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THE EFFECT OF WORK STRESS ON EMPLOYEE PERFORMANCE WITH EMOTIONAL INTELLIGENCE AS A MODERATING VARIABLE (A Survey at the Department of Public Works and Spatial Planning of North Bolaang Mongondow Regency)

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Abstract

This study examines the effect of work stress on employee performance and the moderating role of emotional intelligence at the Department of Public Works and Spatial Planning of North Bolaang Mongondow Regency. The study is grounded in the Job Demands-Resources (JD-R) theory, which explains that job demands may influence employee outcomes depending on the availability of personal and job resources. A quantitative explanatory survey was conducted using questionnaire data and analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). The thesis reports 85 respondents in its abstract and analytical tables. The results show that work stress has a positive and significant relationship with employee performance ($\beta = 0.319$; $t = 3.288$; $p = 0.001$). Emotional intelligence also positively moderates this relationship (interaction $\beta = 0.199$; $t = 2.011$; $p = 0.045$). The interaction effect has a small effect size ($f^2 = 0.104$). These findings indicate that, in the studied organizational context, work-related demands that remain manageable may coincide with greater effort, focus, and responsibility, while emotional intelligence strengthens employees' capacity to respond constructively to pressure. The findings should not be interpreted as evidence that excessive or prolonged stress is beneficial. Public-sector managers should therefore balance work demands with clear roles, adequate resources, supportive leadership, and emotional skills development.

Keywords: *Work Stress; Employee Performance; Emotional Intelligence; Moderation; Public Sector*

1. Introduction

Employee performance is a central determinant of organizational effectiveness, particularly in public institutions responsible for delivering essential infrastructure and spatial-planning services. The Department of Public Works and Spatial Planning of North Bolaang Mongondow Regency carries responsibilities related to infrastructure planning, implementation, supervision, and evaluation. These activities require coordination across technical and administrative functions, adherence to standards, and the completion of work within specified time and resource constraints.

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Such conditions can generate work stress through heavy workloads, time pressure, long working hours, leadership demands, interpersonal conflict, incomplete information, role conflict, limited authority, complicated coordination, and bureaucratic procedures. When these demands exceed employees' available resources, stress may deplete physical and psychological energy, impair concentration, and increase the likelihood of errors. However, the relationship between stress and performance is not necessarily uniform. A manageable level of pressure may encourage employees to prioritize tasks, maintain discipline, and direct effort toward work targets, whereas excessive and prolonged stress may undermine performance.

The Job Demands-Resources (JD-R) theory provides a useful explanation. Job demands require sustained physical, cognitive, or emotional effort, while job and personal resources help employees achieve work goals and cope with those demands. In this framework, emotional intelligence can be understood as a personal resource that supports self-awareness, self-management, self-motivation, empathy, and social skills. Employees who regulate their emotions and maintain constructive relationships may be better able to remain focused and responsible when facing work pressure.

The thesis underlying this article identifies work stress as a condition experienced by employees in the agency and reports a high descriptive assessment of the construct. The mean score for the work-stress variable was 3.833 (standard deviation = 0.6163), based on 85 observations. This indicates that employees perceived work-related pressures across the measured indicators. The study further reports positive and significant direct and interaction effects. The specific contribution of this article is to focus on the work-stress–performance relationship and examine whether emotional intelligence changes the strength of that relationship in a local-government technical agency.

Accordingly, this study addresses two questions: (1) Does work stress significantly affect employee performance? and (2) Does emotional intelligence moderate the effect of work stress on employee performance? The study contributes context-specific evidence to public-sector human resource management and offers practical implications for managing work demands without normalizing harmful levels of stress.

2. Literature Review and Hypothesis Development

Job Demands-Resources Theory

JD-R theory distinguishes between job demands and job resources. Job demands include aspects of work that require continuous effort and may produce physiological or psychological costs. Job resources help employees achieve work objectives, reduce the impact of demands, and support learning and development. The thesis applies this framework to explain how work stress represents job demands and how emotional intelligence operates as a personal resource. The relationship between demands and performance therefore depends not only on the intensity of pressure but also on the resources available to employees.

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Work Stress and Employee Performance

Work stress refers to a state of tension arising when job demands, expectations, or conditions require effort that employees perceive as difficult to manage. In the study setting, the measured dimensions include workload, leadership attitudes, working time, conflict, communication, work authority, role demands, organizational structure, physical condition or health, and discomfort in performing work. These dimensions capture both task-related and organizational sources of pressure.

Employee performance concerns the quality and quantity of work, timeliness, effectiveness, independence, planning, implementation, performance monitoring, efficiency, and work loyalty. From the JD-R perspective, work stress may impair performance when demands exhaust employees' resources. Nevertheless, when demands remain manageable and are accompanied by adequate support, they may be associated with greater effort and task focus. The thesis reports a positive coefficient for the direct relationship, and this article tests the corresponding hypothesis.

H1: Work stress has a positive and significant effect on employee performance.

Emotional Intelligence as a Moderator

Emotional intelligence involves recognizing and managing one's own emotions, sustaining self-motivation, understanding others' feelings, and maintaining constructive social relationships. The thesis operationalizes emotional intelligence through self-awareness, self-management, self-motivation, empathy, and social skills. These capabilities may help employees regulate emotional reactions, preserve concentration, communicate effectively, and maintain responsibility when work demands increase.

As a personal resource within the JD-R framework, emotional intelligence may change how work stress is translated into performance. Employees with stronger emotional capabilities may respond to manageable pressure with more adaptive coping, while maintaining focus on work objectives. The thesis reports a positive and significant interaction between work stress and emotional intelligence. Therefore, the following hypothesis is proposed.

H2: Emotional intelligence positively and significantly moderates the effect of work stress on employee performance.

3. Research Method

This study uses a quantitative explanatory survey design. The research was conducted at the Department of Public Works and Spatial Planning of North Bolaang Mongondow Regency. Data were collected through questionnaires distributed to employees. The thesis reports 85 respondents in its abstract and the descriptive and hypothesis-testing tables. The study uses an ordinal measurement scale and analyzes the relationships among latent constructs using PLS-SEM.

Work stress is the independent variable (X), employee performance is the dependent variable (Y), and emotional intelligence is the moderating variable (Z). Work stress is measured through ten dimensions: workload, leadership attitudes, working time, conflict, communication, work authority, role demands, organizational structure, physical condition or health, and discomfort at work. Emotional intelligence is measured

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through self-awareness, self-management, self-motivation, empathy, and social skills. Employee performance is measured through quality, quantity, timeliness, effectiveness, independence, planning, implementation, performance monitoring, efficiency, and work loyalty.

The measurement model is evaluated through indicator loadings, convergent and discriminant validity, and construct reliability. The structural model is assessed through the coefficient of determination, predictive relevance, effect size, and bootstrapping. Hypotheses are evaluated using path coefficients, t-statistics, and p-values. A relationship is considered statistically significant when the t-statistic exceeds 1.96 and the p-value is below 0.05. The moderation effect is represented by the interaction between work stress and emotional intelligence.

Important model-scope note: the original thesis estimates a broader model that also includes task complexity, technical competence, and their interactions with emotional intelligence. The coefficients reported in this article are the work-stress and work-stress × emotional-intelligence paths taken from that full model; they are not results from a newly re-estimated two-predictor model.

4. Results

Descriptive Assessment of Work Stress

The descriptive analysis of work stress is based on 85 observations. The overall mean is 3.833, with a standard deviation of 0.6163. Indicator means range from 3.79 to 3.88. The highest means are reported for indicators X2.1 and X2.10 (3.88), while the lowest is X2.6 (3.79). The thesis classifies the respondents' assessment of work stress as high, indicating that work-related demands are perceived in the daily performance of duties.

Descriptive statistic	Value
Number of observations (N)	85
Minimum indicator value	3
Maximum indicator value	5
Overall mean	3.833
Standard deviation	0.6163
Mean range across indicators	3.79–3.88

Structural Model and Hypothesis Testing

The thesis reports an R-square of 0.739 (adjusted R-square = 0.715) for employee performance in the full model, which includes task complexity, work stress, technical competence, emotional intelligence, and the interaction terms. This value must therefore be interpreted as the explanatory power of the full model, not as the explanatory power of work stress and emotional intelligence alone.

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Relationship	Path coefficient (β)	t-statistic	p-value	Decision
Work stress → Employee performance	0.319	3.288	0.001	Supported
Work stress × Emotional intelligence → Employee performance	0.199	2.011	0.045	Supported

The interaction term has an f-square value of 0.104, which the thesis classifies as a small effect. The thesis also reports a Q-square value of 0.532 for employee performance in the full model, indicating predictive relevance under the procedure applied in the thesis.

5. Discussion

The Effect of Work Stress on Employee Performance

The results show that work stress has a positive and statistically significant effect on employee performance (β = 0.319; t = 3.288; p = 0.001). Thus, H1 is supported. In the context of the agency, employees face workload demands, time constraints, coordination requirements, role expectations, and administrative procedures. The positive coefficient suggests that the level of pressure captured in this sample is associated with greater employee performance rather than an immediate decline.

This finding can be interpreted through JD-R theory. Job demands do not operate in isolation; their consequences depend on the resources available to employees and the way work is organized. When pressure remains manageable and employees have sufficient competence, coordination, information, and leadership support, demands may encourage employees to mobilize effort, maintain discipline, and complete assigned tasks. The finding should not be generalized to excessive or chronic stress. The descriptive mean of 3.833 indicates that work stress is already perceived at a high level, so managers should not seek to increase pressure as a performance strategy.

For the agency, the practical implication is to distinguish constructive work challenges from harmful stressors. Workload distribution, realistic deadlines, clear task authority, effective communication, and timely access to technical information should be strengthened. These actions can preserve the motivating aspects of work demands while limiting the risk of fatigue, conflict, and reduced work quality.

The Moderating Role of Emotional Intelligence

The interaction between work stress and emotional intelligence is positive and significant (β = 0.199; t = 2.011; p = 0.045), supporting H2. This result indicates that emotional intelligence strengthens the positive slope between work stress and employee performance in the estimated model. The interaction effect size is small (f^2 = 0.104), which means that the moderating contribution is statistically significant but its relative magnitude is limited.

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Emotional intelligence may help employees recognize emotional reactions, regulate frustration, maintain self-motivation, understand colleagues, and sustain effective working relationships. These capabilities are relevant when employees face overlapping tasks, tight schedules, coordination challenges, or uncertainty in administrative procedures. Employees with stronger emotional regulation may be more able to direct their effort toward task completion and preserve work focus under pressure.

The moderation result must be interpreted carefully. It does not establish that emotional intelligence eliminates the harmful effects of severe stress, nor does it mean that stress should be increased. Rather, it indicates that emotional intelligence changes the relationship between the measured level of work stress and performance in this particular organizational sample. The result supports investment in emotional self-management, communication, teamwork, and supervisory support, alongside organizational action to control avoidable stressors.

6. Conclusion

This study examined the effect of work stress on employee performance and the moderating role of emotional intelligence at the Department of Public Works and Spatial Planning of North Bolaang Mongondow Regency. The findings show that work stress has a positive and significant relationship with employee performance ($\beta = 0.319$; $p = 0.001$). Emotional intelligence also positively and significantly moderates this relationship (interaction $\beta = 0.199$; $p = 0.045$), although the interaction effect size is small ($f^2 = 0.104$).

The findings suggest that manageable work demands may be associated with greater effort and task focus, particularly when employees can regulate their emotions and maintain constructive relationships. However, the high descriptive assessment of work stress calls for preventive management. The agency should improve workload planning, clarify roles and authority, establish realistic deadlines, strengthen communication and coordination, and provide development opportunities in emotional intelligence.

This article is based on the work-stress paths from a broader PLS-SEM model in the thesis. Future research may re-estimate a focused model containing only work stress, emotional intelligence, their interaction, and employee performance, and may test nonlinear effects or distinguish challenge-related demands from hindrance-related stressors. Such analysis would clarify whether the positive association persists when other predictors are excluded.

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