

The moderating effect of Work Engagement in the relationship between Occupational Stress and Job Performance

ABSTRACT

Occupational stress has become a common concern in today's fast-paced workplace, frequently resulting in burnout, health issues, job discontent, and decreased productivity. Excessive levels of stress reduce the amount and quality of work produced, which hinders job performance. This study examines how work engagement—defined as vigor, dedication, and absorption—modifies the relationship between job performance and occupational stress. Data was collected from a sample of 516 police officers in the Kumaon region of Uttarakhand using a purposive sampling technique, and regression analysis was conducted to explore the moderating role of work engagement. The moderation analysis revealed a significant increase in R-squared, indicating the quantitative significance of work engagement in mitigating the effects of occupational stress on job performance. The findings reveal that work engagement positively moderates this relationship, with the detrimental effects of occupational stress on job performance being lessened when employees are highly engaged. The implications of the study emphasize the importance of fostering work engagement through organizational interventions, such as training programs and stress management initiatives, to enhance job performance and resilience in high-stress environments.

Keywords: Occupational stress, Work engagement, Job performance, Police personnel, Stress management,

1. Introduction

Employees in today's fast-paced workplace are subjected to expectations and demands that frequently surpass their capacity for adjustment, resulting in elevated levels of occupational stress. Because it has a detrimental effect on both human well-being and organizational performance, occupational stress—which occurs when the demands of a job are not in line with a worker's capabilities, resources, or needs—has been the subject of much research. Occupational

stress is defined as the detrimental physical and emotional reactions that arise when job requirements do not align with the worker's abilities by the **National Institute for Occupational Safety and Health (NIOSH, 1999)**. Workplace stress is frequently associated with burnout, health issues, work discontent, and decreased productivity in high-stress occupations like education, healthcare, and law enforcement.

There is ample evidence linking occupational stress and job performance. Excessive amounts of stress can compromise an employee's capacity to work efficiently, which can lower the calibre and volume of work they produce. Research shows that a rise in stress and workload has a negative impact on workers' ability to execute their jobs, especially when workers are unable to cope with these demands (**Huyghebaert *et al.*, 2018; Bruggen, 2015**). Research by **Obiageli *et al.*, (2015)**, on the other hand, shows that favourable elements like work-life balance and employee motivation can lessen the impacts of occupational stress and improve performance.

The association between occupational stress and job performance has been found to be moderated by work engagement, which has become increasingly important in recent years. Work engagement was described as a good, rewarding state of mind marked by vigor, dedication, and absorption in work by **Schaufeli *et al.* (2006)**. Engaged workers are more likely to take on challenges at work with resilience and excitement, which can improve job performance and lessen the harmful impacts of occupational stress. Research has demonstrated that increased work engagement improves workplace outcomes, such as increased productivity, decreased employee turnover, and increased job satisfaction (**Bakker *et al.*, 2011; Halbesleben, 2010**).

Particularly in high-stress professions, this research investigates how work engagement moderates the link between occupational stress and job performance. Organizations can devise tactics to promote work engagement and enhance job performance even in rigorous work settings by comprehending how it might mitigate the negative consequences of stress.

2. Literature Review

2.1 Occupational stress

The mental, bodily, and emotional pressure that workers endure when work demands beyond their ability to handle them is referred to as occupational stress. It is described as a condition that deviates from normal functioning and modifies a person's psychological and

physiological state by **Beehr and Newman (1978)**. Time constraints, high workloads, ambiguous job descriptions, and challenging working environments are some of the elements that lead to occupational stress. **Cooper and Marshall (1976)** divided stresses connected to the workplace into five categories: the role of the employee, career development, organizational climate, and work-related stressors.

Research on police workers has shown that work-related stress has a substantial negative impact on health, leading to high blood pressure, burnout, and mental health problems. For instance, **Cooper (2003)** drew attention to the considerable productivity loss and high rate of sick leave associated with stress in the police force. **Mukherjee (2005)** investigated the psychological strain brought on by irritation in the workplace, and **McCraty et al. (1999)** showed how stress management approaches could lessen the negative impacts of long-term stress in law enforcement. Zhang et al. (2020) observed that stress is significantly influenced by characteristics such as work schedules, intensity, and hazards at work across different sectors.

Negative consequences such as job discontent, burnout, mental health problems, and physical illnesses like high blood pressure are associated with occupational stress. Stress in 130 occupations was classified by the **NIOSH (1999)**, indicating that high-stress occupations such as teaching, healthcare, and law enforcement frequently experience job stress. **McCraty et al. (1999)** demonstrated that prolonged exposure to occupational stress in police work leads to significant psychological and physiological strain, including decreased productivity and higher rates of absenteeism.

2.2 Job Performance

Work performance is the efficiency with which workers do their designated responsibilities. According to (**Campbell et al., 1990**), job performance is the achievement of organizational objectives through the completion of duties unique to a certain post. Many elements, such as leadership style, employee motivation, and individual work satisfaction affect positive job performance.

Both positive and negative effects are highlighted in the research on job performance. For instance, **Siahaan (2017)** underlined how role stressors including role conflict and ambiguity negatively affect performance, whereas **Igbaria (1991)** stated that job performance influences

job satisfaction and organizational commitment. Leadership style has a significant impact on staff motivation and emotional health, as **Masi and Cooke (2000)** have shown. As such, it is a critical performance determinant.

Work-life balance and job performance are significantly correlated, according to several research, including **Razali (2011)** and **Obiageliet al., (2015)**. **Huyghebaert et al. (2018)** discovered, for example, that workload, particularly for teaching professionals, negatively affects job performance through sleep-related difficulties. However, **Bruggen (2015)** showed that there is a U-shaped link between workload and performance, indicating that productivity can be increased with an ideal workload.

2.3 Moderating Role of Work Engagement

Positive, rewarding work engagement has a major impact on job performance and occupational stress. It is defined by **Schaufeli et al. (2006)** as involving vitality, dedication, and absorption in one's task. Employees who are engaged are less prone to burnout from work-related stress and are more inclined to see obstacles as chances for personal development.

Work engagement has a favourable impact on job performance and family satisfaction, according to research by **Bakker et al. (2011)**, indicating that engaged employees manage stress better. **Halbesleben (2010)** discovered a positive correlation between work engagement and organizational commitment and a negative correlation with turnover. However, as **Puspitasari and Darwin (2021)** have shown, low engagement might worsen the detrimental consequences of occupational stress on performance.

According to **Wayne et al. (2007)**, job engagement promotes internal simplification, in which success in one area of life—like work—leads to better results in other areas, including family life. Furthermore, it has been demonstrated that work involvement modifies the association between job performance and occupational stress. Even in high-stress situations, workers who are highly engaged at work have greater stress resilience and productivity levels. This idea is further supported by research by **Sahid and Abadi (2023)**, which shows that equitable compensation and positive involvement greatly improve job performance.

3. Research Framework and Hypothesis Development

Based on the literature review, a conceptual framework has been developed to explore the relationship between occupational stress and job performance, with work engagement acting as a moderating variable.

The proposed framework examines:

1. **Occupational Stress (Independent Variable):** It refers to the ongoing or progressing stress an employee experiences due to the responsibilities, conditions, environment, or other pressures of the workplace.
2. **Job Performance (Dependent Variable):** Job performance assesses whether a person performs a job well.
3. **Work Engagement (Moderating Variable):** Job Engagement is individual recognition of the importance of work.

Hypothesis Development

Based on the framework, the following hypothesis has been proposed:

H1: Work engagement positively moderates the relationship between occupational stress and job performance, such that increased work engagement would strengthen the impact of occupational stress on job performance.

4. Research methodology

This study focused on police personnel from the Kumaon region of Uttarakhand, including Almora, Udham Singh Nagar (US Nagar), and Nainital districts. A random purposive sampling technique was employed, targeting officers across various ranks. Data was collected using an interview schedule. A random purposive sampling technique was used to select 516 police personnel, ensuring representation across ranks, roles, and districts in the Kumaon region of Uttarakhand. Criteria included a minimum of three years of service and active engagement in field or administrative duties.

Job performance was assessed using a modified 18-item Individual Work Performance Questionnaire (IWPQ) developed by **Linda Koopmans (2015)**, measuring task performance, contextual performance, and counterproductive work behaviour. Occupational stress was measured using a 46-item scale developed by **Srivastava and Singh (1981)**. Work engagement was assessed using a modified 17-item scale by **Schaufeli et al. (2002)**, measuring vigor, dedication, and absorption. The reliability of the measurement items was assessed using Cronbach's alpha. The scores indicate acceptable to high reliability for the scales used in the study: job performance (0.795), occupational stress (0.760), and work engagement (0.894).

Data Analysis

Data was analyzed using SPSS. Descriptive statistics and regression analysis were conducted to explore the relationship between occupational stress, work engagement, and job performance, with work engagement tested as a moderator.

5. Results

H₁: Work engagement positively moderates the relationship between occupational stress and job performance, such that increased work engagement would strengthen the impact of occupational stress on job performance

The study assessed the moderating role of work engagement (WE) on the relationship between occupational stress (OS) and job performance (JP). Without the inclusion of the moderating effect (OS*WE), the R-sq value for JP was 0.0257. This shows that 2.57% of the variance in job performance (JP) is accounted for by occupational stress (OS). With the inclusion of the interaction term (OS * WE), the R-sq increased to 0.0362, indicating an increase of 1.05% in the explained variance of job performance (JP) due to the moderating effect of work engagement (WE).

The significance of the moderating effect was confirmed, showing a positive and significant impact of work engagement (WE) on the relationship between occupational stress (OS) and job performance (JP) ($b = -0.0038$, $t = -2.3437$, $p = 0.0195$), supporting the hypothesis that work engagement strengthens the relationship between occupational stress and job performance. This means that as work engagement increases, the effect of occupational stress on job performance becomes more significant. The moderation analysis summary is presented in the table 1 below.

Furthermore, a slope analysis is conducted to better visualize the nature of this moderating effect (see Figure 1). As shown in the figure, with higher job engagement, the relationship between occupational stress and job performance is strengthened.

The slope analysis illustrates the moderating effect of work engagement (WE) on the relationship between occupational stress (OS) and job performance (JP). The graph displays two slopes representing low and high levels of work engagement (WE). For individuals with low work engagement (WE), the relationship between occupational stress (OS) and job performance (JP) is slightly negative, as indicated by the equation $y = -0.006x + 2.9078$. This suggests that as occupational stress increases, job performance decreases marginally.

In contrast, for individuals with high work engagement (WE), the slope is slightly steeper, with the equation $y = -0.016x + 3.1252$, indicating that the negative impact of occupational stress (OS) on job performance (JP) is slightly more pronounced when work engagement is high. However, individuals with high work engagement maintain a higher baseline level of job performance compared to those with low work engagement. This demonstrates that work engagement positively moderates the relationship, buffering the detrimental effects of occupational stress while sustaining better job performance.

Overall, the results show that work engagement moderates the relationship between occupational stress and job performance, with a more significant decline in performance observed under high levels of work engagement when occupational stress increases.

Table 1: Moderation analysis

Relationship	Beta	SE	T value	P-value
Moderating effect (OS*WE)→JP	-0.0038	0.0016	-2.3437	0.0195
OS→JP	-0.0086	0.0240	-0.3571	0.7212
WE→JP	0.0967	0.0347	2.7858	0.0055

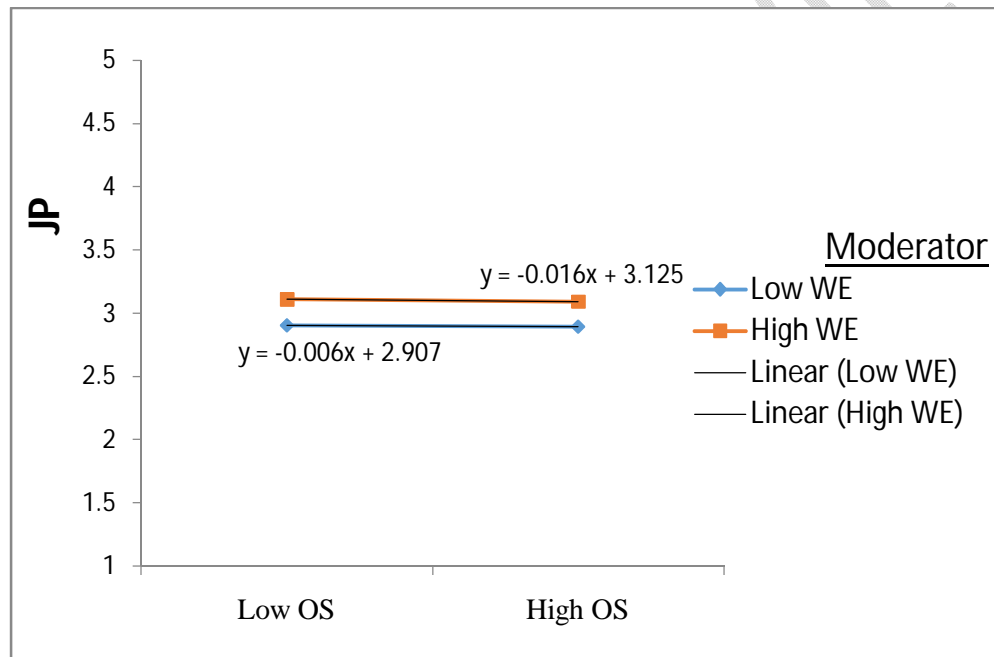


Fig 1:Slope Analysis

6. Conclusion

In today's fast-paced workplace, occupational stress is a serious problem that frequently results in burnout, health problems, work dissatisfaction, and lower productivity. It is related to how well a person performs their job since high levels of stress can impair productivity, which lowers the caliber and amount of work that is produced. Studies indicate that an increase in stress and workload has a detrimental effect on employees' performance, particularly if they are unable to handle the demands placed on them. It has been discovered that work engagement, which is defined by vigor, dedication, and absorption in work, moderates the relationship between occupational stress and job performance. Resilient and enthusiastic workers are more likely to

take on challenges at work, which can enhance job performance and mitigate the negative effects of occupational stress. Improved workplace outcomes including higher output, lower employee churn, and higher job satisfaction are also enhanced by increased work engagement. In this study, police officers from Uttarakhand's Kumaon area were the main subjects, and the relationships between work engagement, occupational stress, and job performance were examined. The findings demonstrated that work engagement positively moderates the link between job performance and occupational stress, with high job engagement levels associated with a more notable fall in performance when occupational stress rises. By understanding how stress may be mitigated, organizations can develop strategies to improve job performance and work engagement even in demanding work environments.

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