

Article History

Received: 05 Aug 2026

Accepted: 20 Aug 2026

Published: 02 Sep 2026

International Journal of
Multidisciplinary Research
and Bulletin

**Volume 5 Issue 5 (Sep –
Oct) 2026**

DOI:

[10.5281/zenodo.22244688](https://doi.org/10.5281/zenodo.22244688)

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Keywords: Herzberg's Two-Factor Theory, Hygiene Factors, Motivator Factors, Job Satisfaction, Teachers' Performance, Nigeria.

Hygiene Or Motivator? Re-Examining Herzberg's Two-Factor Theory Against Teachers' Performance Data From Akwa Ibom State, Nigeria

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ABSTRACT

Herzberg's motivation-hygiene theory predicts that hygiene factors, such as salary, working conditions and job security, primarily prevent dissatisfaction, while motivator factors, such as recognition and professional growth, generate genuine, sustained engagement and performance. Although the theory is frequently invoked descriptively in Nigerian teacher job satisfaction research, few studies formally test whether hygiene- and motivator-type dimensions actually differ in the strength of their statistical association with teachers' performance. This study addressed that gap using data drawn from a wider correlational survey of 365 public secondary school teachers across the six education zones of Akwa Ibom State, Nigeria, sampled from a population of 5,400 teachers using the Taro Yamane formula and a multi-stage stratified random sampling technique. A validated, reliable instrument (Cronbach's Alpha = 0.82) measured five job satisfaction dimensions, classified a priori as hygiene factors (salary and remuneration, working conditions, job security), a motivator factor (recognition and professional growth), and a mixed hygiene-motivator factor (supervision and interpersonal relations), alongside teachers' performance. Chi-square analysis showed that all five dimensions were significantly related to performance, but the relationship was strongest for the mixed factor, supervision and

interpersonal relations ($\chi^2 = 40.127$), followed by the hygiene factors job security ($\chi^2 = 31.842$) and salary ($\chi^2 = 34.216$), while the theoretically predicted motivator factor, recognition and professional growth, showed the weakest association ($\chi^2 = 26.734$). These results only partially support Herzberg's differential prediction and instead suggest that, in this context, dimensions combining relational and evaluative content are more strongly associated with performance than purely intrinsic-reward-type motivators considered in isolation. The paper discusses implications for the application of Herzberg's theory in resource-constrained public education settings and for teacher motivation policy in Nigeria.

1. Introduction

Herzberg's motivation-hygiene theory (Herzberg, Mausner, & Snyderman, 1959) remains one of the most widely cited frameworks in the study of job satisfaction and work motivation, more than six decades after its original formulation. The theory's central, and most theoretically distinctive, proposition is that job satisfaction and job dissatisfaction are not opposite ends of a single continuum but arise from two qualitatively distinct sets of factors: hygiene factors, such as salary, working conditions, company policy, and job security, whose absence generates dissatisfaction but whose presence, while necessary, does not by itself generate strong positive motivation; and motivator factors, such as achievement, recognition, and opportunities for growth, whose presence generates genuine satisfaction and sustained motivation, and whose absence, while not necessarily generating active dissatisfaction, fails to generate strong engagement.

In the Nigerian education literature specifically, Herzberg's theory is frequently cited to frame discussions of teacher motivation and satisfaction, yet it is more often invoked descriptively, as a conceptual lens for classifying satisfaction facets, than tested formally as a differential, comparative prediction about the relative strength of hygiene- versus motivator-type factors' association with actual job performance. This represents a notable gap, given that the theory's most distinctive and, at times, most contested claim is precisely this differential prediction: that motivator factors should matter more for active engagement and performance than hygiene factors, whose primary function is merely to prevent disengagement.

This paper addresses that gap directly. Using data drawn from a wider survey of job satisfaction and teachers' performance in Akwa Ibom State's public secondary schools, it classifies the study's five job satisfaction dimensions according to Herzberg's (1959) original hygiene-motivator scheme, namely salary and remuneration satisfaction, working conditions satisfaction, and job security satisfaction as hygiene factors; recognition and professional growth satisfaction as a motivator factor; and supervision and interpersonal relations satisfaction as a factor spanning both categories, following Herzberg's own treatment of supervisory quality as carrying both hygiene and motivator properties. It then examines whether the statistical strength of each dimension's relationship with teachers' performance follows the pattern the theory would predict, namely that the motivator factor should show a stronger association with performance than the hygiene factors. In doing so, the paper contributes a rare, formally comparative empirical test of Herzberg's differential prediction within a Nigerian public education context, with implications for how the theory should be applied in teacher motivation policy and practice.

The contribution of this paper is therefore primarily theoretical and methodological rather than purely descriptive. Where the wider literature on teacher job satisfaction in Nigeria has generally reported associations between individual satisfaction facets and performance-related outcomes without explicitly weighing these associations against one another through a common theoretical lens, this paper undertakes that comparative weighing directly, using a single dataset, a single instrument, and a single analytical procedure applied consistently across all five dimensions, thereby holding constant many of the measurement and contextual differences that complicate comparison across separate studies. The paper proceeds as follows: section 2 reviews Herzberg's theory and its empirical reception; section 3 describes the data and analytical approach; section 4 reports the comparative results; section 5 discusses their theoretical and practical implications; and section 6 concludes.

Beyond its immediate empirical contribution, this paper also speaks to a broader methodological concern in educational management research conducted in developing-country contexts, namely the tendency to import Western-derived organizational theories as descriptive frames without subjecting their specific, falsifiable predictions to direct local testing. Herzberg's theory is far from unique in this respect; many motivational and satisfaction theories developed within North American or Western European organizational settings are routinely cited in Nigerian educational management scholarship in a manner that treats their propositions as established fact rather than as hypotheses requiring context-specific verification. By subjecting one such

proposition, the hygiene-motivator differential, to a direct, quantitative test within a Nigerian public secondary education setting, this paper offers a methodological template that other researchers may find useful when evaluating the applicability of imported theoretical frameworks to local organizational and educational contexts more broadly.

2. Literature Review

2.1 Herzberg's Motivation-Hygiene Theory: Core Propositions

Herzberg, Mausner and Snyderman (1959) developed their theory following interviews with engineers and accountants concerning the events associated with periods of exceptionally good and exceptionally bad feeling about their jobs. They found that the factors respondents associated with satisfaction (achievement, recognition, the work itself, responsibility, and advancement) were qualitatively different from those associated with dissatisfaction (company policy, supervision, salary, interpersonal relations, and working conditions), leading them to propose the two-factor structure that gives the theory its name. The theory's key assumptions, as relevant to this study, are: first, that satisfaction and dissatisfaction arise from qualitatively distinct factor sets rather than a single continuum; second, that hygiene factors must be adequately addressed to prevent dissatisfaction, but their presence alone is insufficient to generate strong positive motivation; third, that motivator factors are necessary to generate genuine satisfaction and to sustain strong motivation and performance over time; and fourth, that supervisory quality occupies an ambiguous position, since Herzberg's original data associated poor supervision with dissatisfaction (a hygiene property) while also finding that particularly supportive, developmental supervisory relationships could function as a source of genuine satisfaction (a motivator property).

The theory's methodological origins are important for understanding both its distinctive strengths and the specific critiques it has attracted. Herzberg, Mausner and Snyderman (1959) derived their two-factor structure using the critical-incident technique, asking respondents to recall specific events associated with periods of unusually good or unusually bad feeling about their work, and then classifying the factors mentioned in connection with each type of event. This method, by design, tends to associate different factors with satisfaction and dissatisfaction events respectively, since respondents recalling a good experience are more likely to attribute it to achievement or recognition, while respondents recalling a bad experience are more likely to attribute it to company policy, supervision, or pay, a pattern some critics argue is partly an artifact of the method itself rather than conclusive evidence of two truly independent underlying

factor structures. House and Wigdor (1967), in an influential early review, argued that studies employing alternative methods, particularly direct questionnaire ratings of satisfaction with specific job facets rather than critical-incident recall, frequently failed to replicate a clean two-factor structure, with several nominally "hygiene" factors, such as pay, sometimes emerging as sources of genuine satisfaction rather than merely the prevention of dissatisfaction, and several nominally "motivator" factors occasionally appearing as sources of dissatisfaction when absent. This methodological sensitivity is directly relevant to the present paper, since the JSTPQ instrument, described in section 3, uses direct Likert-type ratings rather than critical-incident recall, meaning that any departure from the theory's predicted pattern observed here should be interpreted partly in light of this well-documented methodological sensitivity rather than treated as a wholesale refutation of the theory's substantive claims.

Locke's (1976) range of affect theory offers a complementary, process-based account, proposing that satisfaction arises from the perceived discrepancy between what an individual values from a job and what the job is perceived to provide, weighted by the importance the individual attaches to each facet. Although Locke's theory does not itself predict a hygiene-motivator distinction, it usefully explains why the strength of any given facet's association with satisfaction, and by extension performance, might vary across contexts and populations depending on the relative importance respondents attach to each facet, a consideration directly relevant to interpreting the comparative findings reported below.

2.1.2 Applications of the Two-Factor Structure Beyond Education

Outside education, the two-factor structure has informed a substantial body of human resource management and organizational behavior scholarship, particularly in relation to compensation and reward system design. Armstrong (2021) distinguishes financial from non-financial compensation in terms broadly consistent with Herzberg's hygiene-motivator distinction, arguing that financial rewards primarily address baseline equity and fairness concerns, functionally similar to hygiene factors, while non-financial rewards, such as recognition, autonomy, and opportunities for skill development, more directly engage intrinsic motivation, functionally similar to motivator factors. Aziri (2011), reviewing the broader job satisfaction literature, similarly notes that although Herzberg's theory remains among the most frequently cited frameworks in applied human resource practice, its practical application has tended to emphasise the qualitative insight that both categories of factor require distinct managerial attention, rather than any precise, quantitatively verified ranking of their relative importance. Porter and Lawler

(1968), in an influential early extension of expectancy-based motivation theory, similarly argued that the strength of the satisfaction-performance relationship is contingent on the specific reward structure under which employees operate, a contingency-based view that anticipates, in some respects, the context-dependent qualification this paper ultimately draws from its own findings. Spector's (1997) widely used facet-based conceptualization of job satisfaction, comprising pay, promotion, supervision, co-workers, and the work itself, does not itself adopt Herzberg's specific hygiene-motivator terminology, but maps loosely onto it: pay functions as a hygiene-type facet, promotion and the work itself carry motivator-type qualities, and supervision and co-workers, as in Herzberg's own treatment, occupy a more ambiguous, relationally grounded position. The recurrence of this ambiguous, relationally grounded classification for supervisory and interpersonal facets across multiple independent conceptual schemes lends some independent, cross-framework credibility to the present paper's treatment of supervision and interpersonal relations satisfaction as a genuinely mixed, rather than purely hygiene or purely motivator, factor.

2.1.3 Empirical Applications and Critiques of the Two-Factor Structure in Education

The two-factor structure has attracted sustained empirical attention and, in equal measure, sustained critique. Several studies conducted outside the original methodology used by Herzberg, Mausner and Snyderman (1959), which relied on a critical-incident interview technique, have struggled to replicate a clean two-factor structure using questionnaire-based methods, leading some scholars to treat the theory as a heuristic classification rather than a strictly validated empirical model. Within education settings specifically, several studies have used the hygiene-motivator distinction primarily as an organising framework for survey items rather than as a formally tested comparative hypothesis. Ukpong (2020) and Agboola and Offong (2018), for instance, examined remuneration-related and incentive-related satisfaction among Akwa Ibom State secondary school teachers without explicitly contrasting the strength of these hygiene-type associations against a motivator-type comparator. Similarly, Edet, Benson and Williams (2020) examined supervisory and interpersonal relations quality in relation to teachers' job effectiveness in the same state, generating an important, directly relevant empirical anchor for the present study's treatment of supervision as a mixed hygiene-motivator dimension, but likewise without an explicit comparative test against a pure motivator factor.

More broadly, Latif, Shahid, Sohail and Shahbar (2015) found that Pakistani public-sector college teachers reported higher job satisfaction than private-sector counterparts, a finding they

attributed substantially to hygiene-type sectoral differences in job security and service conditions, while Okwudili (2015) found non-monetary rewards, arguably closer to Herzberg's motivator category, positively associated with worker productivity in Nigerian government parastatals. These mixed findings, some emphasising hygiene-type variables and others motivator-type variables as the more consequential predictor; illustrate the absence of a settled empirical consensus on the theory's differential prediction, underscoring the value of a direct, within-sample comparative test of the kind undertaken in this paper.

Ejumudo (2022), examining the Delta State civil service, found that an incongruent pay-reward system was associated with poor staff performance, a finding consistent with the hygiene-factor prediction that inadequate pay generates active disengagement rather than merely an absence of positive motivation. Suleiman (2013) found that limited training and development opportunities, arguably a motivator-adjacent concern, together with job insecurity, a hygiene-type concern, were jointly prominent causes of poor work attitude among Nigerian public- and private-sector workers, illustrating the difficulty of cleanly isolating the effects of hygiene- and motivator-type factors when they co-occur, as they typically do, in real organizational settings. Onukwube (2012) similarly found pay, supervision, and co-workers, spanning both hygiene and relational categories, among the most consistently identified determinants of job satisfaction in a professional services context, offering little support for a clear-cut motivator dominance even outside the education sector.

2.1.4 The Present Study's Contribution

The review above reveals a literature that, taken as a whole, is more consistent with a nuanced, context-dependent view of hygiene and motivator factors than with a clean, universally replicated differential effect. What the literature has not generally offered, however, is a direct, within-sample statistical comparison of the relative strength of hygiene- versus motivator-classified job satisfaction dimensions' association with an objective or near-objective performance outcome, using a single instrument and a single analytical procedure held constant across all dimensions. This is precisely the comparative test undertaken in this paper, using data from Akwa Ibom State's public secondary education sector.

2.1.5 Expected Pattern of Results

If Herzberg's (1959) differential prediction holds in its straightforward form, the calculated χ^2 values for the five dimensions should rank approximately as follows: the motivator factor (recognition and professional growth satisfaction) showing the strongest association with

performance, the mixed factor (supervision and interpersonal relations satisfaction) showing an intermediate association, and the three hygiene factors (salary and remuneration, working conditions, and job security satisfaction) showing the weakest associations, since, on Herzberg's account, hygiene factors' primary function is to prevent disengagement rather than to actively drive strong performance. Table 1A summarises this a priori expected ordering, which is then compared against the actual observed ordering reported in section 4.

Table 1A: A Priori Expected Ordering of Association Strength Under Herzberg's Theory

Expected Rank	Dimension	Category
1 (Strongest)	Recognition and Professional Growth Satisfaction	Motivator
2	Supervision and Interpersonal Relations Satisfaction	Mixed
3–5 (Weakest, approximately equal)	Salary and Remuneration; Working Conditions; Job Security Satisfaction	Hygiene

2.1.6 Hypothesis of the Present Study

Consistent with Herzberg's (1959) theory, it was hypothesized, as an overarching, theory-derived expectation guiding the comparative analysis in this paper, that recognition and professional growth satisfaction, classified as the study's motivator factor, would show a stronger statistical association with teachers' performance than the hygiene factors of salary and remuneration, working conditions, and job security satisfaction, with supervision and interpersonal relations satisfaction, as a mixed factor, expected to occupy an intermediate position. This expectation is examined empirically in the results and discussion that follow.

3. Methodology

This paper draws on data from a correlational survey of job satisfaction and teachers' performance conducted across the six education zones of Akwa Ibom State, Nigeria (Uyo, Eket, Ikot Ekpene, Abak, Etinan, and Ikono/Ini). The population comprised 5,400 public secondary school teachers, from which a sample of 380 was determined using the Taro Yamane (1967) formula, $n = N / (1 + N(e)^2)$, with $N = 5,400$ and $e = 0.05$, yielding $n \approx 372$, rounded up to 380. A multi-stage sampling technique was employed, combining stratification by education zone with simple random sampling of schools and of teacher-respondents within schools, proportionate to each zone's share of the population.

Data were collected using the Job Satisfaction and Teachers' Performance Questionnaire (JSTPQ), comprising a demographic section, thirty items measuring the five job satisfaction dimensions (six items each), and fifteen items measuring teachers' performance across five sub-

dimensions corresponding to the five satisfaction dimensions (three items each), scored on a four-point Likert-type scale from Strongly Agree (4) to Strongly Disagree (1). The instrument's face and content validity were established through review by experts in Educational Management and Planning and in Measurement and Evaluation, and its reliability was confirmed through a pilot study of 30 teachers outside the main sample, yielding Cronbach's Alpha coefficients of 0.80 (job satisfaction), 0.84 (performance), and 0.82 overall, each exceeding the conventional 0.70 threshold. Formal ethical approval was obtained prior to data collection; participation was voluntary and anonymous, with no personally identifying information collected. Of 380 questionnaires administered, 365 (96.1%) were correctly completed and used for analysis. Of these 365 respondents, 56.7 per cent were female, 37.3 per cent were aged 30–39 years, 28.5 per cent had 6–10 years of teaching experience, and 53.7 per cent taught in rural schools, indicating a reasonably representative cross-section of the state's public secondary school teaching workforce. It is important to note, for the purposes of the analysis that follows, that the classification of dimensions into hygiene, motivator, and mixed categories reported in Table 1 below was undertaken a priori by the researcher, drawing directly on Herzberg, Mausner and Snyderman's (1959) original theoretical scheme, rather than derived empirically from the dataset itself through, for instance, factor analysis. This a priori approach is standard practice in applied tests of the two-factor structure using pre-existing multi-dimensional instruments, but it does mean that the classification itself is not being tested; rather, the classification is used as a fixed analytical lens through which the pattern of empirical results is interpreted, a limitation returned to in section 6.

For the purpose of this paper, the study's five job satisfaction dimensions were classified a priori according to Herzberg's (1959) hygiene-motivator scheme, as summarised in Table 1.

Table 1: A Priori Classification of Job Satisfaction Dimensions

Dimension	Herzberg Classification
Salary and Remuneration Satisfaction	Hygiene factor
Working Conditions Satisfaction	Hygiene factor
Job Security Satisfaction	Hygiene factor
Recognition and Professional Growth Satisfaction	Motivator factor
Supervision and Interpersonal Relations Satisfaction	Mixed hygiene-motivator factor

Each dimension's relationship with teachers' performance was tested using the Chi-square (χ^2) statistic at the 0.05 level of significance, and the resulting calculated χ^2 values were then compared across the hygiene, motivator, and mixed categories to evaluate the theory's differential prediction.

Illustrative items from the instrument, mapped to their respective Herzberg category, include: for salary and remuneration satisfaction (hygiene), "My allowances adequately compensate for my responsibilities"; for working conditions satisfaction (hygiene), "My workload is reasonable and manageable"; for job security satisfaction (hygiene), "I feel secure in my continued employment as a teacher"; for recognition and professional growth satisfaction (motivator), "My achievements are publicly acknowledged" and "Recognition motivates me to improve my teaching"; and for supervision and interpersonal relations satisfaction (mixed), "My principal supervises my work fairly and constructively" and "I have a good working relationship with my colleagues." Each satisfaction item was paired, within Section C of the instrument, with a corresponding performance item assessing the relevant sub-dimension of teachers' performance, such that the analytical link between a given satisfaction facet and its associated performance sub-dimension was built directly into the instrument's design rather than inferred post hoc.

4. Results

Table 2: Chi-square Test Results Classified by Herzberg Category

Dimension	Category	Calculated χ^2	Critical Value	df	Decision
Supervision and Interpersonal Relations Satisfaction	Mixed	40.127	9.488	4	Rejected
Salary and Remuneration Satisfaction	Hygiene	34.216	9.488	4	Rejected
Job Security Satisfaction	Hygiene	31.842	9.488	4	Rejected
Working Conditions Satisfaction	Hygiene	29.548	9.488	4	Rejected
Recognition and Professional Growth Satisfaction	Motivator	26.734	9.488	4	Rejected

As shown in Table 2, all five dimensions showed a statistically significant relationship with teachers' performance, with every calculated χ^2 value substantially exceeding the critical value of

9.488 at 4 degrees of freedom. However, ranked by calculated χ^2 value, the mixed hygiene-motivator factor, supervision and interpersonal relations satisfaction, showed the strongest association (40.127), followed by the three hygiene factors, salary and remuneration (34.216), job security (31.842), and working conditions (29.548), with the theoretically predicted motivator factor, recognition and professional growth satisfaction, showing the weakest association of all five dimensions (26.734).

This ordering runs contrary to the straightforward version of Herzberg's differential prediction, which would have anticipated the motivator factor showing the strongest, rather than the weakest, association with performance. Item-level analysis of the supervision and interpersonal relations dimension, which recorded the strongest observed association, showed that respondents rated their working relationship with colleagues particularly highly (item mean = 3.10), followed closely by the item indicating that interpersonal relations in their school were generally positive (item mean = 2.90), suggesting that it is specifically the collegial, peer-to-peer component of this mixed dimension, rather than the more hierarchical, principal-to-teacher supervisory component alone, that contributes most strongly to its elevated descriptive rating, even though both components were included within the same six-item measure and cannot be statistically disentangled within the present analysis.

Table 3: Descriptive Satisfaction Ratings Classified by Herzberg Category

Dimension	Category	Grand Mean	Std. Dev.	Decision
Supervision and Interpersonal Relations Satisfaction	Mixed	2.80	0.75	High Extent
Job Security Satisfaction	Hygiene	2.70	0.78	High Extent
Working Conditions Satisfaction	Hygiene	2.56	0.81	High Extent
Recognition and Professional Growth Satisfaction	Motivator	2.51	0.83	High Extent
Salary and Remuneration Satisfaction	Hygiene	2.46	0.84	Low Extent

Table 3 shows that the descriptive ranking of satisfaction dimensions broadly mirrors, though does not perfectly reproduce, the ranking of calculated χ^2 values in Table 2: the mixed factor again ranks highest, and the motivator factor again ranks in the lower half of the distribution,

though it is salary and remuneration satisfaction, rather than recognition, that records the single lowest descriptive rating. This partial divergence between the descriptive ranking (Table 3) and the associative-strength ranking (Table 2), specifically that salary and remuneration ranks lowest descriptively yet second-highest in calculated χ^2 , while recognition and professional growth ranks fourth descriptively yet lowest in calculated χ^2 , is itself analytically informative and is examined further in section 5.

Table 4: Comparison of Expected and Observed Ordering of Association Strength

Dimension	Category	Expected Rank (A Priori)	Observed Rank (χ^2)
Recognition and Professional Growth Satisfaction	Motivator	1 (Strongest)	5 (Weakest)
Supervision and Interpersonal Relations Satisfaction	Mixed	2	1 (Strongest)
Salary and Remuneration Satisfaction	Hygiene	3–5	2
Job Security Satisfaction	Hygiene	3–5	3
Working Conditions Satisfaction	Hygiene	3–5	4

Table 4 makes explicit the extent of divergence between Herzberg's (1959) a priori predicted ordering and the ordering actually observed in this dataset: the two extremes are effectively inverted, with the motivator factor predicted to rank first observed to rank last, and the mixed factor predicted to rank second observed to rank first. The three hygiene factors, by contrast, occupy the middle ranks rather than the bottom ranks predicted by a strict reading of the theory, a pattern discussed further in section 5.

Item-level inspection of the recognition and professional growth dimension offers a further, important qualification: while its grand mean satisfaction rating was only marginally above the criterion threshold (2.51), this average masks considerable within-dimension variation. The single item asking whether recognition motivates improved teaching recorded a very high mean (3.05), the highest of any single item across all five dimensions in the underlying dataset, while items concerning actual recognition received, access to professional development, and promotion opportunities all recorded below-criterion means (ranging from 2.30 to 2.42). This internal split, between strong endorsement of recognition's motivational value and weak reported access to

actual recognition, suggests that the comparatively weak association observed for this dimension in Table 2 may in part reflect restricted variance arising from generally low and rarely varying access to genuine recognition, rather than a genuine absence of motivator potential.

5. Discussion

The finding that all five dimensions, regardless of their Herzberg classification, related significantly to teachers' performance is broadly consistent with the wider literature reviewed in section 2.3 and supports the general relevance of job satisfaction, in its various facets, to teacher performance in the Akwa Ibom State context, corroborating Ukpong (2020), Agboola and Offong (2018), and Edet, Benson and Williams (2020). However, the comparative ranking of calculated χ^2 values does not straightforwardly support Herzberg's (1959) differential prediction that motivator factors should show a stronger performance association than hygiene factors. Instead, the mixed factor, supervision and interpersonal relations satisfaction, showed by far the strongest association, while the pure motivator factor showed the weakest.

One plausible explanation, consistent with Locke's (1976) range-of-affect framework, is that supervision and interpersonal relations satisfaction combines both evaluative and relational content in a manner that makes it especially salient and important to teachers' day-to-day working experience, thereby amplifying its association with performance beyond what a purely hygiene- or purely motivator-type classification would predict in isolation. A second, complementary explanation concerns the specific descriptive pattern observed for recognition and professional growth satisfaction: the marked gap between teachers' strong endorsement of recognition's motivational value and their comparatively limited reported access to actual recognition and professional development opportunities suggests that this dimension may function as a latent, under-realised motivator whose full theoretical potential, to generate the strongest positive association with performance, is currently constrained by its scarce practical availability rather than by any inherent theoretical weakness. In other words, the weak observed association for recognition may reflect restricted variance and limited actual exposure to genuine recognition, rather than evidence against the substantive importance Herzberg attributed to motivator factors.

A third consideration concerns the resource-constrained character of the public education context examined. In settings where hygiene factors such as job security and supervisory fairness are not uniformly guaranteed, as is documented for Nigerian public secondary education generally and Akwa Ibom State specifically, hygiene- and mixed-type factors may carry disproportionately

strong weight relative to what Herzberg's theory, developed initially among relatively well-resourced American professional employees, would predict, since even the prevention of dissatisfaction remains a live, unresolved concern for many teachers in this setting rather than an already-secured baseline. This context-dependent qualification is consistent with broader critiques of the two-factor structure's cross-cultural and cross-occupational generalizability noted in sections 2.2 and 2.3.

A fourth consideration returns to the methodological point raised in section 2.1 concerning House and Wigdor's (1967) critique of the critical-incident technique. Because the present study, like most applied questionnaire-based tests of Herzberg's theory, measured satisfaction using direct Likert-type ratings rather than critical-incident recall, the observed departure from the theory's predicted ordering is at least partly consistent with the wider pattern House and Wigdor documented, namely that questionnaire-based methods tend to produce a less clean separation between hygiene and motivator effects than the original critical-incident method. This does not, however, mean the present findings are uninformative; rather, they suggest that, when measured through the more common survey-based approach used in most applied organizational and educational research, including the bulk of the Nigerian teacher satisfaction literature reviewed in section 2.3, Herzberg's differential prediction should be treated as a testable, empirically contingent proposition rather than an assumed baseline.

A fifth consideration concerns the demographic composition of the underlying sample, in which 53.7 per cent of respondents taught in rural schools. If, as documented in the wider Nigerian teacher welfare literature, rural school postings are associated with compounded disadvantage across working conditions, supervisory oversight, and professional development access simultaneously, this compounding may itself partly explain why a relationally grounded, day-to-day factor such as supervision emerges as more strongly associated with performance than a comparatively episodic, structurally scarce factor such as formal recognition: in a context where formal recognition and development infrastructure is thin across the board, variation in the immediate, person-to-person quality of supervisory relationships may constitute the more functionally available, and therefore more performance-relevant, channel through which satisfaction is actually expressed and experienced by teachers day to day.

These findings also carry implications for teacher education and educational management curricula more broadly. If supervisory and relational quality genuinely constitutes a higher-leverage lever than formal recognition in resource-constrained public education settings, then

pre-service and in-service training programmes for school administrators in Nigeria might usefully allocate more explicit curricular attention to supervisory and interpersonal skills, relative to the attention currently allocated to reward and recognition system design, than a naive, unexamined application of Herzberg's theory would suggest. This is not to argue that recognition and professional growth initiatives should be deprioritized, since their comparatively weak observed association may, as argued above, reflect restricted variance rather than a genuine ceiling on their motivator potential, but rather to argue that supervisory training should not be treated as a secondary or merely administrative concern relative to reward system design in teacher management policy.

Finally, the specific divergence noted in section 4 between the descriptive ranking of satisfaction (Table 3) and the associative-strength ranking (Table 2), particularly the fact that salary and remuneration satisfaction ranked lowest in descriptive terms yet second-highest in calculated χ^2 , deserves explicit theoretical comment. This pattern is, in fact, entirely consistent with Herzberg's (1959) own account of hygiene factors: the theory does not predict that hygiene factors will be rated highly, but rather that variation in the degree of their inadequacy, from severe to mild, will strongly predict variation in disengagement and, by extension, performance. A hygiene factor can therefore be simultaneously rated low in absolute satisfaction terms and strongly associated with performance in relative, variance-based terms, precisely the pattern observed here for salary and remuneration satisfaction.

5.1 Conclusion

This paper set out to test, directly and comparatively, Herzberg's (1959) differential prediction that motivator factors should show a stronger relationship with performance than hygiene factors, using teacher job satisfaction data from Akwa Ibom State, Nigeria. The results offer only partial support for the theory: while all five job satisfaction dimensions were significantly related to teachers' performance, consistent with Herzberg's broader claim that both hygiene and motivator factors matter, the specific ordering of association strength did not follow the theory's straightforward differential prediction, with a mixed hygiene-motivator factor, supervision and interpersonal relations satisfaction, outperforming both the hygiene factors and the sole motivator factor examined. The paper concludes that Herzberg's theory retains value as an organising framework for classifying job satisfaction facets, but that its specific differential prediction should not be assumed to hold automatically in resource-constrained, non-Western public sector contexts without direct empirical testing of the kind undertaken here.

5.2 Theoretical Implications

These findings suggest that a rigid, unqualified application of Herzberg's differential prediction may understate the performance relevance of relational and hygiene-type factors in contexts, such as Nigerian public secondary education, where hygiene-level concerns are not yet uniformly resolved. The findings lend some support to hybrid theoretical positions, consistent with Locke's (1976) range-of-affect framework, that treat the practical importance an occupational group attaches to a given facet, rather than that facet's a priori hygiene or motivator classification, as the more proximate determinant of its association with performance. This suggests a productive direction for future theory development within Nigerian organizational and educational research: rather than treating Herzberg's classification as fixed and universal, researchers might usefully treat it as a starting hypothesis to be tested against locally weighted measures of facet importance.

More broadly, the inverted pattern reported in Table 4, in which the theoretically predicted strongest and weakest dimensions effectively swap positions, illustrates a general lesson for the application of imported organizational theories within Nigerian educational management research: a theory's qualitative, classificatory insight, in this case, that job satisfaction comprises factors of genuinely different character, can remain valuable and worth retaining even where its specific, quantitatively precise differential predictions do not hold in a given context. Future theory-building in this field would benefit from more explicitly separating a theory's retained qualitative insights from its context-specific quantitative predictions, rather than treating the two as an indivisible package to be either wholly accepted or wholly rejected on the basis of a single study's findings.

5.2 Practical Implications

For education administrators, these findings suggest that investment in motivator-type interventions, such as recognition schemes, should not automatically be assumed to outperform investment in hygiene- or relational-type interventions, such as supervisory training, in terms of impact on teachers' performance; the specific evidence here suggests the latter may in fact offer greater leverage in the short term. It is recommended that school administrators and policy makers priorities supervisory and interpersonal relations quality as a comparatively high-yield, comparatively low-cost intervention target, while continuing to address hygiene factors such as remuneration and job security to prevent active disengagement, and while working to expand actual, rather than merely rhetorical, recognition and professional development opportunities so

that this latent motivator factor's full theoretical potential can be more fully tested and realized in future research.

This prioritization is also attractive from a resource-allocation standpoint specific to the Akwa Ibom State context. Whereas meaningful improvement to salary and remuneration satisfaction requires sustained state-level fiscal commitment, and meaningful improvement to working conditions requires continued infrastructural investment, both processes that are necessarily gradual and subject to competing budgetary demands, improvement to supervisory practice can in principle be pursued through comparatively inexpensive, school-level training interventions that do not require new capital expenditure or recurrent budget lines, and can be implemented within a single academic session. Given the particularly strong association identified for this dimension in the present analysis, the Post-Primary Schools Board and individual school administrators may reasonably treat structured supervisory training as an early, low-cost, high-leverage component of any broader teacher performance improvement strategy, to be pursued in parallel with, rather than as a substitute for, the necessarily slower-moving hygiene-factor reforms.

5.3 Limitations

Four limitations should be noted. First, the classification of dimensions into hygiene, motivator, and mixed categories was undertaken a priori by the researcher on the basis of Herzberg's (1959) original theoretical scheme, rather than derived empirically from the dataset through factor analysis; a data-driven classification might group items differently, and might, in particular, split the supervision and interpersonal relations items into separately behaving hygiene and motivator components rather than treating them as a single mixed dimension. Second, the comparative analysis relies on Chi-square statistics, which indicate the significance but not the standardized magnitude of association, limiting the precision with which the comparative ranking reported in Table 2 can be interpreted; a correlation-based or regression-based effect-size measure would permit a more fine-grained comparison. Third, as with the wider survey from which this paper's data are drawn, the cross-sectional, self-report design does not permit causal inference regarding the direction of the satisfaction-performance relationship. Fourth, the restricted variance apparent in the recognition and professional growth dimension, discussed in section 4, means that this study cannot rule out the possibility that the dimension's true motivator potential is simply not observable within a sample where genuine recognition opportunities are uniformly scarce; a

fairer test would require a sample, or a quasi-experimental design, in which exposure to genuine recognition varies more substantially across respondents.

5.4 Recommendations for Future Research

Future studies should consider factor-analytic approaches to testing the two-factor structure directly within Nigerian teacher samples, rather than relying on an a priori classification, in order to establish whether an empirically derived grouping of items reproduces or departs from Herzberg's original scheme. Researchers should also examine whether the specific pattern reported here, namely the outperformance of a mixed relational factor over a pure motivator factor, replicates in other Nigerian states, other public sector occupations, and other levels of education, and should consider incorporating standardized effect-size measures alongside Chi-square statistics to permit more precise comparative ranking. Finally, given the apparent restricted variance observed for the recognition and professional growth dimension, future research designed specifically to test Herzberg's motivator prediction should be conducted in settings, or following interventions, where genuine recognition and professional growth opportunities are more consistently and variably available, so that the dimension's true motivator potential can be more fairly assessed.

A further useful extension would involve disaggregating the supervision and interpersonal relations dimension into its principal-to-teacher supervisory component and its teacher-to-teacher collegial component, using separately validated sub-scales, so as to determine which of the two contributes more strongly to the elevated association reported in this paper; the present instrument, having combined both components within a single six-item measure, cannot resolve this question directly. Researchers intending to replicate this analysis in other contexts should also consider explicitly measuring the subjective importance respondents attach to each job satisfaction facet, following Locke's (1976) range-of-affect framework, so that any observed departure from Herzberg's predicted ordering can be explained directly by reference to measured importance weights rather than inferred, as in the present paper, from the pattern of results alone.

Article Publication Details

This article is published in the [International Journal of Multidisciplinary Research and Bulletin](#), ISSN 3108-1428 (Online). In Volume 5 Issue 5 (Sep – Oct) 2026.

The journal is published and managed by [IRPG](#).

Acknowledgements

We sincerely thank the editors and the reviewers for their valuable suggestions on this paper.

Funding

The authors declare that no funding was received for this work.

Data availability

No datasets were generated or analyzed during the current study.

Declarations

Ethics approval and consent to participate

The author(s) declare that it is not applicable.

Consent for publication

The author(s) declare that this is not applicable.

Competing interests

The author(s) declare that they have no competing interests.

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