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The Mediating Role of Job Satisfaction in Healthcare Employee Retention: Structural Evidence from a Hospital in Aceh, Indonesia

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Abstract

Employee retention is a critical challenge for healthcare organizations in Indonesia, where persistent workforce turnover undermines service quality and institutional sustainability. This study examines whether job satisfaction mediates the relationships between four organizational factors (career development, mental health support, compensation, and digital innovation) and employee retention among medical personnel. A quantitative, explanatory research design was employed, with data collected from 110 permanent medical employees at Cempaka Lima Hospital, Banda Aceh, Indonesia, using a closed-ended questionnaire. Structural Equation Modeling (SEM) analyzed with AMOS software was applied to test both direct and indirect pathways in the proposed framework. The model achieved strong explanatory power, accounting for 63% of variance in retention (R^2=0.63) and 51% of variance in job satisfaction (R^2=0.51), with goodness-of-fit indices within acceptable ranges (CFI=0.942; RMSEA=0.061). The central finding is that career development, mental health support, and compensation influence retention exclusively through the mediation of job satisfaction, with standardized indirect coefficients of β=0.107, β=0.113, and β=0.093, respectively; their direct pathways to retention were not statistically significant. Job satisfaction, by contrast, exerted a strong, direct, and statistically significant effect on retention (β=0.361, p<0.001), establishing it as the primary determinant of employee loyalty. Digital innovation showed no significant effect through either pathway. These results demonstrate that organizational inputs must translate into positive psychological states before they can influence retention behavior. Hospital managers and health workforce policymakers in Indonesia are urged to redirect strategic attention from structural inputs toward psychological outcomes as the proximal drivers of sustainable workforce retention.

Keywords: employee retention; job satisfaction; career development; structural equation modeling; healthcare management

1. INTRODUCTION

Indonesia's public hospital sector operates under conditions of persistent human resource pressure. Healthcare worker turnover imposes compounding costs on health institutions—direct costs in recruitment and training, and indirect costs through continuity gaps in patient care, diminished institutional memory, and accumulated organizational stress (Daouda et al., 2021). In resource-limited regional facilities, these pressures are amplified. Banda Aceh, the capital of Aceh Province, presents a case characteristic of secondary healthcare facilities across Indonesia: high patient load, constrained institutional budgets, and a workforce chronically exposed to occupational stress (Mehta et al., 2024; Butt et al., 2024).

Despite the quantifiable burden of workforce turnover, hospital management in Indonesia has not yet systematically adopted evidence-based retention frameworks. Policy responses have tended to address visible symptoms (recruiting additional personnel, adjusting formal salary scales, or installing new clinical technologies) without diagnosing the underlying psychological mechanisms that connect organizational conditions to retention behavior (Awwad & Heyari, 2022). Healthcare workforce challenges in secondary

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public hospitals reflect broader structural patterns observed across countries at comparable stages of economic development, where simultaneous demand-side growth and supply-side constraint characterize the health labor market (Romaniuk et al., 2020). The consequence is a cycle of investment in interventions that yield marginal or inconsistent retention outcomes.

The existing management literature offers an important but underutilized diagnostic tool: job satisfaction. Theoretical frameworks from organizational behavior, including Herzberg's Two-Factor Theory, Social Exchange Theory, and Conservation of Resources Theory. These frameworks converge on the proposition that organizational factors do not influence retention directly but act through the mediating construct of employee satisfaction (Kitsios & Kamariotou, 2021; Aman-Ullah et al., 2023). This mediation hypothesis has received empirical support in healthcare settings across diverse national contexts (Petrey, 2022; Fang et al., 2021), yet it remains undertested in Indonesian hospitals, where the specific configuration of organizational factors and satisfaction antecedents may differ from findings generated in higher-income health systems.

This study addresses that gap by testing empirically whether job satisfaction fully mediates the relationships between four organizational factors (career development, mental health support, compensation, and digital innovation) and employee retention at Cempaka Lima Hospital, Banda Aceh. A Structural Equation Modeling approach simultaneously estimates direct and indirect pathways within a theoretically grounded retention framework.

The study makes three contributions to management science. First, it provides structural evidence for a satisfaction-mediated retention model in an Indonesian provincial hospital—a context underrepresented in the HRM literature. Second, it establishes the comparative mediating strength of each organizational input, enabling hospitals to prioritize resource allocation on an evidence basis. Third, the null finding for digital innovation offers a substantive caution against technology-centric retention strategies that overlook the psychological foundations of workforce loyalty.

2. LITERATURE REVIEW AND RESEARCH FRAMEWORK

2.1. Theoretical Background

Herzberg's Two-Factor Theory distinguishes motivator factors—intrinsic to the work itself, including professional achievement, recognition, autonomy, and career growth—from hygiene factors, which are extrinsic conditions such as compensation, administrative policies, and working environment. Motivators generate genuine satisfaction and heightened retention commitment. Hygiene factors prevent dissatisfaction but do not independently produce satisfaction when present (Kitsios & Kamariotou, 2021). Applied to this study, career development operates as a motivator and compensation as a hygiene factor; both are expected to route through job satisfaction before influencing retention.

Social Exchange Theory (SET) posits that workplace relationships are governed by norms of reciprocity: when organizations invest in employees through material support, professional opportunities, and psychological resources, employees perceive an implicit relational obligation, experienced as satisfaction and reciprocated through commitment and organizational loyalty (Aman-Ullah et al., 2023). SET grounds the expectation that mental health support and compensation translate into job satisfaction before producing retention outcomes.

Conservation of Resources (COR) Theory frames occupational stress as a threat to valued personal resources, including cognitive capacity, emotional stability, and professional identity. Healthcare workers in high-demand environments are particularly vulnerable to resource depletion; when organizational support restores or protects these resources, the resultant psychological stability is experienced as job satisfaction (Petrey, 2022; Fang et al., 2021). COR Theory provides the causal mechanism connecting mental health support to satisfaction and, subsequently, to retention.

Taken together, these three frameworks produce a convergent prediction: the relationship between organizational factors and retention is mediated by job satisfaction. This study tests that prediction with primary SEM data from an Indonesian hospital context.

2.2 Literature Review

a. Career Development and Retention

Career development encompasses structured opportunities for professional growth, including training programs, competency upgrading, mentorship, and advancement pathways. In healthcare settings, clear career trajectories have been linked to higher organizational commitment and reduced turnover intention (Lourenção et al., 2022). The mechanism through which career development affects retention is not automatic: poorly designed or inconsistently implemented programs may fail to produce satisfaction and therefore fail to affect retention (Butt et al., 2024). Career development must be perceived as meaningful and accessible before it translates into retention behavior, supporting a mediated model in which job satisfaction is the proximal predictor.

b. Mental Health Support and Retention

The mental health of healthcare workers is a critical determinant of workforce sustainability. Research confirms that psychological distress remains a leading driver of turnover intention in healthcare, with burnout, anxiety, and compassion fatigue accumulating in high-demand hospital environments (Petrey, 2022; Headrick et al., 2024). Mental health support programs—including confidential counseling services, peer support systems, and policies that destigmatize psychological distress—function as organizational resources under the COR framework, protecting employees from depletion and sustaining satisfaction (Fang et al., 2021). Where such resources are absent or inadequate, dissatisfaction accumulates and retention suffers as a downstream consequence.

c. Compensation and Retention

Compensation encompasses salary, allowances, and non-monetary benefits. While inadequate compensation is a well-established driver of turnover, the relationship between higher compensation and retention is less linear than commonly assumed (Aman-Ullah et al., 2023). Consistent with Herzberg's Two-Factor Theory, compensation operates primarily as a hygiene factor: insufficient pay generates dissatisfaction, but adequate pay does not independently produce loyalty. Compensation's retention effect is conditional on whether it first raises job satisfaction—which requires that employees perceive pay as fair, proportionate to workload, and consistent with institutional norms (Awwad & Heyari, 2022).

d. Digital Innovation and Retention

Digital health technologies are frequently positioned as tools for improving workforce satisfaction through reduced administrative burden and enhanced care quality (Hu & Yao, 2021). However, evidence from diverse healthcare settings reveals consistent implementation complications: digital transformation is undermined by inadequate training, poor infrastructure, digital literacy gaps, and design processes that bypass frontline workers (Swartz et al., 2021; Al Meslamani, 2023). Under these conditions, technology adds to occupational burden rather than reducing it, generating frustration rather than satisfaction (Al Dahdah & Mishra, 2023). Healthcare systems with incomplete digital readiness are especially susceptible to these implementation failure patterns, with consequences for workforce stability (Govender, 2024).

e. Job Satisfaction as a Mediating Variable

Job satisfaction is a multidimensional attitudinal construct reflecting employees' overall evaluation of their work experience across intrinsic and extrinsic dimensions (Kitsios & Kamariotou, 2021). Its role as a mediating variable in the retention relationship is supported by multiple theoretical traditions and empirical studies across healthcare and non-healthcare contexts. The empirical consensus is that organizational factors influence retention through their effect on satisfaction: employees remain in organizations where they experience sustained psychological fulfillment derived from work conditions, professional relationships, and career trajectory (Aman-Ullah et al., 2023; Lourenção et al., 2022). SEM is suited to testing this mediation hypothesis by simultaneously estimating direct and indirect pathways within a single structural model (Daouda et al., 2021).

2.3 Research Hypotheses

Based on the theoretical frameworks and literature reviewed above, this study proposes the following nine hypotheses:

H1: Career development has a significant positive effect on job satisfaction.
H2: Mental health support has a significant positive effect on job satisfaction.
H3: Compensation has a significant positive effect on job satisfaction.
H4: Digital innovation has a significant positive effect on job satisfaction.
H5: Job satisfaction has a significant positive effect on employee retention.
H6: Job satisfaction mediates the relationship between career development and employee retention.
H7: Job satisfaction mediates the relationship between mental health support and employee retention.
H8: Job satisfaction mediates the relationship between compensation and employee retention.
H9: Job satisfaction mediates the relationship between digital innovation and employee retention.

3. METHODS

3.1 Research Design

This study employed a quantitative, explanatory research design aimed at establishing causal relationships between organizational factors, job satisfaction, and employee retention. The explanatory design was selected because the study objective is to test theoretically derived hypotheses about directional relationships and mediation pathways, rather than to describe or explore the phenomenon in an open-ended manner.

3.2 Research Context and Setting

The study was conducted at Cempaka Lima Hospital, a public general hospital located in Banda Aceh, Aceh, Indonesia. The hospital provides inpatient, outpatient, and emergency services to the population of Banda Aceh and surrounding districts. As a public institution within a provincial government structure, it

faces constraints typical of Indonesian regional health facilities: fixed civil service salary structures, limited discretionary budgets for workforce development, and high patient-to-staff ratios. This institutional context makes it a representative empirical site for testing retention dynamics in resource-constrained secondary healthcare settings.

3.3 Population, Sample, and Data Sources

The target population comprised all permanent medical employees at Cempaka Lima Hospital. A sample of 110 respondents was obtained using purposive sampling, with inclusion criteria requiring permanent employment status and a minimum of one year of institutional tenure. The sampling frame was drawn from official hospital personnel records. Primary data were collected directly from respondents via a structured questionnaire administered at the study site.

3.4 Data Collection Procedures

Data collection was conducted through a closed-ended questionnaire administered during a defined data collection period at the hospital. All items employed a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Questionnaires were distributed and collected in coordination with hospital administration. Participation was voluntary, and respondents were assured of the anonymity of their responses prior to completing the instrument.

3.5 Measurement of Variables or Data Instruments

The questionnaire instrument measured six latent constructs: career development, mental health support, compensation, digital innovation, job satisfaction, and employee retention. Items for each construct were adapted from validated instruments in the prior HRM and healthcare management literature. Career development items assessed access to training programs, clarity of career pathways, and perceived opportunities for professional advancement. Mental health support measured access to psychological services, institutional support during high-stress periods, and management responsiveness to psychological distress. Compensation items assessed pay adequacy, perceived equity, and workload alignment. Digital innovation items covered the availability and perceived usability of clinical information systems. Job satisfaction items assessed overall work fulfillment, intrinsic reward, and relational satisfaction at work. Employee retention items measured intention to remain in the organization, organizational commitment, and loyalty orientation.

3.6 Data Analysis Technique

Structural Equation Modeling (SEM) was employed as the primary analytical method, implemented using AMOS (Analysis of Moment Structures) software. SEM was selected for its capacity to simultaneously estimate multiple direct and indirect relationships among latent variables and to assess mediation effects with statistical precision. The analysis proceeded in two stages: confirmatory factor analysis (CFA) first assessed the measurement model, followed by structural model estimation to test hypothesized path

relationships. Bootstrap confidence intervals (5,000 resamples) were computed to evaluate the statistical significance of indirect (mediated) effects.

3.7 Validity, Reliability, and Trustworthiness

Construct validity was assessed through CFA, with convergent validity established through average variance extracted (AVE) and discriminant validity confirmed through inter-construct correlation comparisons. Internal consistency reliability was assessed using Cronbach's alpha for each latent construct. Model fit was evaluated using the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Tucker-Lewis Index (TLI), applying standard acceptable thresholds (CFI ≥ 0.90; RMSEA ≤ 0.08).

3.8 Ethical Considerations

Formal permission to conduct the study was obtained from the management of Cempaka Lima Hospital before questionnaire distribution. All participants provided informed consent prior to completing the questionnaire, and participation was voluntary. Because the study used an anonymous, non-clinical survey of hospital employees and did not involve medical intervention, patient records, vulnerable participants, or identifiable sensitive personal data, formal institutional ethics committee approval was not required under the applicable institutional procedures. Nevertheless, the study followed ethical principles for social science research by ensuring anonymity, confidentiality, and the use of data exclusively for academic purposes.

4. RESULTS

The measurement model demonstrated strong psychometric properties across all six latent constructs, providing a valid and reliable basis for structural estimation. Confirmatory factor analysis confirmed acceptable factor loadings across all items.

Model goodness-of-fit indices fell within acceptable thresholds (CFI=0.942; RMSEA=0.061), confirming the adequacy of the proposed structural framework. The model accounted for 63% of variance in employee retention (R^2=0.63) and 51% of variance in job satisfaction (R^2=0.51), indicating substantial explanatory power for both outcome variables.

Table 1 presents the structural estimates used to test H1-H9. In response to the need for greater clarity, the paths from the four organizational antecedents to job satisfaction are now reported explicitly before the mediated retention paths. Career development, mental health support, and compensation showed positive effects on job satisfaction, with standardized path estimates of β=0.296, β=0.313, and β=0.258, respectively, supporting H1-H3. Digital innovation showed a weaker path to job satisfaction (β=0.174) and did not produce a statistically meaningful mediated retention effect; therefore, H4 and H9 were not supported.

After job satisfaction was included in the model, the direct paths from career development, mental health support, and compensation to employee retention were not statistically significant, whereas their bootstrapped indirect effects through job satisfaction were significant. Specifically, career development had a significant indirect effect on retention through job satisfaction (β=0.107, 95% CI [0.041-0.199]), supporting H6. Mental health support also had a significant indirect effect (β=0.113, 95% CI [0.052-0.203]), supporting H7. Compensation showed a significant indirect effect as well (β=0.093, 95% CI [0.026-0.180]), supporting H8.

Job satisfaction emerged as the strongest direct predictor of employee retention (β=0.361, p<0.001), supporting H5. Digital innovation produced neither a significant direct effect on retention (β=0.067, p=0.412) nor a significant mediated effect through job satisfaction (β=0.063, 95% CI [-0.004-0.140]), indicating that technology-related initiatives did not translate into retention benefits under the observed implementation conditions.

Table 1. Structural Path Estimates for Job Satisfaction and Employee Retention

Hypothesis	Structural path	Direct β	p-value	Indirect β	95% CI	Finding
H1	Career Development -> Job Satisfaction	0.296	—	—	—	Supported
H2	Mental Health Support -> Job Satisfaction	0.313	—	—	—	Supported
H3	Compensation -> Job Satisfaction	0.258	—	—	—	Supported
H4	Digital Innovation -> Job Satisfaction	0.174	—	—	—	Not supported
H5	Job Satisfaction -> Retention	0.361	<0.001	—	—	Supported
H6	Career Development -> Job Satisfaction -> Retention	0.148	0.089	0.107	[0.041-0.199]	Supported
H7	Mental Health Support -> Job Satisfaction -> Retention	0.172	0.076	0.113	[0.052-0.203]	Supported
H8	Compensation -> Job Satisfaction -> Retention	0.044	0.509	0.093	[0.026-0.180]	Supported
H9	Digital Innovation -> Job Satisfaction -> Retention	0.067	0.412	0.063	[-0.004-0.140]	Not supported

Note: Direct β for H6-H9 refers to the direct path from each antecedent to retention after job satisfaction is included in the model. Indirect β and confidence intervals are based on the bootstrapped mediation test.

5. DISCUSSION

The findings from this study establish a satisfaction-mediated causal model of healthcare employee retention in an Indonesian public hospital, offering both theoretical confirmation and practical redirection for hospital workforce management.

5.1 Theoretical Implications

The most theoretically significant contribution of this study is its structural confirmation that job satisfaction is the exclusive mechanism through which organizational factors produce retention outcomes. The absence of significant direct effects from career development, mental health support, and compensation to retention, combined with the presence of significant indirect effects through job satisfaction, is consistent with the theoretical predictions of Herzberg's Two-Factor Theory and Social Exchange Theory. This pattern indicates that it is not the provision of organizational resources per se that generates retention, but the psychological evaluation of those resources by employees that determines loyalty behavior.

These findings extend the work of Kitsios and Kamariotou (2021), who demonstrated job satisfaction as a primary retention antecedent among Greek public health workers, and of Aman-Ullah et al. (2023), who established the mediating role of satisfaction in the compensation-retention relationship. The present study replicates and extends this mediation pattern across multiple organizational inputs in a Southeast Asian hospital environment, contributing to the generalizability of the satisfaction-mediated retention model. The null finding for digital innovation is also theoretically important: it challenges the assumption that digitalization generates satisfaction among healthcare workers and supports instead the characterization of technology's retention effect as implementation-conditional (Swartz et al., 2021; Al Dahdah & Mishra, 2023; Al Meslamani, 2023).

5.2 Managerial and Practical Implications

For hospital managers at Cempaka Lima Hospital and analogous secondary public hospitals in Indonesia, the central practical implication is a required shift in management philosophy: from investing in programs and technologies as structural inputs toward cultivating the psychological environment that determines how those inputs are experienced.

Career development programs should be redesigned not merely to expand training hours but to ensure that development pathways are perceived as fair, accessible, and professionally meaningful. The indirect effect of career development on retention (β=0.107) confirms that structured professional growth increases satisfaction, which in turn produces retention—but this pathway is conditional on employees genuinely experiencing development as credible and valued (Lourenção et al., 2022; Rocha, 2025).

Mental health support must be elevated from a peripheral employee benefit to a core operational priority. The study finds that mental health support produces the strongest indirect effect on retention among the three significant mediators (β=0.113). Investment in confidential counseling services, peer support mechanisms, and institutional destigmatization of psychological help-seeking should be treated as essential infrastructure (Headrick et al., 2024; Fang et al., 2021). The evidence on digital innovation recommends against further technology procurement before addressing foundational implementation conditions, as unresolved digital literacy gaps and poor workflow alignment will not produce retention benefits and may add to occupational burden (Al Meslamani, 2023). For health workforce policy in Indonesia, the study provides evidence that retention policy should be evaluated by whether programs produce measurable improvements in job satisfaction—a leading indicator of future workforce stability (Sweileh, 2024; Yan et al., 2023).

5.3 Limitations and Future Research

This study carries several limitations. First, the sample is drawn from a single public hospital in Banda Aceh, limiting generalizability to private hospitals, primary care facilities, or hospitals in other Indonesian regions. Future research should replicate the satisfaction-mediated model across multiple institutions and geographic settings. Second, the cross-sectional design precludes causal inference in the temporal sense; longitudinal studies would strengthen causal claims. Third, digital innovation measurement relies on self-reported perceptions rather than objective infrastructure assessments. Fourth, unmeasured constructions, including organizational culture, leadership style, and peer social support—may account for unmodeled variance, and model extension to include these variables represents a productive direction for future inquiry.

6. CONCLUSION

This study demonstrates that the retention of medical personnel in Indonesian public hospitals is governed by a satisfaction-mediated causal structure in which organizational factors operate as distal antecedents and job satisfaction functions as the critical proximal determinant of employee loyalty. Career development, mental health support, and compensation each produce statistically significant indirect effects on retention exclusively through job satisfaction, confirming a pattern of full mediation. Digital innovation fails to produce any significant retention effect, directly or indirectly, under current implementation conditions. Job satisfaction exerts the strongest direct effect on retention (β=0.361, $p<0.001$), establishing it as the primary strategic lever for hospital workforce management. For hospital managers in Indonesia, the evidence mandates a reorientation from structural investments toward the cultivation of psychological environments that generate genuine and sustained employee satisfaction. This reorientation is both the ethical obligation of a healthcare employer and the strategic necessity of any institution seeking to maintain a competent and stable workforce over the long term.

Author Contributions

F.P. conceptualized the study, designed and administered the data collection instrument, conducted the empirical analysis, and supervised the research process. M.A.B. developed the theoretical framework, conducted the literature review, interpreted the findings, and drafted the manuscript. Both authors reviewed and approved the final manuscript.

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Use of Artificial Intelligence (AI)

Artificial intelligence tools were used only to support language editing, manuscript refinement, and clarity improvement. All substantive content, empirical data, statistical analysis, interpretation of findings, and final scholarly decisions remained the responsibility of the authors. No AI tools were used to generate data, perform statistical analysis, or produce empirical findings.

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