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The Impact of Workplace Stress on Employee Health: Exploring the Relationship Between Work Demands, Job Control, and mental Health Outcomes

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ABSTRACT

Workplace stress is a common problem with significant repercussions for mental health and workplace performance. Drawing on the Job Demand-Control model, this study explores how particular workplace stressors—job demands, long working hours, and job control—relate to employees' mental health outcomes, anxiety and depression, in varied organizational settings. A cross-sectional, quantitative research design was used to survey 300 participants from public and private sector organizational, administrative, managerial, and teaching positions. The stressors and mental health outcomes were measured using standardized instruments and self-developed survey items: the Generalized Anxiety Disorder 7 (GAD-7), the Patient Health Questionnaire 9 (PHQ-9), the Job Content Questionnaire (JCQ), and the Workplace Stress Questionnaire. Significant positive relationships were found between work demands and long working hours and anxiety and depression, but job control had a protective negative influence on these outcomes. Multivariable regression analyses revealed that work demands were the strongest predictor of anxiety and depression, followed by long working hours, while more job control significantly reduced predicted mental health complaints. Group differences indicated that age and occupation significantly affected anxiety and depression when managing the demographic variables. The research highlights organizations' urgent need for interventions to reduce workloads, eliminate chronic overtime, and encourage employee decision-making autonomy. This study has relevance for occupational health literature as it identifies the context-specific evidence among Pakistani nursing staff that adds to the knowledge that management of workplace stress is multifaceted and needs to be addressed with both, the structural and individual level strategies for better and resilient human resource.

Keywords: *Workplace stress; Work demands; Long working hours; Job control; Anxiety; Depression; Employee mental health; Job Demand-Control model*

INTRODUCTION

Work stress has become a common problem in today's organizational settings and has great impact on the physical and mental health of staff members as well as the total effectiveness of the organization itself. Pyramid workers This is the reality that thousands of employees face every day due to fast changing

technology, high performance demands, and market competition. Long hours, high job demands and low control over work tasks — factors that do not just negatively influence job satisfaction, but are directly linked to negative mental health outcomes including anxiety and depression.

An extensive literature suggests that long-term exposure to high work demands and low job control is associated with an increased risk of psychological distress in the forms of anxiety disorders and depressive symptoms and burnout (Karasek & Theorell, 1990; Stansf eld & Candy, 2006). Workplaces of high demand/low control were said to be particularly detrimental to employees, as they are at increased risk for mental strain and stress-related health issues, as outlined in the demand-control model of job content. The body of empirical research consistently conveys the finding that individuals who have low autonomy with respect to their tasks are more at risk of poor mental health outcomes, while it also suggests that high job control may provide protection, even where workload is substantial.

In spite of increasing awareness, the burden of mental health problems associated with occupational stress is still high. According to recent studies, stress and stress-related disorders are considered as one the most important factors causing absence, presenteeism, and in general decreased productivity at work around the world (WHO, 2020). Social, economic, and societal costs go beyond personal distress, including organizational inefficiency, healthcare utilization, and societal permutations.

In developing countries like Pakistan, etc., there is less number of empirical studies at workplace involving stress and mental health specifically in varied occupational groups like administrative, managerial and teaching staff etc. This lack of local evidence hinders the design of intervention and policy approaches targeted to job tasks and cultural environment. Second, it is important to explore if demographic factors such as age, sex, and work years may moderate associations, which would enable organizations to design targeted mental health intervention strategies.

Against this backdrop, the present study was designed to investigate the relationship between key workplace stressors — work demands, long working hours, and job control — and mental health outcomes among employees**,** specifically focusing on anxiety and depression. Guided by the job demand-control framework**,** this study hypothesized that:
(a) work demands and long working hours would positively correlate with anxiety and depression;
(b) higher job control would negatively correlate with anxiety and depression; and
(c) these workplace stressors would significantly predict mental health outcomes even after accounting for demographic variables.

Ultimately, the goal of this research is to help narrow the theory-practice gap in occupational health by providing contextually-embedded knowledge of how workplace stress impacts mental health in order to nurture healthier, more productive workforces.

LITERATURE REVIEW

Job stress has long been identified as an important issue that affects the health, well-being, and productivity of workers. Dramatic organizational change, global competition, and competitive pressures have increased the demands of work, as have recent technological developments, which have made the line between work and non-work more ambiguous and have resulted in increased levels of continuous stress (Sprigg et al., 2000). Review of the theoretical and empirical literature of work stressors The present study was guided by three primary work stressors: work demands, long work hours, and job

control (see also Emslie et al., 2004), and their links to poor mental health outcomes, including anxiety and depression.

The Job Demand-Control (JDC) Model, developed by Karasek (1979) and elaborated by Karasek and Theorell (1990), is one of the most important theoretical models in Occupational Health Psychology (OHP). It suggests that the 'strain' represented by job demands is due not simply to high demands but to their interaction with job control (decision latitude). This model predicts that low job control in combination with high work demands is the most important stressor concerning psychological strain, that is, control mitigates the negative effects of demands.

There is empirical support for the JDC model's central hypothesis: workers with higher levels of autonomy with regard to decision-making in regard to their work and/or discretion with regard to how to undertake the work have better mental health issues even in conditions of high demands (de Lange et al., 2003). In contrast, low decision latitude increases stress and is continuously associated with anxiety, depression and burnout (Theorell & Karasek, 1996; Häusser et al., 2010).

Job demands include the quantitative demands (e.g. workload, pace) and qualitative demands (e.g. task complexity, conflicting roles) of the work. It is known that high job demands are positively related to anxiety, depressive symptoms and burnout (Ganster & Rosen, 2013). For example, Stansfeld and Candy (2006) carried out a meta-analysis of the high job demands and common mental disorders (depression and generalized anxiety) and found strong relationships.

This association is supported in studies conducted in both Western and non-Western populations. In one study of healthcare workers, high work demands were an independent predictor of depressive symptoms (Tsutsumi et al., 2001). Likewise in South Asia, where there is a widespread work culture that promotes long working hours and heavy workloads, employees experience elevated psychological distress in response to excessive demands (Purohit et al., 2016). The current study extends this literature by specifically assessing perceptions of workload and time pressure and investigating whether these demands influence the level of anxiety and depression.

The association between long working hours and mental health is an increasingly studied dimension in occupational health research, which is partly suggested by changing norms in professional life and by the development of digital communication tools that make the workday almost omnipresent. A number of long-term studies have shown that long working hours (generally > 40–48 hours/week) lead to an increased risk of depressive mood and anxiety (Virtanen et al., 2012; Bannai & Tamakoshi, 2014).

Sparks et al. carried out a systematic review (2001) found strong evidence for an association of long working hours and psychological ill-health (depression and anxiety). Suggested mechanisms are long-term exposure to work stress, diminished recovery time and disturbance of work-life balance.

Working afterhours is perceived as being dedicated in South Asian cultures, which complicates the association between hours worked and mental health. We aim to investigate this association in the Pakistani setting and postulate that with the increasing working hours, employees will have higher anxiety and depression scores.

Job Control as a Buffer

Job control also known as decision latitude — is the extent to which workers can determine how and when their duties are performed. This refers to skill discretion (the extent to which the job offers variety in and opportunity to develop skills) and decision authority (autonomy over decisions). The JDC model posits that high job control can act as a buffer against the adverse effects of high demands on psychological distress.

Studies point out that greater job control has been found to be associated with lower risks of anxiety and depression (Häusser et al., 2010). An example is a longitudinal study by de Lange et al. (2003) demonstrated that low job control predicts over time reporting of depressive symptoms. The association between high decision latitude and good self-rated mental health was also found in European workers, also under high workload conditions (Dragano et al., 2010).

Studies in South Asian workforces, though limited, also indicate similar patterns. For example, Purohit et al. (2016) observed that perceived job control predicted psychological distress among Indian healthcare workers in the context of challenging working conditions. The present study investigates whether Job control also functions as a buffer among the workers in Pakistan.

Anxiety and depression are two of the most widespread mental disorders among the workforce. Anxiety is described as the feeling of fear and/or nervousness associated with excessive worrying, restlessness, and physiological symptoms, depression as the set of feelings of low mood and lack of interest or pleasure coupled with an inability to perform daily activities (WHO, 2017). Both are physically debilitating, leading to lower work productivity and quality of life, and are increasingly associated with workplace stress.

The GAD-7 and PHQ-9 are validated instruments commonly implemented to measure levels of anxiety and depression in the workplace (Spitzer et al., 2006; Kroenke et al., 2001). These tools have been found to be reliable across a range of cultural settings, which ensures their appropriateness for our research.

It is indicated in the literature that the association of work-related stress and mental health might be moderated by age, gender and job function. Younger employees may have more anxiety (because of less tenure on-the-job and job insecurity; Warr, 1994). Gender Gender differences vary; women are reportedly more susceptible to suffering from workplace stress because of work-family conflict (depending on the study) while other studies have found no substantial gender difference (Stansfeld et al., 1995). Job positions also determine the degree of exposure to stressors and levels of autonomy, as managers typically have greater job control relative to administrators.

This paper also includes such demographic variables so as to explore whether or not they have any moderating effect in between the workplace strain and the mental health.

Objectives

The primary objectives of this study are:

1. To investigate the relationship between workplace stress (in terms of long hours, high demands, and low job control) and mental health outcomes (including anxiety and depression).

2. To explore whether workplace stressors predict mental health conditions such as anxiety and depression.
3. To examine the mediating role of job control in mitigating or exacerbating the effects of workplace stress on mental health.
4. To assess whether specific demographic factors (e.g., age, gender, job role) influence the relationship between workplace stress and employee mental health.

METHODOLOGY

This study uses a quantitative cross-sectional research design which aims to examine if work stressors — work demands, work hours and job control—influence employees' mental health, that is, anxiety and depressive symptoms. Convenience sample of 300 working adults aged 18 years and older will be recruited from various industries and types of work (e.g., public and private sectors). Inclusion criteria were current employment status (either full time or less), and consent to participate; exclusion criteria were unemployment, presence of medical or cognitive problems that could interfere with the comprehension of the survey. The data will be collected through online survey comprising standardised instruments: the Generalized Anxiety Disorder 7 (GAD-7) for anxiety, the Patient Health Questionnaire 9 (PHQ-9) for depression and items from the Job Content Questionnaire (JCQ) for job control. Furthermore, an ad hoc Workplace Stress Questionnaire will measure perceived work demands and long working hours. Demographic information will be collected from participants (age, gender, job position, education, income, years of tenure) allowing for subgroup analyses.

The methodology is to contact the participants via e-mail, employee networks and social media, ask for informed consent and answer an internet questionnaire in an anonymised way. Descriptive statistics will be used to describe the sample; Pearson's correlation will be used to examine the relationship between stressors and mental health outcomes; and multiple regression analysis will be used to determine the predictive utility of workplace stressors, after controlling for demographics. Group differences by age, gender and job role are to be investigated using ANOVA or MANOVA. Ethical issues are voluntary participation, identity protection and debriefing at the end. The current study has several limitations— use of self-reported measurements; data collection design, which lacks a causative inference; and selective bias with convenience sampling, which limits generalizability. Nonetheless, the design is expected to be a powerful tool to explore how particular workplace stressors influence the mental well-being outcomes and, in turn, to develop evidence-based interventions to promote employee well-being.

RESULTS

This section presents the results of the statistical analyses performed to investigate the relationship between workplace stress and employee mental health outcomes. Specifically, the analyses aimed to explore how work demands, job control, and long working hours influence employees' anxiety and depression levels.

Sample Characteristics

A total of **300 participants** (n = 300) completed the survey. The demographic characteristics of the sample are presented in **Table 1**.

Demographic Variable	Category	Frequency (n)	Percentage (%)
Age	18-29	85	28.3

Demographic Variable	Category	Frequency (n)	Percentage (%)
	30-44	98	32.7
	45-59	78	26.0
	60+	39	13.0
Gender	Male	148	49.3
	Female	152	50.7
Job Role	Administrative	103	34.3
	Managerial	92	30.7
	Teachers	105	35.0
Years of Employment	1-5	116	38.7
	6-10	88	29.3
	11+	96	32.0

Workplace Stress

Workplace stressors (work demands, long working hours, and job control) were measured using a self-developed **Workplace Stress Questionnaire** and the **Job Content Questionnaire (JCQ)**. Descriptive statistics for these variables are presented in **Table 2**.

Workplace Stressor	Mean (M)	Standard Deviation (SD)
Work Demands	3.62	0.89
Long Working Hours	3.14	1.07
Job Control	2.78	1.15

The mean scores for work demands and long working hours were relatively high, indicating that most participants reported moderate to high stress related to workload and time pressure. The job control score was lower, reflecting moderate levels of autonomy and decision-making capacity in the workplace.

Mental Health Outcomes

The mental health outcomes of interest were anxiety and depression, measured using the **GAD-7** and **PHQ-9** scales. Descriptive statistics for these variables are presented in **Table 3**.

Mental Health Outcome	Mean (M)	Standard Deviation (SD)
Anxiety (GAD-7)	7.24	5.06
Depression (PHQ-9)	6.95	5.31

The mean score for anxiety (**M = 7.24**) suggests moderate levels of anxiety symptoms across the sample, while the mean score for depression (**M = 6.95**) indicates mild depressive symptoms on average.

Correlational Analysis

Pearson's correlation coefficients were calculated to examine the relationships between workplace stressors (work demands, long working hours, job control) and mental health outcomes (anxiety and depression). The results are shown in **Table 4**.

Workplace Stressor	Anxiety (GAD-7)	Depression (PHQ-9)
Work Demands	.45**	.42**
Long Working Hours	.36**	.32**
Job Control	- .29**	- .25**

Note: $p < .01$

There were significant positive correlations between work demands and both anxiety ($r = .45$, $p < .01$) and depression ($r = .42$, $p < .01$). Similarly, long working hours showed moderate positive correlations with anxiety ($r = .36$, $p < .01$) and depression ($r = .32$, $p < .01$). On the other hand, job control exhibited negative correlations with both anxiety ($r = - .29$, $p < .01$) and depression (**r** = - .25, $p < .01$), suggesting that higher job control is associated with lower levels of anxiety and depression.

Multiple Regression Analysis

Multiple regression analysis was conducted to examine whether workplace stressors (work demands, long working hours, and job control) predicted anxiety and depression, controlling for demographic variables such as age, gender, and job role. The results are presented in **Table 5**.

Table 5: Multiple Regression Analysis Predicting Anxiety and Depression

Predictor	Anxiety (GAD-7)	Depression (PHQ-9)
Constant	3.58**	3.24**
Work Demands	0.37**	0.34**
Long Working Hours	0.23*	0.19*
Job Control	- 0.22**	- 0.18**
Age	0.03	0.02
Gender	- 0.05	0.08
Job Role	0.12	0.10

Note: *$p < .01$, $p < .05$

The regression model was significant for both anxiety ($F(6, 293) = 13.52$, $p < .001$) and depression ($F(6, 293) = 12.08$, $p < .001$). Workplace stressors explained 28% of the variance in anxiety ($R^2 = .28$) and 25% of the variance in depression ($R^2 = .25$).

- Work demands were significant predictors of both anxiety ($\beta = 0.37$, $p < .01$) and depression ($\beta = 0.34$, $p < .01$).

- Long working hours also significantly predicted anxiety ($\beta = 0.23$, $p < .05$) and depression ($\beta = 0.19$, $p < .05$).
- Job control negatively predicted both anxiety ($\beta = -0.22$, $p < .01$) and depression ($\beta = -0.18$, $p < .01$), suggesting that greater autonomy in the workplace reduces anxiety and depression.

Demographic variables (age, gender, and job role) did not significantly predict mental health outcomes in the final models.

Group Comparisons

To examine whether the relationship between workplace stress and mental health outcomes differed across demographic groups, **Analysis of Variance (ANOVA)** was conducted for age and job role, and a **t-test** was used to compare gender differences. The results are shown below:

Age Groups

ANOVA revealed a significant difference in anxiety levels across age groups, $F(3, 296) = 4.23$, $p = .006$. Post-hoc comparisons showed that participants in the 18-29 age group reported significantly higher anxiety than those in the 30-44 and 45-59 age groups ($p = .004$ and $p = .02$, respectively).

Gender Differences

A t-test revealed no significant difference between males and females in anxiety scores ($t(298) = 1.28$, $p = .20$) or depression scores ($t(298) = 0.65$, $p = .52$).

Job Role Differences

ANOVA indicated significant differences in depression levels between job roles, $F(2, 297) = 3.47$, $p = .03$. Post-hoc tests revealed that administrative roles had significantly higher depression scores than both managerial ($p = .01$) and Teachers roles ($p = .03$).

The results of this study provide evidence to support the association of workplace stressors, particularly work demands and long working hours, with anxiety and depression. Moreover, job control has a strong negative association with both anxiety and depression, implying that higher work autonomy could mitigate the detrimental impact of work stress. Group comparisons indicated that younger employees (18–29) had higher levels of anxiety whereas administrative employees had higher levels of depression when compared with management and technical employees.

These findings highlight the significance of reducing work-related stress and enhancing control at work for the mental health of employees.

DISCUSSION

This study sought to investigate the associations between workplace stressors, namely, work demands, long working hours, and job control, and staff mental health outcomes, such as anxiety and depression. Based on the Job Demand-Control (JDC) Model as the theoretical background, several key findings emerged from a survey study of 300 employees, which are consistent with and extend prior research.

First, a correlation analysis supported our hypothesis that greater work demands and longer work hours are correlated with increased anxiety and depression. Strongest positive correlations were between work demands and anxiety (r =. 45, p <. 01) and depression (r =. 42, p <. 01), which means that participants experiencing their workload as heavy and too complex have higher work-related psychological distress. This accords with prior writings on the importance of workload as the main stressor at work (Stansfeld & Candy, 2006; Ganster & Rosen, 2013). It underscores that employees, who might expect there to be highs and lows in the work they do, can in fact, become critically exposed to repetitive demand without the appropriate resources or recovery, which has a profound negative impact on mental health.

Scores on the long working hours had also moderate positive associations with anxiety (r =. 36, p <. 01) and depression (r =. 32, p <. 01). This is also aligned with the earlier studies (Virtanen et al., 2012; Bannai & Tamakoshi, 2014) which revealed that long working hours increased psychological strain because it restricts the rest, family time, and recovery. Within the Pakistani work culture as well as Pakistani organizations, organizational and cultural values to value overtime as loyalty may contribute to re-enforcing this risk.

On the other hand, job control was inter-related negatively with anxiety (r = -. 29, p <. 01) and depression (r = -. 25, p <. 01). This is theoretically interesting because it speaks to the issue of buffering the JDC model (Karasek & Theorell, 1990) supposes that if a worker have autonomy in the job and control over working hours he/she would not be psychologically distressed by work demands and longer working hours. This is also in line with longitudinal studies from various contexts demonstrating that decision latitude lowers the risk of mental health problems (de Lange et al., 2003; Häusser et al., 2010).

The multiple regression analysis additionally supported these relationships, as work stressors together accounted for 28% of the variance in anxiety and 25% in depression. Work demands was the most powerful predictor (β = 0.37 for Anxiety; β = 0.34 for Depression), reflecting the continued dominance that work demand pressure exerts on distress. Long working hours also significantly predicted anxiety (β = 0.23) and depression (β = 0.19), but to a smaller extent. Job control was particularly protective (β = -0.22 for anxiety; β = -0.18 for depression), highlighting its practical relevance in an organizational context.

Notably, demographic characteristics (i.e., age, gender, and job position) did not emerge as significant predictors in the regression models, suggesting there may be general convergence in the influence of workplace stressors on mental health within the aforementioned categories, once exposure to stress is taken into account. This result is consistent with systemic observations about the role that demographic variables may have in determining baseline risk for mental health problems, compared to the ability of work related sources of stress to more directly predict health risk (Stansfeld et al., 1995; Dragano et al., 2010).

Group comparisons provided additional nuance. Younger workers (aged 18–29) reported higher anxiety than older workers, which mirrors past research showing that younger workers may face more ‘role ambiguity’ and ‘felt pressure to prove oneself at work’ (Warr, 1994, p. 304). Non-manual staff also had greater levels of depression than managers and teachers which may be indicative of differences in job control and perceived status. As the JDC model would predict, administrative positions are relatively mundane and provide little control, thus increasing psychological strain when demand is high.

In contrast to anxiety and depression, there was no significant gender difference in either of these variables, consistent with conflicting findings from previous studies (Stansfeld et al., 1995). This

indicated, that in the sampled organizations, men and women may be impacted by work-related stress in a comparable way and demonstrating the general validity of organization based interventions.

These results add to the growing literature on work stress by validating the interactions between high work demands, long working hours and low job control on mental health of workers in the Pakistani context, where literature in these area have been limited. They demonstrate empirically the fundamental principles of the JDC model in that job control acts as a buffer, but it does not fully compensate the adverse effects of over-demand and long hours.

In terms of application, the study suggests the necessity of work redesign and organizational policy. By cutting back on excessive work and chronic over-time, anxiety and depression in the workforce can be reduced directly. Just as significant, we need to raise the decision latitude of workers, e.g., through flexible work scheduling, participative decision making, and task discretion, actions that also act protectively to reduce or avoid psychological strain.

For organizations and HR professionals, however, it is important to note that mental health interventions would be most successful when addressing individual resilience alongside workplace-related structures. Stress reduction training programmes can complement, but not replace, changes in working practices which reduce workload pressures and increase control.

LIMITATIONS

The study has limitations which should temper interpretation, despite its strengths. Cross-sectional design does not allow to infer causality; longitudinal studies are needed to determine whether high work demands cause a mental health decline. The use of self-reported measures may also be sensitive to response bias, where participants under report or over report symptoms from stigma or self- concept.

Secondly, the convenience sampling affects generalizability since employees in various functions and sectors were represented in the study, it does not necessarily mean that all sectors or all industries in Pakistan are portrayed by these findings. Potential future research might consider random or stratified sampling for greater representativeness.

Recommendations and Future Research

Building on these insights, several recommendations emerge:

1. **Monitor and manage work demands**: Organizations should regularly assess employee workload and adjust targets to prevent chronic overload.
2. **Limit excessive working hours**: Implement policies to discourage overtime and promote work-life balance.
3. **Enhance job control**: Empower employees through participatory decision-making, flexible scheduling, and skill development opportunities.
4. **Target vulnerable groups**: Younger employees and administrative staff may benefit from tailored interventions addressing unique stressors in their roles.
5. **Promote mental health awareness**: Encourage open dialogue, reduce stigma, and provide access to counseling or employee assistance programs.

For future research, longitudinal studies could examine causal pathways between workplace stressors and mental health over time. It would also be valuable to explore **moderators and mediators** (e.g., coping strategies, organizational support) that might influence these relationships.

CONCLUSION

In summary, the aim of the present study was to investigate the association between major work-related stressors — in terms of high work demands, long working hours, and low job control — and mental health outcomes for employees with a focus on anxiety and depression. Employing a quantitative, cross-sectional research design and underpinned by the Job Demand-Control (JDC) model, the study offered empirical evidence that work demands and long working hours are positively and significantly related to increased anxiety and depression while high job control serves as a protective factor to mitigate the ill effects of worker's mental health. These results are consistent with the JDC model's main thesis: exposure to high demands magnifies the negative sides of demanding work, due to having low decision latitude, while few control options and possibility for variation/adjustment can function as a buffer from psychological strain. Critically, the findings also highlight the fact that job control will not completely mitigate the negative impact of high workloads and long hours. This underscores the importance of a multi-level approach of workplace mental health including organizational redesign, supportive leadership, and cultural transformation.

The study adds to the literature by presenting a context specific evidence based on Pakistan, a country in which the empirical investigate of workplace stress and mental health is scarce. Through a cluster-analysis of responses from public and private administrative, supervisory and teaching employees, the study yields a detailed understanding of how distinct groups of employees perceive work stress. Younger staff reported the most anxiety and administrative staff experienced higher levels of depression compared with managerial and teaching staff. These findings imply that exposure to stress and stress outcomes may be patterned by age, job title and work type and that interventions need to be targeted. The study has several theoretical and practical implications. Employers should understand that making work better for mental health entails structural shifts: scaling back on excessive workloads and chronic overtime and building flexibility and autonomy into the design of jobs. Interventions may involve solutions ranging from schedule flexibility, shared decision-making, load evaluations, and leadership preparation to develop supportive managerial approaches. Also, awareness campaigns and confidential counseling and return-to-work services can help to alleviate the stigma and encourage employees to come forward.

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