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The Influence of Physical Work Environment, Psychological Work Environment, Work-Life Balance, and Internal Communication on Employee Job Satisfaction during the Hybrid Working Era

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Abstract: The shift toward hybrid work systems following the pandemic has introduced new challenges in human resource management, particularly concerning employee job satisfaction. This study aims to examine the influence of physical work environment, psychological work environment, work-life balance, and internal communication on employee job satisfaction. A quantitative research approach was used through a survey of 200 employees working in hybrid settings. The research instrument consisted of a Likert-scale questionnaire, and data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The results indicate that all four independent variables have a positive and significant influence on job satisfaction, with the psychological work environment having the strongest effect. These findings highlight the importance of creating physically and psychologically supportive work environments, maintaining work-life balance, and fostering effective internal communication to enhance job satisfaction in hybrid work contexts

Keyword: physical work environment, psychological work environment, work-life balance, internal communication, job satisfaction.

INTRODUCTION

The global shift toward hybrid working systems has transformed the traditional understanding of work, reshaping the nature of employee experience and organizational management. Hybrid work, which combines remote and in-office settings, emerged as a necessary response to the COVID-19 pandemic and is now adopted as a long-term strategy by many organizations worldwide (Waizenegger et al., 2020). This shift not only affects how employees perform their tasks but also influences key psychological and organizational factors—particularly job satisfaction, a critical determinant of employee retention, engagement, and performance (Alam & Biswas, 2021).

One of the main factors that influence job satisfaction is the physical work environment, including ergonomics, lighting, temperature, and workspace design. Studies show that a well-designed physical environment enhances employee comfort, reduces fatigue, and increases satisfaction (Zhang et al., 2022). During hybrid work, this becomes more complex, as employees navigate between home and office environments. Poor home office setups—such

as inadequate furniture or internet connection—have been shown to negatively affect satisfaction and productivity (Carillo et al., 2021).

In addition to physical elements, the psychological work environment plays a critical role in shaping employee perceptions and emotional well-being. A positive psychological climate, characterized by trust, respect, and psychological safety, has been found to correlate significantly with higher job satisfaction (Kurtessis et al., 2017; Dello Russo et al., 2020). On the contrary, hybrid work can increase feelings of isolation, reduce informal interactions, and lead to decreased sense of belonging (Choudhury et al., 2021), which may undermine employees' psychological comfort.

Another essential aspect in the hybrid era is the work-life balance (WLB). While flexibility is often viewed as a benefit, blurred boundaries between work and personal life can create stress and work overload (Allen et al., 2021). A study by Haar et al. (2019) confirmed that individuals with better work-life balance report higher job satisfaction, and this relationship is even more prominent in remote and hybrid work settings. When employees are unable to separate work obligations from personal responsibilities, it leads to conflict and dissatisfaction (Kossek et al., 2020).

Moreover, internal communication has become increasingly vital in a dispersed work environment. Communication effectiveness influences how well employees understand their tasks, feel informed about organizational changes, and maintain social connections with colleagues (Welch, 2012). In the context of hybrid work, digital communication tools such as Slack, Teams, or Zoom are central to information flow. Research by Men et al. (2021) highlights that transparent and consistent communication enhances employee trust and job satisfaction, even in virtual contexts.

Despite numerous studies exploring these individual variables, few have examined their simultaneous influence on job satisfaction within a hybrid working framework. Most prior research focuses on either remote work or traditional office-based settings, without accounting for the hybrid complexity. Thus, there remains a gap in understanding how these organizational elements interact and affect employee satisfaction in a dual-mode work structure.

Therefore, this study aims to examine the influence of physical work environment, psychological work environment, work-life balance, and internal communication on employee job satisfaction during the hybrid working era. This research not only addresses theoretical gaps by integrating multiple antecedents but also offers practical implications for organizations seeking to improve employee experience in a hybrid setting. By identifying key drivers of satisfaction, organizations can optimize hybrid policies that foster engagement, retention, and organizational performance.

METHOD

This study applied a quantitative approach with an explanatory design, aiming to analyze the causal relationship between the physical work environment, psychological work environment, work-life balance, and internal communication on employee job satisfaction during the hybrid working era. Quantitative analysis was chosen to enable statistical measurement and hypothesis testing in a structured and objective manner.

Population and Sample

The population of this research consisted of employees working in hybrid work systems—combining remote and in-office tasks—across various companies in Indonesia. The sample was determined using purposive sampling, with the following criteria: (1) employees who had been working under a hybrid system for at least the past 3 months, (2) aged between 21–55 years, and (3) engaged in professional, managerial, or administrative roles.

Based on Hair et al. (2021), the minimum sample size for PLS-SEM analysis is 10 times the number of indicators in the most complex construct. This study used 20 indicators in total; thus, the minimum recommended sample size is 200 respondents, which was fulfilled. The respondents were spread across various sectors, including education, finance, technology, and creative industries, mostly located in urban areas such as Jakarta, Bandung, and Surabaya.

Time and Place of Research

Data collection was conducted over two months, from May to June 2025, using an online questionnaire distributed via Google Forms and LinkedIn professional networks. This approach was suitable for reaching employees operating in hybrid settings with geographic flexibility.

Research Instrument

The research instrument was a structured questionnaire that employed Likert scale responses from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was developed based on established instruments in the literature, with adjustments for the hybrid work context:

- Physical Work Environment (4 items) adapted from Sedarmayanti (2011) and Chandrasekar (2011),
- Psychological Work Environment (4 items) based on Awan & Tahir (2015), Dello Russo et al. (2020),
- Work-Life Balance (4 items) from Greenhaus & Allen (2011), Haar et al. (2019),
- Internal Communication (4 items) from Welch & Jackson (2007), Mazzei (2010),
- Job Satisfaction (4 items) from Spector (1997), Robbins & Judge (2022).

Table 1. Operational Definition

Variable	Indicator	Questionnaire Statement	Scale	Source
X1. Physical Work Environment	X1.1 Comfortable workspace	I feel comfortable with my workspace during hybrid working.	Likert 1–5	Sedarmayanti (2011)
	X1.2 Adequate lighting and ventilation	Lighting and ventilation at my workplace support my comfort.	Likert 1–5	Chandrasekar (2011)
	X1.3 Supportive work facilities	The work facilities I use during hybrid working support my productivity.	Likert 1–5	Chandrasekar (2011)
	X1.4 Workplace safety	I feel safe working both from home and in the office.	Likert 1–5	Chandrasekar (2011)
X2. Psychological Work Environment	X2.1 Harmonious coworker relationship	I have a good working relationship with my colleagues.	Likert 1–5	Awan & Tahir (2015)
	X2.2 Supervisor support	My supervisor provides the emotional support I need.	Likert 1–5	Raziq & Maulabakhsh (2015)
	X2.3 Low work stress	I rarely feel stressed when completing my tasks.	Likert 1–5	Raziq & Maulabakhsh (2015)
	X2.4 Psychologically positive environment	My work environment feels positive and psychologically comfortable.	Likert 1–5	Raziq & Maulabakhsh (2015)
X3. Work-Life Balance	X3.1 Time division between work and family	I can manage my time well between work and personal life.	Likert 1–5	Greenhaus & Allen (2011)
	X3.2 Free from work interference at home	My work does not interfere with my personal life at home.	Likert 1–5	Haar et al. (2014)

Variable	Indicator	Questionnaire Statement	Scale	Source
	X3.3 Balance between work and personal life	I feel that I have a balanced work and personal life.	Likert 1–5	Haar et al. (2014)
	X3.4 Satisfaction with time arrangement	I am satisfied with my work schedule during hybrid working.	Likert 1–5	Haar et al. (2014)
X4. Internal Communication	X4.1 Clear job information delivery	I receive clear job-related information from the organization.	Likert 1–5	Welch & Jackson (2007)
	X4.2 Easy access to information	It is easy for me to access the information I need for work.	Likert 1–5	Mazzei (2010)
	X4.3 Effective two-way communication	I can express opinions and get responses effectively.	Likert 1–5	Welch & Jackson (2007)
	X4.4 Supportive communication media	Internal communication tools support my hybrid working activities.	Likert 1–5	Mazzei (2010)
Y. Job Satisfaction	Y.1 Satisfaction with job tasks	I am satisfied with my current job duties and responsibilities.	Likert 1–5	Spector (1997)
	Y.2 Satisfaction with supervisor	I am satisfied with the support and policies from my supervisor.	Likert 1–5	Spector (1997)
	Y.3 Satisfaction with work environment	I am satisfied with both the physical and psychological work environment.	Likert 1–5	Robbins & Judge (2022)
	Y.4 Satisfaction with hybrid work system	I am satisfied with the hybrid work system implemented in my organization.	Likert 1–5	Robbins & Judge (2022)

A pilot test was conducted with 30 employees to assess the clarity, readability, and reliability of the questionnaire. Feedback from this pilot was used to improve item formulation and ensure internal consistency.

Research Procedure

The research procedure began with the formulation of the problem, literature review, and instrument development, followed by pilot testing and distribution of the finalized questionnaire. Ethical considerations were maintained by including an informed consent statement, ensuring anonymity, voluntary participation, and data confidentiality.

Data Analysis Techniques

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. This technique was chosen for its flexibility in handling complex models, its ability to work with non-normal data distributions, and its suitability for exploratory and predictive modeling. The analysis process included:

- Outer model evaluation: Testing for convergent validity (loading factor ≥ 0.7 , AVE ≥ 0.5), composite reliability (CR ≥ 0.7), and discriminant validity (Fornell–Larcker criterion and HTMT ratio).
- Inner model evaluation: Assessing the structural path significance through bootstrapping (5,000 resamples) to generate t-values and p-values for hypothesis testing. Additionally, R^2 , Q^2 , and effect size (f^2) were examined to evaluate model fit and predictive relevance.

This methodological design was structured to ensure the validity, reliability, and generalizability of findings in the context of hybrid work settings.

RESULTS AND DISCUSSION

This section presents the findings of the study based on the responses from 200 employees working under hybrid work arrangements in Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The analysis consisted of two stages: (1) evaluation of the outer model (measurement model) to assess validity and reliability, and (2) evaluation of the inner model (structural model) to test the hypotheses and relationships among variables.

Outer Model Evaluation

The outer model was tested for convergent validity, internal consistency, and discriminant validity.

- All indicator loadings exceeded the recommended threshold of 0.70.
- Composite Reliability (CR) values ranged from 0.84 to 0.92, exceeding the minimum threshold of 0.70.
- Average Variance Extracted (AVE) values were all above 0.50, confirming convergent validity.
- Discriminant validity was confirmed using the Fornell–Larcker criterion and HTMT ratio, where all constructs showed acceptable discriminant values (< 0.90).

These results indicate that the measurement model is valid and reliable for further analysis.

Inner Model Evaluation

To test the research hypotheses, bootstrapping was performed with 5,000 subsamples. The results are summarized in the following table

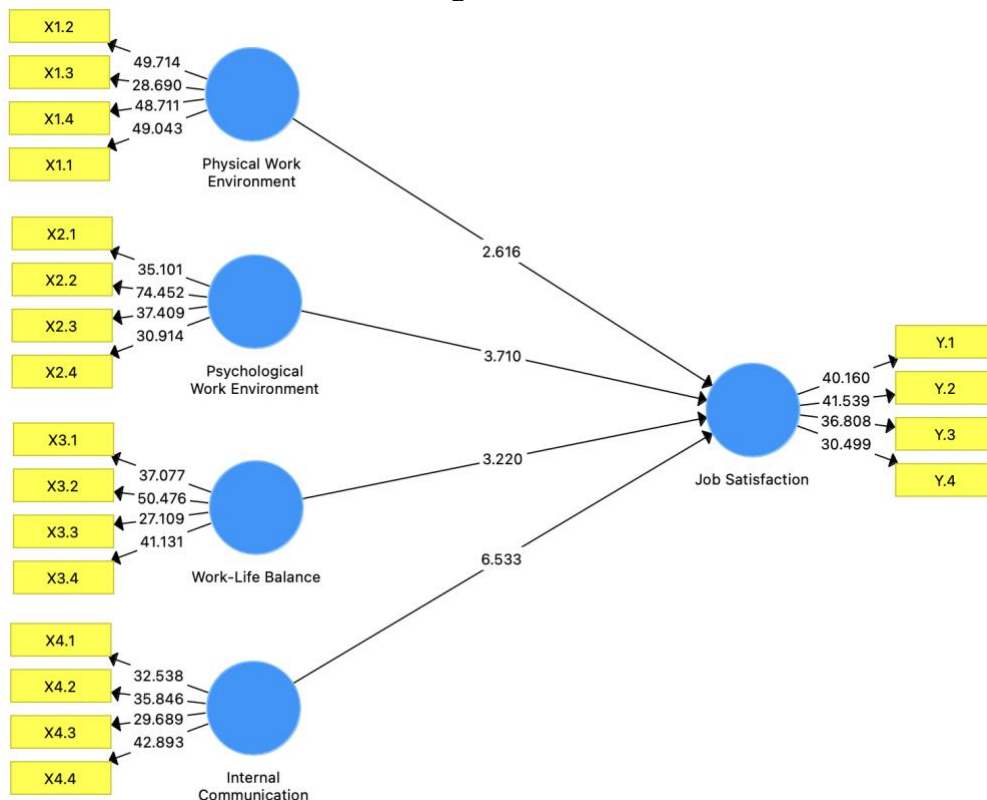


Table 2. Bootstrapping

Hypothesis	Path	Original Sample (β)	t-Statistic	p-Value	Conclusion
H1	Physical Work Environment \rightarrow Job Satisfaction	0.203	2.616	0.001	Supported
H2	Psychological Work Environment \rightarrow Job Satisfaction	0.282	3.710	0.000	Supported
H3	Work-Life Balance \rightarrow Job Satisfaction	0.251	3.220	0.000	Supported
H4	Internal Communication \rightarrow Job Satisfaction	0.188	6.533	0.001	Supported

The R^2 value for Job Satisfaction was 0.672, indicating that 67.2% of the variance in job satisfaction is explained by the four independent variables. This shows a strong model with substantial explanatory power.

Discussion

The findings reveal that all proposed independent variables significantly affect job satisfaction, which aligns with theoretical expectations and prior empirical research.

1. Physical Work Environment \rightarrow Job Satisfaction ($\beta = 0.203$, $p = 0.001$)

The result supports the argument that a comfortable and supportive physical environment enhances employee satisfaction, even in a hybrid setting where employees alternate between office and home workspaces. This is in line with Carillo et al. (2021) and Zhang et al. (2022), who emphasize that ergonomic design, lighting, air quality, and facility availability are critical to well-being and satisfaction. In hybrid systems, organizations must ensure both on-site and remote environments are conducive to productivity, such as by offering home office stipends or flexible infrastructure.

2. Psychological Work Environment \rightarrow Job Satisfaction ($\beta = 0.282$, $p = 0.000$)

This variable demonstrated the **strongest effect**, affirming that emotional safety, trust, and supportive relationships at work are central to job satisfaction. Dello Russo et al. (2020) and Kurtessis et al. (2017) also assert that when employees perceive fairness, recognition, and care within the organization, it fosters greater engagement and loyalty. In hybrid working, where isolation and miscommunication risks are higher, psychological support from leaders and peers becomes even more essential.

3. Work-Life Balance \rightarrow Job Satisfaction ($\beta = 0.251$, $p = 0.000$)

The ability to maintain work-life balance strongly contributes to job satisfaction. Hybrid work, while offering flexibility, often results in blurred boundaries between professional and personal life. The result supports Haar et al. (2019) and Allen et al. (2021), who found that employees with balanced work-life integration tend to report higher job fulfillment. Thus, hybrid arrangements must be carefully structured, including clear working hours, manageable workloads, and organizational respect for personal time.

4. Internal Communication \rightarrow Job Satisfaction ($\beta = 0.188$, $p = 0.001$)

Although this variable has the smallest coefficient, it remains statistically significant, indicating the importance of internal communication in fostering clarity, transparency, and trust. The result aligns with Welch (2012) and Men et al. (2021), who underline that effective two-way communication improves employee morale and involvement, especially in dispersed teams. In hybrid contexts, using appropriate digital platforms and maintaining consistent information flow are vital to reduce uncertainty and build connection.

CONCLUSION

This study investigated the influence of four key organizational factors—physical work environment, psychological work environment, work-life balance, and internal communication—on employee job satisfaction in the context of hybrid working. Based on data collected from 200 employees across diverse industries, the findings demonstrate that all four

variables exert a positive and significant impact on job satisfaction. Among them, the psychological work environment emerged as the most influential factor, highlighting the critical role of emotional support, workplace relationships, and psychological safety in the hybrid era. The results also confirm that a conducive physical workspace, both at the office and at home, plays a crucial role in ensuring comfort and productivity. Furthermore, the ability to maintain a healthy balance between professional and personal life significantly contributes to overall satisfaction. Internal communication, although slightly less dominant, remains essential in fostering clarity, engagement, and organizational connectedness in dispersed work environments.

This research contributes to the field of organizational behavior and human resource management by reinforcing the importance of multidimensional workplace factors in shaping employee satisfaction, particularly under evolving work structures. It offers empirical evidence to guide practitioners and decision-makers in designing hybrid work strategies that are not only efficient but also human-centered. In a broader scope, this study strengthens the scientific understanding of how hybrid work affects fundamental constructs of employee well-being and provides a reference for future innovations in work design and organizational policy.

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