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# Psychological Disorders among IT Professionals in Kerala

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***Abstract***— *The study conducted to explore the prevalence of psychological disorders like stress, anxiety and depression among IT professionals.310 subjects from 20 IT companies at Techno Park, Trivandrum, Kerala were selected. Depression Anxiety Stress Scale (DASS) was used for the study. The result showed that anxiety was the most prevalent psychological disorder followed by depression and stress. Psychological disorders like stress, anxiety and depression were also seen more among female employees than males.*

***Keywords***— ***Anxiety. Depression, Stress, IT professionals***

## I. INTRODUCTION

The Information Technology (IT) industry is the largest among computer-related industries, employing more than 5 trillion people; these occupations are projected to add about 557,100 new jobs. Techno stress is a phenomenon of stress that arises due to use of computers; it is due to the inability to cope up with the new computer technologies. The older generation is also facing stress from using computers called Techno stress (Padma, 2015). The health related issues make them anxious about their wellbeing and relies on internet for finding out a possible cause for their symptoms. This phenomenon of doing internet search for health related information by people who are having a tendency of health anxiety is known as Cyberchondria (Makarla et al., 2019). The informal and unauthentic information found through internet search pushes those with health related anxiety into more anxiety and distress. It has been noted that the general mental health was inversely related to severity of Cyberchondria (Makarla et al., 2019).This study aims to find out such psychological disorders and its prevalence how it effects among IT professionals.

## II. METHODS AND MATERIAL

Sampling method used in the study is multi stage random sampling. Techno Park Trivandrum has three sectors, Phase 1, Phase 2 and Phase 3. Out of which Phase 1 was randomly selected 310 Employees working in IT field for at least one year were included and other blue collar employees who do not have a sedentary style of work and those who are not using computers on daily basis will be excluded from the study.

### Tools

1. *Semi-structured questionnaire* 2. *Depression Anxiety Stress scale (DASS21)* Henry & Crawford (2005). Data was collected by visiting the IT companies at Techno park, Trivandrum after doing the random sampling method and satisfied the inclusion criteria were identified. The participants of the study and were given the self-administered questionnaire.

### Analysis

DASS21 was calculated accordingly and the participant's psychological status. Proportions of psychological disorders like depression, anxiety and stress are being calculated.

The comparison between groups of qualitative variables was performed using a $Chi^2$ test and t test was done to compare continuous variables.. The odds ratio (OR) with 95% confidence interval (CI) has been obtained. The significance level was considered as $P < 0.05$.

## III. RESULT AND DISCUSSION

In this study majority (58.7%) of the study participants were males, this finding was consistent with most of the studies conducted among IT professionals, (Ghatule et al., 2015, Shrivastava et al., 2012, Ramesh et al., 2016, Darshan, et al., 2013). This finding could be mainly attributed by the culture and social factors of our country, where women are

having more responsibilities in family life than in professional life and consider opting for professions which are less stressful and hectic unlike IT profession,( Ragins & Sundstrom,1989). Studies done among IT professionals in Europe and US also found significantly lesser proportion on females working in IT industries (Gefen & Straub, 1997).

Out of the total 310 study participants 182(58.7%) were males and 128(41.3%) were females. The mean age of the study participants were 28.93 (SD±5.3) years. Majority (58.1%) of them belonged to the age group 26-30yrs, with the youngest aged 20yrs and oldest aged 48yrs.The percentage of employees who were married was 45.5%.The age group 23-29yrs, this young age group dominating the IT field could be due to fact that IT profession is fairly a new, emerging and promising profession and youngsters are attracted more and are having more computer related knowledge than the older age group. Another relevant yet unsettling reason for youngsters dominating the IT sector could be the high prevalence of occupational diseases and stress from work, which in turn results in early voluntary retirement. Majority (80%) of the study participants had a work experience of 1-3 years this result was found to be consistent with similar studies done on IT professional in India. (Ramesh et al., 2016; Sethi, Sandhu, & Imbanathan, 2011). Majority (70.9%) had a daily work time of 6-9hrs which is similar to other studies (Ramesh et al., 2016)

**Stress**

The levels of stress and found that 54.2% had stress out of which 24(7.7%) were having extreme stress, 48(15.5%) were having severe stress, same percentage (15.5%) was having moderate stress, 38(12.3%) were having mild stress. Among the participants with stress majority were females (60%) than males (49.5) p=0.043.

IT professionals are prone to develop stress due to the nature of their work with long work shifts, target achievements, work overload and night shifts. In this study stress was found to be present in 54.2% of the study participants, this result is comparable with the study done by Darshan (2013) on IT professionals. Stress was found more in females than males (60.% vs 49.5%), similar results were found in studies conducted by Bolhari et al. ( 2012 ) on IT professional in Iran and on IT professionals in India (Casimirri et al., 2014).The reason for females having more stress could be due to more responsibility they have than males. Stress was found to be more among unmarried professional than married (55% vs 44.9%) this result is consistent with the findings by Shrivastava (2012) on IT professionals in Mumbai.

The decreased prevalence of stress among those who are married could be due to fact that, married employees are able to wind down their stress at home by spending time with their family members whereas unmarried employees had no such option so they had a tendency to work over time, and working overtime leads to more stress. Among those who having stress, a large proportion (79.2%) was working in the IT industry for 1- 3 years, similar finding was found by Ramesh (2016). The mean (SD) number of sick leaves taken by those with stress were comparatively more than those without stress (6.7±5.8 vs 5.3±5.5) and was found statistically significant (p=0.036). This could be due to the misuse of sick leaves by the employees who are having high levels of stress and might consider skipping from workplace a potential relief from stress. Studies have shown that greater levels of stress has greater risk of development of metabolic syndromes (Casimirri et al., 2014; Chandola et al., 2006) So it is important to access the workplace stress and interventions like stress management programs should be conducted for the betterment of the employees.

**Anxiety and depression**

Using DASS 21 questionnaire found that 63.5% were having anxiety, out of which 24.2% were having extreme anxiety,22.3% were having moderate anxiety 8.4% were having severe

anxiety and 7.4% were having mild anxiety. Among the study participants, anxiety was found more in females than in males (64.5% vs 62.7%, p=0.60).

Using DASS 21 found 61.3% were having depression, and out of those with depression 18.4% had moderate depression, 15.5% had extreme depression, 14.2% had mild depression, 12.6% had severe depression. Among the study participants with depression females were more than males (65.7% vs 58.3%, p=0.189).

Anxiety and depression are the most common mental disorders being reported globally. In this study the prevalence of anxiety was 63.5%, and among those with anxiety majority were males (57%) similar result was reported by Ghatule & Ghatule (2015). IT professionals may have greater levels of anxiety compared to other professions due to fact that IT industry is a rapidly developing one, there are changes to the software they are working on, changes to the platform of operating systems, even mobile platforms are updated frequently nowadays, the inability to cope up with these changes makes them anxious about their job security because those who are not talented enough to adapt to these changes and develop new skills are vulnerable to be laid off from his job (Shrivastava et al., 2012)

Depression was found to be present in 61.3% of the study participants, which is comparable with the results of study done by Padma et al. (2015). Among those with depression males were higher in proportion than females (55.3% vs

44.7%) which is in par with the findings of study done by Darshan et al. (2013) on IT professionals in India. Among those with sickness absenteeism majority (78.9%) had depression. There are roots for depression in every workplace, but in a place like IT industry the cause of depression is mainly due to lack of human interactions. IT Employees have a much monotonous and isolated life at workplace, which in turn results in development of depression.

*Table :1 Stress and associated factors*

| Variables | Stress Present | Stress Absent | P value | (95% CI) |
|---|---|---|---|---|
| Gender | | | | |
| **Male** | 90 | 92 | | *OR= 0 .6* |
| | (49.5%) | (50.5%) | | |
| | | | ***P=0.043*** | |
| **Female** | 78 | 50 | | *(95%CI, 0 .3-0 .9)* |
| | (60.9%) | (39.1%) | | |
| Marital Status | | | | |
| **Married** | 75 | 66 | | |
| | (53.2%) | (46.8%) | | |
| **Unmarried** | 93 | 76 | | |
| | (55%) | (45%) | | |
| Daily work time | | | | |
| **1-6hrs** | 6 | 8 | | |
| | (3.8%) | (5.6%) | | |
| **6-9hrs** | 114 | 106 | | |
| | (71.3%) | (74.6%) | p=0.211 | |
| **9-12hrs** | 36 | | | |
| | (22.5%) | 28 | | |
| | | (19.7%) | | |
| **>12hrs** | 4 | 0 | | |
| | (2.5%) | | | |
| Bradford score | | | | |
| **<50** | 97 | 112 | | *OR= 2.7* |
| | (46.4%) | (53.6%) | | |
| | | | *P=0.001* | |
| **>50** | **71** | **30** | | *(95% CI 1.6-4.5)* |
| | **(70.3%)** | **(29.7%)** | | |

Chi² test

*Table 2 Anxiety and associated factors*

| Variables | Anxiety Present | Anxiety Absent | P value* | ODDS ratio* (95% CI) |
|---|---|---|---|---|
| Gender | | | | |
| **Male** | 110 (57%) | 72 (61.5%) | P=0.431 | |
| **Female** | 83 (43%) | 45 (38.5%) | | |
| Marital Status | | | | |
| **Married** | 83 (43%) | 58 (49.6%) | | |
| **Unmarried** | 110 (57%) | 59 (50.4%) | | |
| Daily work time | | | | |
| **1-6hrs** | 10 (5.2%) | 4 (3.4%) | | |
| **6-9hrs** | 136 (70.5%) | 84 (71.8%) | | |
| **9-12hrs** | **4 (22.3%)** | **29 (24.8%)** | | |

*Table 3: Depression and associated factors*

| Variables | Depression Present | Depression Absent | value* | ODDS ratio* (95% CI) |
|---|---|---|---|---|
| Gender | | | | |
| **Male** | 104 (55.3%) | 78 (63.9%) | | |
| **Female** | 84 (44.7%) | 44 (36.1%) | | |
| Marital Status | | | | |
| **Married** | 85 (45.2%) | 56 (45.9%) | | |
| **Unmarried** | 103 (54.8%) | 66 (54.1%) | | |
| Daily work time | | | | |
| **1-6hrs** | 10(5.3%) | 4(3.3%) | | |
| **6-9hrs** | **124(66%)** | **96(78.7%)** | | |
| **9-12hrs** | **50(26.6%)** | **22(18%)** | **P=0.063** | |

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## IV. CONCLUSION

IT professionals are subjected to work under strict deadlines and long working hours which make them exposed to risk factors that lead to various psychological problems. Majority of the employees at IT industry are at their young age. Anxiety was the most prevalent (65%) psychological disorder present among the IT professionals followed by depression (60.7%) and stress (51%). Psychological disorders like stress, anxiety and depression were also seen more among female employees than males and 64.2% had anxiety 63.1% had depression and 55.3% had stress, however anxiety and depression were found to be the predictors of significant work performance. Mental health of the employees is a major factor contributing to the productivity of an IT industry, healthy employee's offers better performance and thereby increasing the productivity. Therefore priorities should be given to the IT employee's health and welfare.

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