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Mediating Role of Work-Place-Harmony on Emotional Exhaustion and Employees' Performance at Federal University Dutsin-Ma, Katsina State

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Abstract

Employee performance remains a critical determinant of organizational sustainability; however, it is increasingly undermined by rising levels of burnout within higher education institutions. This study examined the mediating role of workplace harmony in the relationship between emotional exhaustion and employee performance at the Federal University Dutsin-Ma, Katsina State. The study population comprised 3,600 employees, from which a purposive sample of 351 respondents was drawn to obtain insights from individuals directly exposed to work-related stressors. Data was gathered through a structured questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results revealed that emotional exhaustion exerted a significant negative effect on both workplace harmony and employee performance. Conversely, workplace harmony had a positive and significant effect on performance and partially mediated the relationship between emotional exhaustion and performance. The study concludes that workplace harmony serves as a strategic organizational resource that can buffer the adverse effects of emotional exhaustion on employee outcomes. Accordingly, it is recommended that management prioritize initiatives that foster harmonious work environments and implement comprehensive burnout management programs to sustain optimal employee performance.

Keywords: Workplace harmony, emotional exhaustion, employee performance, burnout, mediation

1. Introduction

Employee performance is essential to the growth and sustainability of academic institutions, particularly in developing economies with limited resources and high expectations (Demerouti & Bakker, 2023). Globally, declining employee performance has been linked to workplace stress and emotional exhaustion, key components of burnout (Maslach et al., 2021). Gallup (2023) reports that 76% of employees' experience burnouts at least sometimes, while 28% experience it frequently, leading to reduced productivity, commitment, and institutional effectiveness. In higher education, burnout weakens staff engagement in teaching, research, and administration, threatening educational quality and institutional reputation (Amer et al., 2022).

In Nigeria, burnout is a persistent challenge in public universities, driven by excessive workloads, poor support, industrial disputes, and low remuneration (Salau et al., 2020). The National Bureau of Statistics (2023) attributes declining university productivity to psychological strain and low morale. Northern Nigerian universities face even greater stressors such as

insecurity, cultural barriers, and administrative inefficiencies. Bello and Ahmed (2021) found that over 60% of staff in the region experience moderate to high burnout, leading to disengagement and low performance.

Burnout is a psychological response to prolonged work-related stress, comprising emotional exhaustion, depersonalization, and reduced accomplishment (Maslach et al., 2021). Emotional exhaustion, the feeling of being drained and overextended, reduces motivation and energy for effective performance (Demerouti et al., 2023). In universities, it limits staff capacity to teach large classes, conduct research, manage administrative duties, and pursue career development (Egbuta & Ibrahim, 2022). Consequently, it leads to absenteeism, reduced productivity, and poor service delivery (Adamu & Umar, 2022).

Although burnout's negative impact on performance is well established, few Nigerian studies have focused specifically on emotional exhaustion. Most have addressed general workplace stress while overlooking how exhaustion affects efficiency, creativity, collaboration, and teaching quality (Salau et al., 2020). Also neglected is the potential mediating role of workplace harmony, the extent of cooperation, mutual respect, and supportive relationships among employees. Workplace harmony fosters positive interactions and collective morale, which can buffer the effects of emotional exhaustion. In academic settings, such harmony is vital for effective collaboration and institutional performance.

To address this gap, this study investigates the mediating role of workplace harmony on the relationship between emotional exhaustion and employee performance at the Federal University Dutsin-Ma, Katsina State. The findings will offer insights to promote harmony, alleviate psychological strain, and enhance performance in Nigerian universities.

Practically, the study provides guidance for improving organizational climate and human resource practices. Understanding how workplace harmony mitigates exhaustion will assist management in designing wellness programs, conflict management strategies, and leadership interventions that foster collegiality and respect. It will also inform policymakers on developing sustainable staff support systems aligned with Nigeria's broader goal of improving higher education quality and competitiveness.

1.1 Research Questions

This study was guided by the following research questions:

i. How does emotional exhaustion significantly relate to employee performance at the Federal University Dutsin-Ma, Katsina State?
ii. How does emotional exhaustion significantly relate to workplace harmony at the Federal University Dutsin-Ma, Katsina State?
iii. How does workplace harmony significantly relate to employee performance at the Federal

University Dutsin-Ma, Katsina State?

iv. How does workplace harmony mediate the relationship between emotional exhaustion and employee performance at the Federal University Dutsin-Ma, Katsina State?

2. Literature Review

This section provides a review of literature related to employees' performance, workplace harmony and emotional exhaustion.

2.1 Concept of employees' performance

Employee performance is the extent to which individuals effectively fulfill responsibilities, meet organizational goals, and contribute to overall success (Kibaru & Karanja, 2022). It covers task completion, innovation, efficiency, collaboration, and adherence to standards, reflected in both qualitative and quantitative outcomes such as work quality, punctuality, teamwork, and service delivery (Adeola & Ogunyomi, 2023). Scholars categorize performance into task performance, contextual performance, and counterproductive work behavior (Bashir & Mahmood, 2022; Koopmans et al., 2014). In academic contexts, it includes effective teaching, impactful research, administrative efficiency, and student engagement (Alhassan & Suleiman, 2022). For this study, employee performance is defined as the ability of academic and non-academic staff at Federal University Dutsin-Ma to meet institutional expectations in efficiency, role commitment, collaboration, and service delivery, especially under conditions of burnout.

2.2 Emotional Exhaustion (EE)

Emotional exhaustion refers to the depletion of emotional and physical resources caused by prolonged exposure to workplace stressors (Schaufeli & Taris, 2021). This state of exhaustion is considered the central component of burnout, reflecting feelings of being emotionally drained and a lack of energy due to excessive work demands (Maslach & Leiter, 2022). It manifests as chronic fatigue, which negatively impacts both cognitive and emotional functioning in professional environments (Khan et al., 2023). As a result, individuals experiencing emotional exhaustion find it increasingly difficult to recover, even with rest, leading to a continuous cycle of weariness (Lee et al., 2023). For this study, emotional exhaustion is chronic fatigue, which negatively impacts both cognitive and emotional functioning in professional environments.

2.3 Workplace Harmony (WPH)

Workplace harmony refers to the balance and positive interactions among employees that foster respect, inclusion, and understanding, thereby enhancing job satisfaction and performance. It encompasses mutual respect, open communication, and shared goals that promote cooperation, psychological safety, and organizational effectiveness (Focuskeeper, 2024; Sustainability Directory, 2025; BS Journal, 2025). Scholars highlight it as a dynamic property shaped by justice, reciprocal contracts, and inclusivity through active listening, which sustains collaboration, trust, and team motivation (SuperStaff, 2025; StudySmarter, 2024). Ultimately,

workplace harmony serves as a cornerstone of organizational success by reducing conflict, fostering engagement, and promoting well-being (Peaceful Leaders Academy, 2025). For this study, workplace harmony is conceptualized as the balance and positive interactions among employees that cultivate respect, inclusion, and understanding to enhance satisfaction and performance.

2.3 Review of empirical studies

2.4.1 Burnout and Employees' Performance

Empirical evidence consistently shows that emotional exhaustion negatively affects employee performance across diverse contexts. Zhang and Li (2023) found that emotional exhaustion significantly reduced task and contextual performance among healthcare workers in China, while Yusuf et al. (2023) reported similar effects on teaching and research output among Nigerian academics. Studies in logistics (Morales & Rivera, 2023), nursing (Tanaka & Fujimoto, 2023), and university administration (Ibrahim et al., 2022) likewise highlight how emotional exhaustion undermines efficiency, communication, and service delivery. Research from South Korea, Kenya, Portugal, and India further confirms its adverse impact on creativity, absenteeism, customer satisfaction, and service quality (Lee & Park, 2022; Martins & Costa, 2022; Singh et al., 2022; Wambui & Njoroge, 2022). In Nigeria, findings among civil servants and bank employees also show burnout's detrimental effects on motivation and performance (Ogunleye & Dauda, 2022; Okoro & Aniekan, 2022).

A review of empirical studies reveals key gaps in existing research. Most prior works on burnout and employee performance were conducted outside Nigeria, limiting contextual relevance, particularly for Katsina State (Ibrahim et al., 2022; Yusuf et al., 2023). Research attention has also centered on sectors such as healthcare, banking, and public administration, with minimal focus on education. Moreover, earlier studies often examined burnout as a multidimensional construct, overlooking the distinct effect of emotional exhaustion. This study addresses these gaps by isolating emotional exhaustion and assessing the mediating role of workplace harmony in its relationship with employee performance in Nigeria's academic context.

2.4.2 Workplace Harmony and Employees' Performance

Evidence across contexts highlights workplace harmony as a critical driver of employee performance. Mohamed et al. (2024) showed that positive employer–employee relationships in Somali universities significantly enhanced job satisfaction and performance, while Çivilidağ and Durmaz (2024) found flexible work arrangements at Akdeniz University to positively influence productivity. In the U.S., Ambade et al. (2024) validated the Augusta Scale, demonstrating that work-life harmony improves well-being and, in turn, performance. Within Nigeria, Ozoekwe and Konya (2021) confirmed that organizational harmony fosters academic productivity, while their earlier study (2020) emphasized leadership emotional intelligence as a key enabler of harmony in manufacturing firms. Similarly, Adim et al. (2025) linked industrial harmony in the food and

beverage sector to long-term performance gains.
Taken together, these studies show that harmonious workplace relationships grounded in mutual respect, collaboration, and effective communication directly enhance performance and indirectly do so through job satisfaction and well-being (Adim et al., 2025 & Mohamed et al., 2024; Leadership competencies and supportive organizational practices further reinforce harmony, making it a cornerstone of sustained motivation, productivity, and organizational success (Ambade et al., 2024; Ozoekwe & Konya, 2020).

2.4.3 Mediating Role of Workplace Harmony on Burnout and Employees' Performance

The mediating role of workplace harmony between motional exhaustion and performance is supported by both theory and evidence. The Job Demands–Resources (JD–R) model posits those positive relationships and supportive climate key elements of workplace harmony help buffer the adverse effects of burnout by sustaining motivation and performance (Silva et al., 2023). Similarly, Conservation of Resources (COR) theory suggests that harmonious interactions provide social and emotional resources that mitigate strain, replenish energy, and maintain productivity under demanding conditions (Hobfoll & Shirom, 2000).

Furthermore, empirical studies reinforce these arguments, showing that social support, organizational trust, and collaboration mediate the relationship between stressors and outcomes. For example, work engagement and job satisfaction partially mediate burnout's effect on performance, with harmony strengthening these mechanisms (Frontiers in Education, 2024; Silva et al., 2023). Evidence also links supportive work environments to enhanced commitment and achievement striving, which translate into higher performance (PMC, 2022).

In sum, positioning workplace harmony as a mediator is both theoretically consistent and empirically validated. It provides a robust explanatory pathway through which the negative impact of burnout can be alleviated, preserving and enhancing employee performance.

2.5 Theoretical Review

This study draws on four complementary perspectives, the Job Demands–Resources (JD–R) model, Conservation of Resources (COR) theory, Affective Events Theory (AET), and Maslach's Burnout Theory (MBT) to justify workplace harmony as a mediator between emotional exhaustion and employee performance.

2.5.1 Job Demands–Resources (JD–R) Model

The Job Demands–Resources (JD–R) model, developed by Demerouti and Bakker (2023), posits that performance depends on the balance between job demands (e.g., workload, emotional exhaustion) and job resources (e.g., social support, positive relationships). Excessive demands cause burnout and performance decline, while workplace harmony functions as a job resource that buffers strain, sustains motivation, and promotes engagement (Silva et al., 2024).

2.5.2 Conservation of Resources (COR) Theory

COR theory emphasizes that burnout arises when valued resources are lost or threatened (Hobfoll, 1989). Workplace harmony provides relational and emotional resources that conserve energy, reduce interpersonal conflict, and build a cooperative climate, thereby protecting employees from depletion and maintaining performance.

2.5.3 Affective Events Theory (AET)

AET by (Weiss & Cropanzano, 1996), explains how workplace events trigger emotional responses that shape behavior Harmony generates positive emotions such as trust and satisfaction, which counter burnout-related negativity, enhance resilience, and sustain performance even under high demands.

2.5.4 Maslach's Burnout Theory (MBT)

MBT conceptualizes burnout as emotional exhaustion, depersonalization, and reduced accomplishment (Maslach et al., 2001). Harmony mitigates these dimensions by fostering trust, reducing cynicism, and enhancing competence, thereby limiting burnout's negative impact on performance.

Together, these theories converge on harmony as a mediator: JD–R positions it as a job resource, COR as a reservoir against depletion, AET as a source of positive affect, and MBT as a counterbalance to burnout's dimensions. Through replenishing resources, reducing strain, and fostering positive emotions, workplace harmony enables employees to maintain performance despite burnout pressures. Empirical evidence supports this integrated view, showing harmony enhances engagement, satisfaction, and resilience in mediating the burnout–performance link (Frontiers in Education, 2024 & Silva et al., 2024).

3. Methodology

This study employed a cross-sectional descriptive survey design, which involves data collection at a single point in time. Such a design is suitable for systematically and factually describing a population without manipulating or controlling variables (Swain, 2008).

The study population comprised 3,600 academic and non-teaching staff of Federal University Dutsin-Ma, Katsina State, as obtained from the institution's Outlook mail (20th June 2025). Using Krejcie and Morgan's (1970) sample size determination table, a minimum of 351 respondents was required. To address possible non-response, 10% was added, yielding a final sample size of 386 (Israel, 1992). Purposive sampling was adopted to target staff who were physically present in offices and accessible via institutional WhatsApp groups. This non-probability method was considered appropriate given the difficulty of accessing a complete sampling frame and the impracticality of assembling all staff for random sampling (Olukotun at

al., 2023).

Primary data was collected through a structured questionnaire divided into four sections. Section A captured demographic information (e.g., gender, age, qualification, years of service), while Sections B–D measured the study's independent, mediating, and dependent variables. Attitudinal items were rated on a 5-point Likert scale ranging from "Strongly disagree" (1) to "Strongly agree" (5), chosen for its precision, ease of use, and analytical flexibility (Yusuf et al., 2024).

Data analysis involved both descriptive and inferential statistics. Descriptive analysis (frequencies and percentages) summarized respondents' characteristics, while PLS-SEM, conducted using SmartPLS 4 (Ringle et al., 2024), tested the direct and indirect effects of emotional exhaustion and workplace harmony on employee performance. SmartPLS 4 was employed due to its robustness in handling complex models with multiple latent constructs and its suitability for predictive and exploratory research.

The study employed standardized and validated scales to measure the core variables, ensuring accuracy and reliability. Employee burnout was assessed using the **Maslach Burnout Inventory (MBI)** developed by Maslach and Jackson (1981), focusing on **emotional exhaustion** through eight items. To measure **workplace harmony**, the six-item **Augusta Scale** developed by Ambade et al. (2024) was adopted. Finally, **employee performance** was measured using the **Individual Work Performance Questionnaire (IWPQ)** developed by Koopmans et al. (2014), which consists of nine items and provides a comprehensive assessment of performance dimensions.

4. Results and Discussion

Out of the 386 structured questionnaires distributed, **375 were retrieved**, representing a **97.2 percent response rate.** After careful screening, **360 responses** were deemed usable for analysis. This final sample size exceeds the **minimum threshold of 351** suggested by Krejcie and Morgan's (1970) sample size determination table. Hence, the 360 valid responses were considered adequate for the subsequent analysis and discussion.

4.1 Assessment of Measurement Model

The measurement model evaluation focused on reflective constructs, assessing composite reliability, convergent validity, and discriminant validity, consistent with Hair et al. (2024). Following Hulland (1999), indicators with loadings between 0.40 and 0.70 were considered for removal only if their exclusion improved the model's reliability or validity. In this study, WPH2 was removed to enhance the Average Variance Extracted (AVE) for workplace harmony. The results of the measurement model assessment are presented in Table 2.

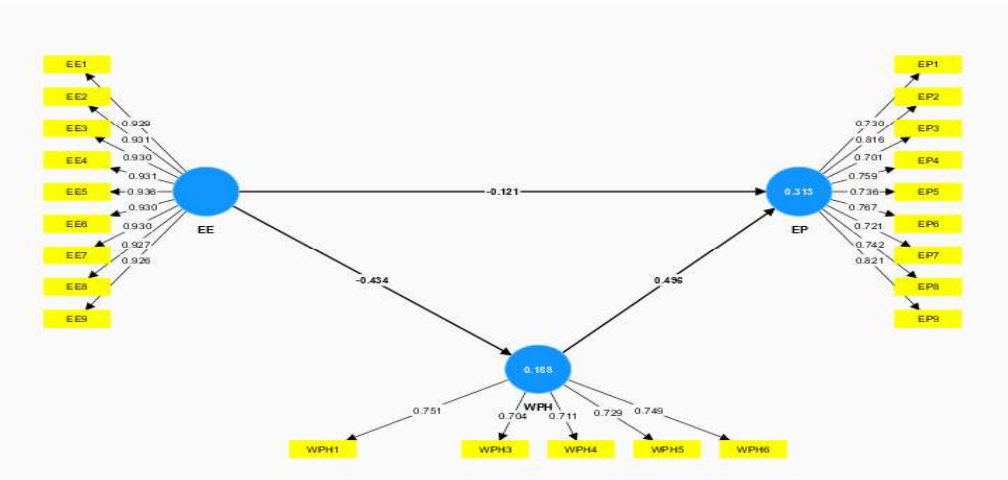

Figure: 1 PLS Path Model
Source: Authors computation (2025), using SmartPLS 4.0

4.1.1 Reliability and Validity Assessment

The reliability and validity of the reflective constructs, **Emotional Exhaustion (EE), Workplace Harmony (WPH), and Employees' Performance (EP),** were assessed following Hair et al. (2022). **Cronbach's alpha** evaluated internal consistency, while **Composite Reliability (CR)** and **rho_A** assessed construct reliability. **Convergent validity** was examined using the **Average Variance Extracted (AVE).** All indicators met the recommended thresholds of 0.70 for alpha, CR, and rho_A, and 0.50 for AVE (Fornell & Larcker, 1981; Hair et al., 2022). The results are presented in **Table 1**.

Table 1 Internal consistency, reliability and validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Variance Extracted (AVE)
EE	0.881	0.881	0.883	0.865
EP	0.806	0.808	0.823	0.571
WPH	0.780	0.784	0.750	0.531

Source: Authors computation (2025), using SmartPLS 4.0

The reliability of the measurement model was evaluated using Cronbach's Alpha, rho_A, Composite Reliability (CR), and Average Variance Extracted (AVE). As presented in Table 1 above, all constructs, Emotional Exhaustion (EE), Workplace Harmony (WPH), and Employees' Performance (EP), demonstrated strong reliability and validity. Cronbach's Alpha and rho_A values exceeded the recommended 0.70 threshold, confirming internal consistency. CR values were also above 0.70 for EE (0.883), EP (0.823), and WPH (0.750), indicating robust indicator reliability. Furthermore, AVE values surpassed the 0.50 benchmark (EE = 0.865; EP = 0.571; WPH = 0.531), establishing convergent validity. Collectively, these results confirm that the measurement model is both reliable and valid for subsequent analysis.

Table 2 Individual Item Reliability, Internal Consistency Reliability, Convergent Validity

		Convergent Validity			Internal Consistency Reliability		
Latent Variable	**Indicators**	**Loadings**	**Indicator Reliability**	**AVE**	**Cronbach's Alpha**	**Reliability**	**Composite Reliability**
EE	EE1	0.929	0.863	0.865	0.881	0.881	0.883
	EE2	0.931	0.867				
	EE3	0.930	0.865				
	EE4	0.931	0.867				
	EE5	0.936	0.876				
	EE6	0.930	0.865				
	EE7	0.930	0.865				
	EE8	0.927	0.859				
	EE9	0.926	0.857				
EP	EP1	0.730	0.533	0.571	0.806	0.808	0.823
	EP2	0.816	0.667				
	EP3	0.701	0.491				
	EP4	0.759	0.576				
	EP5	0.736	0.542				
	EP6	0.767	0.588				
	EP7	0.721	0.520				
	EP8	0.742	0.551				
	EP9	0.821	0.674				
WPH	WHP1	0.751	0.564	0.531	0.780	0.784	0.750
	WHP3	0.704	0.496				
	WHP4	0.711	0.506				
	WHP5	0.729	0.531				
	WHP6	0.749	0.561				

Source: Authors computation (2025), using SmartPLS 4.0

4.1.2 Discriminant Validity

Discriminant validity ensures that constructs intended to be distinct are empirically different. In this study, it was evaluated using the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT).

Table 3 Discriminant validity Using Fornell and Lacker criterion

Construct	**EE**	**EP**	**WPH**
EE	**0.930**		
EP	-0.336	**0.756**	
WPH	-0.434	0.549	**0.729**

Source: Authors computation (2025), using SmartPLS 4.0

Discriminant validity was assessed using the Fornell–Larcker criterion. As shown in Table 3, the

square roots of the AVE for Emotional Exhaustion (0.930), Employees' Performance (0.756), and Workplace Harmony (0.729) all exceeded their respective inter-construct correlations. This confirms that each construct is empirically distinct, thereby establishing discriminant validity (Fornell & Larcker, 1981).

Table 4 Discriminant validity Using HTMT ratio

	EE	EP	WPH
EE			
EP	0.354		
WPH	0.493	0.642	

Source: Authors computation (2025), using SmartPLS 4.0

As shown in Table 4, the HTMT values between the constructs were below the threshold of 0.85, confirming discriminant validity (Henseler et al., 2015). To further validate this, the HTMT confidence interval bias-corrected method was applied using a 10,000-bootstrap procedure, with results presented in Table 5 (Hair et al., 2024).

Table 5 Discriminant validity Using HTMT ratio Confidence Interval Bias

Construct	Original Sample (O)	Sample Mean (M)	Bias	5.00%	95.00%
EP <-> EE	0.354	0.353	-0.001	0.252	0.437
WPH <-> EE	0.493	0.494	0.000	0.403	0.573
WPH <-> EP	0.642	0.641	-0.001	0.501	0.736

Source: Authors computation (2025), using SmartPLS 4.0

As shown in Table 5, the 95% confidence interval values (0.437, 0.573, 0.736) were all below the threshold of 0.85 at a 5% error probability. This confirms the discriminant validity of the constructs based on the HTMT criterion. With both reliability and validity established, the study proceeded to evaluate the structural model.

4.2 Assessment of Structural Model

The PLS-SEM structural model assessment evaluates the model's ability to explain variance in the dependent variables. After confirming reliability and validity, key metrics assessed include variance inflation factors (VIF) to detect collinearity, path coefficients, coefficients of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2) (Hair et al., 2022).

4.2.1 Exogenous Constructs Collinearity Assessment

According to Hair et al. (2024), the first step in assessing the structural model is to examine collinearity among predictor constructs, as presented in Table 6.

Table 6: Assessment of Exogenous Constructs

Path	VIF
EE -> EP	1.232
EE -> WPH	1.000
WPH -> EP	1.232

Source: Authors computation (2025), using SmartPLS 4.0

Table 6 presents the collinearity statistics for the predictor constructs. All VIF values fall below the conservative threshold of 3.3 (Kock, 2015), indicating that collinearity is not a concern in the structural model.

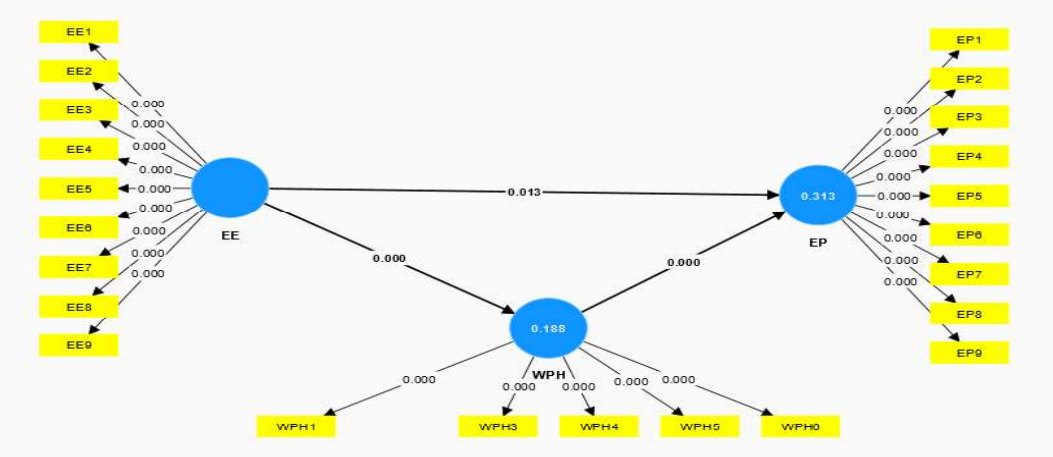

Figure 2: Bootstrapping (10,000) procedure showing P-values
Source: Authors computation (2025), using SmartPLS 4.0

4.2.2 Coefficients of Determination (R^2 Values)

The R^2 value, or coefficient of determination, indicates the proportion of variance in the dependent variable explained by the independent variables, reflecting the model's explanatory power. Higher values suggest stronger predictive ability. The results are presented in Table 7 below.

Table 7: Coefficients of Determination (R^2 values)

Construct	R Square	R-square adjusted
EP	0.313	0.309
WPH	0.188	0.186

Source: Authors computation (2025), using SmartPLS 4.0

The explanatory power of the model was evaluated using the coefficient of determination (R^2). As shown in Table 7, Employees' Performance (EP) recorded an R^2 of 0.313, indicating that

31.3% of its variance is explained by Emotional Exhaustion (EE) and the mediating effect of Workplace Harmony (WPH), while 68.7% is attributable to other factors. Similarly, WPH had an R^2 of 0.188, showing that it accounts for 18.8% of the variance in EP. The adjusted R^2 values (0.309 for EP and 0.186 for WPH) confirm that the model is not overfitted and remains robust.

According to Hair et al. (2024), R^2 values of 0.75, 0.50, and 0.25 indicate substantial, moderate, and weak explanatory power, respectively. Hence, the model demonstrates weak explanatory power. Nonetheless, consistent with Ozili (2022), an $R^2 \geq 0.10$ is acceptable when explanatory variables are statistically significant, suggesting that the observed R^2 values (0.313 and 0.188) fall within acceptable standards for management research.

4.2.3 Effect Size (F^2)

The f^2 statistic assesses the practical significance of each independent variable by examining the change in R^2 when the variable is excluded from the model. Following Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively. The results are presented in Table 8.

Table 8: Effect Size (F2)

Construct	Employees' Performance (EP)	Effect Size
EE -> EP	0.017	Small
EE -> WPH	0.232	Medium
WPH -> EP	0.291	Medium

Source: Authors computation (2025), using SmartPLS 4.0

Effect size (f^2) analysis assessed the contribution of each exogenous construct to Employees' Performance (EP). As shown in Table 8, Workplace Harmony (WPH → EP, $f^2 = 0.291$) demonstrated a medium effect, making it the strongest predictor of EP. Emotional Exhaustion (EE → WPH, $f^2 = 0.232$) also showed a medium effect, whereas EE → EP ($f^2 = 0.017$) had only a small effect.

4.2.4 Predictive Relevance (Q^2)

The PLS predict procedure was applied to assess the model's out-of-sample predictive power, consistent with PLS-SEM best practices (Hair et al., 2022; Shmueli et al., 2019;). All indicators of Employees' Performance (EP1–EP5) produced Q^2predict values greater than zero, ranging from 0.024 to 0.110, thereby confirming predictive relevance (Hair et al., 2024). Among the indicators, WPH6 recorded the highest predictive relevance ($Q^2 = 0.110$), while EP7 showed the lowest ($Q^2 = 0.024$), though still above the threshold.

The PLS-SEM model demonstrated superior predictive accuracy over the linear benchmark, as reflected in its lower RMSE (0.111) and MAE (0.062) for EP1, compared to the linear model's

RMSE (0.112) and MAE (0.064). Overall, these findings confirm that the PLS-SEM model demonstrates adequate predictive capability and strong predictive validity, reinforcing the robustness of the structural model beyond its explanatory strength.

4.2.5 Cross-Validated Predictive Ability Test Predictive

Table 9: Comparison of Predictive Loss between PLS and IA Models

Indicator	PLS Loss	IA Loss	Avg. Loss Difference	t-value	p-value
EP	0.018	0.019	-0.001	1.791	0.074
WPH	0.046	0.050	-0.005	4.315	0.000
Overall	0.028	0.030	-0.002	3.475	0.001

Source: Authors computation (2025), using SmartPLS 4.0

To further validate the predictive power of the PLS-SEM model, a loss comparison was conducted using the PLS predict framework. The average loss from the PLS-SEM model for EP was 0.018, which is substantially lower than the 0.019 loss observed from the linear benchmark model (IA). Similarly, WPH also recorded average loss of 0.046 as compared to the linear benchmark model (IA) average loss of 0.019 as displayed in table 9 above. The CVPAT result ($p = 0.01$) revealed that the predictive ability of the PLS model was significantly superior to that of the linear regression benchmark (Liengaard et al., 2021).

4.2.6 Model Fit

Table 10: model fit

	Saturated model	Estimated model
SRMR	0.045	0.045
NFI	0.945	0.945

Source: Authors computation (2025), using SmartPLS 4.0

Model fit was assessed using several goodness-of-fit indices. From the result in Table 10 above, the Standardized Root Mean Square Residual (SRMR) for both the saturated and estimated models was 0.045, well below the recommended threshold of 0.08 (Henseler et al., 2014), indicating an excellent fit between the model and the data. The Normed Fit Index (NFI) was 0.945 surpassing the commonly accepted benchmark of 0.90, further confirming the model's good fit. This indicates the model is both efficient in structure and consistent with the observed data.

4.3.0 Test of Hypotheses

This study tested four null hypotheses to determine the relationships among emotional exhaustion, workplace harmony, and employees' performance at Federal University, Dutsin-Ma, Katsina state, Nigeria.

Table 11: Size and Significance of the Direct Path Coefficients

Path	Coefficient (β)	T-Statistic	P-Value	Decision
EE -> EP	-0.121	2.476	0.013	Rejected
EE -> WPH	-0.434	11.476	0.000	Rejected
WPH -> EP	0.496	7.536	0.000	Rejected

Source: Authors computation (2025), using SmartPLS 4.0

Path coefficient shows the strength and direction of relationships in the structural model. Their size indicates the importance of predictors, while p-values and t-statistics confirm significance as shown in Table 11 above and Figure 2.

Table 12: Size and Significance of the Indirect Path Coefficients

Path	Coefficient (β)	T-Statistic	P-Value	Decision
EE -> WPH -> EP	-0.215	6.066	0.000	Rejected

Source: Authors computation (2025), using SmartPLS 4.0

4.3.0 Discussion of findings

The first hypothesis tested whether emotional exhaustion has a significant effect on employees' performance. The results (β = –0.121, T = 2.476, p = 0.013) revealed a **negative and significant relationship**, leading to the rejection of the null hypothesis. This implies that higher levels of emotional exhaustion among employees at Federal University Dutsin-Ma diminish their performance outcomes. This finding resonates with the **Maslach Burnout Theory (MBT),** which posits that emotional exhaustion, one of the three core dimensions of burnout undermines employees' ability to function effectively, thereby reducing their sense of accomplishment and job performance. In this context, exhaustion drains both the physical and psychological energy required to sustain productivity. The findings corroborate the work of (Chen et al., 2021; Morales & Rivera, 2023; Tanaka & Fujimoto, 2023; Zhang & Li, 2023)

The second hypothesis examined whether emotional exhaustion significantly affects workplace harmony. The analysis (β = –0.434, T = 11.476, p = 0.000) shows a strong negative relationship, leading to the rejection of the null hypothesis. This means that emotionally exhausted employees are less likely to foster or experience harmonious interactions at work. The **Affective Events Theory (AET)** provides a theoretical lens here: negative emotional experiences, such as exhaustion, spill over into workplace interactions, producing conflict, disengagement, and strained relationships. Thus, exhaustion disrupts the emotional climate, preventing harmony and creating a workplace environment less conducive to collaboration and cohesion. The findings align with (Chen et al., 2021; Morales & Rivera, 2023; Tanaka & Fujimoto, 2023; Zhang & Li, 2023)

The third hypothesis tested whether workplace harmony significantly influences employees' performance. Results (β = 0.496, T = 7.536, p = 0.000) confirmed a strong positive relationship,

leading to the rejection of the null hypothesis. This suggests that harmonious work environments promote higher levels of employee performance. The **Job Demands–Resources (JD–R) model** is particularly relevant here. It emphasizes that resources such as interpersonal harmony, trust, and collaboration buffer against job demands and foster motivation, which in turn enhances performance. Therefore, workplace harmony functions as a crucial job resource that sustains employees' energy and effectiveness, even in the presence of stressors. The results are in tandem with the findings of (Chen et al., 2021; Morales & Rivera, 2023; Tanaka & Fujimoto, 2023; Zhang & Li, 2023).

The fourth hypothesis investigated whether workplace harmony mediates the relationship between emotional exhaustion and employees' performance. The results ($\beta = –0.215$, $T = 6.066$, $p = 0.000$) confirmed a significant partial mediating effect, leading to the rejection of the null hypothesis. The study therefore concludes that workplace harmony partially mediates the relationship since both the direct and indirect effects are significant and meaningful (see Table 11 & 12 above). To further substantiate the type of partial mediation, the study computed the product of the direct and indirect effects. Since the direct and indirect effects are both negative (i.e., -0.121 x -0.215=0.026). Consequently, workplace harmony (WPH) represents complementary mediation of the relationship between emotional exhaustion (EE) and Employees' performance (EP). The findings provide empirical support for the mediating role of WPH and align with the **Conservation of Resources (COR) theory** that best explains this finding. COR theory argues that individuals strive to acquire and preserve valuable resources to cope with stress. In this case, workplace harmony acts as a **resource reservoir**, offsetting the depletion caused by emotional exhaustion and enabling employees to maintain their performance. Without such harmony, the draining effect of exhaustion on performance would be far more severe.

5. Conclusion and Recommendations

This study investigated the mediating role of workplace harmony in the relationship between emotional exhaustion and employees' performance at Federal University Dutsin-Ma, Katsina State. The results confirmed that emotional exhaustion negatively affects both employee performance and workplace harmony. Conversely, workplace harmony was found to enhance performance and significantly mediate the exhaustion–performance relationship. Collectively, these findings suggest that while emotional exhaustion drains employees' capacity to deliver effectively, the presence of workplace harmony can serve as a protective mechanism, cushioning the adverse effects of burnout on performance. The convergence of the JD–R model, COR theory, AET, and MBT provides a multi-dimensional theoretical foundation, underscoring harmony as a critical job resource, an emotional stabilizer, a resource reservoir, and a direct counterbalance to burnout.

Based on the findings, several recommendations are made:

1. Management should encourage teamwork, mutual respect, and conflict resolution mechanisms to strengthen harmonious interactions among employees.
2. Counseling services, stress management workshops, and wellness programs should be implemented to help employees manage emotional exhaustion.
3. Departmental heads should model supportive and inclusive behaviors that nurture a harmonious workplace climate.
4. Policies, performance appraisals, and recognition schemes should reward collaboration, collegiality, and positive relationships among staff.

The study contributes to theory by demonstrating how workplace harmony operates within established frameworks: it validates the **MBT** perspective that emotional exhaustion undermines performance, confirms **AET's** proposition that negative emotional experiences disrupt workplace climate, supports the **JD–R model** by identifying harmony as a crucial job resource, and extends **COR theory** by showing how harmony acts as a mediating resource reservoir. The findings thus enrich the scholarly discourse by positioning workplace harmony as a central construct linking burnout to performance.

For practitioners, the study underscores the importance of workplace harmony as a strategic organizational resource. HR managers, academic leaders, and administrators can use these insights to design interventions that promote interpersonal trust and reduce stressors. Practically, cultivating harmony can enhance productivity, reduce turnover intentions, and improve the overall quality of service delivery in higher education institutions.

At a policy level, the results suggest the need for institutional policies that explicitly address workplace harmony as part of staff welfare and performance management. Federal University Dutsin-Ma, and similar institutions, should embed harmony-related provisions in their human resource policies, including mechanisms for conflict resolution, teamwork enhancement, and emotional support systems. Such policies can institutionalize harmony as a long-term strategy for mitigating burnout and sustaining organizational effectiveness.

Despite its contributions, the study has limitations. First, it focused on a single institution, Federal University Dutsin-Ma, limiting the generalizability of findings to other universities. Second, the reliance on self-reported data raises concerns of social desirability bias. Finally, the study focused only on emotional exhaustion, leaving out other burnout dimensions such as depersonalization and reduced accomplishment.

Future research should expand the scope to multiple universities to enhance generalizability across higher education institutions in Nigeria. Furthermore, researchers could examine the role of other burnout dimensions and test alternative mediators such as employee engagement,

organizational justice, or resilience. Additionally, comparative studies across public and private universities could uncover sectoral differences in how workplace harmony buffers burnout's effects on performance

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