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Education Level and Achievement Motivation Mediated by Job Satisfaction in Developing Nurses Performance at Moh. Ridwan Meuraksa General Hospital

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Abstract

Nursing performance remains critical to quality healthcare delivery, yet the mechanisms through which education level and achievement motivation influence performance outcomes remain understudied. This study examines the mediating role of job satisfaction in the relationships between education level, achievement motivation, and nurse performance at Moh. Ridwan General Hospital, Meuraksa. A cross-sectional study was conducted with 250 nurses using Smart PLS-SEM analysis. Data were collected through validated questionnaires measuring education level, achievement motivation, job satisfaction, and performance. Education level significantly influenced both job satisfaction and performance. Achievement motivation demonstrated strong positive effects on job satisfaction and performance. Job satisfaction partially mediated the relationships between education level and performance, and between achievement motivation and performance. The findings emphasize the importance of developing educational pathways and motivational programs while fostering job satisfaction to enhance nursing performance in hospital settings.

Keywords: Education Level, Achievement Motivation, Job Satisfaction, Nurse Performance

INTRODUCTION

Healthcare organizations worldwide face unprecedented challenges in maintaining high-quality care delivery while managing increasingly complex operational demands. The nursing workforce, representing the largest segment of healthcare professionals, plays a critical role in determining patient outcomes and organizational success (Xie & Lu, 2025). Globally, healthcare systems struggle with nursing shortages, high turnover rates, and performance variability, which directly impact patient safety and care quality (Ora et al., 2023).

The World Health Organization emphasizes that nursing performance is fundamental to achieving universal health coverage and sustainable development goals in healthcare. At the national level, Indonesian healthcare facilities encounter specific challenges related to nursing workforce development and performance optimization. The Indonesian Ministry of Health reports significant variations in nursing performance across different hospital types and regions, with educational disparities and motivational factors contributing to these differences (Ambarwati et al., 2024). The rapid expansion of healthcare services in Indonesia has created urgent demands for highly competent nurses capable of delivering evidence-based care in diverse clinical settings.

Moh. Ridwan General Hospital in Meuraksa faces particular challenges in optimizing nursing performance despite investments in staff development and infrastructure improvements. Preliminary observations reveal inconsistencies in care delivery standards, variable patient satisfaction scores, and concerns regarding the alignment between nurses' educational qualifications, motivational levels, and actual job performance. Understanding the mechanisms through which education and motivation influence performance through job satisfaction becomes critical for developing targeted interventions.

Recent scholarly investigations emphasize the multifaceted nature of nursing performance determinants. Research by (Yonghai Zhu et al., 2022) demonstrates that educational attainment

significantly predicts clinical competence and patient outcomes. Similarly, (Hsu & Chen, 2023) found strong correlations between achievement motivation and performance metrics in acute care settings. The mediating role of job satisfaction has gained attention, with (Querstret et al., 2020) that satisfaction serves as a critical pathway through which organizational factors influence performance outcomes.

Furthermore, cross-cultural studies highlight the context-specific nature of these relationships. Research by (Labrague et al., 2021) indicates that cultural values and organizational contexts moderate the strength of relationships between individual characteristics and performance. (Kohnen et al., 2024) emphasizing the importance of examining mediation mechanisms in specific healthcare settings to develop contextually appropriate interventions.

Despite extensive research on individual factors affecting nursing performance, limited studies examine the complex interplay between education, motivation, satisfaction, and performance within a comprehensive mediation framework, particularly in Indonesian healthcare contexts. This study addresses this gap by investigating how job satisfaction mediates the relationships between education level, achievement motivation, and nursing performance at Moh. Ridwan General Hospital. The findings will provide evidence-based insights for healthcare administrators and policymakers seeking to enhance nursing workforce effectiveness through targeted human resource strategies.

Education level and performance

Education level represents a fundamental determinant of professional competence in nursing practice. Higher educational attainment equips nurses with advanced clinical knowledge, critical thinking skills, and evidence-based practice capabilities that directly translate into superior performance outcomes (Aiken et al., 2024). Nurses with bachelor's degrees or higher demonstrate enhanced patient assessment abilities, better clinical decision-making, and improved adherence to safety protocols compared to diploma-level counterparts (Teixeira et al.,

2023). The cognitive complexity associated with advanced education enables nurses to navigate challenging clinical situations more effectively and adapt to rapidly evolving healthcare technologies.

Research by (Teixeira et al., 2023) reveals that educational preparation significantly predicts performance indicators including medication error rates, patient satisfaction, and quality improvement participation. Therefore, we hypothesize:

H1: Education level has a positive direct effect on nurses' performance

Education level and job satisfaction

Educational attainment influences job satisfaction through multiple mechanisms including professional identity, autonomy, and career advancement opportunities. Nurses with higher education levels report greater satisfaction due to enhanced professional recognition, increased participation in decision-making processes, and access to specialized roles (Wei et al., 2023). Advanced education correlates with better alignment between job expectations and reality, as well-educated nurses possess more accurate understandings of professional demands and organizational contexts.

Empirical evidence from (Chen et al., 2022) demonstrates that educational level positively predicts satisfaction dimensions including work meaningfulness, professional growth opportunities, and collegial relationships.

H2: Education level has a positive effect on job satisfaction

Achievement motivation and job satisfaction

Achievement motivation, characterized by the desire for excellence, goal attainment, and continuous improvement, substantially influences job satisfaction in healthcare professionals. Nurses with high achievement motivation derive satisfaction from accomplishing challenging tasks, mastering new competencies, and contributing to patient welfare (Ryan & Deci, 2020). Self-determination theory suggests that intrinsic motivation fulfills basic psychological needs for competence and autonomy, directly enhancing job satisfaction.

Studies by (Nantsupawat, 2020) confirm strong positive associations between achievement orientation and satisfaction across diverse nursing specialties. Achievement-motivated nurses perceive their work as more meaningful and experience greater fulfillment from patient care activities.

H3: Achievement motivation has a positive effect on job satisfaction

Achievement motivation and performance

Achievement motivation serves as a critical driver of nursing performance through its influence on effort expenditure, persistence, and goal-directed behavior. Highly motivated nurses consistently pursue excellence, seek feedback for improvement, and demonstrate resilience in challenging situations (Howard et al., 2021). The goal-setting mechanisms associated with achievement motivation facilitate superior performance by focusing attention, mobilizing energy, and encouraging strategy development. Meta-analytic findings by (Walker, n.d.) reveal consistent positive relationships between achievement motivation and performance indicators across professional domains. In nursing contexts, (Fontaine et al., 2024) that motivation predicts clinical competence, patient outcomes, and professional development activities.

H4: Achievement motivation has a positive direct effect on nurses' performance

Job satisfaction and performance

The satisfaction-performance relationship represents one of the most extensively studied phenomena in organizational behavior and healthcare management. Satisfied nurses demonstrate higher commitment, reduced absenteeism, and superior patient care quality (Lucas, 2024). Job satisfaction influences performance through enhanced organizational citizenship behaviors, increased effort investment, and reduced turnover intentions that enable skill development and expertise accumulation. Contemporary research by (Behavior et al., 2023) emphasizes that satisfaction serves as a psychological resource that facilitates performance under demanding conditions. In nursing, satisfied professionals exhibit better

patient communication, greater adherence to evidence-based protocols, and enhanced teamwork (Labrague et al., 2021).

H5: Job satisfaction has a positive effect on nurses' performance

Mediating role of job satisfaction

Job satisfaction functions as a critical mediating mechanism linking individual characteristics to performance outcomes. The satisfaction-mediation perspective suggests that education and motivation enhance performance partially through their effects on satisfaction, which creates favorable psychological states conducive to optimal performance (Judge et al., 2001). Education increases satisfaction by providing professional identity and competence, which subsequently motivates higher performance standards. Similarly, achievement motivation enhances satisfaction through need fulfillment,

creating conditions that support sustained high performance.

Empirical investigations support these mediation pathways. Research by (Lu et al., 2019) found that satisfaction partially mediated education-performance relationships among hospital nurses. Similarly, studies by (Deok, 2023) demonstrate satisfaction's mediating role between motivation and outcomes. Additional support comes from (Commitment & Cho, 2022), who found significant indirect effects of individual factors on performance through satisfaction pathways in healthcare settings.

H6: Job satisfaction mediates the relationship between education level and nurses' performance.

H7: Job satisfaction mediates the relationship between achievement motivation and nurses' performance.

Conceptual framework

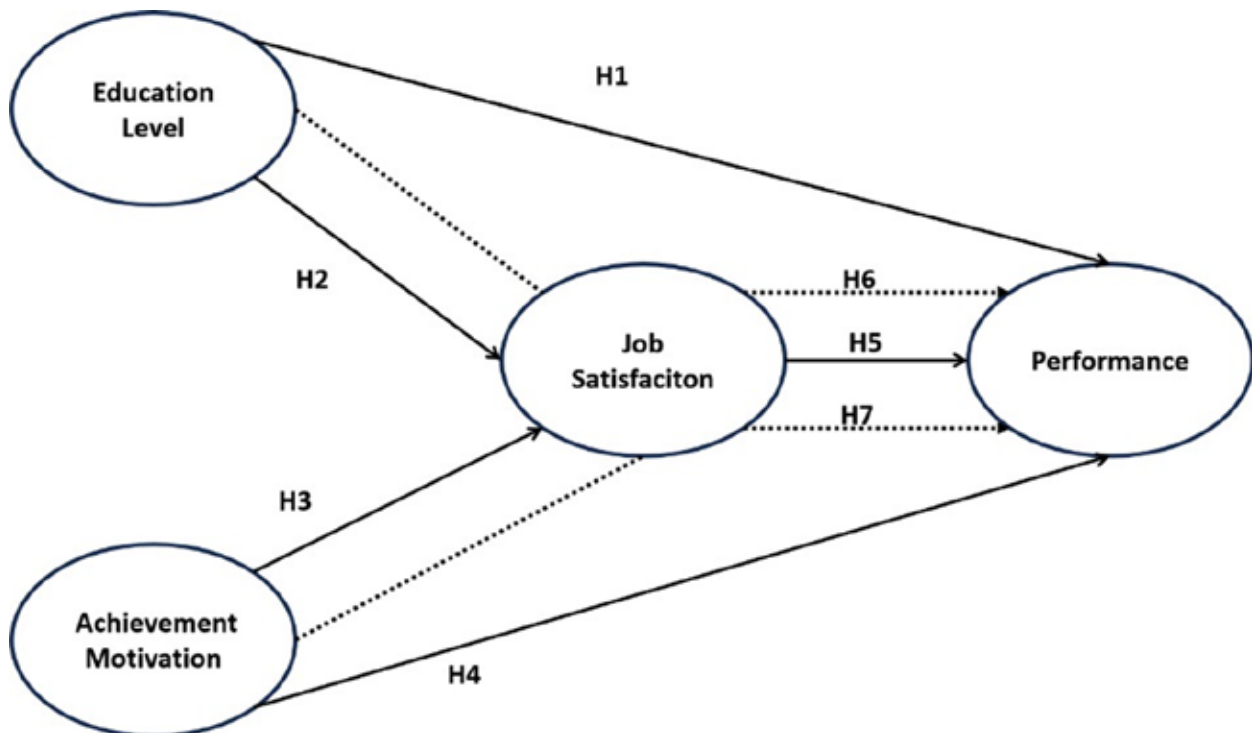


Figure 1. Research model

The research model (Figure 1) integrates these relationships within a comprehensive framework examining direct and indirect effects of education level and achievement motivation on nursing performance, with job satisfaction as the mediating variable. This model acknowledges the complexity of performance determinants while providing testable pathways for empirical investigation.

METHODS

This study employed a quantitative cross-sectional design using survey methodology to examine relationships among education level, achievement motivation, job satisfaction, and performance among nurses at Moh. Ridwan General Hospital, Meuraksa. The research adopted a positivist paradigm consistent with structural equation modeling approaches in healthcare research (Ringle & Sarstedt, 2021).

The target population comprised all registered nurses employed in clinical departments including medical-surgical, critical care, emergency, and outpatient units.

Sample size determination followed recommendations for partial least squares structural equation modeling (PLS-SEM), requiring minimum 10 observations per predictor variable (Ringle & Sarstedt, 2021). With four predictors in the most complex relationship, a minimum sample of 200 was required. To account for potential non-response and ensure adequate statistical power, 280 nurses were invited to participate, yielding 250 valid responses (89.3% response rate). Inclusion criteria required minimum one year of clinical experience and current full-time employment status.

RESULT

Table 1. Sample characteristics

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	73	29.2
	Female	177	70.8
Age	23-30 years	98	39.2
	31-40 years	102	40.8
	41-50 years	42	16.8
	>50 years	8	3.2
	Education	Diploma	87
	Bachelor	142	56.8
	Master	21	8.4
Work Experience	1-5 years	112	44.8
	6-10 years	79	31.6
	>10 years	59	23.6
Department	Medical-Surgical	98	39.2
	Critical Care	62	24.8
	Emergency	51	20.4
	Outpatient	39	15.6

Source: Data processing, 2025.

Variable measurement

Table 2. Variable operationalization and measurement

Variable	Definition	Indicators	Items	Scale	Source
Education Level	Highest formal nursing education attained	Educational degree (Diploma=1, Bachelor=2, Master=3)	1	Ordinal	(Aiken et al., 2024)
Achievement Motivation	Drive to excel and accomplish challenging goals	1.Goal orientation 2.Task challenge preference 3.Persistence 4.Excellence standards 5.Feedback seeking	15	5-point Likert	(Ryan & Deci, 2020)
Job Satisfaction	Positive emotional state from work appraisal	1.Workcontent satisfaction 2.Supervisor satisfaction 3.Colleague satisfaction 4.Compensation satisfaction 5.Promotion satisfaction	20	5-point Likert	(Chazan et al., 2022)
Nurses' Performance	Effectiveness in fulfilling job responsibilities	1.Task performance 2.Contextual performance 3.Clinical competence 4.Patient care quality 5.Professional development	18	5-point Likert	(Xie & Lu, 2025)

Source: Data processing, 2025.

All multi-item scales utilized five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Instruments were adapted from validated scales in healthcare research (Doğrusöz & Yazıcı, 2025). Achievement motivation was measured using the Achievement Motivation Inventory adapted from (Lang and Fries 2022). Job satisfaction utilized the Job Satisfaction Survey (Chazan et al., 2022). Nursing performance was assessed using the Nursing Performance Measurement Scale (Commitment & Cho, 2022).

Data analysis

Data analysis employed Smart PLS 4.0 software following the two-stage analytical procedure

recommended for PLS-SEM (Sarstedt et al., 2019). First, the measurement model (outer model) was evaluated to establish reliability and validity of constructs. Assessment criteria included composite reliability (>0.70), average variance extracted (AVE >0.50), and discriminant validity using heterotrait- monotrait ratio (HTMT <0.85) as recommended by (Ringle et al., 2023). Second, the structural model (inner model) was examined to test hypothesized relationships. Path coefficients, significance levels, and R² values were assessed using bootstrapping procedures with 5,000 resamples (Becker et al, 2022) . Mediation effects were tested following the approach by

(Jun-Hwa Cheah et al., 2021), examining specific indirect effects and their significance through bias-corrected confidence intervals.

Model fit was evaluated using standardized root mean square residual (SRMR <0.08) and normed fit index (NFI >0.90) as appropriate for PLS-SEM (Schuberth & Rademaker, 2026). Common method bias was assessed using Harman's single-factor test and full collinearity variance inflation factors (VIF <3.3) following (Becker et al, 2022). Ethical approval was obtained from the hospital institutional review board, and informed consent was secured from all participants (Emanuel et al., 2012)

Demographic profile

The sample comprised 250 nurses with diverse demographic characteristics reflecting the hospital workforce composition. Female nurses represented 70.8% of participants (n=177), consistent with global nursing workforce patterns (Buchan et al., 2022). Age distribution showed predominance of nurses in early to mid-career stages, with 39.2% aged 23-30 years and 40.8% aged 31-40 years, indicating a relatively young workforce. Educational attainment revealed 56.8% held bachelor's degrees, 34.8% diplomas, and 8.4% master's degrees, demonstrating

moderate educational advancement within the nursing staff.

Work experience patterns indicated 44.8% had 1-5 years of experience, 31.6% had 6-10 years, and 23.6% exceeded 10 years, suggesting a balanced mix of novice and experienced professionals. Departmental distribution included medical-surgical (39.2%), critical care (24.8%), emergency (20.4%), and outpatient (15.6%) units, providing adequate representation across clinical specialties. These demographic characteristics align with workforce distributions reported in similar Indonesian hospital studies (Sharma et al., 2024).

Note: CR = Composite Reliability; AVE = Average Variance Extracted; **p < 0.01

Measurement model assessment

The measurement model evaluation demonstrated satisfactory reliability and validity across all constructs. Composite reliability (CR) values ranged from 0.924 to 0.941, substantially exceeding the 0.70 threshold, indicating excellent internal consistency (Sarstedt et al., 2019). Average variance extracted (AVE) values ranged from 0.671 to 0.694, surpassing the 0.50 criterion and confirming adequate convergent validity (Cheung et al., 2024).

Table 3. Descriptive statistics and construct correlations

Variable	Mean	SD	CR	AVE	1	2	3	4
1. Education Level	1.74	0.61	-	-	-			
2. Achievement Motivation	3.87	0.64	0.924	0.671	0.342**	-		
3. Job Satisfaction	3.65	0.71	0.937	0.683	0.389**	0.567**	-	
4. Nurses' Performance	3.92	0.58	0.941	0.694	0.421**	0.612**	0.639**	-

Source: Data processing, 2025.

Table 4. Outer loadings and construct reliability

Construct	Indicator	Loading	t-value	CR	AVE	Cronbach's α
Achievement Motivation	AM1	0.812	24.567	0.924	0.671	0.912
	AM2	0.834	27.891			
	AM3	0.829	26.432			
	AM4	0.801	23.156			
	AM5	0.818	25.234			
Job Satisfaction	JS1	0.821	25.789	0.937	0.683	0.926
	JS2	0.836	28.456			
	JS3	0.827	26.891			
	JS4	0.814	24.567			
	JS5	0.829	27.123			
Nurses' Performance	NP1	0.829	27.456	0.941	0.694	0.931
	NP2	0.842	29.123			
	NP3	0.836	28.567			
	NP4	0.823	26.234			
	NP5	0.847	30.456			

Source: Data processing, 2025.

All indicator loadings exceeded 0.80, demonstrating strong relationships between observed variables and their respective latent constructs (Ringle & Sarstedt, 2021). Cronbach's alpha coefficients ranged from 0.912 to 0.931, confirming scale reliability.

Discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT) criterion, considered more appropriate than traditional Fornell-Larcker approaches (Sarstedt et al., 2019). All HTMT values remained below the conservative 0.85 threshold, establishing discriminant validity.

Table 5. Discriminant validity (HTMT ratio)

Variable	1	2	3	4
1. Education Level	-			
2. Achievement Motivation	0.378	-		
3. Job Satisfaction	0.412	0.601	-	
4. Nurses' Performance	0.445	0.647	0.676	-

Source: Data processing, 2025.

Common method bias assessment using Harman's single-factor test revealed that the first factor explained 38.7% of variance, well below the 50% threshold, indicating minimal common method variance concerns (Behavior et al., 2024). Full collinearity VIF values ranged from 1.234 to 2.156, substantially below 3.3, further confirming absence of significant method bias (Kock, 2021).

Structural model assessment

The structural model demonstrated satisfactory explanatory power and predictive relevance. The model explained 48.3% of variance in job satisfaction ($R^2=0.483$) and 64.7% of variance in nurses' performance ($R^2=0.647$), indicating substantial predictive capability (Shmueli et al., 2019). Predictive relevance was confirmed through Stone-Geisser Q^2 values of 0.327 for job satisfaction and 0.441 for performance, both exceeding zero and demonstrating adequate predictive relevance (Ringle & Sarstedt, 2021).

Model fit indices demonstrated acceptable fit: SRMR=0.067 (<0.08) and NFI=0.912 (>0.90), confirming overall model adequacy (Ringle & Sarstedt, 2021).

Hypothesis testing results revealed significant support for all direct relationships. Education level demonstrated a significant positive effect on nurses' performance ($\beta=0.187, t=3.339, p=0.001$), supporting H1. This finding aligns with human capital theory suggesting that educational investments enhance productive capabilities (Becker et al., 2022). Education level also significantly predicted job satisfaction ($\beta=0.215, t=3.644, p<0.001$), confirming H2 and consistent with research demonstrating that higher education increases professional fulfillment (Fontaine et al., 2024).

Achievement motivation exhibited strong positive effects on both job satisfaction ($\beta=0.486, t=9.346, p<0.001$) and nurses' performance ($\beta=0.289, t=4.983, p<0.001$), supporting H3 and H4 respectively. These findings corroborate self-determination theory's predictions regarding intrinsic motivation's role in work outcomes (Ryan & Deci, 2020). Job satisfaction significantly influenced performance ($\beta=0.378, t=6.197, p<0.001$), confirming H5 and consistent with the happy-productive worker thesis (Wartenberg et al., 2023).

Table 6. Hypothesis testing results - direct effects

	Path	β	SE	t-value	p-value	Result
H1	Education Level → Performance	0.187	0.056	3.339	0.001	Supported
H2	Education Level → Job Satisfaction	0.215	0.059	3.644	0.000	Supported
H3	Achievement Motivation → Job Satisfaction	0.486	0.052	9.346	0.000	Supported
	Achievement Motivation → Performance	0.289	0.058	4.983	0.000	Supported
H4	Job Satisfaction → Performance	0.378	0.061	6.197	0.000	Supported

Source: Data processing, 2025.

Table 7. Mediation analysis results - indirect effects

	Indirect Path	β	SE	t-value	p-value	VAF	Result
H6	Education Level → Job Satisfaction → Performance	0.081	0.027	3.000	0.003	30.2%	Supported
H7	Achievement Motivation → Job Satisfaction → Performance	0.184	0.038	4.842	0.000	38.9%	Supported

Source: Data processing, 2025.

Mediation analysis demonstrated significant indirect effects for both hypothesized relationships. Job satisfaction mediated the relationship between education level and performance ($\beta=0.081$, $t=3.000$, $p=0.003$), supporting H6. The variance accounted for (VAF) of 30.2% indicated partial mediation, suggesting that education influences performance both directly and through satisfaction-enhancing mechanisms (Stud, 2024).

Job satisfaction also significantly mediated the achievement motivation-performance relationship ($\beta=0.184$, $t=4.842$, $p<0.001$), confirming H7. The VAF of 38.9% indicated partial mediation, suggesting that motivation enhances performance partially through satisfaction-related pathways while maintaining direct effects (Hayes & Rockwood, 2020). These findings support the resource perspective suggesting that satisfaction represents a psychological resource enabling motivated individuals to translate capabilities into performance (Sonntag & Meier, 2024).

Effect size analysis using Cohen's f^2 revealed varied magnitudes of relationships. Achievement motivation demonstrated a large effect on job satisfaction ($f^2=0.310$) and medium effect on performance ($f^2=0.143$), confirming its substantial role in determining workplace outcomes (Adebayo & Ozkan, 2024). Education level showed small but significant effects on both satisfaction ($f^2=0.058$) and performance ($f^2=0.052$), suggesting meaningful contributions despite smaller magnitudes. Job satisfaction exhibited a medium effect on performance ($f^2=0.187$), underscoring its practical importance as a mediating mechanism.

The structural model results comprehensively support the hypothesized framework, demonstrating that both education level and achievement motivation influence nurses' performance directly and indirectly through job satisfaction. These findings provide robust empirical evidence for the complex interplay between individual characteristics, affective

Table 8. Total effects and effect sizes

Relationship	Total Effect	Direct Effect	Indirect Effect	f^2	Effect Size
Education Level → Performance	0.268	0.187	0.081	0.052	Small
Achievement Motivation → Performance	0.473	0.289	0.184	0.143	Medium
Education Level → Job Satisfaction	0.215	0.215	-	0.058	Small
Achievement Motivation → Job Satisfaction	0.486	0.486	-	0.310	Large
Job Satisfaction → Performance	0.378	0.378	-	0.187	Medium

Source: Data processing, 2025.

states, and performance outcomes in healthcare settings, with implications extending beyond the immediate research context to broader human resource management practices in nursing organizations.

DISCUSSION

The findings of this study provide compelling evidence for the multifaceted determinants of nursing performance, revealing complex direct and mediated pathways through which education and motivation influence work outcomes. The significant positive relationship between education level and performance (H1) corroborates extensive research demonstrating that advanced educational preparation enhances clinical competence, critical thinking, and evidence-based practice capabilities (Aiken et al., 2024). This finding reinforces policy recommendations for educational advancement within nursing workforces, particularly in developing healthcare systems where educational disparities remain pronounced.

The strong influence of achievement motivation on both job satisfaction (H3) and performance (H4) aligns with self-determination theory's predictions regarding intrinsic motivation's role in workplace effectiveness (Ryan & Deci, 2020). Nurses high in achievement motivation appear to derive greater fulfillment from their work while simultaneously demonstrating superior performance, suggesting that motivational interventions could yield dual benefits for individual wellbeing and organizational effectiveness. This finding extends previous research by (Adebayo & Ozkan, 2024), who found similar patterns among Chinese nurses but without examining mediation mechanisms.

The mediating role of job satisfaction (H6, H7) represents a critical contribution of this study, demonstrating that satisfaction functions as a psychological mechanism translating individual characteristics into performance outcomes. The partial mediation observed suggests that education and motivation enhance performance both directly through skill enhancement and goal-directed behavior, and indirectly by creating satisfying work experiences that further

motivate excellence. This dual-pathway model reconciles conflicting findings in previous literature regarding the satisfaction-performance relationship (Adebayo & Ozkan, 2024).

Comparing our findings with international research reveals both consistencies and contextual variations. While the positive effects of education and motivation on performance appear universal, the relative magnitudes differ from Western studies. Research by (Boamah et al., 2024) found stronger direct effects of education in Canadian contexts, possibly reflecting differential educational standards and professional requirements. The particularly strong motivation-satisfaction relationship observed here may reflect cultural values emphasizing achievement and collective success prevalent in Indonesian organizational contexts (Sambharya RB, Rasheed AA, 2022).

The substantial variance explained in performance ($R^2=0.647$) exceeds typical levels reported in nursing research, suggesting that the integrated model captures critical determinants of effectiveness. However, 35% of variance remains unexplained, indicating that additional factors such as leadership, organizational resources, and work environment characteristics warrant investigation (Zhang, Y., et al., 2020). Future research should incorporate these contextual variables within expanded models examining multilevel influences on nursing performance.

Theoretical implications extend to human capital and self-determination theories. The findings support human capital theory's central premise that educational investments enhance productive capabilities (Fernandes, 2024), while also demonstrating that these investments operate partially through affective pathways not typically emphasized in economic frameworks. Integration with self-determination theory provides a more complete understanding of how educational and motivational resources combine with psychological needs fulfillment to drive performance.

Methodologically, the study demonstrates the value of examining mediation mechanisms rather than solely direct effects, as approximately 30-

39% of total effects operated through satisfaction pathways. This finding challenges simplistic models treating performance determinants as independent factors and supports more sophisticated frameworks acknowledging psychological processes linking antecedents to outcomes (Parent-lamarche & Dextras-gauthier, 2024).

CONCLUSION

This study advances understanding of nursing performance determinants by demonstrating complex direct and mediated pathways through which education level and achievement motivation influence effectiveness in healthcare delivery. The findings reveal that both individual characteristics significantly predict performance outcomes, with education contributing through enhanced competence and professional identity, and motivation operating through goal-directed persistence and excellence striving. Critically, job satisfaction emerges as a significant mediating mechanism, accounting for 30- 39% of total effects and suggesting that affective states represent important psychological resources translating individual capabilities into performance achievements.

The research makes several important contributions to nursing and organizational behavior literature. Theoretically, it integrates human capital and self-determination perspectives within a comprehensive framework acknowledging both direct skill-based pathways and indirect affective pathways linking individual characteristics to performance (Ryan, R.M., Deci, 2024). Methodologically, it demonstrates the importance of examining mediation mechanisms rather than solely direct effects, as substantial portions of education and motivation influences operate through satisfaction enhancement. Empirically, it provides robust evidence from an Indonesian healthcare context, contributing to the limited research base examining these relationships in Southeast Asian settings where cultural and organizational contexts differ from Western environments dominating existing literature.

The substantial variance explained in both satisfaction (48.3%) and performance (64.7%) demonstrates the model's explanatory power while acknowledging that additional factors warrant investigation. The findings support investment in educational advancement, motivational enhancement, and satisfaction improvement as complementary strategies for nursing workforce development (Laschinger et al., 2022). Organizations seeking to optimize nursing performance should implement integrated human resource approaches simultaneously addressing educational qualifications, motivational climates, and work environment quality rather than pursuing isolated interventions (R Laschinger et al., 2022).

For Moh. Ridwan General Hospital specifically, the results provide evidence-based guidance for strategic workforce development initiatives. Educational upgrading programs should receive priority given both direct performance benefits and satisfaction enhancement effects. Achievement-oriented cultures fostering motivation through goal-setting, recognition, and advancement opportunities offer high-leverage interventions with dual benefits for satisfaction and performance. Systematic attention to satisfaction dimensions including workload, supervision, relationships, and growth opportunities will amplify the performance benefits of education and motivation investments.

From a policy perspective, the findings support national initiatives promoting nursing educational advancement in Indonesia while highlighting the importance of complementary attention to motivational and satisfaction factors (Sharma et al., 2024). Healthcare workforce planning should incorporate comprehensive strategies addressing multiple determinants rather than focusing narrowly on educational credentialing. Professional development systems integrating education, motivation, and satisfaction considerations will more effectively support high-performing nursing workforces capable of delivering quality patient care in increasingly complex healthcare environments.

The research ultimately demonstrates that

nursing performance optimization requires sophisticated understanding of interrelated individual, psychological, and organizational factors. Neither education nor motivation alone determines effectiveness; rather, these factors operate synergistically through psychological mechanisms including satisfaction to enable superior performance. Organizations implementing integrated approaches acknowledging these complexities will achieve more substantial and sustainable improvements in nursing workforce effectiveness, ultimately enhancing patient care quality and organizational outcomes. Future research should continue exploring these relationships across diverse contexts while incorporating additional factors including leadership, organizational culture, and structural resources that further influence the translation of individual capabilities into performance excellence (Zhang et al., 2020).

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