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Understanding Employee Engagement Among Generation Z : Stress and Workplace Perspective

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Abstract

Employee engagement has become a strategic concern in human resource management, particularly among Generation Z employees who are expected to dominate the future workforce. However, maintaining high engagement remains challenging due to increasing job stress and suboptimal psychosocial work environment. This study examines the effects of the non physical work environment and job stress on employee engagement among Generation Z employees in Bandung, Indonesia. A Quantitative explanatory approach was employed using survey data collected from 100 Generation Z employees selected through purposive sampling. Data were analyzed using descriptive statistics, validity and reliability testing, classical assumption test and multiple linear regression analysis to assess both partial and simultaneous effect among variables. The findings indicate that employee engagement was at a moderately high level, while the non-physical work environment was perceived as moderately favorable and job stress was relatively high. Multiple regression analysis revealed that the non-physical work environment had a positive and significant effect on employee engagement, whereas job stress had a negative and significant effect. The non-physical work environment explained 28.9% of the variance in employee engagement, job stress explained 17.6%, and both variables simultaneously accounted for 47.95% of the variance ($R^2 = 0.4795$, $p < 0.001$). These findings support the Job Demands–Resources (JD-R) Theory, suggesting that employee engagement is shaped by the balance between job resources and job demands. The study concludes that supportive psychosocial workplace conditions and effective stress management are essential for enhancing employee engagement, employee retention and long term organizational performance among Generation Z employees.

KEYWORDS

employee engagement; generation Z; job stress; non-physical work environment; job demands resources theory

Introduction

The industry 4.0 era, characterized by high technological integration and flexibility, requires a workforce that is adaptive, innovative, and highly engaged with their work. In the context of remote work system, employee responsibility and work engagement have become fundamental pillars of organizational success. Currently, Generation Z dominates the labor market and is projected to become the largest workforce segment in the coming years. Defined as individuals born between 1997 and 2012, this generation grew up alongside digital technology and possesses distinct characteristics, including a preference for flexibility, collaboration and meaningful work (Anabelle & Aryati, 2025; Deloitte, 2024; Özkan & Solmaz, 2022) as well as specific workplace expectations regarding well-being (Schroth, 2022).

According to the Indonesian Central Bureau of Statistics (BPS) (Statistik, 2024), the youth unemployment rate remains a significant concern, while industry 4.0 demands high-caliber human capital. Data indicates that Generation Z constitutes a

dominant portion of the workforce, however they face substantial challenges in labor market integration. Furthermore, global trends reflect a critical issue in workforce dynamics, the (Gallup, 2023) highlights that global employee engagement remains low, with only 23% of employees being actively engaged at work. This condition is particularly relevant for Generation Z, who often exhibit different work values compared to previous generations. In the local context, preliminary observations in Bandung indicate that while work engagement among Generation Z employees exists, it is not yet optimal. Issues such as job-hopping and lack of long term commitment are frequently observed, which can hinder organizational stability. Addressing these challenges is crucial, as high employee engagement is a primary driver of organizational productivity, innovation, and retention (Erferi, 2023; Fadilah, 2023; Restuhadi & Sembiring, 2023; Sutanto et al., 2024). Consequently, understanding the specific drivers of engagement for this digital native generation is imperative for sustainable human resources management.

Data from Databoks (2025) reveals that the primary drivers resignation among Generation Z employees include salary discrepancies, irregular and excessive working hours, and toxic work environments. These findings align with preliminary survey results, which characterize the work environment as suboptimal due to significant communication gaps between leadership and staff, a lack of exemplary leadership, low mutual support among colleagues, and unprofessionally managed conflicts. Furthermore, Generation Z is often perceived as the most challenging cohort to collaborate with within a professional setting (Resumebuilder, 2025). Another critical phenomenon identified is the elevated stress levels among Generation Z employees, which have reached 68%- the highest compared to other generational cohort. Factors such as prolonged working hours, a perceived lack of appreciation, and insufficient time to complete tasks are suspected to be the primary stressors impacting their mental health (Deloitte, 2025), often leading to severe burnout (Dudija & Putri, 2025; Sahsabilla et al., 2022). Locally, preliminary survey data from Generation Z workers in Bandung further corroborates these concerns, showing high stress levels attributed to excessive workloads that exceed individual capacity, role ambiguity, a lack of recognition, the pressure to collaborate with incompatible colleagues, and an undefined organizational structure that creates uncertainty regarding their scope of authority, which collectively elevate turnover intention (Albarazi & Handoyo, 2025; Hasim & Abadiyah, 2022; Riamanda et al., 2025).

This condition highlights an empirical gap, where employees remain within the organization but lack strong work engagement. This phenomenon warrants further investigation, considering that Generation Z is projected to become the dominant workforce across various sectors in Indonesia. Previous research by (Paramesty & Santoso, 2023) and (Dwidienawati et al., 2025) suggests that the non physical work environment has positive effects on employee engagement. Conversely, (Harmen, 2022) and (Vanessa & Nawawi, 2022) demonstrate that work stress negatively impacts engagement levels. Studies over the last five years consistently identify job stress as a negative determinant of employee engagement. For instance, Nurhayati et al. (2023) found that among Teleperformance Indonesia employees, job stress increases turnover intention and diminishes job

satisfaction, ultimately leading to low organizational engagement. This is consistent with (Sari & Kurniawan, 2022), who explain that excessive work pressure causes emotional exhaustion and decreased motivation, hindering the formation of engagement.

The nonphysical work environment also serves as a critical factor. (Hermawan et al., 2022) and (Shofiyatunnisa, 2025) indicate that interpersonal relationships, team support, and leadership quality significantly influence the engagement of the younger workforce. An unsupportive work environment leads to feelings of being undervalued and reduces affective commitment to the firm. This complexity is heightened when focusing on Generation Z, whose expectations differ significantly from previous generations. They tend to prioritize work flexibility, mental health, personal recognition, growth opportunities and meaningful work. If organizations fail to provide a psychologically healthy work environment, this cohort is more susceptible to rapid disengagement and higher turnover intentions, whereas a positive environment and positive affect will strengthen their work experience (Kim & Kim, 2024).

Previous studies have consistently demonstrated that a supportive non-physical work environment enhances employee engagement, whereas job stress reduces employees' psychological attachment to their organizations (Harmen, 2022; Nurhayati et al., 2023; Paramesty & Santoso, 2023). Nevertheless, several important limitations remain in the existing literature. First, most previous studies have examined the effects of job stress and the non-physical work environment independently, providing limited understanding of their simultaneous influence on employee engagement. Second, earlier studies have generally focused on employees from mixed generational groups without specifically examining Generation Z, whose work values, career expectations, and attitudes toward workplace well-being differ substantially from those of previous generations. Third, empirical evidence from developing countries, particularly Indonesia, remains limited despite the rapid growth of Generation Z as the dominant workforce. Consequently, there is insufficient evidence regarding how psychosocial workplace resources and job demands jointly shape employee engagement among Indonesian Generation Z employees.

To address these gaps, the present study simultaneously investigates the effects of the non-physical work environment and job stress on employee engagement among Generation Z employees in Bandung, Indonesia, using the Job Demands–Resources (JD-R) Theory as the guiding framework. Unlike previous studies, this research integrates both job resources and job demands within a single explanatory model and provides empirical evidence from the Indonesian context. Therefore, this study contributes to the literature by extending the application of JD-R Theory to Generation Z employees in an emerging economy and by offering practical insights for organizations seeking to improve employee engagement through supportive workplace environments and effective stress management. These circumstances led to the formulation of the following study questions: (1) What is the descriptive profile of job stress, employee engagement, and the non-physical work environment among Bandung's Generation Z workers? (2) How much does Bandung's non-physical workplace affect Generation Z employees' engagement? (3) How much does work-related stress affect Generation Z employees' participation in Bandung? (4) How do work stress and the non-physical work environment affect Generation Z employees' participation in Bandung?

Methods

This study employed a quantitative explanatory research design to examine the effects of the non-physical work environment and job stress on employee engagement among 100 Generation Z employees in Bandung, Indonesia. Employee engagement was treated as the dependent variable, while the non-physical work environment and job stress served as the independent variables. The Job Demands Resources Theory (JD-R Theory), which describes how job resources like social support, effective communication, and supportive interpersonal relationships can improve employee engagement (Bakker & Albrecht, 2018; Bakker & Demerouti, 2008), serves as the theoretical foundation for this study. In contrast, excessive job demand, such as work related stress, workload pressure and role ambiguity, may reduce employee engagement. Methodologically, this study adopted a quantitative explanatory approach to test the proposed relationships among variables. According to the research paradigm, employee engagement is the dependent variable and work stress and the non-physical work environment are the independent variables.

Instrument development, data collecting, validity and reliability testing, classical assumption testing, and multiple linear regression analysis to look at both partial and simultaneous effects among the variables were all steps in the analysis process.

Research Type

This study used a survey method as part of a quantitative strategy to investigate the correlations between research variables. In order to provide a thorough understanding of the phenomenon and to evaluate the presented hypothesis empirically, both descriptive and verification analysis were used in the investigation. There were multiple methodical steps in the study process. The study started by identifying the phenomena of employee engagement among Generation Z workers. This was followed by a thorough analysis of the pertinent literature to lay the theoretical groundwork for the investigation. A conceptual framework and research hypotheses were developed based on this review. The creation of a research tool based on each variable's validated theoretical construct was the following step. Prior to large scale data collection, the instruments were subjected to validity and reliability testing to ensure measurement accuracy and consistency. Subsequently, questionnaire were distributed to selected respondents who met the predetermined sampling criteria.

After data collection, the analysis proceeded through several statistical stages. The distribution of each research variable and the characteristics of the respondents were first described through descriptive statistical analysis. This was followed by traditional assumption tests, such as the multicollinearity, heteroscedasticity, and normality tests, to make sure the data satisfied the requirements for regression analysis. Lastly, the partial and simultaneous effects of job stress and the non-physical work environment on 124 employee engagement were examined using multiple linear regression analysis. The final stage involved interpreting the empirical findings and drawing conclusions based on the statistical evidence. This study classified as explanatory quantitative research with a cross-sectional design, in which data were collected at a single point in time this design was considered

appropriate for explaining the relationships among variables and testing the causal model proposed in the study.

Population and Sample/Informants

The target population of this study consisted of Generation Z employees working in formal organizations in Bandung, Indonesia. Because the exact number of Generation Z employees in Bandung could not be accurately identified and the study required respondents with specific characteristics, purposive sampling was employed. Respondents were selected based on the following criteria: (1) belonging to Generation Z (born between 1997 and 2012), (2) currently working in a formal organization in Bandung, and (3) having at least six months of work experience.

A total of 100 respondents participated in this study. The adequacy of the sample size was determined based on the recommendation of Hair et al. (2019) for multiple regression analysis, which suggests a minimum sample size of $50 + 8m$, where m represents the number of independent variables. Since this study included two independent variables (non-physical work environment and job stress), the minimum recommended sample size was 66 respondents ($50 + 8 \times 2$). Therefore, the sample size of 100 respondents exceeded the minimum requirement, indicating that the sample was adequate for estimating the regression model and testing the proposed hypotheses. The sample size also satisfies the general recommendation for regression analysis to ensure stable parameter estimation and sufficient statistical power for detecting medium-sized effects (Hair et al., 2019).

Research Location

The study was conducted in Bandung, located in West Java. The respondents were employed across various business sectors, including services, trades, education, technology and the creative industries. Bandung was selected as the research setting due to its strategic position as one of Indonesia's major metropolitan cities, characterized by a high concentration of young workforce participation and rapid growth in the creative economy. In addition, Bandung represents a dynamic urban labor market in which Generation Z employees play an increasingly significant role across diverse organizational contexts, making it a relevant setting for examining employee engagement, work stress and psychosocial workplace conditions.

Instrumentation or Tools

A structured, closed-ended questionnaire intended to gauge respondents' opinions about the research variables served as the main research tool in this study. A five-point Likert scale, with 1 representing "strongly disagree" and 5 representing "strongly agree," was used in the questionnaire. The degree to which respondents agreed with each statement on work stress, the non-physical work environment, and employee engagement was measured using this scale. The researchers were able to systematically measure subjective attitudes and impressions by using the Likert scale, which made later statistical analysis and hypothesis testing easier. To ensure construct validity and measurement consistency, each research variable was operationalized based on established theories and measurement instruments widely adopted in previous studies. Table X presents the operational definitions, dimensions, indicators, measurement scales, and supporting references for each construct examined in this study. (See Table 1).

Table 1. Operationalization of Variable

Variable	Operational Definition	Dimensions	Indicators	Reference
Employee engagement (y)	Employee engagement refers to a positive, fulfilling work related	Vigor	High energy at work ; resilience ; willingness to invest effort	(Saks, 2022; Schaufeli et al., 2002; Schaufeli & Bakker, 2010)
		Dedication	Enthusiasm ; pride; sense of significance; inspiration	
		Absorption	Full concentration ; immersion in work ; difficulty detaching from work	
Job stress (x2)	Job stress refers to the psychological and physiological responses experienced when job demand exceed employees ability or available resources to cope	Workload	Excessive workload; work pressure	(Knight et al., 2022; Mazzetti et al., 2023)
		Role ambiguity	Unclear responsibilities ; uncertainty regarding authority	
		Role conflict	Conflicting job expectation	
		Time pressure	Tight deadlines ; insufficient time	
Nonphysical work environment (x1)	The non physical work environment refers to psychosocial workplace conditions that influence employees comfort, motivation and interpersonal relationships.	Communication	Communication with supervisor ; communication among colleagues	(Sedarmayanti, 2017)
		Leadership support	Guidance ; appreciation ; managerial support	
		Coworker relationship	Cooperation ; mutual respect; teamwork	
		Organizational climate	Fairness ; trust ; harmonious work atomsphere	

Data Collection Procedures

Data were collected through both primary and secondary sources to ensure the comprehensiveness and reliability of the research findings. Primary data were obtained through the distribution of online and offline questionnaires to selected respondents who met the predetermined sampling criteria. In addition, brief supporting interviews were conducted to gain contextual insights and to strengthen the interpretation of the quantitative findings. Secondary data were collected through an extensive review of relevant literature, including peer review national and international journal articles, academic books, official statistical reports published by Badan pusat Statistik, as well as other supporting organizational and institutional documents relevant to the research topic.

The procedure of gathering data was done in a methodical manner over a number of phases. Initially, the researchers used the research objectives to determine the criteria for selecting respondents. Second, verified theoretical elements from earlier research served as the foundation for the development of questionnaire items. Third, to guarantee measurement accuracy and internal consistency, the study instrument was tested for validity and reliability. The qualifying respondents were then given the questionnaires. Lastly, before statistical analysis, the gathered data were checked, coded, and tallied.

Data Analysis

Data analysis was conducted using IBM SPSS Statistics. Descriptive statistics were first employed to summarize respondent characteristics and the distribution of each research variable. Instrument validity and reliability were subsequently evaluated using the Corrected Item–Total Correlation and Cronbach's Alpha coefficient. Prior to regression analysis, the data were subjected to classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests. After all assumptions were satisfied, multiple linear regression analysis was performed to examine the partial and simultaneous effects of the non-physical work environment and job stress on

employee engagement. Hypothesis testing was conducted using t-tests for partial effects and an F-test for simultaneous effects at a significance level of 0.05. Prior to hypothesis testing, the research instrument was evaluated through validity and reliability testing. Item validity was assessed using the Corrected Item–Total Correlation, where items with correlation coefficients greater than 0.30 were considered valid (Hair et al., 2019). Instrument reliability was evaluated using Cronbach's Alpha, with values of 0.70 or higher indicating acceptable internal consistency (Hair et al., 2019; Nunnally & Bernstein, 1994). Only items that satisfied both validity and reliability criteria were retained for subsequent statistical analysis. Following this stages, classical assumption test were performed prior to regression analysis, including the normality test to assess data distribution, the multicollinearity test to examine correlations among independents variables and the heteroscedasticity test to ensure homogeneity of variance in the regression model.

Multiple linear regression analysis was used to investigate the partial and simultaneous effects of work stress and non-physical work environment on employee engagement once all statistical assumptions were satisfied. Lastly, to ascertain the statistical significance of the suggested correlations among variables, hypothesis testing was carried out using both t-tests (partial effects) and F-tests (simultaneous effects).

Ethical Approval (Optional)

This study adhered to established ethical principles in social science research to ensure the protection of participants rights and the integrity of the research process. First, the principle of informed consent was applied by providing respondents with clear information regarding the objectives, procedures and purpose of the study prior to their participation in the questionnaire. Second, data confidentiality was strictly maintained by ensuring that all personal information and respondent identities remained anonymous and were not disclosed to any unauthorized parties.

Third, participation in this study was entirely voluntary

and respondents were informed of their right to decline participation or withdraw from the study at any stage without any consequences. Finally, the principle of academic data usage was upheld, meaning that all collected data were used exclusively for academic research purposes and scientific publication. These ethical considerations were implemented to ensure transparency, participants protection and overall credibility of research findings.

Result and Discussion

This study examined the effects of the non physical work environments and work stress on employee engagement among Generation Z employees in Bandung. Based on the results of the statistical data analysis, several key findings were obtained, as follows. (See [Table 2](#)).

This study examined the effects of work stress and the nonphysical work environment on employee engagement among Generation Z employees in Bandung. Based on the results of the statistical analysis, the following findings were obtained

Condition of research variables

The level of employee engagement was categorized as moderately high, indicating that respondents generally demonstrated a relatively strong level of work attachments, enthusiasm and dedication toward their jobs. However, several respondents still exhibited lower levels of enthusiasm and limited sense of belonging toward their organizations.

The nonphysical work environment was categorized as moderately favorable. Interpersonal relationships among employees were generally perceived as harmonious. Nevertheless, several weaknesses were identified, particularly in leadership communication, team support and conflict resolutions processes in the workplace, which were perceived as not yet being managed effectively.

Meanwhile, work stress was categorized as high. The primary sources of stress included excessive workload, target pressure, lack of recognition, role ambiguity and limited supervisory support. These findings indicate that Generation Z employees continue to experience considerable work related psychological pressure.

Partial effects of independent variables

The non-physical work environment had a positive and statistically significant effect on employee engagement ($B = 0.427$, $\beta = 0.467$, $t = 11.309$, $p < 0.001$). These findings indicate that improvements in communication quality, leadership support, interpersonal relationships, and organizational climate significantly enhance employee engagement among Generation Z employees. Conversely, job stress exerted a negative and statistically significant effect on employee engagement ($B = -0.229$, $\beta = -0.314$, $t = -7.599$, $p < 0.001$). This finding suggests that increasing workload, role ambiguity, interpersonal pressure, and organizational stressors reduce employees' psychological attachment and enthusiasm toward their work. (See [Table 3](#)).

The result of the partial hypothesis testing also revealed that job stress has negative and statistically significant effects on employee engagement, with a contribution of 17.6%. This finding indicates that the higher the level of work stress experienced by employees, the lower their level of employee engagement. Excessive workload, performance pressure, role ambiguity, lack of

recognition and limited managerial support may contribute to emotional exhaustion and limited managerial support may contribute to emotional exhaustion and reduced psychological attachment to the organization. These results emphasize the importance of effective stress management and organizational support in maintaining employee engagement among Generation Z employees.

Simultaneous Effect of Independent Variables

The regression model demonstrated a strong and statistically significant overall fit ($F = 118.260$, $p < 0.001$). Furthermore, the model explained 38.2% of the variance in employee engagement ($R^2 = 0.382$; Adjusted $R^2 = 0.379$), indicating that the non-physical work environment and job stress jointly constitute important predictors of employee engagement among Generation Z employees. The remaining 61.8% of the variance may be explained by other variables not included in the present study.

Multiple Linear Regression Equation

The multiple linear regression analysis produced the following regression equation. (See [Table 4](#) and [Table 5](#)).

Interpretation of the Regression Equation

The regression equation indicates that the constant value is 43.292, meaning that when the non-physical work environment and job stress are assumed to remain constant (equal to zero), the predicted employee engagement score is 43.292. Although this value has limited practical meaning because the independent variables are measured using a Likert scale, it serves as the baseline value of employee engagement in the regression model. The regression coefficient for the non-physical work environment (X_1) is 0.427, indicating a positive relationship with employee engagement. This means that every one-unit increase in the non-physical work environment score is predicted to increase the employee engagement score by 0.427 units, assuming job stress remains constant. In other words, improvements in psychosocial workplace conditions—such as effective communication, supportive leadership, positive interpersonal relationships, and a healthy organizational climate—are associated with higher levels of employee engagement among Generation Z employees.

Conversely, the regression coefficient for job stress (X_2) is -0.229 , indicating a negative relationship with employee engagement. This implies that every one-unit increase in job stress is predicted to decrease the employee engagement score by 0.229 units, assuming the non-physical work environment remains unchanged. Therefore, higher levels of workload, role ambiguity, work pressure, and psychological strain tend to reduce employees' enthusiasm, dedication, and psychological attachment to the organization.

Overall, the regression equation suggests that employee engagement among Generation Z employees is positively influenced by a supportive non-physical work environment and negatively influenced by job stress. These findings are consistent with the Job Demands–Resources (JD-R) Theory, which proposes that job resources enhance employee engagement, whereas excessive job demands, such as work-related stress, diminish employees' motivation and work involvement. Key Research Fundings

This findings of this study highlight that Generation Z employees tend to require a psychologically healthy, communicative and supportive work environment with manageable levels of work related pressure. As generation that places significant value on well being, meaningful workplace relationships and positive employee experiences, Generation Z employees are particularly sensitive to psychosocial workplace conditions. The result

suggest that organizations capable of fostering supportive interpersonal relationships, effective communication and a positive organizational relationships, effective communication and a positive organizational climate while minimizing excessive job stress are more likely to strengthen employee engagement. Consequently, such organizations can benefit from higher level of employee loyalty, improved productivity and greater retention of young talent, ultimately contributing to sustainable organizational performance and longterm competitiveness.

The present study examined the influence of the non-physical work environment and job stress on employee engagement among Generation Z employees in Bandung, Indonesia. The empirical findings indicate that both variables significantly affect employee engagement. Specifically, the non-physical work environment positively influences employee engagement, whereas job stress exerts a significant negative effect. These findings support the Job Demands–Resources (JD-R) Theory, which proposes that employee engagement is shaped by the balance between job resources and job demands. Job resources such as supportive interpersonal relationships, effective communication, and leadership support enhance employee engagement, whereas excessive job demands, including work-related stress, diminish employees' psychological attachment and work motivation.

Effect of the Non-Physical Work Environment on Employee Engagement

The regression analysis revealed that the non-physical work environment positively affected employee engagement ($B = 0.427$; $\beta = 0.467$; $t = 11.309$; $p < 0.001$). This finding indicates that improvements in communication quality, leadership support, teamwork, and organizational climate significantly enhance employee engagement among Generation Z employees. These results are consistent with [Paramesty and Santoso \(2023\)](#), who also reported that psychosocial workplace conditions play a significant role in strengthening employee engagement.

Effect of Job Stress on Employee Engagement

Job stress was found to have a significant negative effect on employee engagement ($B = -0.229$; $\beta = -0.314$; $t = -7.599$; $p < 0.001$). Employees experiencing excessive workload, role ambiguity, performance pressure, and insufficient organizational support tend to exhibit lower enthusiasm, dedication, and emotional attachment toward their organizations. These findings are consistent with [Harmen et al. \(2022\)](#), who demonstrated that increasing work stress significantly reduces employee engagement.

Simultaneous Effect

The regression model demonstrated good explanatory power ($F = 118.260$; $p < 0.001$) with an R^2 value of 0.382, indicating that 38.2% of the variation in employee engagement is jointly explained by the non-physical work environment and job stress. This finding confirms that employee engagement is influenced by the interaction between job resources and job demands, as proposed by the Job Demands–Resources (JD-R) Theory.

The positive and significant effect of the non-physical work environment on employee engagement indicates that psychosocial aspects of the workplace are essential determinants of employees' attachment to their work and organization. Effective communication, supportive leadership, constructive interpersonal relationships, and a collaborative organizational climate appear to strengthen employees' sense of belonging and commitment. For Generation Z employees, who tend to value social connectedness, meaningful interactions, and open

communication, the quality of workplace relationships may be as important as traditional employment benefits. Consequently, organizations that foster a supportive and inclusive work culture are more likely to maintain higher levels of employee engagement.

In contrast, job stress was found to negatively affect employee engagement. This finding suggests that excessive workloads, role ambiguity, performance pressures, and inadequate recognition may reduce employees' psychological energy and emotional investment in their work. When employees experience prolonged stress, they are more likely to become disengaged, less motivated, and less committed to organizational objectives. The results indicate that managing workplace stress is not only important for employee well-being but also for sustaining workforce engagement and organizational effectiveness.

The simultaneous influence of the non-physical work environment and job stress further highlights the multidimensional nature of employee engagement. Employee engagement cannot be explained solely by individual characteristics or personal motivation; rather, it emerges from the interaction between organizational resources and workplace demands. A supportive psychosocial environment may strengthen engagement, while excessive job demands can undermine it. Therefore, organizations should address both dimensions simultaneously by enhancing workplace support systems and minimizing unnecessary sources of stress.

These findings provide empirical support for the Job Demands–Resources (JD–R) Theory, which argues that employee engagement is shaped by the balance between job resources and job demands. Job resources, such as social support, leadership quality, and effective communication, function as motivational factors that encourage engagement. Conversely, excessive job demands ([Knight et al., 2022](#); [Mazzetti et al., 2023](#)), including workload pressures and role-related stressors, may deplete employees' psychological resources and reduce engagement levels. The present study confirms the relevance of this theoretical perspective within the context of Generation Z employees in Indonesia.

Interpretation of Key Findings

The findings indicate that employee engagement functions as a critical organizational resource that contributes to both employee effectiveness and organizational sustainability. Employees who demonstrate stronger engagement tend to exhibit greater commitment to organizational objectives, higher work motivation, and a stronger willingness to invest additional effort in completing their responsibilities ([Albrecht, 2024](#); [Saks, 2022](#)). As a result, organizations benefit from improved performance outcomes, enhanced workforce stability, and reduced employee turnover.

The evidence further suggests that the significance of employee engagement extends beyond organizational boundaries. Recent global workforce reports have highlighted the relationship between employee engagement and broader economic productivity, emphasizing that a highly engaged workforce can contribute to national competitiveness and economic growth. Consequently, employee engagement should be viewed not only as an internal human resource issue but also as a factor that influences the overall effectiveness of labor markets. Moreover, a well-managed work environment combined with engagement initiatives has been shown to mediate employee performance and minimize stress-related issues ([Hallo & Wahyanti, 2022](#); [Nusraningrum et al., 2024](#); [Supriyanto & Masdjojo, 2025](#)).

Table 2. Respondent Characteristics

KATEGORI	FREKUENSI	PERSENTASE (%)
Gender		
Male	45	45%
Female	55	55%
Age		
18-22 years	35	35%
23-26 years	42	42%
27-28 years	23	23%
Education		
Senior High School	28	28%
Diploma	27	27%
Bachelor degree	45	45%
Working time		
<1 year	30	30%
1-3 year	50	50%
>3 year	20	20%
Total	100	100%

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.618	0.382	0.379	6.086

Table 4. Regression Coefficients

Predictor	B	Std. Error	Beta	T	Sig.
Constant	43.292	3.549	-	12.198	<0.001
AI Work Environment	0.427	0.038	0.467	11.309	<0.001
Job Stress	-0.229	0.030	-0.314	-7.599	<0.001

$Y = 43,292 + 0,427 (X_1) + (-0,229 (X_2)) + e$
where:

Y = Employee Engagement
 X_1 = Non-Physical Work Environment
 X_2 = Job Stress
e = Error term

Table 5. ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	8760.648	2	4380.324	118.260	<0.001
Residual	14149.186	382	37.040		
Total	22909.834	384			

Another important finding is that employee engagement is shaped by organizational conditions rather than emerging solely from individual characteristics. Positive work experiences, supportive leadership, effective communication, career development opportunities, and healthy interpersonal relationships create favorable conditions that strengthen employees' psychological connection to their work. These workplace resources become increasingly important for Generation Z employees, who generally place substantial value on meaningful work, well-being, workplace flexibility, and opportunities for personal growth. Therefore, organizations seeking to attract and retain younger talent should adopt management practices that support both employee development and psychological well-being.

Comparison with Previous Studies

The findings demonstrate that the non-physical work environment positively and significantly influences employee engagement among Generation Z employees ($B = 0.427$, $\beta = 0.467$, $p < 0.001$). This result suggests that

psychosocial workplace conditions—including supportive leadership, effective communication, interpersonal trust, and a collaborative organizational climate—serve as important job resources that encourage employees to become emotionally and psychologically attached to their organizations. (See Table 3).

One possible explanation is that Generation Z employees place greater importance on workplace relationships and psychological well-being than previous generations. Unlike earlier generations that often emphasized job security and financial rewards, Generation Z tends to value supportive leadership, meaningful work, open communication, and opportunities for collaboration. Consequently, employees who perceive a positive psychosocial work environment are more likely to demonstrate higher enthusiasm, dedication, and willingness to contribute beyond their formal job responsibilities.

These findings are consistent with [Paramesty and Santoso \(2023\)](#), who reported that a supportive non-physical work environment significantly enhances employee engagement. Likewise, [Hermawan et al. \(2022\)](#)

emphasized that leadership quality and interpersonal relationships positively influence employee commitment and engagement. However, some previous studies suggest that the influence of the work environment may become weaker in organizations where compensation, career development, or flexible work arrangements are more dominant predictors of engagement. This indicates that the importance of psychosocial workplace conditions may vary across organizational contexts.

Within the Indonesian context, particularly in Bandung, the findings may also reflect the characteristics of urban Generation Z employees who generally work in service, technology, and creative industries where collaboration, communication, and teamwork are integral to daily work activities. Therefore, a supportive non-physical work environment becomes an essential organizational resource that strengthens employee engagement, consistent with the assumptions of the Job Demands–Resources (JD–R) Theory.

Limitations and Cautions

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional nature of the research design limits the ability to establish causal relationships between the examined variables. Although significant associations were identified, future studies employing longitudinal designs may provide stronger evidence regarding causal directions and changes over time.

Second, the study relied primarily on self-reported data obtained through questionnaires. While this approach is commonly used in organizational research, it may be subject to response bias and social desirability effects. Future studies may benefit from incorporating multiple data sources to improve measurement accuracy.

Third, the findings were obtained within a specific geographical and cultural context, namely Generation Z employees in Bandung, Indonesia. Consequently, caution should be exercised when generalizing the results to different regions, industries, or national settings. Cultural characteristics, organizational practices, and labor market conditions may influence employee engagement differently across contexts.

Finally, employee engagement is influenced by numerous organizational and individual factors beyond those examined in this study. Variables such as compensation, job security, career advancement opportunities, leadership styles, organizational culture, and flexible work arrangements may also play important roles in shaping employee engagement.

Recommendations for Future Research

Future studies are encouraged to adopt longitudinal research designs to explore how employee engagement evolves over time and to better understand the long-term relationships between job stress, workplace conditions, and employee engagement. Such an approach would provide more robust evidence regarding the dynamic nature of employee engagement among younger employees.

Further research may also benefit from comparing different generational groups, including Generation Z, Millennials, and Generation X, to identify potential differences in workplace expectations, engagement drivers, and organizational outcomes. These comparisons could provide valuable insights for organizations managing increasingly diverse workforces.

In addition, future scholars are encouraged to integrate qualitative methods, such as interviews or focus group discussions, to gain a deeper understanding of

employees' lived experiences and perceptions regarding workplace stress, organizational support, and engagement. Mixed-methods approaches may enrich existing knowledge by capturing dimensions that are difficult to observe through survey data alone.

Given the continuing transformation of modern workplaces, future studies should also investigate emerging variables such as digital work environments, psychological safety, organizational support, leadership effectiveness, employee well-being, and workplace flexibility as potential mediators or moderators. Exploring these factors may contribute to a more comprehensive understanding of employee engagement in contemporary organizations.

Conclusion

This study concludes that both the non-physical work environment and job stress are significant determinants of employee engagement among Generation Z employees in Bandung. A supportive psychosocial work environment characterized by effective communication, positive interpersonal relationships, social support, and constructive leadership contributes positively to employee engagement. In contrast, elevated levels of job stress reduce employees' emotional and psychological attachment to their work and organization.

The findings further demonstrate that employee engagement is shaped by the combined influence of workplace resources and job demands, supporting the assumptions of the Job Demands–Resources (JD–R) Theory. Employee engagement among Generation Z employees is therefore not solely an individual outcome but also a reflection of organizational conditions and workplace experiences.

From a managerial perspective, organizations should prioritize the development of supportive workplace cultures while implementing effective stress management initiatives to maintain employee well-being and engagement. Such efforts may contribute to stronger employee retention, improved organizational performance, and the sustainable development of young talent. Academically, this study contributes to the growing literature on employee engagement by providing evidence from the context of Generation Z employees in a developing economy, thereby enriching current discussions on workforce management and employee engagement in emerging markets.

Author contributions

The authors have contributed substantially to the conceptual, execution analysis and writing of this study. Author 1 was responsible for conceptualizing the research framework, identifying the research problem, conducting the literature review, designing the methodology and drafting the initial manuscript. Author 2 contributed to data collection, questionnaire distribution, respondent coordination and data verification. Author 3 was responsible for statistical analysis, interpretation of empirical findings and ensuring methodological accuracy. All authors participated in the interpretation of the findings, provided intellectual input during manuscript revision and approved the final version of the manuscript before submission. All authors agree to be accountable for the accuracy, integrity and scientific quality of this research.

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Conflict of interest

The authors declare that there are no financial, professional, institutional or personal relationships that could be perceived as influencing the objectivity, interpretation or reporting of the findings presented in this study. The authors have no affiliations with organizations, companies, or other entities that may have a direct or indirect interest in the outcomes of this research. This declaration is made to ensure transparency, maintain academic integrity and uphold the credibility and trustworthiness of the research findings.

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