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An Investigation of the Impact of Occupational Stress on Mental health of remote working women IT Professionals in Urban Bangalore, India

By Subha B¹, Madhusudhanan R² and Ajai Abraham Thomas³

Abstract

The COVID-19 pandemic has influenced various aspects of our lives and triggered many long-term consequences. The actual well-being of women IT employees is in danger due to the prolonged period of work from home as the pandemic has influenced individuals differently across the world. Physical distancing, dread, vulnerability, and a continued period of remote working has prompted an enormous number of women in the IT sector to experience challenges to emotional well-being. Work-related pressure is one of the major sources of stress in the modern working environment. Stress and unfavorable working conditions have been connected to low efficiency, truancy, and increasing rates of mishaps in and out of work. This is largely due to ailments, substance abuse, and family issues experienced by a large number of work-from-home women software company employees. Extended period of work from home can disturb women and their mental health as they try to strike a work-life balance. The purpose of this research is to examine the impact of occupational stress factors on the mental health of the women software professionals working remotely in urban Bangalore during the COVID-19 pandemic. The exploratory factor analysis identifies that Workload, Job Insecurity, Poor Work Environment, Personal Problems, and Lack of Structure as the main five factors of occupational stress while working from home for women IT employees in urban Bangalore. Multiple regression analysis undertaken in the study indicates that the relationship between the five factors of Occupational Stress and Mental Health is negatively significant with an inverse relationship.

Keywords: Occupational Stress, Mental health, Remote working Women IT Professionals, Influencing factors, Exploratory factor analysis

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Introduction

With a GDP of \$2.94 trillion, India is the fifth-largest economy in the world. In attaining this status, the service sector's contribution towards this achievement has been remarkable. 54.77% of GDP is achieved through the services sector. Due to globalization, the Information Technology sector has grown significantly in India. The report of NASSCOM states that Information Technology sector is growing faster than the GDP in India. Nearly 34% of the IT sector constitutes women, and it is this reality which forms the basis of this study. The article also predicts that there will be a growth of 8.4% in the Information and Technology sector in the near future. If the prediction comes true, then it is expected that the contribution of female employees will be approximately 34% towards achieving that growth. At present, we are facing an unprecedented challenge in the form of the on-going pandemic which has posed serious challenges to the entire economy including the IT sector. People are slowly adapting to the new normal. In certain professions, people were already used to working from home, but the current situation has called for drastic changes across professions in order to adapt and cope with the changing scenario.

Occupational Stress

Occupational stress refers to the physiological and psychological response to events or conditions in the workplace that are detrimental to overall health and well-being. It is influenced by factors such as autonomy and independence, decision latitude, workload, level of responsibility, job security, physical environment and safety, the nature and pace of work, and relationship with co-workers and supervisors.

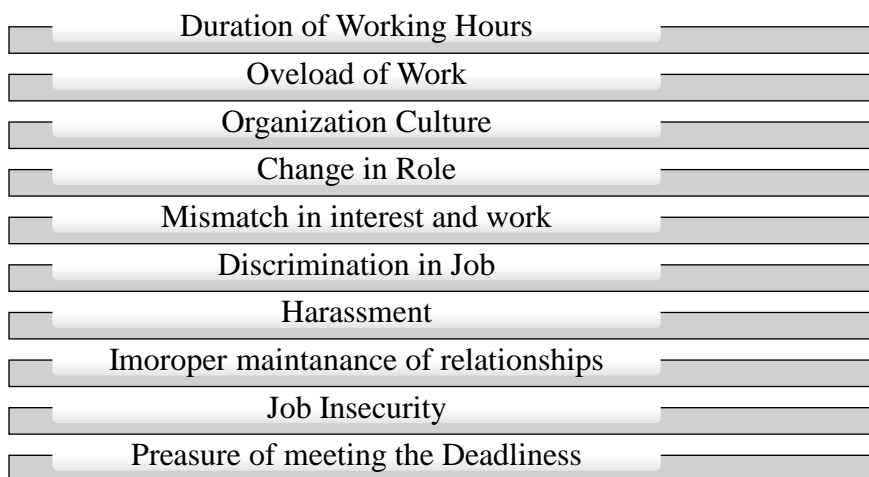
Occupational Stress and Mental Health

Rao and Chandraiah (2012) suggests that there is a negative correlation between occupational stress and mental health. There is an inverse relationship that exists between occupational stress and mental health. Workplace stress will also affect physical health and it has an impact on emotions as well.

Moreno *et al.* (2020) in their study examined the relationship between occupational stress and mental health. In contrast to the previous study, this article found no significant relationship between occupational stress and mental health. Only a moderate relationship existed between both variables. The researchers concluded that there are various strategies to manage burnout resulting from occupational stress, therefore, there is no such relationship.

Determinants of Occupational Stress

Different determinants are influencing the occupational stress which are as follows:



Three warning signs for remotely working employees

An article published in *Forbes* magazine states that these are the major causes which will be encountered by the people working remotely.



Select Literature Review

Shepherd-Banigan *et al.* (2016) analysed the improper balance of work and life as a great stressor. Their study specifically focused on women with small children. For these women, working remotely becomes complicated and results in adverse effects on their personal and professional lives. The article also insists that this will affect women's overall well-being. Emotional instability is a common outcome. The study examined the effects of work intensity, work schedule (night/day/variable), schedule flexibility, working from home, and work stress on changes in depressive symptoms among the women having children between the ages of 6 and 24 months. The results of the study show that work intensity, scheduled flexibility, and work schedule were not associated with changes in depressive symptoms. Work from home and work stress were associated with depressive symptoms. Therefore, this study clearly supports the real-time seriousness of this issue with strong evidence.

Zarra-Nezhad *et al* (2010) also sought to prove the relationship between job stress and the impact of an imbalance between work and personal life. The study reveals the fact that there exists a positive relationship between occupational stress and family life, with women struggling to balance both. In addition, the article explores the lesser involvement of men in household chores than women that contribute towards women's work-life imbalance.

In contrast to the previously mentioned studies, Thirumaleswari (2015) has examined the other side of stress which is the positive aspect that helps to motivate a person in the workplace as well as in their personal life. The author states that stress will also help in a positive manner as it will prompt people to push forward towards the next level. The analysis was based on different service sectors such as healthcare, education, communication and retail. This article also compared the level of occupational stress in the different services sectors and identified the occupational stress for women was higher in the healthcare sector, followed by the communication and retail sector. The article helps readers understand that stress prevails in all the sectors, irrespective of the job and the position.

Prasada *et al.* (2020) particularly focused on women working remotely in the IT sector and tested occupational stress. The result of this study proved that a relationship exists between occupational stress and the psychological well-being of women in the IT industries.

Statement of Problem

The unprecedented challenges that arose due to COVID-19 were new to the world. In this context, technical advancement bridged the gap between workplace and home by bringing the job into the home, such that the home itself has become the workplace for many people, especially employees in IT sectors. Even though this is possible because of technology, the reproduction of the entire work atmosphere is not possible in remote working conditions. There are a number of advantages as well as disadvantages as far as working remotely is concerned. The problem here is to identify the hindrances and the impact of converting the home into a workplace with a special focus on women employees in the IT industry.

Need for the study

The entire world is trying to acclimatize itself with the “new normal”, acknowledging the fact that we are still at risk of contracting the infection. In the past five months, Indians have seen thousands of deaths due to lack of oxygen, lack of drugs, lack of ventilators, and hospital beds. The COVID-19 pandemic has disturbed the entire country and caused Indians to pay more than they should. The two leading vaccines in India, covaxin and coveshield, have been administered to eligible citizens in government hospitals for free, yet private hospitals have been charging an astounding pace of 800-1400 Indian rupees⁴. It is impossible to check-in for an appointment at a government hospital due to a shortage of vaccines, so a maximum of the population had to choose the private hospital at a charge which is high-priced for lower- and middle-class people. The pandemic has hit workers, but women were the maximum affected. Many formal economy sectors directly affected by lockdown have an excessive women’s labour force. Economic shocks are felt particularly by women who have lower incomes, fewer savings, unstable jobs or live near the poverty line. Even if the death rate of men is twice as that of women, the Covid-19 pandemic affects women’s health more than the health of men. The number of gender violence cases in India is huge, and this number has deteriorated at an alarming rate during the Covid-19 pandemic. IT firms have mostly extended the remote working option to avoid the spread of COVID. If the pandemic persists, the companies will continue to encourage working from home, and this situation will likely continue for a considerable period. Therefore, this is the opportune time to

⁴ The Indian rupee (INR) is the currency of India. INR is the International Organization for standardization currency code for the Indian rupee, for which the currency symbol is ₹.

discuss the advantages and disadvantages of this system from various perspectives and help both the corporate and individual employees to make positive decisions. Women in countries like India, have suffered these negative impacts with dire impacts. What we want now are policies which intentionally focus on and support women, giving them get entry to financial resources to help them achieve protection.

Research Objectives

1. To explore the different factors of occupational stress among women IT professionals who are working remotely in urban Bangalore.
2. To examine the impact of occupational stress on the mental health of remote working women who are IT professionals in urban Bangalore.

Research Methodology

The primary data for this study was collected from women working remotely in IT sector in urban Bangalore. A structured questionnaire was outlined using Google forms and disseminated online among 425 women who were IT professionals and were working remotely; 400 responded. Convenience sampling was the technique we adopted for the study. The content validity of the questionnaire was observed by three experts by making use of Item Objective Congruence (IOC). The result of the analysis identified that IOC was above 0.70 for all the items in the questionnaire. Hence, the questionnaire was suitable for use (Hair *et al.*, 2014). Exploratory Factor Analysis was used to discover the significant factors of occupational stress among IT professional women in urban Bangalore who were working remotely. Multiple linear regression was used to examine the influence of factors affecting occupational stress on the mental health of remote working women in the IT field. The data for this research was analysed by using SPSS 21 version.

Table: 1 Demographic characteristic

Demographic Characteristics	Frequency	Percentage
Gender		
Female	400	100
Age Group		
Below 25	112	28
25-30	221	55.25
30-35	37	9.25
Above 35	30	7.5
Educational qualification		
Under -Graduation	249	62.25
Post-Graduation	139	34.75
Doctorate	12	3
Annual Income		
Below 5 lakhs	152	38
5 to 10 lakhs	220	55
10 to 15 lakhs	16	4
Above 15lakhs	12	3
Marital Status		
Single	175	43.75
Married	225	56.25

Table 2: Codes and Items

Codes	Items
X1	Extended work hours
X2	Out of control
X3	Lack of support
X4	Qualitative workload
X5	Layoff
X6	Social Isolation
X7	Later Bed times
X8	Childcare Issue
X9	Lack of advancement opportunities
X10	Out Sourcing
X11	Lack of privacy
X12	Health concerns
X13	Balancing work and family
X14	Financial Issues
X15	Distractions
X16	Tight deadlines
X17	Work related pressure
X18	Pay cut
X19	Lack of Resources
X20	Social media draining productivity

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.783
Approx. Chi-Square	386.75
Bartlett's Test of Sphericity df	105
Sig.	.000

Table 4: Exploratory Factor Analysis of Occupational Stress

Factor	Item code	Factor loadings	Eigen value	Percentage of variation	Factor Name
1	X1	0.838	6.553	32.680	Workload
	X17	0.812			
	X16	0.813			
	X4	0.774			
2	X8	0.846	2.691	13.426	Job Insecurity
	X5	0.823			
	X9	0.819			
	X10	0.781			
3	X11	0.862	2.212	11.028	Poor Work Environment
	X19	0.854			
	X3	0.841			
	X6	0.847			
4	X14	0.812	1.600	9.004	Personal Problems
	X12	0.754			
	X08	0.732			
	X13	0.719			
5	X2	0.801	1.382	6.922	Lack of Structure
	X15	0.774			
	X20	0.781			
	X7	0.773			
Cumulative percentage of variation		-	-	73.06	-

Table 5: Data Reliability

Factors	Number of Items	Cronbach's Alpha
Workload	4	.827
Job Insecurity	4	.769
Poor Work Environment	4	.763
Personal Problems	4	.737
Lack of Structure	4	.762

Table 6: Factors of Occupational stress influencing mental health

Factors	Co-efficient	Sig.
Workload	-0.376	.000
Job Insecurity	-0.332	.000
Poor Work Environment	-0.428	.000
Personal Problems	-0.416	.000
Lack of structure	-0.391	.000
R	-0.72	
R square	0.63	
F	14.716	.000

Data Analysis and Interpretation

The KMO estimation of this research was 0.783, which is more prominent than the satisfactory reach (0.5), therefore, adequate for directing factor analysis (Kaiser, 1974). Bartlett's test of sphericity⁵ was utilized in this examination to test the connection between the items in the structured questionnaire. Bartlett's test range for this research was $p < .05$. Subsequently, the data is proper for factor examination (Brace *et al.*, 2012). The 20 items were presented to Principal Component Analysis (PCA) with varimax rotation to decrease the items into factors. Any item having factor loading under 0.50 ought to be omitted, however in this examination, factor loading for every item is above 0.50. Thus, the informational index is fitting (Hair *et al.*, 1996). In this manner, 20 items are accepted and PCA decreased these 20 items into five factors. The components are named as Workload, Job Insecurity, Poor Work Environment, Personal Problems, and Lack of structure with Eigenvalues more prominent than 1, clarifying 6.553, 2.691, 2.212, 1.600, and 1.382 respectively.

The complete level of variance is 73.06 percentage. The contribution of every one of the five elements is 32.680, 13.426, 11.028, 9.004, and 6.922 respectively. The Principal Component Analysis outcome can be seen in Table 4. The reliability of the five variables was examined with Cronbach's Alpha Coefficient and is displayed in Table 5. All the components are solid with Cronbach Alpha value over the adequate scope of 0.70 (Nunally, 1978).

Multiple regression analysis was employed to test the influence of Workload, Job Insecurity, Poor Work Environment, Personal Problems, and Lack of structure on the mental health of remote working women IT professionals. Every one of the five components is estimated as independent variable and mental health as a dependent variable. In this research, the measure of a correlation coefficient, $R = -0.762$ specifies that there is a negative and inverse relationship between (dependent variable) and the five factors (independent variables) workload, job insecurity, poor work environment, personal problems, and lack of structure. The outcome of the regression analysis indicates that the coefficient of determination value is 0.63.

About 63.00 percent of the variance in mental health is explained by the factors- Workload, Job Insecurity, Poor Work Environment, Personal Problems, and Lack of structure and 37% by other factors. The result of multiple linear regression infers that all the five factors of occupational

⁴ Bartlett's test of sphericity compares an observed correlation matrix to the identity matrix. Essentially it checks to see if there is a certain redundancy between the variables that we can summarize with a few numbers of factors.

stress are negatively significant with the mental health of remote working women IT professionals in urban Bangalore. This clearly shows that as occupational stress increases, the mental health of the remote working women IT professionals decreases.

Conclusion and Recommendations

The Covid-19 pandemic is harming health, social and economic well-being worldwide, with women at the centre. Covid has revealed existing inequalities and amplified the hurtful effects of gender inequality in our society. Therefore, there is a need for rapid policy action to redress gender inequalities exposed and worsened by covid-19.

Stress levels are high, yet women IT professionals working from home are not able to take sufficient downtime to re-energize, dreading that they could be laid off if they do not put in their maximum effort and hard work. Although women IT professionals are competent at their jobs, they still fear that they could lose their pay checks or have their compensation cut eventually if the downturn persists.

The Indian Government can take prompt covid policy action to correct the blatant gender inequalities exposed and exacerbated by Covid -19. The government should create policies to protect women and girls from gender-based violence.

With schools shut across the nation because of the COVID-19 pandemic, remote working women have had to adjust their routines to take care of children during the day and help them with online schooling. There's been an enormous amount of women's labour that has been largely imperceptible to men even in the same families; the need for men to share more fully in domestic duties during this prolonged period has the potential to create a sea-change in gender standards at home and at work. As well domestic violence during the pandemic has increased globally. The limitations forced to control the spread of the infection brought about an expansion in brutality. For example, experts committed to help victims of domestic violence in Australia detailed an increase in the recurrence and seriousness of vicious violence against women during COVID-19 (Fitz-Gibbon *et al.*, 2020). NGOs in India should come forward to broaden their help and collaboration for the assurance and care for survivors of brutality. They should deliver counselling, intervention services, legal and medical assistance, and social rehabilitation. The government is still working hard to enact various laws to protect women from various atrocities in society, many years post-Independence. In order to effectively implement the laws enacted to protect women, it is indeed necessary for women to understand the various rights granted to them by the laws. Some women can read and write but do not yet understand their rights. Government can also take social protection measures, including gender and financial support programs for unpaid caregivers, especially for the most vulnerable women in the country. However, we also need policies that ensure women's fair representation in response plans and decision-making, address the "care economy" issues, and address the socio-economic impact of COVID-19 from a gender perspective.

Since several women IT professionals are working from home because of the COVID-19 pandemic, the employers should offer passionate help and advice that can improve workers' psychological wellbeing. To establish good work environment, software companies can make a virtual office for their employees. IT companies can create some platform virtually to share their problems as well as work-related issues. Employers can allocate some teamwork to their employees, urging colleagues to cooperate and remain associated. IT companies can introduce virtual tea breaks and can encourage women employees to make video calls where workers

socialize to take breaks, mingle, and have their water cooler conversations. These discussions appear to be successful in forestalling potential burnout and detachment. Acknowledgment in the working environment is important for the overall achievement of the organizations. When the companies recognize their women employees for their remarkable work, women feel justly rewarded for their commitments, igniting their enthusiasm to improve and acquire appreciation from their managers.

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