THE RELATIONSHIP BETWEEN STRESS AND REMOTE WORKING IN INDIAN INFORMATION TECHNOLOGY COMPANIES

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\textbf{ABSTRACT}

\textbf{Purpose:} While remote working is a common practice in Information Technology organization, it was mostly confined to a small percentage of employees. The COVID-19 pandemic forced several companies to swiftly adapt to a near 100 percentage remote working model. The aim of this study was to understand the relationship between Stress and Remote Working in the Indian IT companies.

\textbf{Design/Methodology/Approach:} With multiple waves of infection, several companies are yet to return back to office. It is by now clear that, remote working is going to be way of life. Most companies are looking at a hybrid work model even after the pandemic era. However, it is important to realise that implementation of remote working is a much broader subject. Employees have been complaining of stress and fatigue while working from home. NASSCOM data has shown an increase in attrition across IT organizations. We decided to adopt the survey approach for studying work stress while working from home and the impact on the intent to stay amongst employees working in IT organizations. We followed the snowball sampling method and a total of 181 employees participated from IT Companies across India. A model was created to explore the relationship between Autonomy, Emotional Demands, Work Pressure, Work Engagement, Recognition, Intent to Leave and Stress. A PLS-SEM model was created and the relationships were analyzed.

\textbf{Findings:} A total of six hypotheses were tested and the result was conclusive. The result corroborated with the fact that working from home is stressful and identified the factors that influence the stress. While remote working continues to be a preferred option, the concerns raised by the employees were valid and hence stress inducing. We also spoke to a group of HR Managers to understand and solution some of the problems that surfaced in our survey. Together, we arrived at recommendations that could help address these concerns. As remote working is going to be a part of future work strategy, it is important to bring about these changes to immediately reduce the increasing attrition in Indian IT organizations.

\textbf{Research, Practical & Social implications:} Organizations should understand that remote working is the future way forward. With more clients being open to have employees working from home it is important for the organizations to ensure that they provide a stress free work environment to their remote workers. While there could be other external factors that could induce stress, it is the responsibility of the organization to focus on the controllable factors.

\textbf{Originality/Value:} While working from home is not new to Indian Indian IT companies they have allowed only a small percentage of their workforce to operate remotely. Most employees are allowed to work from home on a need basis. However, permanent work from home is generally discouraged. Remote working by majority workforce was uncommon before the pandemic and hence this topic was rarely researched. The recommendations provided based on our research study could help bridge the gaps and help organizations reduce the stress levels of their employees.
A RELAÇÃO ENTRE ESTRESSE E TRABALHO REMOTO EM EMPRESAS INDIANAS DE TECNOLOGIA DA INFORMAÇÃO

RESUMO
Objetivo: Embora o trabalho remoto seja uma prática comum nas organizações de Tecnologia da Informação, ele estava confinado principalmente a uma pequena porcentagem de funcionários. A pandemia da COVID-19 forçou várias empresas a adaptarem-se rapidamente a um modelo de trabalho quase 100% remoto. O objetivo deste estudo foi compreender a relação entre Estresse e Trabalho Remoto nas empresas indianas de TI.

Design/metodologia/abordagem: Com múltiplas ondas de infecção, várias empresas ainda não voltaram ao escritório. Agora está claro que o trabalho remoto será um modo de vida. A maioria das empresas está buscando um modelo de trabalho híbrido, mesmo após a era da pandemia. No entanto, é importante perceber que a implementação do trabalho remoto é um assunto muito mais amplo. Os funcionários têm reclamado de estresse e fadiga enquanto trabalham em casa. Os dados da NASSCOM mostraram um aumento no desgaste nas organizações de TI. Decidimos adotar a abordagem de pesquisa para estudar o estresse no trabalho durante o trabalho em casa e o impacto na intenção de permanecer entre os funcionários que trabalham em organizações de TI. Seguimos o método de amostragem em bola de neve e participaram um total de 181 funcionários de empresas de TI de toda a Índia. Foi criado um modelo para explorar a relação entre Autonomia, Demandas Emocionais, Pressão no Trabalho, Engajamento no Trabalho, Reconhecimento, Intenção de Sair e Estresse. Foi criado um modelo PLS-SEM e as relações foram analisadas.

Resultados: Foram testadas seis hipóteses e o resultado foi conclusivo. O resultado corroborou com o fato de que trabalhar em casa é estressante e identificou os fatores que influenciam o estresse. Embora o trabalho remoto continue a ser uma opção preferida, as preocupações levantadas pelos colaboradores eram válidas e, portanto, causavam stress. Também conversamos com um grupo de gerentes de RH para entender e solucionar alguns dos problemas que surgiram em nossa pesquisa. Juntos, chegamos a recomendações que poderiam ajudar a resolver essas preocupações. Como o trabalho remoto fará parte da estratégia de trabalho futura, é importante realizar essas mudanças para reduzir imediatamente o desgaste crescente nas organizações de TI indianas.

Implicações de investigação, práticas e sociais: As organizações devem compreender que o trabalho remoto é o futuro caminho a seguir. Com mais clientes abertos a ter funcionários trabalhando em casa, é importante que as organizações garantam um ambiente de trabalho livre de estresse aos seus trabalhadores remotos. Embora possa haver outros fatores externos que possam induzir stress, é responsabilidade da organização concentrar-se nos fatores controláveis.

Originalidade/valor: Embora trabalhar em casa não seja novidade para as empresas indianas de TI, elas permitiram que apenas uma pequena porcentagem de sua força de trabalho operasse remotamente. A maioria dos funcionários tem permissão para trabalhar em casa conforme a necessidade. No entanto, o trabalho permanente a partir de casa é geralmente desencorajado. O trabalho remoto por mão de obra majoritária era incomum antes da pandemia e, portanto, este tópico raramente era pesquisado. As recomendações fornecidas com base no nosso estudo de investigação podem ajudar a colmatar as lacunas e ajudar as organizações a reduzir os níveis de stress dos seus funcionários.

Palavras-chave: Tecnologia da Informação, Desafios de RH, Trabalho Remoto, Funcionários, Gestão de Recursos Humanos.

LA RELACIÓN ENTRE EL ESTRÉS Y EL TRABAJO REMOTO EN LAS EMPRESAS INDIAS DE TECNOLOGÍAS DE LA INFORMACIÓN

RESUMEN
Objetivo: Aunque el trabajo remoto es una práctica común en las organizaciones de Tecnologías de la Información, se limitaba principalmente a un pequeño porcentaje de empleados. La pandemia de COVID-19 obligó a varias empresas a adaptarse rápidamente a un modelo de trabajo casi 100% remoto. El objetivo de este estudio fue comprender la relación entre el estrés y el trabajo remoto en las empresas de TI de la India.

Diseño/metodología/enfoque: Con múltiples oleadas de infección, muchas empresas aún no han regresado a la oficina. Ahora está claro que el trabajo remoto será una forma de vida. La mayoría de las empresas siguen un modelo de trabajo híbrido incluso después de la era de la pandemia. Sin embargo, es importante darse cuenta de que implementar el trabajo remoto es un tema mucho más amplio. Los empleados se han quejado de estrés y fatiga mientras trabajan desde casa. Los datos de NASSCOM mostraron un aumento en el agotamiento en las organizaciones de TI. Decidimos adoptar el enfoque de la encuesta para estudiar el estrés laboral durante el trabajo desde casa y el impacto en la intención de permanecer entre los empleados que trabajan en organizaciones de TI.
Seguimos el método de muestreo de bola de nieve y participaron un total de 181 empleados de empresas de TI de toda la India. Se creó un modelo para explorar la relación entre autonomía, demandas emocionales, presión laboral, compromiso laboral, reconocimiento, intención de irse y estrés. Se creó un modelo PLS-SEM y se analizaron las relaciones.

**Resultados:** Se probaron seis hipótesis y el resultado fue concluyente. El resultado corroboró que trabajar desde casa es estresante e identificó los factores que influyen en el estrés. Si bien el trabajo remoto sigue siendo una opción preferida, las preocupaciones planteadas por los empleados eran válidas y, por lo tanto, causaban estrés. También hablamos con un grupo de gerentes de recursos humanos para comprender y resolver algunos de los problemas que surgieron de nuestra investigación. Juntos, elaboramos recomendaciones que podrían ayudar a abordar estas preocupaciones. Dado que el trabajo remoto será parte de la estrategia laboral futura, es importante realizar estos cambios para reducir de inmediato la creciente presión sobre las organizaciones de TI de la India.

**Investigación, implicaciones prácticas y sociales:** las organizaciones deben comprender que el trabajo remoto es el camino a seguir en el futuro. Con más clientes dispuestos a que sus empleados trabajen desde casa, es importante que las organizaciones garanticen un entorno de trabajo libre de estrés para sus trabajadores remotos. Aunque puede haber otros factores externos que pueden inducir estrés, es responsabilidad de la organización centrarse en factores controlables.

**Originalidad/valor:** Si bien trabajar desde casa no es nada nuevo para las empresas de TI de la India, solo han permitido que un pequeño porcentaje de su fuerza laboral opere de forma remota. A la mayoría de los empleados se les permite trabajar desde casa según sea necesario. Sin embargo, en general se desaconseja el trabajo permanente desde casa. El trabajo remoto por parte de la mayoría de la fuerza laboral era poco común antes de la pandemia y, por lo tanto, rara vez se investigaba este tema. Las recomendaciones proporcionadas en base a nuestro estudio de investigación pueden ayudar a llenar los vacíos y ayudar a las organizaciones a reducir los niveles de estrés de sus empleados.

**Palabras clave:** Tecnología de la Información, Desafíos de Recursos Humanos, Trabajo Remoto, Compromiso de los Empleados, Gestión de Recursos Humanos.

**INTRODUCTION**

The COVID-19 pandemic spread superfast in 2020 and changed the global outlook. The pandemic has affected various parts of the world, and globally all the organizations struggled to cope with the changing demands. The information technology industry was also caught by surprise but managed to react quickly by moving to work from home (WFH) mode of work. This movement to remote working happened without much preparation. It was actually a reaction to the challenges posed by the spread of the virus and hence the most suitable alternative. Before the pandemic, only 12% of the Europeans were working from home. With the restrictions forced by the pandemic, approximately 50% of the Europeans started to work from home (Ahrendt et al., 2020). This number is expected to be the same even after the pandemic since many organizations are planning to continue work from home even after the pandemic or adopt a hybrid model of working (Gabriel, 2022).

The concept of working from home started in the early 1970s as teleworking, which was seen as an alternative to working from different locations (office, home, or any other place), with the help of technological assistance (Van Meel, 2011). Support had to be given to reduce the negative impacts that may arise due to working from home due to social isolation and work-life balance conflicts (Contreras et al., 2020).
According to Allen et al. (2015), “the organizational changes of work from home and a more flexible work structure have to be done in a properly planned way with proper design, preparation, and adaptation to allow organizations to effectively support their employees’ work-life balance without compromising on their productivity”. Working from home has its advantages and disadvantages. The common challenges of work from home include collaborating and communicating with their colleagues, and the increased working time in the work from home setting. There are other challenges that the managers and leaders found in working from home which if not addressed may lower the productivity of the employees. This was listed by Di Martino (1990), “Collaboration and communication, loneliness, not being able to unplug from work, distractions at home, being in different time zone compared to their teammates, staying motivated, vacation time, other connectivity, and technical issues that may hinder the work”.

It is already clear that even after the end of COVID-19 pandemic, the work from a home model is expected to continue. Not only, the model of working but also the relationship between the employees and the leaders have changed. According to Ganesan (2022), social interaction between the manager and co-worker (new joiners) is very important for their engagement.

Huei-Ling et al. (2018) have stated, “In a work from home setting, the boundary between work and personal life is not clear for the employees leading to work overload, stress and anxiety which affects job satisfaction”. Thus, this study aims to understand the various factors that may cause stress in the work from the home setting which may affect the work-life balance.

THEORETICAL FRAMEWORK

The job demand resource model created by Baker et al. (2001), categorizes the job characteristics into resources and demands. This can be used to understand stress and burnout that is related to work; which may be characterized by feeling emotionally drained, lack of enthusiasm and doubting self-competence, all of which may affect one’s contribution to work. Those workers who are highly engaged generally exhibit higher energy levels and self-efficacy. These engaged workers who are so full of enthusiasm ensure that they actually take this energy and enthusiasm outside of the organization too. This is what makes them have a sense of accomplishment at the end of the day (Demrouti et al., 2001).

Good employee engagement helps to reduce burnout. Work engagement is very important as the IT sector is a service industry and the quality of the work is very important. Technology plays an important part towards this and the same has been confirmed by Sukawat
Few studies also support that the employees who are in client facing role have high chances of burning out because the customer demands are high and there are no fixed working hours in this sector (Pienaar et al., 2008). The JDR model can be used to know the complexity of the realities of the organization and to increase employee engagement and thus preventing stress and burnout. This model can also be used as a tool for communication between the stakeholders like employees, HR officials, and the different levels of management.

Schaufeli et al. (2006) have done extensive research on stress and employee engagement. According to them, the burnout due to stress and employee engagement may have many similarities. However, at the basic level, while burnout could result in negative emotions, employee engagement would end up in having positive emotions. This clearly implies that stress and employee engagement are actually at the opposite poles.

“Many personal and organizational factors linked to engagement and burnout were divided into job resources, demands, social support, and affinity”. Through their extensive research, Demerouti et al. (2001) have proven that “job demand and job resources have a long-term connection to both engagement and stress & burnout”. According to the JDR model, when sufficient resources required to meet the job demands are not provided despite making a demand would result in the increase of stress and lead to burnout.

According to a study conducted in 2008 by Baker et al., “the JDR model also includes the social support aspects and measures the cooperation among colleagues”. There are three levels of support: support from the supervisor, support from the colleagues and spousal support. The study inferred that when there is enough work-related social support, the engagement levels are very high. Similarly, higher levels of support from the supervisor negatively impacted the burnout. A study found that work-related social support had a positive association with the dedication dimension of engagement and that supervisor support was negatively associated with burnout.

The purpose of this research is to explore the relationship between Autonomy, Emotional Demands, Work Pressure, Work Engagement, Recognition, Intent to Leave and Stress. The structure of the research is shown in Figure 1.
The Relationship Between Stress and Remote Working in Indian Information Technology Companies

Santhanam, G., Balaji, K. D. (2023)

There are two objectives to the study: (1) To understand the influence of Autonomy and Emotional Demands on Work Pressure while working from home (2) To study the influence of Work Engagement, Work Pressure, Recognition and Intent to Leave on Work Stress while working from home.

Autonomy: Having autonomy in the work is important for knowledge workers. When they are empowered to make their own decisions, it makes the work easier and also could reduce work pressure. To test this, we have the first hypothesis H1: Autonomy has an influence on Work Pressure.

Emotional Demands: The emotional demands have a direct effect on work pressure and gives us our second hypothesis, H2: Emotional Demands has a positive influence on Work Pressure.

Based on the studies discussed earlier, we also decided to check four other hypotheses (H3, H4, H5 and H6) to check the influence of Work Pressure, Work Engagement, Recognition and Intent to Leave respectively on Stress.

RESEARCH METHODOLOGY

A survey is one of the effective methods to understand the psychological perceived attitudes of an individual. We worked on an online questionnaire survey and reached out to participants through the snow ball sampling method. This was an easier and effective way to
reach out to the target population which consisted of IT employees working in India. The participants were explained about the need for this research and were also assured about the complete confidentiality of their responses. The questionnaire consisted of 21 questions and except for the demographic questions the others were based on a Likert scale. A total of 181 respondents participated in the survey. 46.4% of the respondents were females and 53.6% were males. On the age front, 9.4% were aged between 19-25 years, 11% between 26-30 years, 42% between 31-35 years, 15.5% in the 41-45 years and the rest were above 45 years. Based on the job role, 55.25% of them were individual contributors/consultant, 25.97% were front line managers (managing a team), 13.26% were mid-level manager (managing managers) and 5.52% were senior-level managers. All the participants worked from home during the peak pandemic and except for two employees who are currently working in a hybrid mode, the remaining participants continue to work from home. The survey is intended to study the factors contributing to work related stress while working from home and hence the participants were clearly asked to take the survey keeping this context in mind.

**RESEARCH FINDING**

We used the Partial Least Squares (PLS) procedure to explore the relationship between the research variables, test the model and hypotheses. In order to perform the repetitive sampling and to derive path coefficients, we used the PLS Algorithm and Bootstrapping. The discriminant validity, internal consistency, construct reliability and validity were all evaluated through their loadings (Table 1). In order to avoid multicollinearity, it needs to be noted that certain elements (in some structures) had to be omitted from the model.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>jd_emo1</td>
<td>My work is emotionally demanding</td>
<td>0.943</td>
</tr>
<tr>
<td>jd_emo2</td>
<td>I usually face emotionally charged situations during work</td>
<td>0.953</td>
</tr>
<tr>
<td>jd_wp</td>
<td>I work under time pressure.</td>
<td>1.000</td>
</tr>
<tr>
<td>jr_auto1</td>
<td>I have the flexibility (autonomy) in the execution of my job.</td>
<td>0.960</td>
</tr>
<tr>
<td>jr_auto2</td>
<td>I have complete control over how my work is being carried out</td>
<td>0.912</td>
</tr>
<tr>
<td>recog1</td>
<td>I get recognised/appreciated for the work I have done.</td>
<td>0.909</td>
</tr>
<tr>
<td>recog2</td>
<td>I get paid adequately for the work that I do.</td>
<td>0.863</td>
</tr>
<tr>
<td>stress stay</td>
<td>I have plans to search for a new job within 12 months.</td>
<td>1.000</td>
</tr>
<tr>
<td>we_stress1</td>
<td>Some days, I feel tired even before I start working</td>
<td>0.853</td>
</tr>
<tr>
<td>we_stress2</td>
<td>After my work, I generally feel weary and worn out</td>
<td>0.896</td>
</tr>
<tr>
<td>we_stress3</td>
<td>After work, I feel more exhausted now-a-days</td>
<td>0.861</td>
</tr>
<tr>
<td>we_we1</td>
<td>I love my job and am enthusiastic about it</td>
<td>0.862</td>
</tr>
<tr>
<td>we_we2</td>
<td>When I wake up every morning, I feel like starting my work</td>
<td>0.913</td>
</tr>
</tbody>
</table>

Source: Prepared by Authors (2023)
The Variance Inflation Factor (VIF) was less than 3 for all the dimensions studied in the research. This indicated that among the study dimensions, there is no collinearity problem. The model fit is good where the SRMR is 0.072 and NFI is 0.690. Also, the model verification was analyzed and was explained by the path analysis and $R^2$. It can be seen from Table 2 that all the hypotheses in this study have reached a significant level with a p value less than 0.01 and hence valid.

Table 2. Significance level

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Coefficients</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy -&gt; Work Pressure</td>
<td>-0.275</td>
<td>0.085</td>
<td>3.219</td>
<td>0.001</td>
</tr>
<tr>
<td>Emotional Demands -&gt; Work Pressure</td>
<td>0.562</td>
<td>0.072</td>
<td>7.841</td>
<td>0.000</td>
</tr>
<tr>
<td>Work Pressure -&gt; Stress</td>
<td>0.278</td>
<td>0.055</td>
<td>4.978</td>
<td>0.000</td>
</tr>
<tr>
<td>Work Engagement -&gt; Stress</td>
<td>-0.212</td>
<td>0.076</td>
<td>2.804</td>
<td>0.005</td>
</tr>
<tr>
<td>Recognition -&gt; Stress</td>
<td>-0.325</td>
<td>0.067</td>
<td>4.832</td>
<td>0.000</td>
</tr>
<tr>
<td>Intent to Leave -&gt; Stress</td>
<td>0.331</td>
<td>0.064</td>
<td>5.149</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The PLS-SEM model is shown in Figure 2.

The explanatory ability of the model was evaluated using the $R^2$ value. The explanatory power of emotional demands and autonomy to work pressure is 44.6% and the explanatory
power of all other variables to stress is 45.4%. It is evident that the model explains the latent variables with a moderate degree of explanatory power.

DISCUSSION

The intent of this research is to explore the factors influencing stress while working from home with the help of a PLS-SEM model. The research also attempts to explain the relationship between autonomy at work, emotional demands, work pressure, work engagement, recognition, intent to leave and stress. We not only checked the relationship but also checked as to how these variables affected the work stress.

First of all, it was evident that emotional demands and autonomy at work influenced work pressure. While an increase in emotional demands increased the work pressure, autonomy had the reverse effect, i.e. an increase in autonomy would result in a decrease in work pressure. Second, the research also found out that when there is an increase in work pressure it resulted in an increase in work stress. The results were similar when there was an increase in intent to leave an organization. Thirdly, it was noticed that there was a decrease in work stress when there was more recognition or work engagement. Finally, when absolute percentages were looked at based on the responses, it showed only 24% employees stating that they are not stressed while working from home and almost 72% confirming that they intend to leave their current organization in the next 12 months. The statistical modelling clearly corroborated this data and established the relationships proving beyond doubt that working from home could be stressful if the above mentioned parameters are not addressed effectively.

CONCLUSION

The pandemic has completely altered the way our IT Organizations function. While working from home was necessitated as an immediate reaction to avoid disruption of work, it has now slowly becoming the best possible way to deliver work. The hybrid model is here to stay. However, this research clearly establishes the fact that work related stress is a natural outcome of working from home. It is also evident, factors such as autonomy, emotional demands, work pressure, work engagement, recognition and intent to leave play a significant role in work related stress. The research involving 181 participants, helped in evaluating the proposed structural model. Although the NFI value was low, the SRMR value of this research model was lesser than 0.08 thereby confirming that there is a reasonable fit. There were six hypotheses which were evaluated and all of them were validated. The researchers also reached
out to a group of Human Resources practitioners who provided various useful recommendations that could help reduce stress while working from home. The recommendations if implemented will go a long way in ensure in reducing the stress while work from home The sample size could be expanded for future research with additional variables. We will be very happy to collaborate with anyone who wants to do a deeper research on this subject.

RECOMMENDATIONS

The findings were shared with a group of HR managers working in the information technology industry. The session was organized as a virtual round table over a video conferencing platform and recommendations were sought from the leaders on addressing these dimensions. The critical recommendations from the group is summarized below:

Time Pressure: This is something that cannot be avoided in the information technology industry. There will be projects and clients who could be highly demanding. However, the deadline pressure could get magnified due to various distractions while working from home. The pressure could be avoided by proper planning and by ensuring limited interferences during work hours. Managers should be more flexible, however, without compromising on the deliverables. They should be trained on being more empathetic. There is a general expectation that employees must be available 24/7 while working from home and this needs to change. A fixed work timing is sacrosanct and should be respected. Employers who have a culture of ensuring employees personal time is not encroached have been better able to manage the morale of employees working from home.

Lack of infrastructure: Many employees have complained that frequent power outages and slow internet bandwidth have hampered their productivity. It is important to have an uninterrupted power supply and a stable high speed internet connection to ensure that productivity is not affected. Wherever employers deploy a hybrid/ remote work strategy, care must be taken to ensure employees are provided the required infrastructure support including hardware, software, and monetary reimbursements wherever possible.

Lack of Trust: When employees are working remotely, managers tend to micromanage their teams. Sometimes, the lack of trust and micromanaging affects autonomy thereby demotivating the employees and adding to their work pressure.

Recognition: Organizations need to look for newer ways to instantly recognize employees and also ways to celebrate milestones remotely. Any recognition that comes late is not valued by
employees and hence the recognition must happen in a timely manner. Companies should invest in a recognition portal which could personalise the recognition experiences. These tools can also be curated to cater to the changing needs and thereby get us the desired behaviour.

Stress: These days, the awareness on mental health and wellbeing is steadily increasing. The pandemic has put the spotlight on this problem which is also an outcome of stress due to overwork. It is the job responsibility of managers to ensure that there is even distribution of work. They should make time to discuss with their employees about their stress levels and how the managers can help reduce it. Companies should have a well defined Employee Assistance Program (EAP) benefit. Several companies have taken the services of qualified counsellors to talk to employees on their mental wellness and address signs of stress. Companies should ensure that any stigma around counselling is removed.

REFERENCES


