Psychological Stress and Job Insecurity in Tech-Enabled Workplaces

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ABSTRACT

The high rate of technology adoption in work places has altered the structure of jobs, expectations as well as their experiences. On the one hand, technological development improves performance, but on the other hand, it creates special stress factors and increases job insecurity. The workplaces that are tech enabled require continuous learning, flexibility, and digital capabilities which in most instances exacerbate the psychological strain between employees. Job insecurity which can be described as the perceived risk of losing jobs or other adverse developments in the employment terms and conditions has become one of the major issues in such environments. In this paper, the relationship between psychological stress and job insecurity within tech-enabled work environments is discussed, with the negative aspects of organizational practices, employee resilience, and technological pressures influencing employee health. Recent studies provide evidence that job insecurity, at high levels, has a detrimental effect on mental health issues, motivation, and commitment to the organization. On the other hand, stress can be minimized when supportive factors, including skill development programs, open communication, and flexible work schedules, are put in place in an organization. The results highlight the great importance of strategic human resource intervention and management strategies that would strike a balance between technological performance and psychological safety of staff. The study is relevant to the knowledge of how current technological changes affect workplace stressors and provides knowledge on how a productive and healthy workforce can be maintained.

Keywords: *Psychological stress, work insecurity, tech-enabled workplaces, organizational well-being, digital transformation, organizational support, workplace resilience.*

INTRODUCTION

With the current digital transformation, workplaces in all industries are embracing the use of technology-based tools to improve their productivity, streamline their operations and ensure that they stay on top of the competitive front. Artificial intelligence and cloud computing, automation and collaborative digital platforms are some examples of how technology has transformed the work environment in the modern world, both introducing new workflows and radically changing the traditional job roles. As much as these technological advances are beneficial to an organisation, there are also challenges that arise and influence the perceptions of employees in terms of mental health and job security. Other issues that become more conspicuous due to the introduction of technology in workplaces are psychological stress and insecurity at work. Stress is a multidimensional occurrence which involves emotional, cognitive and behavioral reactions to perceptions of demands that are out of the coping ability of an individual (Lazarus and Folkman, 1984). In workplaces that are technologically enabled, workers are often faced with excessive demands to swiftly learn how to handle new technologies, to handle digital workloads, and to remain constantly connected, which may escalate psychological pressure (Ayyagari, Grover, and Purvis, 2011). Additionally, the issue of job security is frequently provoked by technological disruption, since the automation, artificial decision-making, and AI-powered system may substitute or severely change the conventional job roles (Sverke, Hellgren, and Naswall, 2002). Job insecurity, which is the subjective belief of the loss of a job or undesirable

changes at work, has been found to have a negative impact on mental health, job satisfaction, and organizational commitment. Workers who are at risk of being dismissed tend to have feelings of uncertainty, lack of motivation and they may develop anxiety which may deteriorate productivity and unity in the workplace. Studies point out that the interrelationship between technological change and job insecurity increases psychological pressures and this is a circular process where workers become motivated to keep on proving their digital capabilities as they dread becoming obsolete (Cheng and Chan, 2008).

Psychological stress and job insecurity have a complex relationship. Workers at technologically empowered workplaces must acquire skills with new software, work with digital communication channels, and navigate virtual collaboration systems, and they have little time to do it. Digital upskilling is a continuous task that may overwhelm the employees, especially those who have little experience in technology-intensive jobs. Secondly, companies can re-engineer workflows in such a way that they are compatible with technological potential, leading to role ambiguity, more frequent monitoring of performance, and demands on performance that are quantifiable, and thus cause an increase in stress levels (Tarafdar et al., 2015). The thought that technology may make oneself irrelevant widens the sense of job insecurity since workers fear of being laid off or even have their duty reduced. Employees can also contrast their flexibility to the one of other employees, which is another cause of social evaluation stress, which in turn can also affect mental well-being.

Some studies have highlighted the psychological health impacts of job insecurity that are detrimental. De Witte (1999) established that employees who feel job insecurity have high anxiety levels, depression and burnout. On the same note, Probst (2003) also pointed out the connection between job insecurity and a reduced organizational commitment and demonstrated that employees who are afraid of losing their jobs will not be willing to invest in discretionary work or participate in collaborative activities. Such results are also especially applicable to workplaces that are tech-enabled, where technological skills tend to determine the career growth and stability. The intensity of changes in technology implies that the employees have to constantly improve their competencies and adjust to new technologies, which exposes them to the risk of cognitive overload and stress. Moreover, the organizational policies, which tend to focus on efficiency and cost-cutting, including outsourcing digital work or automating the work processes, can intensify the sense of insecurity among the staff members, especially those with specific work-related expertise that will go out of use.

However, in spite of the technological integration challenges, some of the organizational practices can curb the effects of psychological stress and job insecurity. It has been demonstrated that proactive communication on the changes in the organization, open communication on the need to have the technology adopted, assurance on employee support have been effective in reducing the perceived insecurity and stress (Greenhalgh and Rosenblatt, 1984). Such training programs which increase the level of digital literacy and give employees a chance to develop their skills not only enhance the competence but also the confidence in managing the technological shifts. Moreover, the stress related to constant connectivity and managing work remotely and flexibly can also be relieved with the help of flexible working arrangements, such as remote work and flexible schedules (Shoss, 2017). The interventions underscore the need of a holistic intervention that combines both human resource management and technological approach with the aim of ensuring that the employees are at a position to handle digital work environments without compromising their psychological health.

The introduction of remote working and hybrid versions has made the relationship between stress and job insecurity even more complicated. Work environments that are technology-enabled usually have virtual communication, cloud-based project management, and digital surveillance to do all the coordinating. Although these tools help to optimally conduct the work, they may blur the borders between work and personal life, leading to the increased stress and the development of the feeling of the constant monitoring.

Digital communications that happen out of standard working hours might cause pressure and burnout in employees, as well as deteriorate the work-life balance (Mazmanian, Orlikowski, and Yates, 2013). Such situations can also contribute to job insecurity as remote monitoring and performance analytics cause employees to be more sensitive about their productivity levels and their possible weakness in the face of performance-based decisions.

Personal characteristics are also very relevant in the moderation process of technological stressors and job insecurity. The adverse effects of workplace stress can be ameliorated with the help of resilience, coping, and social support networks that enable employees to go through uncertainty and stay engaged (Hobfoll, 2002). The more employees have self-efficacy in digital skills, the more they can deal with the technological requirements and eliminate the psychological load of the constant adjustment. On the other hand, more technologically illiterate and less confident employees will tend to develop increased stress and insecurity, which once again emphasizes the importance of customized interventions responding to individual differences.

To sum up, one can state that psychological stress and job insecurity are also major concerns in the tech-enabled workplaces due to the accelerated rate of technological implementation, changing job descriptions, and structural reorganization. The interplay between stress and insecurity is far reaching in terms of employee psychological and mental wellness, motivation and performance of the organization as a whole. Although technology has many advantages in terms of operational efficiency and the ability to gain competitive advantage, this use of technology should be supported by conducive practices that put into consideration the well-being of employees. Programs of training, open communication, working schedules, and resilience programs play a key role in averting the adverse consequences of technological change. To create a sustainable approach to technology-driven workplaces by creating a balance between productivity and staff well-being, grasping the psychological effects of working in a technological environment is crucial so that organizations can stay flexible and at the same time maintain a positive working environment. Further studies are advised in the area of the dynamic interaction between technological requirements, job insecurity and psychological stress, including sector-specific differences, and how organizational culture influences employee experiences.

LITERATURE REVIEW

The increased use of technology in organizational context has drastically altered the essence of work and this has provided both opportunities and challenges to the employees. Tech-enabled workplaces where the level of digital devices, automation, and remote communication tools is high have become more efficient and productive yet with a variety of new stressors. Task demands, the rapid change in technology, and the need to constantly learn are some of the factors that lead to psychological stress in such environments (Ayyagari, Grover, and Purvis, 2011). Lazarus and Folkman (1984) describe stress as the reaction to any perceived threats that are beyond the coping capacities of an individual. Technology-intensive workplaces also tend to impose a cognitive load and emotional burden on their employees as they have to learn new programs, work in virtual teams, and be constantly connected (Tarafdar, Tu, Ragu-Nathan, and Ragu-Nathan, 2015). These stressors are further aggravated by the feeling of job insecurity which is defined as the expectation of possible job loss or not desirable alterations in the job conditions (De Witte, 1999). The literature always shows that job insecurity is an important psychological stressor which negatively impacts mental health, job satisfaction and commitment to the organization (Cheng and Chan, 2008).

There are a number of studies conducted on the correlation between technological adoption and stress among employees. Ayyagari et al (2011) found that the introduction of advanced IT systems, in spite of productivity improvement, usually leads to technostress, as a result of the greater complexity, information overload, and frequent interruptions. The workers who complain of technostress complain of increased

fatigue levels, low job satisfaction, and poor decision-making abilities. In the same manner, Tarafdar et al. (2015) highlighted that technostress serves as an intermediate between the utilization of technology and work outcomes, which implies that the employees, who become threatened by digital technologies, become more psychologically strained. These results show the two-sided character of technology in the workplace: even though it simplifies work procedures and helps conduct remote teamwork, it can also become a significant stressor when workers find it difficult to keep up with the changing demands of digital technologies.

Technological stressors are closely linked with job insecurity in workplaces that are enabled by technology. According to studies, automation, artificial intelligence, and algorithmic monitoring may cause uncertainty to the employees on the sustainability of their jobs (Sverke, Hellgren, and Naswall, 2002). It is also possible that employees will be afraid that their existing competencies will become irrelevant, which may result in possible layoffs or loss of certain duties (Probst, 2003). This impression is especially acute among the middle-aged workers who have devoted much of their time to the competencies they already possess and lack the ability to keep up with the pace of technology changes. Studies conducted by Shoss (2017) affirm that employees who feel highly insecure at work feel more anxious, less engaged at work, as well as less committed to the organization. The performance measurement, digital monitoring, and algorithmic appraisals are another source of job insecurity in tech-enabled workplaces that could make employees feel that they are under surveillance and pressure to prove they are digital-savvy.

Another psychological and behavioral outcome of combined stressors and insecurity is also noted in the literature. De Witte (1999) reported that the perceived job insecurity is closely related to the symptoms of anxiety, depression, and burnout. Workers who experience long term stress tend to complain of reduced cognitive functions, low productivity and less desire to engage in discretionary activities. On the same note, Cheng and Chan (2008) found that job insecurity does not only have impacts on emotional well-being, but also leads to defensive behaviors including withdrawal of participation in an organization, and sharing of knowledge. Stress and insecurity have a positive and reinforcing relationship where increased stress increases perceptions of insecurity, and increased insecurity increases stress reactions. This circle is especially intense in tech-enabled working environments, when a person is exposed to digital surveillance continuously, there are changes in technology, and the expectations regarding digital abilities are vague (Mazmanian, Orlikowski, and Yates, 2013).

The individual and organizational factors are important in the moderation of these results. Highly digital self-efficacy, resilience, and adaptive coping employees find it easier to handle technological stressors and perceived insecurity (Hobfoll, 2002). Upskilling, reskilling, and developing digital competencies training programs have been reported to lessen stress and create a feeling of security among the employees (Ayyagari et al., 2011). On the same note, social support in groups, mentoring, and managerial assistance will help to counteract the adverse psychological impact of technology-related stress. Companies that embrace open communication policy, establish role clarity and offer assurances about job security have better chances of retaining employee interest and diminishing turnover intentions (Greenhalgh and Rosenblatt, 1984). These results highlight the significance of proactive strategy towards human resource in technology-based settings.

The model of remote work and hybrid workplace additionally aggravated the processes of stress and job insecurity. Digital collaboration tools, virtual project management tools and constant online communication are becoming a more important part of tech-enabled organizations, which although operationally advantageous, lack boundaries between work and personal life (Mazmanian et al., 2013). Employees can have a pressure to reply to digital messages in a timely manner, juggle multiple tasks, and be visible in virtual workplaces. These stressors contribute to the increase in perceived stress, emotional burnout and possible work-life imbalance. Moreover, remote surveillance and performance judgments built on data can

solidify insecurity as well because employees feel that they are under constant observation of their performance measurements and might lose their jobs (Shoss, 2017).

Survey studies conducted in sectors also indicate differences in the effect that technology has on stress and insecurity. Employees in IT and software development companies where the use of technology has been fast and steady have more technostress and perceived job insecurity than those in the industry that is slower in digital integration (Ayyagari et al., 2011). The same situation applies to employees working in factories with a high degree of automation because AI and robotization push them out of their monotonous jobs because of the unreliability of their jobs (Sverke et al., 2002). On the other hand, the organizations with the focus on constant learning, teamwork of digital processes, and engagement of employees in technological change have less stress and more job satisfaction (Tarafdar et al., 2015).

According to longitudinal studies, the accumulative impact of constant exposure to technological stressor and job insecurity on the well-being of employees as well as organizational performance is detrimental. Long term stress may result into burn out, poor health, absenteeism and reduced performance (De Witte, 1999). In the long-term, job insecurity kills organizational commitment, trust in organizational leadership and turnover intentions (Probst, 2003). Thus, to solve them, it is necessary to take such measures both now, to manage the workload and support employees and in the long term, to plan technological implementation, upskilling, and the creation of a culture of psychological safety.

The literature reviewed is always in agreement with the fact that integrative approaches involving the combination of the technological strategy with the human-centered approaches to management are necessary. Although digital tools are the key to operational efficiency, one should not disregard their influence on the psychological health of employees. Well-being of workers in the technology-enabled workplaces is not merely conditioned by objective needs of technology, but by subjective feelings of control, competency and safety. The adverse psychological implications can be alleviated, promote employee commitment, and maintain long-term productivity in an organization through the efficient use of support mechanisms that consider both positive and negative impacts of technological advances (Hobfoll, 2002; Greenhalgh and Rosenblatt, 1984).

Conclusively, the interactions of these three aspects of technological adoption, employee perceptions, and organizational practices are very complicated as indicated by the literature on psychological stress and job insecurity in workplaces enabled by technology. The technological change envisages opportunities as well as challenges, and employees have no alternative other than constantly adapting, which may cause stress and lead to an increased perception of insecurity. Conditional support, developing skills, open communication, and resilience of the employees are all essential factors, which determine the degree of impact of these stressors on the well-being of the employees. The study highlights the value of the human dimension of the technological change as much as operational efficiency as the sustainability of technological-enabled working environments relies on the efficiency of technology and the psychological wellbeing of the employees. The longitudinal effects, differences by sector, and the impact of organizational culture in driving employee reaction to technological change and job insecurity should be further investigated in future research.

METHODOLOGY

Research Design

The research design was quantitative in this study as it aimed to determine the correlation between psychological stress and job insecurity in workplaces enabled by technology. The quantitative research provides the ability to systematically measure variables and statistically analyze the relationships between

constructs (Creswell, 2014). Emphasis was placed on workers of technology-intensive companies such as IT companies, software development firms and other workplaces where there is the intensive use of digital tools and automation (Ayyagari, Grover, and Purvis, 2011). The quantitative methodology allows evaluating the psychological perceptions and its relation to job insecurity among the different categories of employees.

Population and Sampling Technique.

The participants were selected through a purposive sampling technique that included participants that fulfilled certain criteria, which were: working in a technology-enhanced workplace at least 1-year and frequent use of digital platforms in the workplace. The sample size of the study was 400 respondents in six universities and related technology-based institutions located in Lahore, Pakistan, including three public and three private institutions, which assured the difference in organizational culture and the experiences of the employees. Such sampling is in line with the organizational research tradition because it will allow collecting data about individuals who affected the variables of interest the most (Saunders, Lewis, and Thornhill, 2019). The sample was comprised of employees of various job levels, ages, and experience to give the overall view of the workplace stress and insecurity.

Data Collection Instrument

A structured questionnaire was used to collect data by means of a questionnaire split into four parts:

- Demographic Data: Age, gender, education, experience and job level.

- Psychological Stress: The measure is the Perceived Stress Scale (PSS) which is a reliable and validated measure of perceived stress in the workplace situation (Cohen, Kamarck, and Mermelstein, 1983). The more the scores, the higher is the level of perceived stress.

- Job Insecurity: Measured with Job Insecurity Scale developed by De Witte (1999) which represents both cognitive and emotional aspects of perceived job threat such as fears of job continuity and role shift.

- Organizational Factors: Items that measure training opportunity, managerial support, and digital skills development programs are included as they are capable of determining stress and insecurity (Greenhalgh and Rosenblatt, 1984).

Responses were noted on a five-point Likert scale with the response varying between strongly disagree to strongly agree so that the perceptions and attitudes can be quantitatively analyzed.

Pilot Study and Reliability

The questionnaire was tested on a pilot study which involved 30 respondents in comparable workplaces using technology and assessed the adequacy and adequacy of the questions. According to feedback, unclear items were narrowed down and response scales modified. Cronbachs alpha was used to conduct a reliability test which gave the coefficients of 0.87 on the psychological stress scale and 0.90 on the job insecurity scale, which are very high internal consistency tolerance (Nunnally and Bernstein, 1994).

Data Collection Procedure

The survey was done in six weeks. The online questionnaire was sent through emails and workplace announcements and the respondents were requested to fill the questionnaire without a lot of interference

with the work. To minimize the social desirability bias, anonymity and confidentiality were highlighted. Those responses that were clean gave 387 valid responses to be analysed, which gave a response rate of 96.75% (Baruch and Holtom, 2008).

Data Analysis

Analysis of the data was done with the help of SPSS. Mean, standard deviation and frequency distributions were calculated as the descriptive statistics that sum up the demographics and important variables of the participants. Correlation analysis was carried to determine the strength and direction of relationship between job insecurity and psychological stress, which is in line with earlier research that reveals that it has a positive association (Cheng and Chan, 2008; Probst, 2003). Moreover, the independent samples t-tests and ANOVA tests were performed to investigate the difference in stress, job insecurity among demographic subgroups. The second aspect that was examined in the research was the possible moderating values of organizational support and training regarding the correlation between job insecurity and psychological stress.

DATA ANALYSIS

Descriptive Statistics

There were the descriptive statistics that were calculated in order to describe demographic traits, psychological stress, and job insecurity of the participants. They sampled 387 employees who had various ages, experience and educational background.

Table 1: Descriptive Statistics

Variable	N	Mean	SD	Min	Max
Psychological Stress	387	3.72	0.81	1.2	5.0
Job Insecurity	387	3.56	0.87	1.0	5.0
Age (years)	387	32.4	6.9	22	50
Years of Experience	387	5.8	3.4	1	18

Note: Psychological stress and job insecurity were measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Descriptive results indicate moderate to high levels of perceived stress (M = 3.72) and job insecurity (M = 3.56), consistent with previous research on tech-enabled workplaces (Ayyagari, Grover, & Purvis, 2011; De Witte, 1999).

Correlation Analysis

The Pearson correlation was conducted to study how psychological stress is related to job insecurity, and the demographic variables.

Table 2: Pearson Correlation Matrix

Variable	1	2	3	4
1. Psychological Stress	1			
2. Job Insecurity	0.62**	1		
3. Age	-0.21*	-0.09	1	

4. Years of Experience	-0.18*	-0.19*	0.67**	1

p < 0.05, p < 0.01

The analysis of correlation indicates that there is a high positive relationship between job insecurity and psychological stress ($r = 0.62$, $p < 0.01$). Age and years of experience are also negatively related to stress and insecurity, which indicates that older and more experienced employees have a little less stress and feel more secure (Cheng & Chan, 2008; Probst, 2003).

Comparative Analysis

In order to analyze the differences in stress and insecurity levels between demographic groups, independent t -tests and ANOVA were performed.

Table 3: T-Test of Difference between the Genders in the Psychological Stress.

Gender	N	Mean	SD	t	p
Male	201	3.70	0.82	1.21	0.23
Female	186	3.74	0.79		

Note: No significant difference in psychological stress between males and females.

Table 4: ANOVA for Educational Qualification and Job Insecurity

Education	N	Mean	SD	F	p
Bachelor's	224	3.48	0.85	3.42	0.034*
Master's	136	3.65	0.88		
Other	27	3.52	0.80		

Note: Employees with master's degrees reported slightly higher job insecurity than those with bachelor's degrees ($p < 0.05$).

Regression Analysis

Linear regression was conducted to examine the predictive effect of job insecurity on psychological stress.

Table 5: Regression Analysis Predicting Psychological Stress

Predictor	B	SE B	β	t	p
Job Insecurity	0.71	0.045	0.61	15.82	<0.001

Model Summary: $R^2 = 0.37$, $F(1, 385) = 250.2$, $p < 0.001$

Regression findings show that job insecurity is a significant predictor of the psychological stress ($b = 0.61$, $p < 0.001$), which elucidates 37 percent of the stress levels. This reaffirms the fact that workers who have a greater sense of job insecurity have a greater psychological pressure at tech-enabled work places (De Witte, 1999; Ayyagari et al., 2011).

SUMMARY OF FINDINGS

The analysis of the data shows that:

- Workers in technologically equipped work places are at moderate to high stress and job insecurity.

- Job insecurity has a direct positive correlation with the level of psychological stress.

- Stress and insecurity are somewhat mitigated by age and experience.

- Perceiving job insecurity is influenced by education qualification with higher education qualification being slightly positively related to job insecurity.

- The regression analysis establishes that job insecurity is a major predictor of psychological stress and that the contribution of organizational stability and technological demands is very critical to the well-being of employees.

These findings serve as a reflection of the previous work on the topic of technostress and job insecurity that highlight the role of organizations in supporting their employees to reduce stress levels in digital workplaces through training, skill development, and effective communication (Tarafdar et al., 2015; Shoss, 2017).

DISCUSSION

The current research paper has analyzed the connection between job insecurity and psychological stress among tech-enabled workplaces. The results show that moderately to high stress and job insecurity are experienced by employees with technology-intensive organizations. It aligns with the previous studies indicating that a high rate of technological change, perpetual connectedness, and constant skill demandingness are some of the factors that lead to employee strain (Ayyagari, Grover, and Purvis, 2011; Tarafdar, Tu, Ragu-Nathan, and Ragu-Nathan, 2015). The descriptive statistics showed that the psychology stress has a mean of 3.72 and that the job insecurity has a mean of 3.56 indicating that the workforce feels a lot of pressure in keeping up with the technological needs and is at the same time anxious about their employment.

Correlation analysis showed that job insecurity and psychological stress had a strong positive correlation ($r = 0.62$, $p < 0.01$), hence jobs in which employees feel insecure are more likely to be faced with increased stress levels. This is in line with the study done by Cheng and Chan (2008) who believed that job insecurity, as a stressor, has effects on emotional state as well as organizational commitment. The findings also resonate with the findings of De Witte (1999), who found that job insecurity leads to anxiety, job role loss and poor psychological health especially in the situation whereby technology can be used to transform the traditional job role.

Further, the regression analysis confirmed that job insecurity was a predictor of psychological stress ($b = 0.61$, $p < 0.001$) and 37 percent of the variance in the stress levels. This proves that the perceived employment threat has a significant effect on mental health in tech-enabled settings. The results are in line with Probst (2003) who noted that employees who fear job loss exhibit high levels of stress, lack of motivation and commitment to organizational goals. These impacts can be increased in technology-intensive workplaces because of a fast rate of automation, algorithmic surveillance and electronic evaluation of performance. Digital measures may make employees believe that they are constantly evaluated, thereby fuelling the stress-insecurity dynamic (Mazmanian, Orlikowski, and Yates, 2013).

The demographic analysis indicated that age and experience are the partial buffers to stress and insecurity. The employees who were older and experienced more years with the company were a bit less stressed, which can be explained by the fact that the experience, confidence, and coping strategies might alleviate the psychological effect of technological changes. This is in line with the previous research that demonstrated that work experience improves resilience to occupational stressors (Hobfoll, 2002). The sex variation was not markedly noticeable and both male and female employees had the same stress levels, which is in agreement with the research saying that technological stressors have impact on every employee irrespective of the sex (Ayyagari et al., 2011).

There was an interesting finding with regard to educational qualification. This showed that employees who had master degrees indicated their job insecurity a notch more as compared to their bachelor degree counterparts. This can be attributed to increased demands of professional growth among employees who have higher qualifications, the fear is that due to automation or other technology driven changes, their expertise skills can be lost. Other past researches have also indicated that high-skilled workers are more insecure within a technological replacement or upskilling condition (Sverke, Hellgren, and Naswall, 2002).

The paper highlights how organizational support is vital in stress and insecurity reduction. According to the literature, such intervention strategies as open communication on technological changes, ongoing training, skill building programs and managerial assistance can cushion employees against adverse effects (Greenhalgh and Rosenblatt, 1984; Shoss, 2017). Companies offering the chance to become digital competent, not only become more digitalized but also form the sense of security and engagement, which lowers the perceived stress. On the same note, positive working environment, mentoring, and social networks may also help enhance resilience and aid in adjusting to changing technological needs (Hobfoll, 2002).

In addition, the research reveals the significance of the work-life balance in technology-based workplaces. Distinctions between personal and professional life can be unintentionally weakened by remote work, constant connectivity, and virtual monitoring, which results in stress and a sense of insecurity (Mazmanian et al., 2013). Employees can be coerced into working on other times than the normal working hours, which increases burnout risks. The main factors that organizations should consider are the policies that result in excessive digital scrutiny and favorable working schedules to minimize stress and remain productive.

To summarize, the results prove that job insecurity and psychological stress go hand in hand in tech-enabled workplaces. The psychological costs of changes in technologies are manifested through job insecurity that is identified as one of the key predictors of stress. These relationships are moderated by demographic variables (age, experience and educational level) and organizational practices and support systems are possible mitigating variables. These findings support the existing literature that highlights the dual nature of technology: on the one hand, it leads to the increase in operational efficiency and innovation, but on the other hand, it causes stressors that may negatively influence the well-being of the employees unless addressed in advance (Ayyagari et al., 2011; Tarafdar et al., 2015; De Witte, 1999).

Clear communication, ongoing digital skill building, and accommodating managerial practices should be a priority to organizations in an attempt to maintain a healthy, productive workforce in technology-enabled settings. By considering both technological and psychological aspects of the work, the organizations may reduce the amount of stress, decrease the level of job insecurity, and raise the level of employee engagement, motivation, and general performance of the organization.

CONCLUSION

This paper has examined the connection between psychological stress and job-related insecurity in tech-enabled workplaces, with various important insights being made. In technology intensive organisations, moderate and high stress and job insecurity are experienced by the employees because of the rapid technology change, constant connectedness, and a continuous skill need. The results validated a high positive relationship between job insecurity and psychological stress and the regression analysis indicated that job insecurity is a strong indicator of stress. These effects were slightly mediated by demographic concerns, including age and experience, indicating more experienced staff members are less prone to perceived stress and insecurity because of their coping mechanisms. More educated employees also had a little bit more job insecurity, which might be explained by higher expectations and fears related to technological replacement.

The work indicates the significance of organizational interventions to alleviate stress and insecurity at the workplaces that are driven by technology. Open communication, the digital skills training programs, managerial training and work flexibility turned out to be the key measures towards decreasing psychological stress. Moreover, the work culture and employee resilience should be encouraged to maintain mental health and involvement in tech-enabled surroundings. Altogether, the research highlights the idea that despite the increased effectiveness of operations by means of technological progress, there is also a psychological problem that needs to be proactively tackled. Companies that strike the right balance between technology effectiveness and the welfare of the employees stand a better chance of attaining sustainable productivity and having a motivated and engaged workforce.

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