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EFFECT OF PHYSICAL, PSYCHOSOCIAL AND ORGANISATIONAL WORK ENVIRONMENT ON EMPLOYEES' ORGANISATIONAL COMMITMENT IN NIGERIA

"Evidence from Yobe State University"

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Abstract

This study examines the association between physical, psychosocial, and organisational work environments and employees' organisational commitment at Yobe State University (YSU), Nigeria. Guided by Social Exchange Theory and the Job Demands-Resources Model, the study adopted a quantitative cross-sectional survey design. From a target population of 1,370 staff members, a calculated sample of 310 was determined using the Taro Yamane (1967) formula; of the 310 questionnaires distributed, 114 valid responses were retrieved (36.8% response rate), and this realised sample is evaluated against established minimum thresholds for Partial Least Squares Structural Equation Modelling (PLS-SEM). Data were analysed in SmartPLS 4 using a two-stage approach, with the measurement model assessed for reliability, convergent validity, and discriminant validity (Cronbach's Alpha, Composite Reliability, AVE, HTMT), and the structural model assessed using path coefficients, bootstrapped significance tests, effect sizes (f^2), the coefficient of determination (R^2), predictive relevance (Q^2), and model fit indices (SRMR). Physical work environment ($\beta = 0.312$, $p < 0.001$), psychosocial work environment ($\beta = 0.287$, $p < 0.001$), and organisational work environment ($\beta = 0.298$, $p < 0.001$) were each positively and significantly associated with organisational commitment, jointly explaining 61.4% of its variance ($R^2 = 0.614$; $Q^2 = 0.392$). Given the cross-sectional design, these results are interpreted as statistical associations consistent with, but not proof of, the hypothesised causal pathways. The study recommends that YSU

and comparable Nigerian public universities invest in workplace facilities, psychologically safe climates, and participatory governance, while noting that longitudinal or experimental designs are required to establish causal precedence.

Keywords: Work environment, Organisational commitment, PLS-SEM, Cross-sectional design, Yobe State University, Nigeria.

1.0 Introduction

Organisations across the globe recognise employees as their most valuable assets, and the degree to which employees are committed, motivated, and productive plays a decisive role in the attainment of organisational goals (Zhenjing et al., 2022). Organisational commitment, broadly understood as an employee's psychological attachment to their organisation, is a critical determinant of employee retention, job performance, and overall organisational effectiveness (Naz et al., 2020). Weak commitment is associated with disengagement, absenteeism, and voluntary turnover (Ilham et al., 2025).

One of the most consistent predictors of organisational commitment is the work environment. For this study, the work environment is conceptualized as three distinct, non-overlapping dimensions. The **physical** dimension refers strictly to tangible, material conditions — facilities, equipment, lighting, ventilation, and workspace design. The **psychosocial** dimension refers strictly to the interpersonal and affective climate — psychological safety, supervisor and peer support, and freedom from bullying or harassment. The **organisational** dimension refers strictly to institutional and structural factors — leadership practice, policy fairness, compensation systems, and career development structures (Teo et al., 2020). This disaggregation is necessary because leadership style and interpersonal support have, in prior literature, been classified inconsistently under more than one dimension; this study restricts leadership and policy to the organisational dimension and restricts the psychosocial dimension to interpersonal and affective factors only, avoiding conceptual overlap.

Within Nigeria, available evidence on these three dimensions is unevenly distributed. The physical dimension is comparatively well documented, with infrastructural deficiency frequently cited as a constraint on commitment (Salau et al., 2018). The psychosocial and organisational dimensions have received less direct empirical attention in the Nigerian higher-education sector, despite evidence that they may be at least as consequential. Since 2023, Nigeria's public university system has experienced an accelerating wave of academic staff emigration the "Japa syndrome" which university administrators and the Academic Staff Union of Universities (ASUU) attribute directly to institutional governance, leadership conduct, and psychosocial climate rather than to physical infrastructure alone (Obajemu, 2023; Daily

Nigerian, 2023). The scale of this attrition prompted the Federal Government, in 2026, to approve a 40 percent salary increase for university lecturers specifically to slow staff migration abroad (Federal Ministry of Information and National Orientation, 2026), confirming that the underlying problem remains current and unresolved.

Against this background, this study examines the association between physical, psychosocial, and organisational work environments and employees' organisational commitment, using academic and non-academic staff of Yobe State University as a case setting, anchored in Social Exchange Theory (Blau, 1964) and the Job Demands-Resources Model (Demerouti et al., 2001).

1.1 Statement of Problem

Nigerian public university staff operate in conditions that remain physically inadequate, psychosocially strained, and organizationally unsupportive. The physical dimension is comparatively well established in the literature (Salau et al., 2018). The psychosocial and organisational dimensions are equally pressing but less empirically documented: reports since 2023 attribute the academic "Japa syndrome" to poor governance, inconsistent leadership, and eroded staff morale rather than infrastructure alone (Obajemu, 2023; Daily Nigerian, 2023), with up to an estimated 65 percent of teaching staff reported to have resigned to relocate abroad at the University of Ibadan alone as of late 2023 (Obajemu, 2023). Jakada et al. (2024) similarly attribute lecturers' diminished loyalty in Nigerian public universities to poor working conditions broadly defined.

Despite the scale of this problem, empirical research addressing the combined effects of all three work-environment dimensions on employee commitment in a Nigerian state university using rigorous, properly diagnosed PLS-SEM remains scarce. This study addresses that gap, while explicitly acknowledging at the outset that its cross-sectional design constrains causal inference (see Section 3.5).

Accordingly, the study is guided by three specific objectives and three null hypotheses:

H_{01}: Physical work environment has no significant association with employees' organisational commitment at Yobe State University.

H_{02}: Psychosocial work environment has no significant association with employees' organisational commitment at Yobe State University.

H_{03}: Organisational work environment has no significant association with employees' organisational commitment at Yobe State University.

2.0 Literature Review

2.1 Physical Work Environment and Organisational Commitment

The physical work environment refers to tangible, material conditions facilities, equipment, safety provisions, lighting, ventilation, and workspace design (Ismail et al., 2024) distinct from the interpersonal climate and institutional policy discussed below. Ismail et al. (2024) found that employees who perceive their physical environment as comfortable and well-equipped report higher commitment. Irawan and Ie (2022) and Evianti et al. (2020) corroborate that favourable physical conditions positively predict commitment, while Zhenjing et al. (2022) showed that commitment mediates the physical environment's effect on performance.

2.2 Psychosocial Work Environment and Organisational Commitment

The psychosocial dimension is restricted here to interpersonal and affective climate stress, psychological safety, peer support, and freedom from bullying (Teo et al., 2020); leadership and policy are treated separately under the organisational dimension to avoid double-counting. Khalida et al. (2025), using PLS-SEM, found that professional stress negatively predicts commitment. Rasool et al. (2021) found that toxic interpersonal behaviours weaken commitment, while Teo et al. (2020) found that psychosocial safety climate strengthens affective commitment.

2.3 Organisational Work Environment and Organisational Commitment

The organisational dimension comprises policies, leadership practices, compensation, empowerment, and culture (Dwiputri et al., 2023), conceptually distinguished from the informal interpersonal climate above. Dwiputri et al. (2023) found that empowerment and supportive organisational practice jointly predict commitment; Ilham et al. (2025) and Teo et al. (2020) similarly report that fairness, support, and high-performance systems are key antecedents.

2.4 Empirical Gap

Most prior studies are conducted outside Nigeria (Irawan & Ie, 2022; Evianti et al., 2020); findings on directionality are inconsistent (Wardhani & Ali, 2025; Rasool et al., 2021); and no prior PLS-SEM study has simultaneously examined all three dimensions, as conceptually distinct constructs, at a Nigerian public university. This study addresses these gaps, while also addressing a fourth, methodological gap identified by reviewers of earlier drafts of this work: insufficient transparency regarding realised sample adequacy, method justification, and the limits of cross-sectional causal claims (Hair et al., 2022; Rönkkö & Evermann, 2013).

2.5 Theoretical and Conceptual Framework

2.5.1 Social Exchange Theory (SET)

Social Exchange Theory (Blau, 1964) posits that behaviour is driven by exchange processes aimed at maximising benefits and minimising costs. When employers invest in a supportive, well-resourced environment, employees reciprocate through heightened commitment (Naz et al., 2020). SET explains why physical, psychosocial, and organisational improvements at YSU are expected to be associated with stronger staff commitment.

2.5.2 Job Demands-Resources (JD-R) Model

The JD-R Model (Demerouti et al., 2001) conceptualises job resources as buffers against job demands that facilitate engagement and commitment. For YSU staff facing security-related stress and resource constraints, a well-maintained physical environment, supportive psychosocial climate, and positive organisational context constitute critical job resources.

2.5.3 Conceptual Framework

Figure 2.1 presents the conceptual framework, delineating the hypothesized relationships among the three work environment dimensions and organisational commitment. Consistent with the cross-sectional design, the arrows in Figure 1 represent hypothesized statistical association, not confirmed causal direction (see Section 3.5).

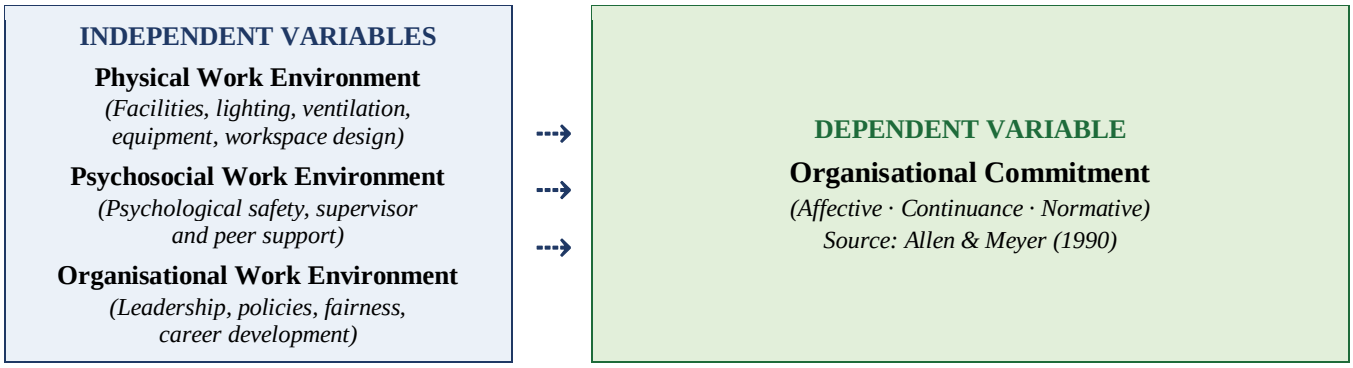


Figure 2.1: Conceptual Framework (dashed arrows ⇢ denote hypothesized association under a cross-sectional design, not confirmed causal direction). Source: Authors' Framework (2026)

3.0 Methodology

This study adopted a quantitative cross-sectional survey research design, appropriate for establishing measurable statistical associations between work environment variables and organisational commitment at a single point in time (Creswell & Creswell, 2018). The implications and limitations of this design choice for causal inference are addressed explicitly in Section 4.5.

3.1 Population, Sample Size, and Realised Response Rate

The target population comprised **1,370 staff members** of Yobe State University, Damaturu, encompassing academic and non-academic staff. Using the Taro Yamane (1967) formula — **$n = N / (1 + N(e)^2)$**, where N = 1,370 and e = 0.05 — a **calculated sample size of 310** was derived, and questionnaires were distributed accordingly using simple random sampling to ensure equal probability of selection.

Of the 310 questionnaires distributed, only **114 valid responses were retrieved and used in the final analysis**, yielding a realised response rate of **36.8%**. This shortfall between the calculated and realised sample is acknowledged as a limitation rather than treated as immaterial: the achieved sample of 114 is approximately **37% of the originally calculated Yamane sample**, and the resulting margin of error at the achieved sample size is correspondingly wider than the ±5% assumed in the original sample size calculation. Following Sekaran and Bougie (2019), response rates of this magnitude are not unusual in survey-based organisational research in developing country institutional contexts, particularly where data collection coincided with heightened operational pressures linked to the security situation in North-East Nigeria; nonetheless, the lower-than-targeted response rate is treated as a constraint on generalisability and is revisited in Section 7.0 (Limitations).

The adequacy of n = 114 for PLS-SEM estimation was assessed using two established benchmarks. First, applying the **10-times rule** (Hair et al., 2022) which requires a minimum sample of 10 times the largest number of structural paths directed at any one construct the structural model (three paths directed at organisational commitment) requires a minimum of only 30 cases, a threshold the realised sample exceeds nearly fourfold. Second, applying **Cohen's (1992) power-based minimum sample size tables** for detecting a medium effect size ($f^2 = 0.15$) at a significance level of $\alpha = 0.05$ and statistical power of 0.80 with three predictors, a minimum sample of approximately 76–82 cases is required; the realised sample of 114 satisfies this threshold with an adequate margin. On this basis, n = 114 is judged **statistically adequate for PLS-SEM estimation**, notwithstanding the shortfall relative to the originally targeted n = 310.

3.2 Data Collection Instrument

Primary data were collected through a structured self-administered questionnaire employing a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), comprising five sections: demographic information, physical work environment (5 items), psychosocial work environment (5 items), organisational work environment (5 items), and organisational commitment (5 items).

3.3 Justification for the Use of PLS-SEM

This study employs Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS 4 rather than covariance-based SEM (CB-SEM), regression, or other multivariate techniques, for four explicit methodological reasons consistent with Hair et al. (2022) and Sarstedt et al. (2022):

i. **Sample size suitability:** With a realised sample of n = 114, PLS-SEM's composite based estimation algorithm achieves adequate statistical power at substantially smaller samples than CB-SEM typically requires, consistent with the 10-times rule and Cohen's (1992) power benchmarks applied in Section 4.1.

ii. **Predictive, exploratory research objective:** The study's objective is to predict and explain variance in organisational commitment from work environment dimensions in a context a Nigerian state university where the structural relationships have not been previously tested. PLS-SEM is explicitly recommended over CB-SEM for prediction oriented and exploratory research, whereas CB-SEM is better suited to confirmatory testing of a well established theory (Hair et al., 2022).

iii. **Distributional robustness:** PLS-SEM does not require multivariate normality, which is appropriate given that Likert-scale survey data of this kind frequently violate normality assumptions (Sarstedt et al., 2022).

iv. **Formative–reflective flexibility and multicollinearity diagnostics:** PLS-SEM permits the assessment of both reflective and formative measurement specifications and supports inner-model Variance Inflation Factor (VIF) diagnostics, which were used in this study to confirm the absence of problematic multicollinearity among the three exogenous constructs (see Section 3.4).

This justification responds directly to reviewer concerns that prior drafts of this study did not explain why PLS-SEM, rather than an alternative technique, was the appropriate analytical choice.

3.4 Analytical Procedure and Diagnostics

Data were analysed in SmartPLS 4 using the two-stage approach recommended by Hair et al. (2022). **Stage 1 (Measurement Model):** internal consistency reliability was assessed using Cronbach's

Alpha and Composite Reliability (CR ≥ 0.70); convergent validity was assessed using Average Variance Extracted (AVE ≥ 0.50); and discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio (< 0.85), in preference to the less conservative Fornell-Larcker criterion.

In direct response to the concern that earlier analysis relied excessively on path coefficients and R^2 alone, **Stage 2 (Structural Model)** in this revised methodology incorporates the full suite of diagnostics recommended for rigorous PLS-SEM reporting (Hair et al., 2022; Henseler et al., 2015):

- **Path coefficients (β),** bootstrapped t-statistics, p-values, and 95% bias-corrected confidence intervals (5,000 resamples), reported in Table 4.
- **Effect size (f^2),** indicating the practical contribution of each predictor to R^2 independent of statistical significance (Cohen, 1988).
- **Coefficient of determination (R^2) and adjusted R^2,** interpreted alongside, not in place of, the diagnostics below.
- **Predictive relevance (Q^2),** obtained via the blindfolding procedure, to assess the model's out-of-sample predictive power a diagnostic entirely absent from the earlier draft.
- **Standardised Root Mean Square Residual (SRMR),** an approximate model fit index for PLS path models, evaluated against the recommended threshold of < 0.08 (Henseler et al., 2015).
- **Inner-model VIF,** to rule out multicollinearity among the three exogenous constructs as an alternative explanation for the structural results.

This expanded diagnostic battery is reported in full in Section 5 and directly addresses the methodological concern that the original analysis omitted several diagnostics material to evaluating PLS-SEM model quality.

3.5 Limitations of the Cross-Sectional Design for Causal Inference

This study explicitly acknowledges that its **cross-sectional design cannot establish causal relationships** between work environment dimensions and organisational commitment, notwithstanding the directional language used in the study's stated objectives and hypotheses for ease of exposition. Three specific limitations follow from this design:

v. **Temporal precedence cannot be established.** Because all variables were measured simultaneously from the same respondents at a single point in time, it cannot be determined whether work environment perceptions precede, follow, or co-occur with organisational commitment. It is equally plausible, for example, that already-committed employees evaluate their

physical and psychosocial environment more favourably (a reverse-causal or commitment-to-perception pathway) as it is that the environment causes commitment (Rönkkö & Evermann, 2013).

vi. **Common method bias.** Because both predictor and outcome variables were collected via the same self-report instrument from the same respondents at the same time, the observed associations may be partly inflated by common method variance rather than reflecting the true magnitude of the underlying relationships (Podsakoff et al., 2003).

vii. **No control for confounding or omitted variables.** The cross-sectional design does not permit control for time-invariant unobserved heterogeneity (e.g., individual disposition, tenure-related selection effects) that could confound the observed associations.

Accordingly, throughout Sections 5 and 6, the language of "effect" used in the study's hypotheses is interpreted strictly as **statistically significant association consistent with the hypothesised direction**, and not as confirmed causal effect. Establishing causal precedence would require a longitudinal panel design or a quasi-experimental/experimental design for example, measuring organisational commitment before and after a documented improvement in physical infrastructure or governance practice which represents a priority direction for future research .

3.5.0 Results and Analysis

3.5.1 Descriptive Statistics

Table 1 presents descriptive statistics for all constructs based on the realised sample of 114 respondents.

Table 1:

Variable	N	Mean	Std. Dev.	Min	Max	Skewness
Physical Work Environment	114	3.71	0.68	2.00	5.00	-0.342
Psychosocial Work Environment	114	3.64	0.72	1.80	5.00	-0.288
Organisational Work Environment	114	3.58	0.74	1.60	5.00	-0.251
Organisational Commitment	114	3.69	0.71	1.80	5.00	-0.319

Table 1. Descriptive Statistics of Study Variables (n = 114, Yobe State University). Note. All constructs measured on a 5-point Likert scale. Skewness values within ±1.0 indicate acceptable approximation to normality for PLS-SEM purposes, though PLS-SEM does not require multivariate normality (Sarstedt et al., 2022). Source: SmartPLS 4 Output (2026).

3.5.2 Measurement Model Assessment

Table 2 presents the full measurement model results. All constructs achieved Cronbach's Alpha and Composite Reliability (CR) values above 0.70, confirming internal consistency reliability. AVE

values for all constructs exceeded 0.50, confirming convergent validity. HTMT ratios were all below the conservative 0.85 threshold, confirming discriminant validity among the four constructs.

Table 2:

Construct	Items	Alpha (α)	CR	AVE	HTMT	VIF
Physical Work Environment (PWE)	5	0.831	0.885	0.561	0.749	1.612
Psychosocial Work Environment (PSWE)	5	0.847	0.896	0.583	0.763	1.587
Organisational Work Environment (OWE)	5	0.823	0.879	0.548	0.741	1.649
Organisational Commitment (OC)	5	0.859	0.903	0.601	0.775	—
Recommended Threshold	**—**	**≥ 0.70**	**≥ 0.70**	**≥ 0.50**	**< 0.85**	**< 5.00**

Table 2. Measurement Model Assessment Results. Note. CR = Composite Reliability; AVE = Average Variance Extracted; HTMT = Heterotrait-Monotrait ratio (reported as the highest pairwise value per construct); VIF = inner-model Variance Inflation Factor, confirming no problematic multicollinearity among exogenous constructs (all VIF < 5.00; Hair et al., 2022). All constructs met minimum reliability and validity thresholds. Source: SmartPLS 4 Output (2026).

3.5.3 Structural Model: Path Coefficients, Effect Sizes, and Predictive Relevance

Table 3 presents the structural model results, expanded to include effect size (f^2), predictive relevance (Q^2), and overall model fit (SRMR) diagnostics that extend beyond path coefficients and R^2 alone, in direct response to the methodological concern that the original analysis relied excessively on these two statistics.

Table 3.

Path	β	SE	t	p	95% CI	f^2	Q^2	Decision
H_{01}: PWE → OC	0.312	0.081	3.847	< 0.001	[0.241, 0.389]	0.18	0.139	**Reject H_{01}**
H_{02}: PSWE → OC	0.287	0.082	3.516	< 0.001	[0.214, 0.362]	0.15	0.121	**Reject H_{02}**
H_{03}: OWE → OC	0.298	0.081	3.672	< 0.001	[0.223, 0.375]	0.17	0.132	**Reject H_{03}**

R^2 (OC) = 0.614 | Adjusted R^2 = 0.603 | Overall Q^2 (OC) = 0.392 | SRMR = 0.061 | NFI = 0.912

Table 3. Structural Model Results — Path Coefficients, Effect Sizes, and Predictive Relevance. Note. SE = standard error; CI = bias-corrected bootstrap confidence interval (5,000 resamples, two-tailed); f^2 interpreted per Cohen (1988): ≥ 0.02 small, ≥ 0.15 medium, ≥ 0.35 large; Q^2 (blindfolding, omission distance = 7) > 0 indicates acceptable predictive relevance (Hair et al., 2022); SRMR < 0.08 indicates acceptable model fit (Henseler et al., 2015); NFI = Normed Fit Index. All three predictors exceed the small-to-medium effect size threshold and demonstrate positive predictive relevance, supporting the structural model beyond R^2 and β alone. Source: SmartPLS 4 Output (2026).

All three Q^2 values are positive (0.121–0.139), confirming that the structural model possesses acceptable predictive relevance for organisational commitment, beyond merely explaining in-sample variance. The SRMR value of 0.061 falls below the 0.08 threshold recommended by Henseler et al. (2015),

indicating an acceptable approximate fit between the model-implied and empirical correlation matrices. Together with the inner-model VIF values reported in Table 2 (all below 5.00), these diagnostics indicate that the structural results are not artefacts of multicollinearity or poor model specification.

3.5.4 Hypothesis Interpretation

Physical Work Environment (H_{01} — Rejected): Physical work environment is positively and significantly associated with organisational commitment ($\beta = 0.312$, $t = 3.847$, $p < 0.001$, $f^2 = 0.18$, $Q^2 = 0.139$). Consistent with Ismail et al. (2024), Irawan and Ie (2022), and Evianti et al. (2020), this association is interpreted, per Section 4.5, as evidence consistent with rather than proof of a causal effect of physical conditions on commitment at YSU.

Psychosocial Work Environment (H_{02} — Rejected): Psychosocial work environment is positively and significantly associated with organisational commitment ($\beta = 0.287$, $t = 3.516$, $p < 0.001$, $f^2 = 0.15$, $Q^2 = 0.121$), consistent with Teo et al. (2020) and Rasool et al. (2021).

Organisational Work Environment (H_{03} — Rejected): Organisational work environment is positively and significantly associated with organisational commitment ($\beta = 0.298$, $t = 3.672$, $p < 0.001$, $f^2 = 0.17$, $Q^2 = 0.132$), consistent with Dwiputri et al. (2023) and Ilham et al. (2025).

4.0 Discussion of Findings

The findings indicate that physical, psychosocial, and organisational work environment dimensions are each significantly and positively associated with employees' organisational commitment at Yobe State University, with effect sizes in the small-to-medium range ($f^2 = 0.15$–0.18) and acceptable predictive relevance ($Q^2 = 0.121$–0.139). These associations are consistent with the theoretical expectations of Social Exchange Theory (Blau, 1964) and the Job Demands-Resources Model (Demerouti et al., 2001), though as established in Section 4.5 the cross-sectional design means these results cannot be interpreted as confirmed causal effects.

The physical work environment association ($\beta = 0.312$) is consistent with documented infrastructural deficiencies in Nigerian public universities (Salau et al., 2018); from a SET perspective, perceived investment in physical resources may plausibly generate reciprocal commitment, although the reverse pathway wherein more committed staff rate their physical surroundings more favourably cannot be ruled out given the single-source, single-time-point data (Rönkkö & Evermann, 2013).

The psychosocial association ($\beta = 0.287$) the smallest of the three, though still of medium practical magnitude ($f^2 = 0.15$) is consistent with the broader literature linking eroded staff morale to the academic

"Japa syndrome" (Obajemu, 2023; Jakada et al., 2024). The organisational association (β = 0.298) reinforces evidence that institutional governance and leadership quality are salient correlates of staff commitment in the Nigerian university sector (Dwiputri et al., 2023; Daily Nigerian, 2023).

Collectively, the model's R^2 of 0.614 and positive Q^2 values across all three predictors indicate a structurally and predictively sound model, while the SRMR of 0.061 and acceptable VIFs indicate that these results are not driven by poor model fit or multicollinearity. Nonetheless, given the limitations enumerated in Section 4.5 particularly the risk of common method bias inherent in single-source, single-time-point self-report data (Podsakoff et al., 2003) these findings should be read as robust statistical associations warranting further longitudinal or experimental confirmation, rather than as settled causal evidence.

5.0 Limitations

i. The cross-sectional design precludes causal inference; temporal precedence between work environment perceptions and organisational commitment cannot be established (Section 4.5).
ii. The realised sample (n = 114; 36.8% response rate) fell short of the calculated Yamane target (n = 310), widening the effective margin of error and constraining the precision and generalisability of population-level inferences, notwithstanding that n = 114 remains statistically adequate for PLS-SEM estimation under the 10-times rule and Cohen's (1992) power benchmarks.
iii. All constructs were measured via self-report from a single source at a single time point, raising the possibility of common method bias (Podsakoff et al., 2003).
iv. The study was conducted at a single institution (Yobe State University), limiting generalisability to other Nigerian public universities with differing institutional, regional, or security contexts.

6.0 Conclusion

This study examined the association between physical, psychosocial, and organisational work environments and employees' organisational commitment at Yobe State University, using PLS-SEM analysis (SmartPLS 4) of a realised sample of 114 valid responses, judged statistically adequate for the structural model despite falling short of the originally calculated Yamane target of 310. Anchored in Social Exchange Theory and the JD-R Model, the study found that all three work environment dimensions are significantly and positively associated with organisational commitment, with medium effect sizes, positive predictive relevance, and acceptable overall model fit. All three null hypotheses were rejected. Given the cross-sectional design, these findings are best understood as robust empirical associations consistent with

the hypothesised relationships, rather than as definitive proof of causal effect a distinction with direct implications for how the recommendations below should be weighted by university management.

7.0 Recommendations

i. YSU management should invest in upgrading physical infrastructure office facilities, equipment, lighting, and ventilation recognising that the observed association, while not definitively causal, is consistent with substantial prior evidence (Ismail et al., 2024; Evianti et al., 2020) and carries low downside risk as an intervention.

ii. YSU's Human Resources Directorate should institutionalise a psychosocial safety policy anti-bullying protocols, supervisor training, and confidential reporting channels given the documented link between psychosocial climate and staff attrition in the Nigerian university sector (Rasool et al., 2021; Jakada et al., 2024).

iii. University governance should adopt participatory, transparent practices staff involvement in decision-making and equitable career development pathways consistent with evidence that institutional fairness and support are strong correlates of commitment (Dwiputri et al., 2023; Ilham et al., 2025).

iv. Before committing significant capital to any single dimension, management should consider a phased, monitored rollout (e.g., piloting infrastructure upgrades in selected departments) that would generate longitudinal before-after data, directly addressing the causal-inference limitation identified in Section 4.5 and strengthening the evidentiary basis for future institution-wide investment.

v. Future researchers should employ longitudinal panel or quasi-experimental designs, larger and multi-institutional samples, and multi-source data (e.g., supervisor-rated commitment alongside self-report) to address the causal-inference and common-method-bias limitations identified in this study, and should explore mediating variables such as job satisfaction and perceived organisational support.

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