

The Influence of Workload and Physical Work Environment as Predictors of Work Stress among Employees at the Salatiga City Education Office

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Abstract

Work stress is a condition of tension that affects emotions, thought processes, and physical condition in the work environment. The purpose of this study was to examine workload and physical work environment simultaneously as predictors of work stress among employees of the Education Department of Salatiga City. This research employed a saturation sampling technique involving the entire population of 62 employees as the research sample and utilized multiple linear regression analysis for data processing. The results showed that there was a significant influence of workload and physical work environment together as predictors of work stress among employees of the Education Department of Salatiga City, with a contribution of 92.2%. Specifically, both workload and physical work environment demonstrated significant effects on work stress. Based on categorization, the majority of respondents were at moderate levels for all three variables studied. This means that the higher the workload and the less conducive the physical work environment, the higher the level of work stress experienced by employees, and vice versa.

Keywords: *workload; physical work environment; work stress*

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INTRODUCTION

Work stress has become a significant global issue, profoundly affecting the physical and mental health, as well as the productivity, of employees across various sectors. In Indonesia, concern about stress among civil servants (PNS), particularly in the education sector, is growing. A study by Sari dkk. (2023) indicates that the level of work stress among PNS in educational environments is quite alarming, with 49% of respondents reporting experiencing stress. This finding highlights the critical need for serious attention to the factors causing work stress in government settings, especially in education. Musa & Ruma (2022) identified two primary factors contributing to work stress: workload and the work environment.

Work Stress

Robbins & Judge (2015) define work stress as a dynamic state where individuals encounter situations, demands, or resources related to their desires, with consequences perceived as uncertain and significantly impactful. This definition emphasizes that stress is dynamic—not static—and can change based on various

factors such as the work situation, an individual's perception of tasks, and the availability of resources to complete those tasks.

Workload

The first factor contributing to the emergence of work stress is workload. Hart & Staveland (1988, cited in Prijayanti, 2015) explain workload as the result of the interplay between behavioral skills, worker perceptions, and task demands within the work environment. This concept encompasses the demands of various tasks that must be performed, the environmental conditions of the workplace, the skills required to complete these tasks, individual behavior in handling work tasks, and the subjective perception of the worker regarding the perceived level of difficulty or pressure. Thus, workload is not merely limited to the quantity of tasks, but also considers how individuals respond to and interpret these tasks within their work context.

Physical Work Environment

The second equally important factor is the physical work environment. Sedarmayanti (2001) defines the physical work environment as all external physical elements surrounding the work area that can have an impact on workers, both directly and indirectly. A non-conducive physical work environment can be a significant source of stress for employees, affecting concentration, comfort, and ultimately impacting work productivity.

Based on the complexity of these issues, this research aims to comprehensively examine and analyze how workload and the physical work environment simultaneously act as potential predictors of the level of work stress experienced by employees at the Salatiga City Education Office. This investigation will uncover the causal relationship between these two independent variables and the manifestation of work stress, as well as identify the extent to which these two factors can predict and explain variations in the level of work stress experienced by employees within the context of an educational bureaucracy.

The objective of this study is to empirically explore and identify the collective influence of workload and the physical work environment as predictors of work stress experienced by employees at the Salatiga City Education Office. Through a comprehensive analytical approach, this study seeks to reveal how these two variables simultaneously contribute to the onset of work stress, and to measure the significance and magnitude of the predictive effect of each factor, as well as their interaction, within the context of local government educational bureaucracy.

The theoretical benefits of this research encompass contributions to the understanding of organizational psychology and human resource management. This is achieved by advancing the concept of work stress, validating existing theories, deepening the understanding of human-environment interaction, enhancing comprehension of employees' psychological aspects, and developing predictive models to forecast work stress levels based on variables such as workload and physical work environment conditions. Meanwhile, the practical benefits for employees of the Salatiga City Education Office are to serve as a reference and evaluation material for fostering a more conducive and efficient work environment. For the institution, this study can assist in managing employee work stress and improving organizational performance, which is expected to lead to enhanced

employee health and performance, increased productivity and efficiency, and improved service levels.

Based on the literature review and the problems outlined, the hypotheses proposed in this study are:

H0 : There is no significant simultaneous influence of workload and physical work environment as predictors of work stress among employees at the Salatiga City Education Office.

H1 :. There is a significant simultaneous influence of workload and physical work environment as predictors of work stress among employees at the Salatiga City Education Office.

METHODOLOGY

This study employed a quantitative research design using a correlational approach with multiple regression analysis. The aim was to investigate workload and the physical work environment as predictors of work stress among employees at the Salatiga City Education Office. The population for this study consisted of all 62 permanent employees working at the Salatiga City Education Office. These employees served as the research subjects regarding workload and physical work environment conditions as predictors of employee work stress. For this study, a saturation sampling technique was utilized to determine the sample. Sugiyono (2018), explains that saturation sampling is a technique where all members of the population are selected as the sample. Thus, the research sample comprised all 62 employees of the Salatiga City Education Office. The sample characteristics considered were age, gender, length of service, and last education. These criteria were deemed sufficient to understand the work culture and environment at the Salatiga City Education Office. Researchers collected data using a scale (questionnaire) instrument. The scale used in this study utilized the Likert scale model, which is a type of psychometric scale frequently employed in questionnaires and survey research. Responses on the Likert scale include strongly disagree, disagree, agree, and strongly agree (Taluke et al., 2019).

RESULTS AND DISCUSSION

I. Description of Research Variables

The research findings indicate that the levels of workload, physical work environment, and work stress among employees at the Salatiga City Education Office are predominantly in the moderate category. The majority of respondents (69.4%) perceived their workload as moderate, while 22.6% experienced high workload, and 8.1% reported low workload. Regarding the physical work environment, most respondents (74.2%) assessed its condition as moderate, with 25.8% rating it as high. For the work stress variable, the majority of respondents (62.9%) experienced moderate levels of work stress, 24.2% experienced high work stress, and 12.9% experienced low work stress.

Table 1. Categorization of research variables

Variable	Category	Percentage (%)
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Workload	High	22,6%
	Moderate	69,4%
	Low	8,1%
Physical Work Environment	High	25,8%
	Moderate	74,2%
Work Stress	High	24,2%
	Moderate	62,9%
	Low	12,9%

II. Simultaneous Influence of Workload and Physical Work Environment on Work Stress

The results of the regression analysis indicate that workload and the physical work environment simultaneously have a significant influence on work stress among employees at the Salatiga City Education Office ($F = 349.460$; $p < 0.05$). These two variables collectively contribute 92.2% to employee work stress, while the remaining 7.8% is influenced by other variables not included in this research model.

Table 2. Simultaneous significance test (F-test)

	Model	F	Sig
1	Regression	349,460	0,000

The research findings confirm that workload and the physical work environment simultaneously have a significant influence on work stress among employees at the Salatiga City Education Office. This finding aligns with studies by Triniwati dkk. (2017) and Irfan (2021), which also demonstrated that workload and the physical work environment simultaneously affect work stress.

Table 3. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,960	0,922	0,920	0,966

The substantial contribution of both variables (92.2%) indicates that workload and the physical work environment are primary predictors of work stress among employees at the Salatiga City Education Office. Employees facing heavy workloads in less supportive physical work environments tend to experience higher levels of stress compared to those working under the opposite conditions. These results reinforce Musa & Ruma (2022) assertion that situational factors, such as workload and workplace environmental conditions, are key determinants of work stress within the context of government organizations.

III. Partial Influence of Workload and Physical Work Environment on Work Stress

The partial influence analysis shows that workload has a significant positive influence on work stress ($t = 24.960$; $p < 0.05$) with a regression coefficient of 1.377. This result indicates that every one-unit increase in workload will increase work stress by 1.377 units. Meanwhile, the physical work environment has a significant negative influence on work stress ($t = -3.102$; $p < 0.05$) with a regression coefficient of -0.085. This means that every one-unit increase in the quality of the physical work environment will decrease work stress by 0.085 units. These findings align with previous studies that demonstrate a significant influence of both workload and the physical work environment on employee work stress (Musa & Ruma, 2022; Zulmaidarleni dkk., 2019).

Table 4. Partial Significance Test (t-test)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	(Constant)	-3,127	1,426		-2,912	0,32
	Beban Kerja	1,377	0,55	0,929	24,960	0,00
	Lingkungan Kerja Fisik	-0,085	0,27	-0,115	-3,102	0,003

CONCLUSION

Based on the study findings and discussion, it can be concluded that there is a significant simultaneous influence of workload and the physical work environment on work stress among employees at the Salatiga City Education Office. The study results indicate that a higher workload and a less conducive physical work environment lead to a higher level of work stress among employees. Conversely, a lower workload and a more conducive physical work environment result in a lower level of work stress. Data analysis revealed that workload and the physical work environment collectively contribute 92.2% to work stress among employees at the Salatiga City Education Office, demonstrating a very strong relationship between these variables. More specifically, both workload and the physical work environment individually also have a significant influence on work stress. Based on data categorization, the majority of participants fell into the moderate category for all three variables, indicating that while conditions are not extreme, there is still room for improvement in managing workload and the physical work environment to further reduce work stress among employees.

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