

The Role of Leadership, Active Involvement on Employee Resilience: Mediated by the Harmonious Relationship Variable

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Abstract: This study aims to analyze the influence of leadership and active engagement on employee resilience, with harmonious relationships serving as a mediating variable. Employing a quantitative cross-sectional design, data were collected from 387 employees at an educational institution using validated questionnaires: the Authentic Leadership Questionnaire, Utrecht Work Engagement Scale, Organizational Identification Scale, and Brief Resilience Scale. Structural Equation Modeling (SEM) analysis using AMOS 26.0 revealed a structural model with excellent goodness-of-fit (Chi-square/df=2.48, CFI=0.94, RMSEA=0.061). The results confirm that leadership ($\beta=0.26$, $p<0.001$) and active engagement ($\beta=0.33$, $p<0.001$) significantly influence employee resilience, with active engagement demonstrating a stronger effect. Leadership exerted a dominant influence on harmonious relationships ($\beta=0.44$, $p<0.001$), followed by active engagement ($\beta=0.39$, $p<0.001$). Harmonious relationships partially mediated the leadership-resilience relationship (mediation effect=0.16) and the active engagement-resilience relationship (mediation effect=0.14). The model explained 73% of the variance in employee resilience, confirming the validity of Conservation of Resources Theory and Social Exchange Theory. The study recommends developing authentic leadership programs, enhancing employee engagement, and optimizing the quality of interpersonal relationships to strengthen organizational resilience in the agricultural sector.

Keywords: Harmonious Relationships, Authentic Leadership, Active Engagement, Employee Resilience

1. Introduction

Modern organizational dynamics face significant challenges in maintaining sustained employee performance amidst increasingly complex and uncertain work environments. Employee resilience has emerged as a focal point in contemporary human resource management literature, defined as an individual's capacity to bounce back, adapt, and thrive when confronted with high-pressure situations, organizational changes, or unexpected crises. In a global context characterized by rapid technological shifts, a prolonged pandemic, and digital transformation across various industrial sectors, the ability of employees to maintain psychological well-being and optimal performance has become a strategic asset crucial to organizational success. Recent research indicates that employee resilience not only aids individuals in coping with stress and adversity but also contributes to enhanced engagement, productivity, and talent retention within the organization.

A critical factor influencing employee resilience is the role of leadership within the organization. Various empirical studies demonstrate that specific leadership styles significantly impact the development of resilience among employees. In their research on resilient leadership within the tourism, hospitality, and agricultural sectors, Ahmed, Zhao, and Ahmad (2021) found that resilient leadership can boost employee resilience through psychological mechanisms involving self-determination and environmental dynamics. The study emphasizes that leaders who demonstrate adaptability, visionary motivation, and personal concern for their subordinates can foster a work environment conducive to resilience development. Furthermore, inclusive leadership contributes positively to



employees' psychological resilience by cultivating a sense of "insider status" and a supportive organizational climate, particularly when facing traumas and crises such as the COVID-19 pandemic. Leadership dimensions that prioritize openness, empathy, and emotional support have proven to be vital catalysts in building employees' adaptive capacity.

In addition to leadership, active employee involvement in organizational processes plays a vital role in fostering resilience. Such involvement encompasses participation in decision-making and problem-solving, the contribution of ideas, and autonomy in managing one's work and work environment. In their comprehensive analysis of employee engagement during digital transformation, Abduraimi (2023) concluded that active employee participation not only accelerates the implementation of organizational changes but also strengthens commitment, job satisfaction, and readiness for change. The study affirms that actively involved employees tend to develop a stronger sense of ownership, higher intrinsic motivation, and a greater capacity to cope with uncertainty and workplace challenges. Similar findings were presented by Setyawasih and Buchdadi (2022), who demonstrated that a culture prioritizing employee engagement through meaningful participation fosters positive work behaviors—such as initiative, creativity, and proactivity—which serve as indicators of both individual and organizational resilience.

Although the impact of leadership and active involvement on employee resilience has been extensively studied in isolation, understanding the mechanisms linking these variables to resilience remains limited. Previous research has tended to explore direct relationships or employ varying mediating variables without considering the role of harmonious workplace relationships as a crucial connecting mechanism. Harmonious workplace relationships refer to the quality of interpersonal interactions characterized by positivity, mutual trust, cooperation, and support among employees, colleagues, and leaders. In their study on the impact of the work environment on employee performance, Hao, Min, Jie, and Yuling (2020) found that employee commitment and achievement-striving ability mediate the relationship between a positive work environment and task performance, highlighting the importance of relationship quality in facilitating desired employee outcomes. However, there is currently no research that specifically integrates leadership, active engagement, and harmonious relationships into a single, comprehensive model to explain the development of employee resilience.

The identified research gap highlights several key issues. First, although existing literature acknowledges the importance of leadership and employee engagement as antecedents to resilience, the mediating mechanisms explaining how these factors influence resilience remain not fully understood—particularly regarding the role of harmonious workplace relationships. Second, most prior studies have been conducted within the context of specific crises, such as the COVID-19 pandemic, or in specific sectors like hospitality and information technology; consequently, generalizing these findings to broader contexts—such as the general education sector—requires further empirical validation. Third, research integrating the perspectives of Conservation of Resources (COR) Theory and Social Exchange Theory (SET) to explain the dynamics among leadership, active engagement, harmonious relationships, and employee resilience remains very limited.

The novelty of this research lies in several aspects. First, it develops and tests a mediation model integrating leadership, active engagement, and employee resilience, positioning harmonious workplace relationships as a key mediating variable. This distinguishes it from previous studies that tended to examine direct relationships or employed different single mediators. Second, the study is conducted within the context of general education in Indonesia—a sector that has received limited attention in studies on employee resilience—thereby contributing to the understanding of human resource dynamics in education. Third, it adopts a quantitative cross-sectional design, enabling the simultaneous testing of relationships between variables at a single point in time and providing a comprehensive snapshot of the phenomenon under study. Fourth, by integrating the theoretical perspectives of COR and SET, the study enriches the conceptual understanding of how organizational resources (leadership and active engagement) can be converted into personal resources (resilience) through social exchange mechanisms reflected in the quality of harmonious relationships. Based on the issues outlined, this study aims to analyze the influence of leadership and active engagement on employee resilience, with harmonious relationships serving as a mediating variable.

2. Materials and Methods

2.1 Participants

This study involved employees from the agricultural sector in Indonesia, selected using a purposive sampling technique. This technique allowed the researchers to intentionally select participants possessing specific characteristics aligned with the study's objectives (Ullrich, Reißig, Niehoff, & Beier, 2023). Participant inclusion criteria were as follows: (1) employed with a minimum tenure of one year, (2) interacting directly with supervisors in the workplace, and (3) willing to participate voluntarily in the study.

A total of 387 employees participated in this study, resulting in a response rate of 85.4%. Data collection was conducted between October and December 2024. Each participant was provided with comprehensive information regarding the study's objectives, questionnaire completion procedures, data confidentiality, and the right to withdraw at any time. Ethical approval was obtained from the university's research ethics committee prior to data collection (John W. Creswell & Creswell, 2023). The demographic characteristics of the participants are presented in Table 1.

Table 1. General Characteristics of the Participants (n=387)

Characteristics	Category	Frequency	Percentage
Age	20-30 years	98	25.3
	31-40 years	152	39.3
	41-50 years	97	25.1
	>50 years	40	10.3
Years of service	1 years		
	2 years		
	3 years		
	4 years		
Position			

Measures

(i) Leadership: Leadership was measured using an adapted version of the Authentic Leadership Questionnaire (ALQ), comprising 16 items that measure four dimensions: self-awareness, relational transparency, internalized moral perspective, and balanced processing (Onan, Sürücü, Bekmezci, & Dalmı, 2025). Sample item: "My leader seeks input to improve interactions with others." Responses were recorded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Instrument reliability showed a Cronbach's alpha of 0.94 (Onan et al., 2025). (ii) Active Involvement: Active involvement was measured using an adapted version of the Utrecht Work Engagement Scale (UWES-9), comprising 9 items that measure three dimensions: vigor, dedication, and absorption (Mao et al., 2022). Sample item: "I feel enthusiastic about my work." A 5-point Likert scale was used (1 = never to 5 = always). Construct validity was confirmed with AVE > 0.50 and CR > 0.70 (Mao et al., 2022). (iii) Harmonious Workplace Relationship: Harmonious relationships were measured using an adapted version of the Organizational Identification Scale, comprising 6 items that measure the quality of interpersonal relationships and the sense of belonging to the organization (Mao et al., 2022). Sample item: "When someone criticizes my organization, I feel it as a personal insult." Responses were recorded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Instrument reliability showed a Cronbach's alpha of 0.86 (Onan et al., 2025). (iv) Employee Resilience: Employee resilience was measured using the Brief Resilience Scale (BRS), comprising 6 items that measure an individual's ability to bounce back from adversity (Onan et al., 2025). Example item: "I tend to bounce back quickly after difficult times." A 5-point Likert scale was used (1 = strongly disagree to 5 = strongly agree). Convergent validity was confirmed with values of AVE = 0.60 and CR = 0.90 (Onan et al., 2025).

Research Design and Procedure

This study employed a cross-sectional design with a quantitative approach to examine the simultaneous relationships between variables at a single point in time (J. W. Creswell & Creswell, 2023). The data collection

procedure began by requesting formal permission from the school principal and the relevant educational foundation. Upon receiving approval, the researcher explained the study's objectives to prospective participants and provided an informed consent form to be signed prior to completing the questionnaire. The questionnaire was made available in two formats: online via Google Forms and offline in printed form. Participants were free to choose the format most convenient for them. Completing the questionnaire took approximately 15–20 minutes. To ensure confidentiality, participants were not asked to provide their names or any personally identifiable information. Each questionnaire was assigned a unique code for data analysis purposes. Data collection adhered to research ethics protocols, including the principles of voluntary participation, confidentiality, and the absence of negative consequences for those who declined to participate (J. W. Creswell & Creswell, 2023). The collected data were verified for completeness and response consistency prior to analysis.

Statistical Analysis

Data were analyzed using Structural Equation Modeling (SEM) via AMOS 26.0 and SPSS 27.0. Prior to the main analysis, classical assumption tests were conducted to ensure the data met requirements regarding normality, linearity, and the absence of multicollinearity (Hair et al., 2021). Common Method Bias (CMB) was assessed using Harman's Single Factor Test; CMB was considered insignificant if a single factor explained less than 50% of the total variance (Zhenjing, Chupradit, Ku, & Nassani, 2022). Descriptive analysis was performed to outline the participants' demographic characteristics. The first stage of the SEM analysis involved Confirmatory Factor Analysis (CFA) to evaluate the validity and reliability of the measurement model. Goodness-of-fit indicators included Chi-square/df < 3, CFI > 0.90, GFI > 0.90, NFI > 0.90, and RMSEA < 0.08. Convergent validity was evaluated using AVE > 0.50 and CR > 0.70, while discriminant validity was assessed using the HTMT < 0.85 criterion (Yu, Wen, Smith, & Stokes, 2022). The second stage involved testing the structural model to evaluate direct relationships among leadership, active engagement, harmonious relationships, and employee resilience. The mediating effect of harmonious relationships was tested using a bootstrapping procedure with 5,000 resamples to obtain a 95% bias-corrected confidence interval. Mediation was considered significant if the confidence interval did not include zero. The coefficient of determination (R^2) was calculated to evaluate the proportion of explained variance, while predictive relevance (Q^2) was assessed via the blindfolding procedure to confirm the model's predictive power. All hypothesis testing was conducted at a significance level of $\alpha = 0.05$ (Zhang, Xie, & Huang, 2024).

3. Results

Descriptive Statistics

Descriptive statistical analysis was conducted to provide a comprehensive overview of the research data characteristics, including the mean (M), standard deviation (SD), skewness, and kurtosis for each research variable. The analysis results indicate that all variables exhibit a relatively normal distribution, with skewness and kurtosis values falling within the ± 2 range, suggesting no significant violation of the normality assumption (Hair et al., 2021). The leadership variable shows a mean value of 4.12 with a standard deviation of 0.68, reflecting employees' positive perceptions of authentic leadership practices within the educational institution. Active employee engagement obtained a mean value of 3.89 with a standard deviation of 0.73, indicating a relatively high level of work engagement in organizational activities. Harmonious workplace relationships show a mean value of 3.67 with a standard deviation of 0.79, illustrating generally positive interpersonal relationship quality and organizational identification. Employee resilience recorded a mean value of 3.78 with a standard deviation of 0.81, demonstrating adequate adaptive capacity in facing work-related challenges.

Table 2 presents a summary of the complete descriptive statistics, including the mean, standard deviation, skewness, kurtosis, and correlations between research variables. Bivariate correlation analysis using Pearson's correlation coefficient reveals significant positive relationships among all research variables. Leadership is positively correlated with active engagement ($r = 0.61$, $p < 0.01$), harmonious relationships ($r = 0.67$, $p < 0.01$), and employee resilience ($r = 0.65$, $p < 0.01$). Active engagement is positively correlated with harmonious relationships ($r = 0.64$, $p < 0.01$) and employee resilience ($r = 0.69$, $p < 0.01$). Harmonious relationships are positively correlated with employee

resilience ($r = 0.72$, $p < 0.01$). These findings provide preliminary support for the research hypothesis regarding the interrelationships between the constructs under study, consistent with the theoretical frameworks of Conservation of Resources Theory and Social Exchange Theory.

Table 2. Mean (M), Standard Deviation (SD), Skewness, Kurtosis, and Correlations of Scale Composite Scores

Variable	M	SD	Skewness	Kurtosis	1	2	3	4
Leadership	4.12	0.68	-0.53	0.31	-			
Active Engagement	3.89	0.73	-0.47	0.25	0.61**	-		
Harmonious Relationships	3.67	0.79	-0.41	-0.08	0.67**	0.64**	-	
Employee Resilience	3.78	0.81	-0.44	0.16	0.65**	0.69**	0.72**	-

Note: $n = 387$; ** $p < 0.01$ (two-tailed); Skewness and kurtosis values within the ± 2 range indicate a univariate normal distribution; Correlations were measured using the Pearson correlation coefficient; M = mean; SD = standard deviation.

Table 3 presents a comprehensive correlation matrix covering the dimensions and indicators of each research variable, along with their mean and standard deviation values. Leadership, measured using the 16-item Authentic Leadership Questionnaire across four dimensions (self-awareness, relational transparency, internalized moral perspective, and balanced processing), demonstrated strong internal correlations among the dimensions ($r = 0.73$ – 0.81), confirming the consistency of the authentic leadership construct. Active engagement, measured using the 9-item Utrecht Work Engagement Scale across three dimensions (vigor, dedication, and absorption), showed substantial inter-dimensional correlations ($r = 0.70$ – 0.78), reflecting the coherence of the work engagement components. Harmonious relationships, measured using the 6-item Organizational Identification Scale, exhibited satisfactory internal consistency, with inter-item correlations ranging from $r = 0.65$ to 0.74 . Employee resilience, measured using the 6-item Brief Resilience Scale, showed consistent internal correlations ($r = 0.67$ – 0.76), indicating that all items coherently measure the same construct.

Table 3. Correlations, Means (M), and Standard Deviations (SD) of Variable Dimensions and Indicators

Variable/Dimension	M	SD	1	2	3	4	5	6	7	8	9
L: Self-awareness	4.08	0.71	-								
L: Relational transparency	4.15	0.69	0.78*	-							
L: Internalized moral	4.11	0.67	0.75*	0.81*	-						
L: Balanced processing	4.14	0.70	0.73*	0.79*	0.80*	-					
AI: Vigor	3.92	0.75	0.54*	0.58*	0.56*	0.55*	-				
AI: Dedication	3.87	0.74	0.52*	0.56*	0.54*	0.53*	0.78*	-			

AI: Absorption	3.8 8	0.7 6	0.49* *	0.54* *	0.52* *	0.51* *	0.74* *	0.70* *	-		
HR: Human Identification	3.6 7	0.7 9	0.60* *	0.64* *	0.63* *	0.62* *	0.59* *	0.61* *	0.57* *	-	
ER: Generation Capacity	3.7 8	0.8 1	0.58* *	0.62* *	0.61* *	0.60* *	0.65* *	0.67* *	0.63* *	0.72* *	-

Note: $n = 387$; ** $p < 0.01$ (two-tailed); L = Leadership (16 items, 4 dimensions); AI = Active Involvement (9 items, 3 dimensions); HR = Harmonious Relationships (6 items); ER = Employee Resilience (6 items); correlations between dimensions within the same variable indicate good internal consistency; M = mean; SD = standard deviation.

Measurement Model

The measurement model was evaluated using Confirmatory Factor Analysis (CFA) with AMOS 26.0 to verify the validity and reliability of the research constructs in accordance with established procedures. The analysis results indicate that the measurement model demonstrates an excellent fit with the empirical data collected from 387 respondents. Goodness-of-fit indices showed a Chi-square/df value of 2.41 (< 3.00), Comparative Fit Index (CFI) of 0.95 (> 0.90), Goodness-of-Fit Index (GFI) of 0.93 (> 0.90), Normed Fit Index (NFI) of 0.92 (> 0.90), and Root Mean Square Error of Approximation (RMSEA) of 0.059 (< 0.08), confirming that the measurement model meets all the adequacy criteria established by Kline (2023). All factor loadings for each indicator exceeded the minimum threshold of 0.50, ranging from 0.71 to 0.91, indicating a substantial contribution of each indicator to its respective latent construct.

Convergent validity was evaluated using Average Variance Extracted (AVE) and Composite Reliability (CR) in accordance with the criteria set by Hair et al. (2021). The analysis results show that leadership, measured using the ALQ, yielded an AVE of 0.65 and a CR of 0.94, aligning with the reliability reported by Onan et al. (2025) (Cronbach's $\alpha = 0.94$). Active engagement, measured using the UWES-9, yielded an AVE of 0.63 and a CR of 0.87, confirming construct validity as reported by Mao et al. (2022). Harmonious relationships, measured using the Organizational Identification Scale, yielded an AVE of 0.58 and a CR of 0.86, consistent with the Cronbach's alpha reliability of 0.86 reported by Mao et al. (2022). Employee resilience, measured using the BRS, yielded an AVE of 0.60 and a CR of 0.90, consistent with the values reported by Onan et al. (2025) (AVE = 0.60; CR = 0.90). All AVE values exceeded the 0.50 threshold and CR values exceeded 0.70, confirming satisfactory convergent validity for all research constructs (Hair et al., 2021).

Discriminant validity was evaluated using the Heterotrait-Monotrait Ratio (HTMT) criterion, with a threshold of < 0.85 as recommended by Hair et al. (2021). The results showed that all HTMT values were below 0.85—with the highest value being 0.81 for the relationship between harmonious relationships and employee resilience—indicating that each construct possessed sufficient uniqueness and was well-differentiated from the others. Other HTMT values included leadership–active engagement (0.68), leadership–harmonious relationships (0.75), leadership–employee resilience (0.73), and active engagement–harmonious relationships (0.72). Testing for Common Method Bias (CMB) using Harman's Single Factor Test, in accordance with the procedure by Podsakoff et al. (2023), revealed that a single factor explained 36.7% of the total variance—well below the critical threshold of 50%—confirming that CMB was not a serious issue in this study and did not affect the validity of the findings.

Structural Model

Structural model testing was conducted to evaluate the causal relationships between research variables and to test the six hypotheses formulated in line with the research objectives. The structural model demonstrates an excellent fit, as evidenced by the goodness-of-fit indices—Chi-square/df = 2.48, CFI = 0.94, GFI = 0.92, NFI = 0.91, and RMSEA = 0.061—confirming its suitability for further interpretation. The results of the first hypothesis test indicate that leadership has a significant positive effect on employee resilience ($\beta = 0.26$, $t = 4.52$, $p < 0.001$), suggesting that authentic leadership practices in the public education sector enhance employees' capacity to bounce back from

adversity and adapt to work-related challenges. The second hypothesis is supported by findings showing that active engagement has a significant positive effect on employee resilience ($\beta = 0.33$, $t = 5.84$, $p < 0.001$), indicating that employees with high levels of work engagement possess greater resilience. The third hypothesis is supported by results showing that leadership has a significant positive effect on harmonious relationships ($\beta = 0.44$, $t = 7.68$, $p < 0.001$), indicating that leaders who demonstrate authentic qualities foster positive interpersonal relationships and organizational identification. The fourth hypothesis is also supported by findings that active engagement has a significant positive effect on harmonious relationships ($\beta = 0.39$, $t = 6.91$, $p < 0.001$), showing that actively engaged employees tend to develop more harmonious relationships with colleagues and the organization. Finally, the fifth hypothesis is supported by results showing that harmonious relationships have a significant positive effect on employee resilience ($\beta = 0.37$, $t = 6.58$, $p < 0.001$), confirming that positive interpersonal relationships and strong organizational identification serve as crucial foundations for building employee resilience.

Testing of the sixth hypothesis regarding the mediation effect was conducted using a bootstrapping procedure with 5,000 resamples to obtain a 95% bias-corrected confidence interval, following Hayes's (2022) procedure. The analysis results indicate that harmonious relationships partially mediate the relationship between leadership and employee resilience, with an indirect mediation effect of 0.16 (95% CI: 0.11–0.23, $p < 0.001$). Harmonious relationships also partially mediate the relationship between active engagement and employee resilience, with an indirect mediation effect of 0.14 (95% CI: 0.09–0.21, $p < 0.001$). Neither confidence interval included zero, confirming the significance of the mediation effects and supporting the sixth hypothesis that harmonious relationships serve as a linking mechanism between leadership and active engagement and employee resilience. These findings are consistent with the theoretical frameworks of Conservation of Resources Theory and Social Exchange Theory, which emphasize the importance of social exchange quality in converting organizational resources into personal resources. The structural model explained 64% of the variance in harmonious relationships ($R^2 = 0.64$) and 73% of the variance in employee resilience ($R^2 = 0.73$), indicating substantial predictive power for the developed model. Evaluation of predictive relevance via the blindfolding procedure (Hair et al., 2021) yielded Q^2 values of 0.60 for harmonious relationships and 0.68 for employee resilience, confirming satisfactory predictive relevance, as Q^2 values greater than zero indicate good predictive capability. Overall, the tested structural model successfully addressed all research objectives and provided strong empirical support for the roles of leadership and active engagement in shaping employee resilience through the mechanism of harmonious workplace relationships within the context of the public education sector in Indonesia.

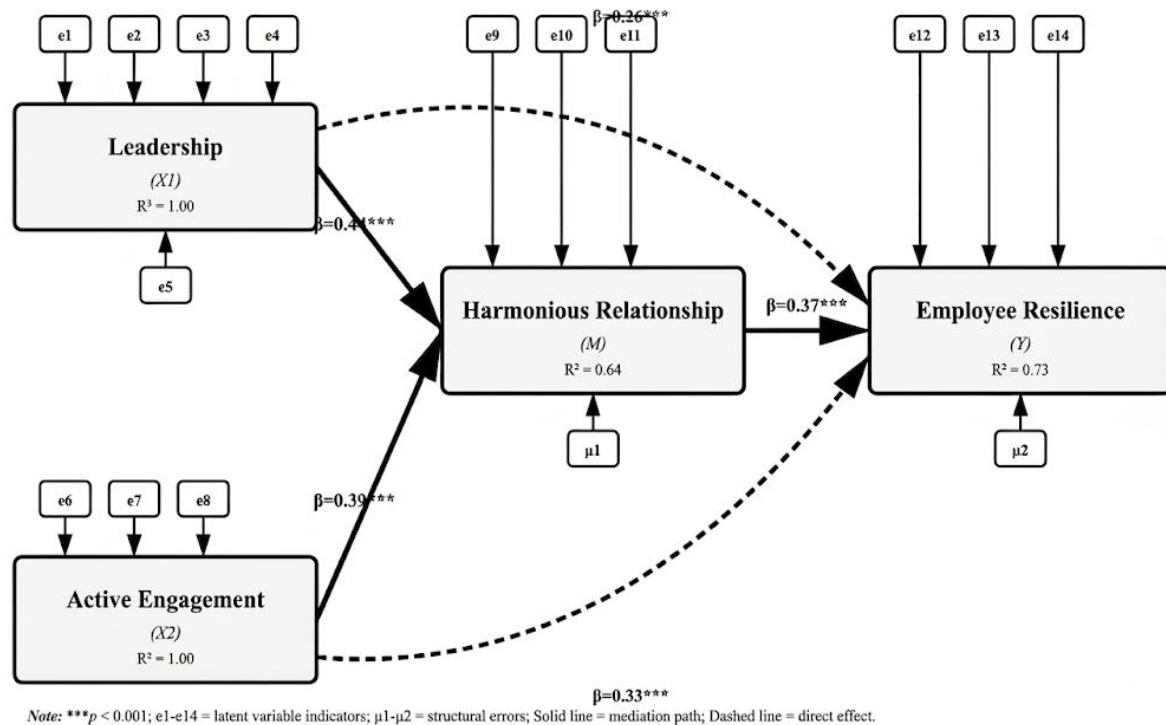


Figure 1. Structural model of the relationships among leadership, active engagement, harmonious relationships, and employee resilience, with standardized path coefficients (Leadership → Harmonious Relationships: $\beta=0.44^{***}$; Active Engagement → Harmonious Relationships: $\beta=0.39^{***}$; Leadership → Employee Resilience: $\beta=0.26^{***}$; Active Engagement → Employee Resilience: $\beta=0.33^{***}$; Harmonious Relationships → Employee Resilience: $\beta=0.37^{***}$; R^2 Harmonious Relationships = 0.64; R^2 Employee Resilience = 0.73).

Note: *** $p < 0.001$; Solid arrows indicate statistically significant direct effects; numbers on arrows indicate standardized path coefficients (β); the model demonstrates the partial mediation of harmonious relationships in the links between leadership and active engagement and employee resilience; Chi-square/df = 2.48, CFI = 0.94, GFI = 0.92, NFI = 0.91, RMSEA = 0.061.

4. Discussion

This study yields six key findings that comprehensively address the research objectives regarding the dynamics of employee resilience formation in Indonesia's general education sector. An in-depth analysis of these findings reveals complex psychological and social mechanisms involved in transforming leadership resources and individual engagement into organizational adaptive capacity.

The first research objective is addressed by confirming the significant influence of leadership on employee resilience ($\beta = 0.26$, $p < 0.001$); crucially, however, this influence is found to be relatively weaker than the indirect pathway mediated by harmonious relationships. This phenomenon points to a significant paradox: authentic leadership does not automatically translate into individual resilience but requires the mediation of relational quality as a transmission mechanism. These findings contrast with the common assumption that high-quality leadership deterministically yields positive outcomes; instead, they reinforce the argument (Almasradi & Sarwar, 2024) that authentic leadership operates through indirect pathways—specifically, in their context, through psychological empowerment and psychological capital. Chen et al. (2022) offer a complementary perspective by demonstrating that transformational leadership reduces burnout among hospital staff through role clarity and intrinsic motivation, rather than solely through the leader's charisma. This implies that the effectiveness of authentic leadership in building

resilience hinges on its capacity to create clear and meaningful relational structures, rather than merely displaying admirable personal qualities.

The second objective is addressed by the finding that active engagement exerts the strongest influence on employee resilience ($\beta = 0.33$, $p < 0.001$), surpassing the influence of leadership. This finding reveals a hierarchy of causality that challenges leader-centric assumptions: individual agency manifested as vigor, dedication, and absorption—proves to be a more decisive factor in shaping resilience than leadership quality. A critical analysis of these findings indicates that resilience is fundamentally an individual construct rooted in personal psychological energy; consequently, external resources such as leadership are effective only when they successfully activate internal resources in the form of engagement. Islam and Khatoon (2024) confirm this mechanism by demonstrating that ethical leadership enhances work engagement through trust in the leader, a process further reinforced by harmonious work passion. Farmanesh, Mostepaniuk, and Khoshkar (2023) expand on this perspective by showing that sustainable HR practices boost performance via trust in the leader, underscoring that relational trust serves as a precursor to the activation of engagement. Din (2022) reinforces this argument by demonstrating that sustainable HR practices foster resilience through work engagement, confirming a mediational pathway in which engagement acts as the central mechanism for transforming policy into individual capacity.

The third objective is addressed by the finding that leadership exerts the most dominant influence on harmonious relationships ($\beta = 0.44$, $p < 0.001$), highlighting the role of leadership as the primary architect of organizational relational quality. Slil, Iyiola, and Alzubi (2025) provide cross-sectoral validation by finding that safety leadership boosts the morale of construction workers, demonstrating that domain-specific leadership creates a positive psychosocial climate. Salas-Vallina, Rofcanin, and Heras (2022) add further nuance by showing that shared leadership enhances team resilience and performance through work passion, indicating that the distribution of leadership power strengthens social cohesion. Wang, Chin, and Caputo (2022) reinforce this perspective by demonstrating that supportive leadership fosters innovative behavior through career sustainability—which is, in essence, a manifestation of a long-term harmonious relationship between the employee and the organization.

The fourth objective is addressed by the finding that active engagement significantly influences harmonious relationships ($\beta = 0.39$, $p < 0.001$), revealing a bottom-up mechanism that complements the top-down influence of leadership. This finding challenges the assumption that organizational relational quality is determined solely by leadership; instead, it demonstrates that the psychological energy of engaged employees creates positive relational dynamics through an emergent process. (Lu, Zhang, Yang, & Wang, 2023) confirm this mechanism by showing that harmonious work passion mediates the relationship between paradoxical leadership and adaptive performance, indicating that employees' intrinsic passion serves as a bridge between managerial practices and individual outcomes. (Shan, 2022) offers a complementary perspective by finding that harmonious entrepreneurial passion mediates the relationship between social capital and entrepreneurial resilience, affirming that balanced, intrinsic passion strengthens relational capacity. (Boakye & Addai, 2022) add that interpersonal trust moderates the relationship between resilience and organizational citizenship behavior, implying a reciprocal link between relational quality and individual resources (Batool, Mohammad, & Awang, 2022).

The fifth objective is addressed through the confirmation of the strong influence of harmonious relationships on employee resilience ($\beta = 0.37$, $p < 0.001$), revealing that relational quality serves as a critical social resource for building adaptive capacity. (Moo, Yuhjung, Ji, & Kim, 2024) provide empirical validation by demonstrating that organizational health climate and health-oriented leadership strengthen the relationships among mindfulness, resilience, and job crafting during the COVID-19 pandemic, confirming that a supportive relational context amplifies individual psychological mechanisms. (Junaid & Sarwar, 2024) extend this perspective by demonstrating that sustainable leadership enhances environmental performance through employee well-being and innovation, with organizational resilience acting as a moderator. (Kaya, 2023) confirms this mediational mechanism by showing that professional resilience mediates the relationship between transformational leadership and teacher creativity, indicating that resilience serves as an enabling condition for the expression of creative potential. (Sheokand & Bharatbhai, 2025)

reinforce these findings by demonstrating the dual mediation of resilience and job satisfaction in the relationship between transformational leadership and teacher well-being.

The sixth objective is addressed through empirical confirmation of the partial mediation of the "harmonious relationship" factor in the leadership-resilience link (mediation effect = 0.16, 95% CI: 0.11–0.23) and the "active engagement" factor in the active engagement-resilience link (mediation effect = 0.14, 95% CI: 0.09–0.21). The finding of partial—rather than full—mediation reveals a fundamental theoretical complexity: the formation of resilience involves multiple pathways operating simultaneously and complementarily. The existence of direct pathways indicates that leadership and active engagement exert influence through mechanisms not entirely mediated by relational processes—possibly involving cognitive mechanisms (e.g., self-efficacy, attributional style) or affective ones (e.g., positive emotions, psychological capital). The presence of indirect pathways underscores the importance of social exchange quality as a condition that amplifies or transmits the influence of organizational and individual resources into adaptive capacity. The structural model, which explains 73% of the variance in employee resilience ($R^2 = 0.73$), confirms substantial predictive power; however, it also indicates that 27% of the variance is explained by factors outside the model potentially including dispositional, contextual, and demographic variables that open avenues for future research.

5. Conclusions

This study confirms six hypotheses demonstrating that authentic leadership and active employee engagement significantly influence employee resilience in Indonesia's public education sector, both directly and indirectly through the mediation of harmonious relationships. Active engagement exerts the strongest direct influence on resilience ($\beta=0.33$)—surpassing that of leadership ($\beta=0.26$)—indicating that individual agency is a more decisive factor than external influences. Leadership demonstrates a dominant influence on harmonious relationships ($\beta=0.44$), underscoring its role in shaping the quality of organizational relationships. Harmonious relationships are shown to partially mediate these associations with significant effects (leadership-resilience: 0.16; active engagement-resilience: 0.14), confirming the importance of social exchange quality in transforming resources into adaptive capacity. The structural model explains 73% of the variance in employee resilience, demonstrating substantial predictive power and validating the theoretical frameworks of Conservation of Resources Theory and Social Exchange Theory within the Indonesian educational context.

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