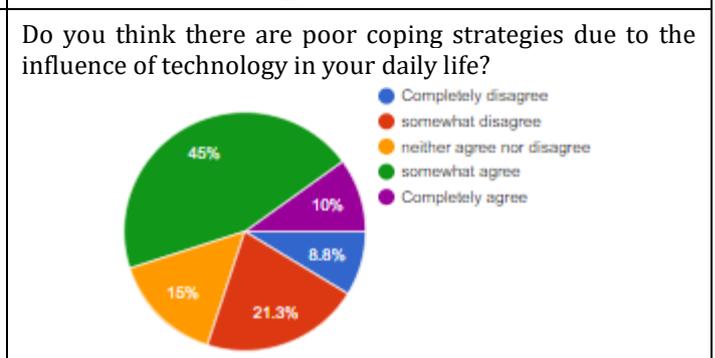


Figure 4.8: analysis of coping strategies due to the influence of technology

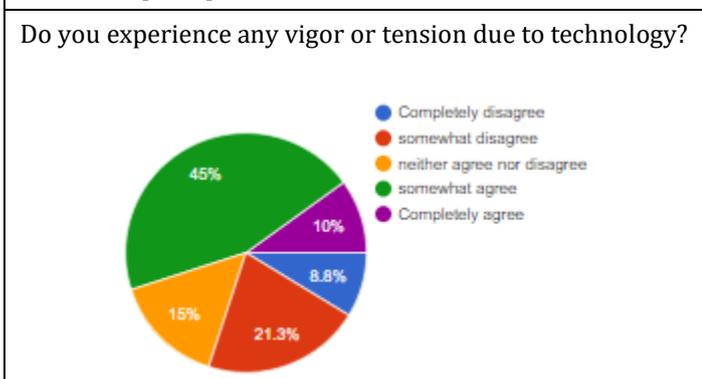


Figure 4.9: depicts vigor or tension due to technology

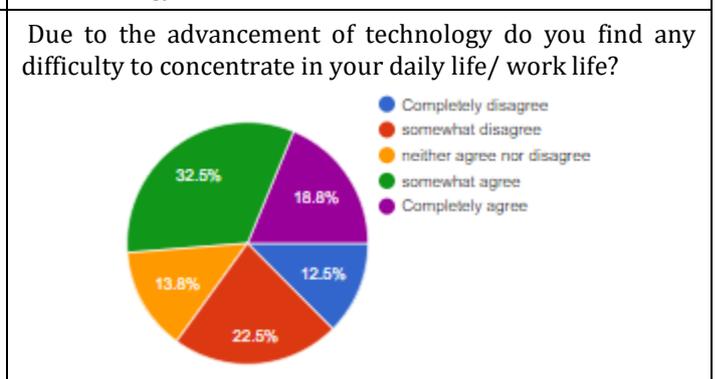
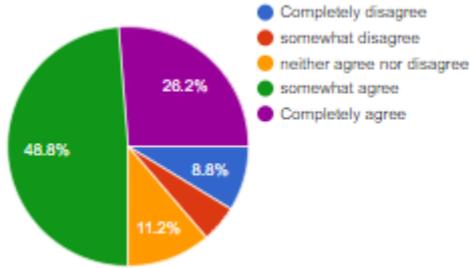
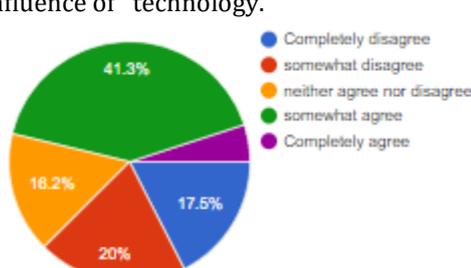
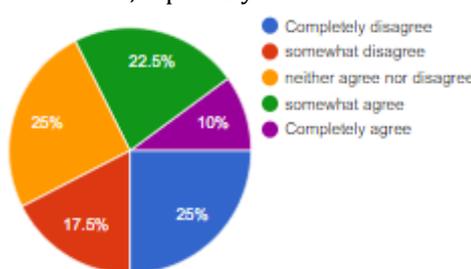
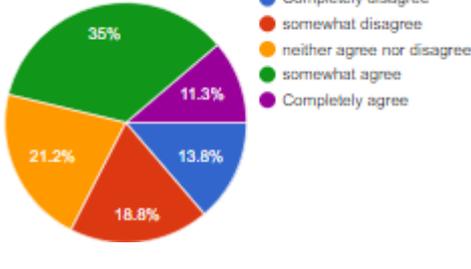
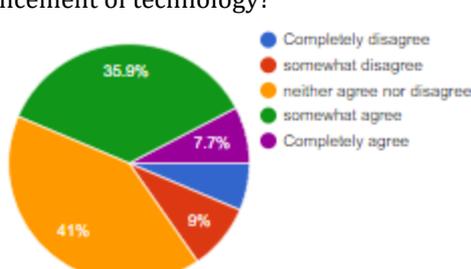
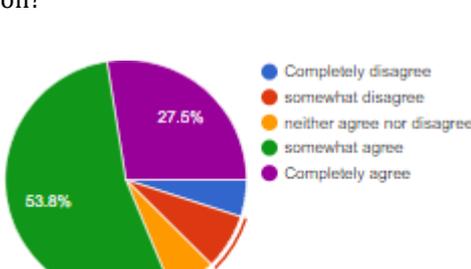
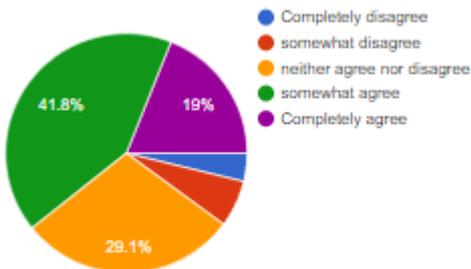
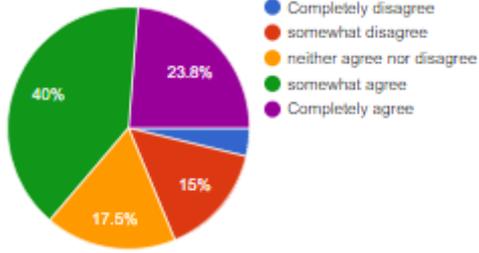
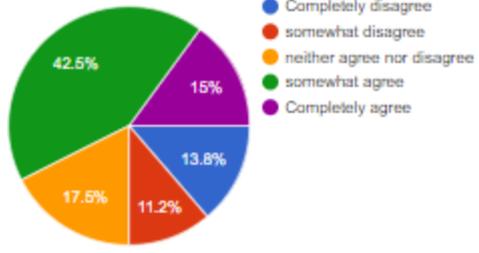


Figure 4.10: depicts the difficulty in concentration in daily and work life due to technology

<p>Can technology be one of the major reasons for lack of sleep?</p> 	<p>Do you feel there exists an inadequate transfer of knowledge due to influence of technology.</p> 
<p>Figure 4.11: analysis of lack of sleep due to technology</p>	<p>Figure 4.12: depicts exists an inadequate transfer of knowledge due to influence of technology</p>
<p>Do you feel technology lowers your self esteem and self confidence, especially the social networking sits</p> 	<p>Is there a fear of losing control due to technology</p> 
<p>Figure 4.13: represents the percentage of respondents feeling lowers your self esteem and self confidence, especially the social networking sits</p>	<p>Figure 4.14: analysis of fear of losing control due to technology</p>
<p>Do you fear the existence of dangerous pseudonym due to the advancement of technology?</p> 	<p>Do you think technology related anxiety can also lead to depression?</p> 
<p>Figure 4.15: depict the fear of existence of dangerous pseudonym due to the advancement of technology</p>	<p>Figure 4.16: technology related anxiety can also lead to depression</p>
<p>Do you think technology has a negative impact on an individual's attitude, thoughts or body physiology?</p>	<p>Techno-stress has been suggested as a term to describe the state of cognition (your thought processes and state of mind) and cortical arousal (Activation of the reticular formation of the brain i.e., it increases wakefulness, vigilance, muscle tone, heart rate, and minute ventilation) observed in certain employees. Do you agree?</p> 

 <p>Figure 4.17: represents the thought of technology having a negative impact on an individual's attitude, thoughts or body physiology</p>	
<p>Figure 4.17: represents the thought of technology having a negative impact on an individual's attitude, thoughts or body physiology</p>	<p>Figure 4.18: represents techno-stress has been suggested as a term to describe the state of cognition</p>
<p>Do you feel isolated from your immediate surrounding due to the influence of technology?</p> 	
<p>Figure 4.19: depicts the percentage of respondents feeling isolated from your immediate surrounding due to the influence of technology</p>	

9. Results

The results of the analysis are as shown in the figure 1 to 10. Pearson coefficient of .8729 indicated a high value of reliability, this implies that the objectives of this paper in developing a Delphi based instrument to capture responses of the subjects of different age groups has met and critically analyzed the situation from the data obtained using general linear model. The value of Cronbach alpha obtained drew the statistical inference and the pattern of anxiety is assessed. The results of our study are as follows:

- 64% of the respondents feel that they have negative impact on their psychology.
- About 93% of the respondents feel that their dependence towards computer has become more prevalent in their workplace.
- 88% of the respondents believe that technology has drastic impact on their work life as well as their feelings.
- More than 50% of the respondents are exposed to technology for more than 8hrs a day; this implies the addiction towards excessive usage of technology
- More than 65% of the respondents said that they are frustrated when the faxes, email and voice mail pile up.
- 55% respondents claimed that there is difficulty in coping with daily life due to technology.
- Insomnia is a major issue in today's society, due to excessive usage of technology and according to our respondents 75% of respondents claim that technology is one of the major reasons for lack of sleep.
- 81% of total responses agree that technology related anxiety can lead to depression.
- 56% feel isolated from their immediate environment due to the influence of technology

10. Conclusion

We conclude that technology is the deepest contributor to stress and this stress in turn leads to anxiety. From the general linear model analysis we have obtained a Cronbach alpha of .8729, which proves that exposure to technology have a high negative impact on human life, thus leading to a state of anxiety.

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