

Increasing Employee Performance Through Physical Work Environment and Work Motivation

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Abstract

Uncomfortable workstations, inadequate lighting, or improper seating can lead to physical discomfort, less motivation, reduced productivity, and decreased employee performance. This research strives to determine to what extent the impact of the physical work environment in the workplace and encouraging work motivation can improve employee performance.

The author's research approach uses quantitative surveys at one of the government agencies in West Bandung. Respondents are 77 state apparatus employees. Data was collected using a structured questionnaire, which was then tested for the validity and reliability of the research instrument. The author's data testing uses path analysis.

The research results show that the physical work environment, such as comfortable workstations and adequate lighting, can improve employee performance. Work motivation, such as the desire to develop, impacts employee performance. Research implications indicate that the presence of comfortable workstations and fulfilling employees' desires for development can contribute to increasing employee performance. The research results contribute to a deeper understanding of the role of the physical work environment and employee work motivation to provide positive aspects for the organization to achieve goals.

The author is aware that this research only uses survey data. Hence, there are several areas for improvement where the scope of the research could be more extensive and only focused on employees who work in government agencies. Also, this research only discusses the physical work environment in the workplace, encouraging work motivation and employee performance.

Keywords: *Comfortable Physical Work Environment, Motivation, Employee Performance*

Introduction

When employees experienced uncomfortable workstations, such as poorly designed desks or chairs lacking adequate support, it had detrimental effects on their physical well-being. Prolonged periods of sitting in uncomfortable positions resulted in back pain, neck strain, and musculoskeletal issues, significantly impacting their ability to concentrate and perform tasks efficiently.

Inadequate lighting was another factor that negatively affected employee performance and well-being. Insufficient lighting or harsh glare strained the eyes, leading to fatigue, headaches, and decreased visual acuity. Dimly lit workspaces also caused drowsiness and difficulty in concentration, hampering overall productivity and the quality of work produced.

Improper seating arrangements, such as chairs that were too high or low, lacking proper ergonomic support or adjustability, resulted in poor posture and discomfort. This led to physical ailments like backaches, muscle stiffness, and joint pain, further diminishing employee focus and optimal performance.

The consequences of these physical discomforts extended beyond the physical realm. Employees who experienced discomfort and pain were more likely to feel demotivated, impacting their overall engagement and enthusiasm for work. Reduced motivation translated into decreased productivity as employees lacked the drive to efficiently complete tasks or strive for excellence.

Moreover, the combination of physical discomfort, reduced motivation, and decreased productivity inevitably led to a decline in employee performance. When organizations failed to provide a conducive work environment that supported employees' physical well-being, their ability to perform at their best was compromised, resulting in subpar outcomes for both individuals and the organization as a whole.

Recognizing the importance of a comfortable and ergonomic workspace, organizations should prioritize investing in suitable furniture, adequate lighting, and ergonomic equipment. By addressing these factors,

employers can create a healthier and more productive work environment, leading to improved employee satisfaction, increased motivation, and enhanced overall performance.

The research conducted by Kar & Hedge (2021) revealed that physical discomfort can significantly decrease productivity. This finding is supported by studies conducted by Hamidi et al. (2020), Makhbul, Shukor, & Muhamed (2022), and Baba, Baba, & Oborah (2021), which demonstrated the impact of ergonomic issues on employee productivity. Additionally, research conducted by Voordt & Jensen (2023), Faez, Zakerian, Azam, Hancock & Rosecrance (2021), and Sohrabi & Babamiri (2022) provided evidence of the negative impact on employee motivation as a result of these issues.

Based on previous research findings that demonstrate the significant role of the Physical Work Environment and Work Motivation in employee performance, the author formulates the research problem of examining the influence of Physical Work Environment and Work Motivation on employee performance. This research aims to assess the extent to which the physical work environment and fostering work motivation can enhance employee performance.

Research Method

The author's research approach utilizes a quantitative survey method conducted at a government agency in West Bandung. The sample consisted of 77 state apparatus employees who were selected through simple random sampling. Only those employees who willingly agreed to participate and completed the questionnaire were included as respondents. Out of the total population of 137 employees, only 77 individuals consented to respond to the survey.

The research instrument for the Physical Work variable was adapted from a tool developed by Thayer et al. (2010), consisting of six statements that assessed Workstation layout, Accessibility of views, Skylights, work surface, Sound, and air circulation. The Employee Motivation variable was measured using an instrument developed by Ryan and Deci (2017), which

focused on autonomy, competence, and relatedness. The measurement of Employee Performance utilized an instrument developed by Koopmans et al. (2012), specifically targeting task performance.

Data collection was carried out using a structured questionnaire, which underwent validity and reliability testing to ensure the robustness and accuracy of the research instrument. The author employed partial least squares (PLS-SEM) as the data analysis technique. PLS-SEM is a widely used statistical method that allows for the examination of complex relationships among variables and provides a comprehensive understanding of the research model.

Result and Discussion

The characteristic of the respondents in this study was predominantly male, comprising 93% of the sample. Furthermore, the data indicated that the largest proportion of respondents, representing 41%, had less than 5 years of work experience. Additionally, 51% of the respondents fell within the age range of 20 to 30 years. These demographic characteristics provide valuable insights into the composition of the sample and allow for a better understanding of the perspectives and experiences of the participants in relation to the research objectives.

Table 1. Validity and Reliability Value

Instru ment	Physica l Work	Employee Motivatio n	Employee Performanc e	Average Varianc e Extracte d (AVE)	Cronbach' s Alpha
pw1	0,651				
pw2	0,677				
pw3	0,772			0,527	0,821
pw4	0,724				
pw5	0,744				
pw6	0,780				
em1		0,752			
em2		0,686			

em3		0,711			
em4		0,719		0,512	0,864
em5		0,642			
em6		0,726			
em7		0,773			
em8		0,706			
emper1			0,722		
emper2			0,767		
emper3			0,799	0,541	0,829
emper4			0,693		
emper5			0,658		
emper6			0,766		

Table 1 presents the results of the validity testing, referring to the overall outer loading values of the instruments for the variables Physical Work, Employee Motivation, and Employee Performance. The outer loading values are all above 0.5, indicating that they are valid. Additionally, the Average Variance Extracted (AVE) and Cronbach's Alpha values demonstrate that each construct has values above 0.5 and greater than 0.7, indicating that they are reliable.

The validity of a construct is determined by the outer loading values, which represent the strength of the relationship between the observed indicators and the latent construct. In this case, the outer loading values for Physical Work, Employee Motivation, and Employee Performance are all greater than 0.5, indicating that the observed indicators effectively capture the underlying constructs.

Reliability, on the other hand, is assessed through the Average Variance Extracted (AVE) and Cronbach's Alpha values. The AVE measures the amount of variance captured by the construct relative to the measurement error, and values above 0.5 indicate good reliability. In this study, all constructs have AVE values greater than 0.5, indicating that they capture a substantial amount of variance and are reliable.

Cronbach's Alpha is another measure of reliability that assesses the internal consistency of the items within a construct. A value above 0.7 is considered acceptable, indicating that the items consistently measure the

same construct. In this study, all constructs have Cronbach's Alpha values greater than 0.7, indicating good internal consistency and reliability.

Overall, the validity and reliability testing results presented in Table 1 indicate that the constructs of Physical Work, Employee Motivation, and Employee Performance have valid and reliable measures.

Table 2. Path Value

Relationship	Value	p-value	Conclusion
Physical Work -> Employee Performance	0,550	0,000	Significant
Employee Motivation -> Employee Performance	0,314	0,001	Significant
R2	0,672	0,000	
R2 Adjusted	0,663	0,000	

Table 2 displays the relationships between the research variables. The path coefficient between Physical Work and Employee Performance is 0.550, with a p-value of 0.000, indicating that the relationship is significant. This suggests that there is a strong positive association between Physical Work and Employee Performance, meaning that an increase in Physical Work is likely to lead to improved Employee Performance.

Similarly, the path coefficient between Employee Motivation and Employee Performance is 0.314, with a p-value of 0.001, indicating a significant relationship. This means that Employee Motivation has a positive impact on Employee Performance, suggesting that higher levels of motivation are associated with better performance outcomes.

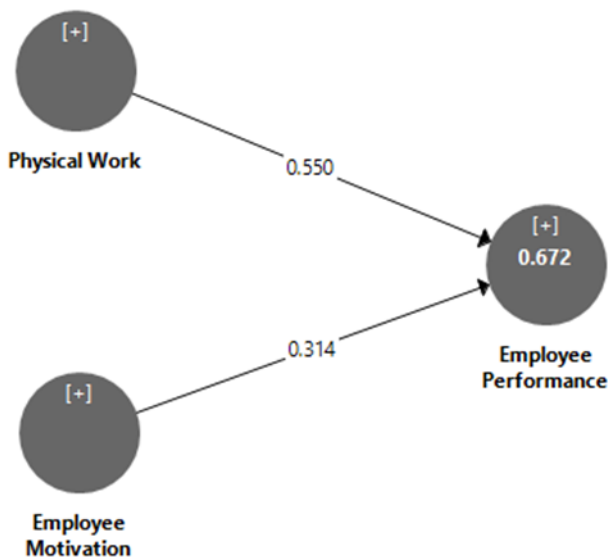


Figure 1. Result of Physical Work and Employee Motivation on Employee Performance

The R-squared value of 0.672 indicates that the independent variables, Physical Work and Employee Motivation, explain approximately 67.2% of the variance in Employee Performance. This suggests that these two variables have a substantial influence on Employee Performance.

The adjusted R-squared value of 0.663 considers the degrees of freedom and the sample size, providing a more conservative estimate of the model's explanatory power. It suggests that approximately 66.3% of the variance in Employee Performance can be explained by the independent variables, Physical Work and Employee Motivation as presented Figure 1.

The research results show that the physical work environment, such as comfortable workstations and adequate lighting, can improve employee performance. Work motivation, such as the desire to develop, impacts employee performance. (Manik & Sidharta, 2017; Sidharta, 2023) Research implications indicate that the presence of comfortable workstations and fulfilling employees' desires for development can contribute to increasing employee performance.

The research findings provide compelling evidence that the physical work environment plays a crucial role in shaping employee performance. The presence of comfortable workstations and adequate lighting has been identified as key factors that can positively impact employee performance. A well-designed and ergonomic workspace that promotes physical comfort can help employees avoid discomfort and distractions, enabling them to focus and perform tasks more efficiently. (Wolkoff, Azuma & Carrer, 2021; López-Cabarcos, Vázquez-Rodríguez & Quiñoá-Piñeiro, 2022) The workstation layout refers to the arrangement and organization of the physical components within a workspace, such as desks, chairs, and equipment. A well-designed workstation layout can enhance task-relatedness by ensuring that essential tools and resources are easily accessible to employees. (Machmud & Sidharta, 2021; Peiró, Bayona, Caballer & Di Fabio, 2020) This can lead to improved efficiency, as employees can navigate their work tasks more effectively. Additionally, the study underscores the significant influence of work motivation on employee performance. Specifically, the desire for personal growth and development emerges as a powerful motivator that drives employees to excel in their roles. When employees feel that their aspirations for growth are supported and valued by the organization, they are more likely to be engaged, proactive, and committed to achieving high levels of performance.

The implications of this research are that organizations should prioritize creating a comfortable work environment and fostering opportunities for employee development. By investing in ergonomic workstations, adequate lighting, and other elements that contribute to physical comfort, organizations can create a conducive atmosphere that promotes productivity and well-being. Furthermore, by offering training programs, mentorship, and career advancement opportunities, organizations can tap into employees' intrinsic motivation for growth and development, leading to enhanced performance outcomes. Recognizing the importance of the physical work environment and employee motivation, organizations can take proactive steps to improve employee performance. Such efforts not only benefit individual employees but also contribute to the overall success and competitiveness of the organization.

Conclusion

The research findings have significantly advanced our comprehension of the interplay between the physical work environment and employee work motivation, offering valuable insights that can benefit organizations in their pursuit of goals. By shedding light on the importance of these factors, the study provides guidance for organizations seeking to optimize their performance outcomes.

However, it is important to acknowledge the limitations of this research. The reliance on survey data may restrict the depth of understanding and prevent a comprehensive examination of the subject matter. To overcome this limitation, future studies could incorporate diverse research methods, such as interviews or observations, to gather a more comprehensive and nuanced understanding of the relationship between the physical work environment, work motivation, and employee performance.

Additionally, the scope of this research was limited to employees working in government agencies. While this focus provides specific insights into this context, it may limit the generalizability of the findings to other sectors or industries. Future research could consider expanding the sample to include employees from various sectors, allowing for a broader understanding of the impact of the physical work environment and work motivation on employee performance across different organizational settings.

Furthermore, this research primarily emphasizes the influence of the physical work environment on work motivation and employee performance. While this is an important aspect to consider, future studies could explore additional factors that contribute to work motivation, such as organizational culture, leadership styles, and job design. By broadening the scope of inquiry, a more comprehensive understanding of the multifaceted factors affecting employee performance can be achieved. By addressing these limitations and expanding the scope of research, future studies can provide a more comprehensive understanding of the complex dynamics that influence employee performance, enabling organizations to make

informed decisions and implement effective strategies to optimize performance outcomes.

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