

An Exploratory Study on Insomnia Symptoms among IT and Non-IT Professionals

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ABSTRACT

The purpose of this study was to investigate the impact of working mode on individuals' mental health, specifically focusing on online and offline modes of work. The primary objective was to assess the effects of online work on sleep behaviour and anxiety levels. The study targeted two common health complaints: sleep deprivation and excessive health-related worries. Data were collected from two groups: individuals working in the Information Technology sector and those whose professions were unrelated to information technology. A sample of 62 residents from Pune participated in the study. Data was collected using two assessment tools, and statistical analysis, including Pearson's correlational test and T-test, was performed.

Keywords: Sleep, Health Anxiety, IT employees, and non-IT employees

India, being a developing country has also started developing various cities as “Corporate hubs”. Most of the youth are inclined towards pursuing a career in Information Technology. Due to the high demand for digitalization, the economy of this sector has also shown a drastic hype. As quoted by Google CEO Sunder Pichai “The future will be more digital” (Goodison, 2020), the glimpse of the same is evident in metro Politian cities of India. According to International Data Corporation, IT services in India grew 8.1% in the first half of 2022 (Lele, 2022). Moreover, according to a survey in 2021 by Brainly, an online learning platform stated that 52% of students have an interest in technology-based careers. Due to the high inclination towards IT career, there has been an expansion in this industry. Hence, the number of employees relying on gadgets (especially laptops or computers) for work has undoubtedly increased.

As the number of people using gadgets has risen, screen dependency has also seen an increase. Screen time can have an impact on several areas of a person. Studies have proven the negative impact on the eyes due to excessive screen time (Lanca & Saw, 2020). There has also been a significant impact of daily screen time on eyes and sleep quality (Gupta, et. al., 2022). Moreover, sleep quality can cause anxiety in an individual (Kim, Kim, Jang & Park, 2022). High-stress levels can also be one of a cause of health anxiety/ Illness anxiety (DSM- VI). Hence, the current study attempts to investigate the association between sleep

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quality (particularly Insomnia symptoms) and Health anxiety. Furthermore, it also studied the comparison between the responses of the sample from IT professionals and non-IT professionals.

IT professionals in the study are the individuals who work on software. On the other hand, the non-IT profession is a vast field. However, for the current study, the criteria for choosing the participants were the profession they work in and not depend on computers. The comparative study is conducted to explore the effect of screen time, computer, or computer-dependent professions on an individual.

Overview

This project will investigate Insomnia symptoms and health anxiety among IT-professionals, and the comparison between Insomnia symptoms among IT and non-IT professionals.

The concept used in the study

Insomnia symptoms – “Insomnia” word is termed when a person faces difficulty in initiating and maintaining quality sleep, thus can be also known as “sleeplessness”. This can further cause fatigue, and distress, and affects other daily functioning. This can be caused due to any psychological stress/disturbances or chronic physical condition. (American Psychological Association).

Health Anxiety symptoms- Health Anxiety, also termed as Illness anxiety disorder, is perceiving or interpreting (misinterpreting) bodily sensations as the symptoms of any serious disorder. It can further distress the individual. It can be caused due to other medical conditions or psychological distress. (Diagnostic and Statistical Manual- 6).

Significance of the study

In many of the metropolitan cities like Pune, Mumbai, Bangalore, etc. the lifestyle of working has changed in the past few years due to the increase in digitalization and IT enablement. Especially due to working for more than 6 hours can have a wide impact on the employers’ day-to-day life.

The current study attempts to investigate the prominent impact of this change in terms of sleep and health perspective among people working in the IT sector. Moreover, the study also attempts to study the difference between the lifestyle of IT and non-IT professionals.

Statement of the problem

The main reason for this research is to study the correlation and comparison between Insomnia symptoms and Health Anxiety symptoms among IT and non-IT professionals.

Objectives

- To study the effect of Insomnia symptoms and Health anxiety among IT.
- To study sleeping issues among IT and non-IT professionals.
- To study Health Anxiety among IT and Non-IT professionals.
- To study the effect of Insomnia and Health Anxiety among Non-IT professionals.

REVIEW OF LITERATURE

Variable 1- Sleep/ insomnia

One of the essential parts of humans' daily routine is sleep. It helps a person to stay balanced throughout the day as well as enhances the healing process of the body. For many illnesses including mere colds, doctors recommend resting and having enough sleep. Hence, sleep and health do have a very predominant connection. Moreover, it has also been justified that sleep has a relation to the anxiety a person experiences. There is a strong relationship between lack of sleep with several anxiety disorders (Staner L., 2003). For many waking up late or not having enough sleep due to workload, or for any other reason has become a part of identity. The current study has attempted to provide the connection between sleep and health anxiety. In addition to this, the research has also studied the role of a mode of a profession in terms of understanding sleep behaviour and level of health anxiety.

Several researchers have concluded the importance of sleeping for people of all age groups. Sleep boosts a healthy lifestyle from toddlers to the old age group. It does not just help in relaxing the body but also paves the way for a healthy mind. According to a recent "National Sleep Foundation Guidelines" study, the required amount of sleep for individuals of the age group 18 to 64 years is around 7 to 9 hours. The amount of sleep has a great impact on memory (Walker M. Helm E., 2009). Loss of sleep due to depression has affected the memory of many individuals (Buysse, 2004; Shaffery, Hoffmann, & Armitage, 2003)- According to Sigmund Freud, our dreams are linked to our emotions intimately. Hence, every person does need enough help to complete the sleep cycle REM and non-REM cycles. Insufficient sleep is also one of the symptoms of many psychological disorders. Individuals with mild to severe depression face sleep issues or sometimes even suffer from Insomnia. Other anxiety disorders in DSM V also have mentioned insomnia as one symptom. In several cases, their medications include Sedatives just to induce sleep in these individuals. According to an article by the Department of Psychiatry, UNC School of Medicine (North Caroline), the relapse of many psychological illnesses is also identified with the behaviour or sleep habits of either too little or too much sleep.

Our professional life is also gets impacted by sleep behaviour and vice-versa (Litwiller, Snyder, Taylor, & Steel, 2016). As sleep induces brain processing, insufficient sleep affects our performance in the workplace. Increased workload, which results in fatigue also affects an individual's sleep cycle. In this, either a person is unable to sleep (transient fatigue) and has several intervals in sleep (cumulative fatigue), or his/her circadian cycle gets affected which is usually from 2 am to 6 am (Circadian fatigue) (Fontenelle, 2015).

Our eyes also play a vital role in our sleep behaviour. An increase in screen time causes dry eye conditions which affect sleep quality negatively (Gupta, Chawla, Rana, Ratti, Duggal, Agarwal, Khurana, Jugran, Bhargava, & Ram, 2022). IT profession expects at least 6 hours of screen time from employees. The effect of screen time on our eyes leads to sleep disturbance. The employees in IT professions must work on the screen more than the non-IT professions (Whose work is not majorly dependent on the screen or computer). Few studies were carried out worldwide on the sleep quality of employees in IT professions. According to one study in Finland, long work hours for IT professionals were associated with sleep debt (Kivisto, Harma, & Kalimo, 2008). In another study, adults who used screens more frequently (more than 6 hours per day) had a comparatively higher likelihood of having issues with sleep onset latency. (Vallance et al., 2015).

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Along with Insomnia symptoms, the current study also has investigated health anxiety among IT and Non-IT professional. Health anxiety is obsessive worrying about health which may cause great distress and affect the ability to function properly. Health anxiety is a condition that leads healthy people to worry that they are ill/sick. It includes worries about physical health and mental health conflicts. Worrying about health is a common human experience among the general population (Salkovskis and Warwick, 2001). It may be a hereditary, psychosomatic, or learned behaviour. (DiLalla et al and Gottesman, 1996). Health Anxiety is observed in early or middle adulthood (APA,2013; Rask et al., 2016) There is some evidence to suggest that Health Anxiety occurs in childhood and adolescence (Eminson et al.,1996; Van Geelen et al.,2015; Wright and Asmundson, 2003). Most of the time beliefs about illness and their responses are shaped by those of significant others, particularly their primary caregivers, mostly their parents (Turner-Cobb,2013).

This disorder is also known as Health Anxiety and illness anxiety disorder. Sometimes they show physical symptoms and sometimes not. Symptoms may include obsessive fear of illness (Bilani et al., 2019). constantly worry about health, frequently checking your body for a sign of illness, asking people for reassurance that you are not ill (APA 2013) obsessively searching for health information on the internet, acting as if you were ill, avoiding physical activities, etc. Many people start searching for health information on the internet and reach the conclusion without medical tests, in the back of their minds, they always think something is wrong happened with their health. People with health anxiety tend to fear serious illnesses like cancer, heart-related problems diabetes, etc.

This excessive anxiety may be for themselves or their loved ones, especially their children. According to Dr Scarella health anxiety appears to affect equally to men and women.

People with health anxiety often suffer from other medical conditions such as other types of anxiety disorders, stress disorders, PTSD, depression, and sleep disturbances. There is a high degree of comorbidity in anxiety disorder (Creswell et al.,2014; Leyfer et al., 2013) and mood disorders (Essau, 2003).

Several pieces of research have been conducted to investigate the relationship between health anxiety and several other factors such as social phenomena, profession etc. It has been proven that social health can change health anxiety even among healthcare professionals. (Javadi. Et.al., 2020). However, there has been the east research work carried out among individuals working in the IT sector.

IT professionals are the individuals who work in the field of Information technology, and since it's a computer, it has a direct relation with screen time. The current research attempts to study the level of health anxiety among these professionals. Several studies have been conducted worldwide addressing the issues such as stress, and health among professionals working in software development. There are several factors which make this profession a stressful one. The factors such as competitive time deadlines, longer work time, (Rathore & Ahuja, 2015) role stress, hard decision (Colomo-Palacios et al., 2013), out-sourcing, continuous re-engineering, increasing demands from customers, and general information overload (Karad, 2010).

In our current study, we aim to determine whether there is any difference between sleep behaviour in IT and Non-IT professionals. Do IT professionals manifest any signs of

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Insomnia? Moreover, do Insomnia signs have any association with Health Anxiety signs in IT professionals?

RESEARCH METHODOLOGY

Variables – (1) Insomnia (2) Health Anxiety

Hypothesis-

1. There is a Positive correlation between insomnia (Independent variable) and Health Anxiety (Dependent Variable) among the IT profession and non-IT professionals.
2. The rate of insomnia symptoms is higher in IT professions than in non-IT professions.
3. Health Anxiety symptoms are higher in its professions than in non-IT professions.

Operational definitions

Insomnia:

1. Insomnia is a sleep disorder that can make it hard to fall asleep, hard to stay asleep or to wake up too early or not be able to get back to sleep.
2. Insomnia is a sleep disorder in which you have trouble falling and/ or staying asleep.
3. It is initiating or maintaining a restorative sleep which results in fatigue.

Health Anxiety:

1. Health Anxiety is a psychiatric disorder defined by excessive worry about having or developing a serious undiagnosed medical condition.
2. Health anxiety is excessive or inappropriate anxiety about one's health based on the misinterpretation of symptoms.
3. Health anxiety is an obsessive and irritating worry about having a serious medical condition.

METHODOLOGY

Sample

The research was designed to include a sample from the age group of 25 years to 35 years old, living in Pune city, and having work experience of not less than 3 years. We excluded responses from subjects aged more than 40 years, scoring extremely high in any one test. The final sample was of a total of 62 individuals among which 31 individuals from IT profession residents of Pune City and 31 individuals from Non-IT professions (individuals who don't have to work with electronic gadgets especially computers/laptops, or whose work doesn't depend on screen time).

The responses were collected using a snowball technique.

Tools

To study the variables, 2 tests have been used in the Research Project. They are as follows- **ATHENS INSOMNIA SCALE (AIS):** A scale that measures Insomnia symptoms was designed by Athen's group of researchers in the year 2000. It is an 8-item questionnaire evaluating sleep onset, sleep time, early morning waking, sleep frequency, quality and duration of sleep complaints, and distress caused by sleep dysfunctions (especially Insomnia). The scale is found to have high reliability and validity. The Test-retest reliability is found from .88 to .89 and internal consistency ranged from .87 to .89. The instrumental validity of the tests when correlated with scores from the Sleep Problem Scale was obtained from .85 to .90.

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HEALTH ANXIETY INVENTORY - Health Anxiety Inventory is developed by P. M. SALKOVSK IS," K. A. R IMES, H. M. C. WARW ICK D. M. CLARK From the University of Oxford Department of Psychiatry, Warneford Hospital, Oxford. This inventory is particularly focused on Health Anxiety patients. It is 14 item inventory that measures how anxious the subject feels about his/her illness for the past week. Each item consists of four responses dealing with the level of anxiety. The subject is asked to respond accordingly. The scale is found to be reliable and to have a high internal consistency. Patients with Health anxiety disorder scored comparatively higher than anxiety disorder patients, including both patients with panic disorder and social phobic as well as normal controls. Internal consistency is 0.95. Test-Retest reliability is 0.76.

Procedure

We randomly contacted the subjects, and consent was taken regarding the following research. The subjects were provided with the tests by taking their time. The responses were collected and were further analysed statistically.

Statistical Analysis

We conducted a correlation analysis between health anxiety and insomnia symptoms, examining the relationship between these two variables separately. Additionally, a comparison was made between the responses of IT professionals and non-IT professionals on both variables. The data was collected from the respective samples for all three tests and analyzed using the Pearson correlation method and T-test in Excel.

RESULT AND DISCUSSION

Result

The following table consists of 2 variables along with their Sum, Mean, and Standard deviation among IT professionals.

Table No. 1 Add Table Name

Variables	Sample size	Sum	Mean	Standard Deviation
Health Anxiety	31	229	7.38	3.41
Insomnia symptoms	31	202	6.52	3.91

The following table consists of 2 variables along with their Sum, Mean, and Standard deviation among non-IT professionals.

Table No. 2 Add Table Name

Variables	Sample size	Sum	Mean	Standard Deviation
Health Anxiety	31	388	12.52	5.74
Insomnia symptoms	31	344	10.77	4.96

The following table shows Pearson Correlation values between the two variables from the responses of IT professionals.

Table No. 3 Add Table Name

	Health Anxiety	Insomnia
Health Anxiety	1	
Insomnia symptoms	0.82131495	1

Table No. 4: Insomnia symptoms result from IT professionals and non-IT professionals.

Group	N	Sum	Mean	SD	T	Level
IT Professionals	31	334	10.77	4.96	0.0004	0.05
Non-IT professionals	31	202	6.51	3.91		

This table indicates that there is a significant difference in Insomnia Symptoms between IT professionals and non-IT professionals.

Table No. 5: Health Anxiety score from IT professionals and non-IT professionals

Group	N	Sum	Mean	SD	T	Level
IT Professionals	31	388	12.51	5.74	6.966	0.05
Non-IT professionals	31	229	7.38	3.41		

This table indicates that there is no significant difference in the score of Health anxiety between IT professionals and non-IT professionals.

DISCUSSION

The positive correlation between Insomnia symptoms and Health anxiety (Health Anxiety) indicates that apart from stress and lack of self-care, sleep duration can also affect our perception of our own health. The ability to have undisturbed sleep can also be affected due to excessive stress and other insecurities. (Benoit et. al. 1992; APA, 2013) This sleep deprivation can lead to stimulating health anxiety and vice versa. There are numerous factors responsible for lack of sleep and Health anxiety such as physiological, personality traits, relationship issues, profession, etc. The current project specifically attempts to address the role of the profession resulting from these two disturbances.

There can several possible reasons behind the high insomnia symptoms among IT professionals. A few of them are high workload (long-hours work), mental stamina, and perception of work (Kivistö, Härmä, Sallinen, & Kalimo, 2008). Eyes problems such as visual impairment can also cause insomnia symptoms (Seixas et. al., 2015). There can be numerous factors causing such visual issues. One of them is screen time. A study has found a moderate effect of screen time on the eyes of IT professionals. It stated 68% of individuals in the study suffered from musculoskeletal and 79% suffered from visual problems (Kumar, Jain, & Bhargava, 2022). Furthermore, many Indian Information Technology companies work for countries like Canada and the United Nations of America. Few participants reported that due to differences in the time zone of these companies, many Indian employees have night shifts. Due to this, there are disturbances in the sleep cycle for a noticeable period. In addition to this, since many IT companies are private, according to a few participants, many employees (including them) don't have permanent and secure jobs. The constant fear of losing a job or repeatedly changing jobs for a better salary can also affect their adjustment style and personal equations.

Moreover, along with other factors, lack of sleep can also be a cause of Health anxiety/Health Anxiety among IT professionals. Insufficient sleep affects emotional health and mood, which can exacerbate anxiety disorder challenges (1 sleep grp). Various anxiety disorders' odds ratio has shown its association with lifetime sleep disturbances (2 s grp). A study also reports that sleep predicts the increased prevalence of generalized anxiety

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disorder (8 in ref below). With the help of a few of the above-mentioned studies, the current study attempts to support the found result of the correlation between insomnia symptoms/lack of sleep and Health anxiety/Health Anxiety.

Limitations and Suggestions

Although insomnia symptoms and health anxiety have been found to be higher in the IT profession sample than in non-IT professionals, there is no significant difference found between the two sampled groups. The probable reason we have analyzed this is that the responses were collected online. This might have created a bias. Moreover, the responses were collected in the year 2022, that is after a pandemic(lockdown). This period has affected the mental health, working mode and work performance of various professions including IT and non-IT. For instance, although the school was started offline in 2022, during the year 2021, many teachers got along with the online teaching mode. Hence, many of the non-professions from 2021 haven't remained purely non-IT. This can be one of the limitations of the study.

Therefore, for further studies on Sleep deprivation and Health anxiety, we suggest including a sample who have never used any device for professional purposes. Moreover, the study should also include qualitative data such as semi-structured interviews, and secondary data such as blogs, articles, and essays. We also suggest conducting data on professions other than Information Technology to get a wider view of Insomnia and Health anxiety in Indian society.

CONCLUSION

The results indicate that there is a positive correlation between Insomnia symptoms and Health Anxiety among IT professionals. The mean score indicates that IT professionals experience high Insomnia symptoms and Health Anxiety as compared to non-IT professionals. However, the difference between these two groups has not been found to be significant.

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Conflict of Interest

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