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RESEARCH ARTICLE

DETERMINANTS INFLUENCING TURNOVER INTENTION AMONG DOCTORS IN EAST NUSA TENGGARA, INDONESIA

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ABSTRACT

OBJECTIVE

High turnover intention among rural doctors disrupts healthcare services and increases organizational costs associated with recruitment and training. This research aims to investigate doctors' turnover intentions and analyse the associated factors that influence them in East Nusa Tenggara (ENT), a remote region in Indonesia.

DESIGN

Doctors' turnover intentions at a single point of time were measured quantitatively with a cross-sectional approach. Data were collected through a structured questionnaire comprising 120 questions, designed to measure turnover intention as the key variable and its related factors. The responses from the questionnaire were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), a statistical technique that allows for the examination of complex relationships between multiple variables and their direct or indirect effects on turnover intention.

SETTING

This study was conducted in ENT, Indonesia, where 13 of 21 regencies are classified as "3T" (In Indonesian: Terdepan, Tertinggal, Terluar; which means: frontier, underdeveloped, outermost). Limited healthcare facilities and professionals hinder service access. Challenges, including poor infrastructure, often lead to doctors' resignation, disrupting healthcare delivery in these remote regions.

RESULTS

Data were collected from 202 general practitioners and specialists in ENT through an online survey. Among the participants, 45.54% expressed an intention to resign. The results indicate that working engagement, pay satisfaction, opportunities for learning and development, work-life balance, and personal accomplishment influence turnover intention through job satisfaction as a mediating variable. Additionally, burnout was found to directly affect turnover intention.

CONCLUSION

This study highlights the importance of targeted interventions—ensuring fair pay, growth opportunities, balanced workloads, and supportive work environments—along with addressing burnout to reduce doctor turnover in ENT. By identifying key turnover factors, this study offers valuable insights for policymakers and hospital management to develop effective retention strategies, ensuring sustainable, high-quality healthcare in ENT.

KEYWORDS

turnover intention, job satisfaction, remote areas, doctor retention, rural health

INTRODUCTION

Indonesia's decentralized governance system influences its tiered healthcare system, spanning public and private sectors across primary, secondary, and tertiary levels [1]. Since implementing National Health Insurance in 2014, primary healthcare centers have served as the frontline of care, tasked with delivering efficient, timely care and managing referrals [2]. However, inefficiencies persist, such as Southeast Sulawesi's 17% referral rate in first-level healthcare facilities n 2016, far exceeding the ideal 5%, primarily due to doctor shortages [3]. Similar issues arise in rural Nigeria, where limited healthcare workers and infrastructure delay referrals and treatment, increasing mortality rates [4].

East Nusa Tenggara (ENT) exemplifies such issues, with a population of 5.6 million but only 14 doctors per 100,000 people, which is far below the WHO standard of 100:100,000, making ENT the region with the second-lowest doctor-to-population ratio in Indonesia [5]. This shortage is partly attributed to the high turnover rate of doctors, influenced by factors such as job satisfaction, resilience, work-life balance, rewards and recognition, and opportunities for professional growth. However, the strongest predictor of actual turnover is turnover intention—the desire to leave one's job [6]. In ENT, only 21% of doctors remain in their positions beyond five years, highlighting retention challenges despite recruitment incentives [7].

Similar trends are seen internationally: in China, 46.9% of doctors in Jining and 42.3% in Chongqing showed high turnover intention, influenced by various factors such as location, job position, work pressure, job satisfaction, resilience, and work engagement [8,9]. Thailand reported 17.6% of doctors permanently leaving rural areas. Turnover disrupts healthcare delivery, undermines patient trust, and raises recruitment costs [10].

In Indonesia, specific data on turnover intention in NTT is unavailable, but a study by Handoyo et al. (2021) [7] revealed a doctor retention rate of only 21% for those working more than five years. While incentives aid in recruitment, they have only minimal impact on doctor retention [7]. This highlights the need for additional strategies, such as fostering resilience during medical education. Retaining doctors in remote areas is critical for sustaining quality healthcare services. High turnover disrupts healthcare delivery, weakens trust between patients and providers, and increases recruitment and training costs for new doctors [10].

Addressing the critical doctor shortage in ENT requires increasing retention by tackling turnover intention. This study investigated doctors' turnover intention in ENT and explored its influencing factors, to enhance retention efforts. The findings aim to guide policymakers and hospital management in improving working conditions and fostering doctors' commitment.

RESEARCH CONTEXT

This study focuses on ENT, an underdeveloped region in Indonesia consisting of 21 regencies and a provincial capital, with 13 regencies classified as "3T" (Terdepan, Tertinggal, Terluar), meaning frontier, underdeveloped, and outermost. The region faces limited healthcare facilities and a shortage of professionals, resulting in unequal access to services. Doctors in ENT include civil servants, contract-based employees, and internship doctors, all of whom face challenges due to inadequate work and living conditions, leading to premature resignations. This disrupts healthcare services, as recruiting replacements in these remote areas is particularly difficult. Therefore, it is essential to identify the turnover intention among doctors in ENT and manage the factors contributing to it to prevent further turnover.

HYPOTHESIS DEVELOPMENT AND RESEARCH MODEL

Turnover intention, defined as an employee's intent to leave their organization voluntarily, is a significant concern, particularly in remote healthcare settings such as ENT. This study adopts a conceptual model where job satisfaction serves as a mediating variable influenced by multiple determinants. Below are the proposed hypotheses based on the relevant theoretical constructs and prior research:

Hypothesis 1: Resilience positively influences job satisfaction among doctors working in ENT
Resilience helps mitigate workplace stressors, enhancing job performance and satisfaction. Studies, including Kuntz et al. (2017) and Matos (2010), highlight resilience as a buffer against stress, showing positive associations with job satisfaction, even in high-pressure environments [11,12].

Hypothesis 2: Work engagement positively influences job satisfaction among doctors working in ENT
Work engagement fosters positive employee experiences, boosting job satisfaction. Mache (2014) emphasized that engaged employees are more motivated, leading to improved satisfaction and retention [13].

Hypothesis 3: Pay satisfaction influences job satisfaction among doctors working in ENT
Fair and reasonable compensation significantly influences job satisfaction. Judge et al. (2010) underscored the role of perceived pay equity in enhancing employee contentment, making pay satisfaction a critical factor [14].

Hypothesis 4: Opportunity to learn and develop influences job satisfaction among doctors working in ENT
Professional growth opportunities positively impact job satisfaction by boosting confidence and fulfillment. Weng et al. (2010) found that employees with access to learning and development feel more competent and satisfied in their roles [15].

Hypothesis 5: Work-life balance influences job satisfaction among doctors working in ENT
Equilibrium between work and personal life enhances job satisfaction. Balanced schedules reduce stress, improve performance, and foster contentment, as evidenced by studies on healthcare workers in Pakistan [16,17].

Hypothesis 6: Burnout negatively influences job satisfaction among doctors working in ENT
Burnout reduces emotional engagement and job satisfaction, particularly in stressful environments. High burnout levels significantly lower satisfaction among healthcare professionals, leading to decreased performance [18].

Hypothesis 7: Personal accomplishment positively influences job satisfaction among doctors working in ENT
A sense of achievement fosters job satisfaction by enhancing engagement and commitment. Research links personal accomplishment to higher satisfaction, emphasizing its role as an intrinsic motivator [19].

Hypothesis 8: Burnout positively influences turnover intention among doctors working in ENT
Burnout erodes emotional attachment, increasing turnover intention. Schaufeli and Bakker (2004) identified burnout as a key predictor, driving employees to seek alternative opportunities [20].

Hypothesis 9: Job satisfaction negatively influences turnover intention among doctors working in ENT
Job satisfaction reduces turnover intention. Studies, including Ali Jadoo et al. (2015), show a strong inverse relationship, with satisfied employees less likely to leave, as observed among physicians in Pakistan and China [21,22].

MATERIAL AND METHODS

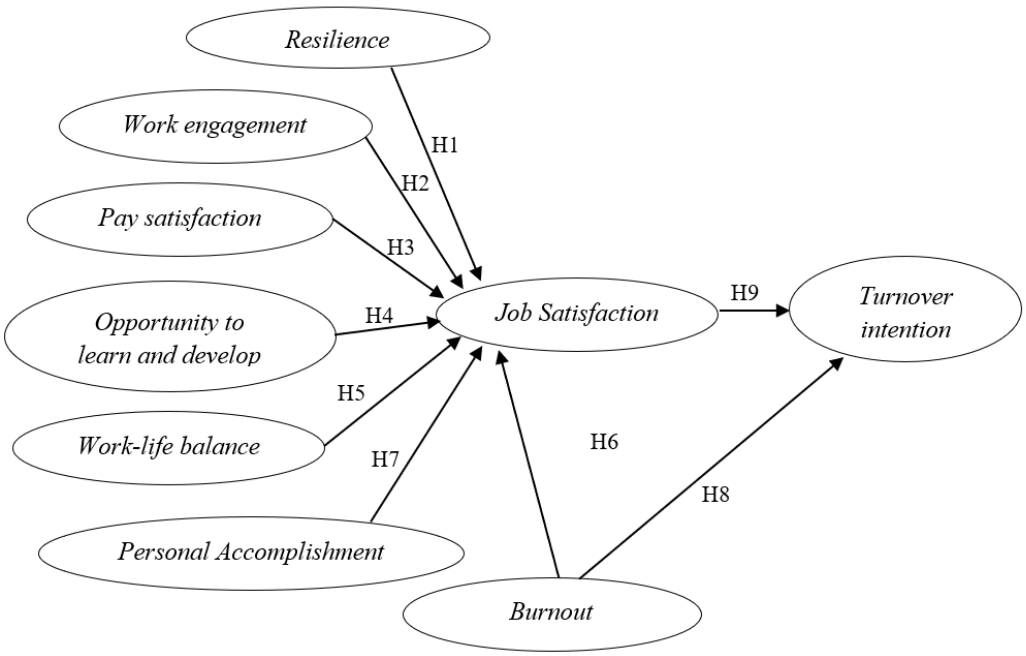
ETHICAL CONSIDERATIONS

This study was approved by the research committee ethic (KEP FEB) Faculty of Economic and Business, Pelita Harapan University (034/MARS/EC/X/2024)

RESEARCH DESIGN

This research was conducted using quantitative method with a cross-sectional approach. The aim of this study is to analyse the factors influencing job satisfaction towards doctor's turnover intention who serve in ENT as one of the remote areas in Indonesia.

FIGURE. 1. RESEARCH MODEL FOR THIS STUDY



There are a total of 9 variables in this study with the turnover intention serves as the dependent variable, while job satisfaction acts as a mediator. Independent variables include resilience, work engagement, pay satisfaction, opportunities for learning and development, work-life balance, burnout, and personal accomplishment (Figure 1).

SAMPLING AND DATA COLLECTION

This study targeted general practitioners and specialists in hospitals across ENT during October 2024. With a total population of 720 general practitioners and 712 specialists, the minimum sample size was calculated using two approaches for partial least square - structural equation modelling (PLS-SEM) analysis. Power analysis with G*Power software determined a minimum of 153 samples, while the inverse square root method suggested 155, ensuring sufficient accuracy. Ultimately, 155 respondents were selected as the reference.

Purposive sampling was used to select general practitioners and specialists in ENT. Data were collected through an online questionnaire designed to evaluate the research variables, incorporating validated indicators and translated into Bahasa Indonesia for clarity. The questionnaire included the TIS-6, which was incorporated to measure turnover intention. Responses were assessed using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), reflecting participants' levels of agreement. In addition to questions related to the research variables, the questionnaire also contained items about the respondents' demographic profiles.

DATA ANALYSIS

This study utilizes PLS-SEM as the analytical approach, ideal for explanatory research. PLS-SEM is preferred over traditional regression methods due to its ability to simultaneously analyse direct and indirect effects, perform robust mediation analysis, and handle complex structural relationships with multiple constructs and indicators [23].

The analysis was conducted using SmartPLS version 4.1.0.8. Two primary models were examined: the outer model and the inner model. The outer model assesses reliability using outer loadings, Cronbach's alpha, and composite reliability, and evaluates validity through average variance extracted (AVE) and the heterotrait-monotrait (HTMT) ratio. Once reliability and validity are confirmed, the inner model investigates construct relationships and tests hypotheses, with statistical significance determined by p-values < 0.05 and t-statistics > 1.645.

RESULTS

RESPONDENT PROFILE

This study's respondents were general practitioners and medical specialists who voluntarily completed an online questionnaire via Google Forms in October 2024. The questionnaire was distributed through the Indonesian Medical Association (IDI) in each district of ENT. A total of 202 respondents from 21 districts met the inclusion criteria and participated within the designated timeframe.

TABLE 1. DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Demographic Variable		Sample (n)	Percentage (%)
Gender	Male	77	38,1
	Female	125	61,9
Total		202	100
Age	20-29 years	87	43,1
	30-39 years	79	39,1
	40-49 years	25	12,4
	>50 years	11	5,4
Total		202	100
District	Alor	10	5
	Belu	15	7,4
	Ende	22	10,9
	Flores Timur	6	3
	District of Kupang	4	2
	Lembata	5	2,5
	Malaka	6	3
	Manggarai	2	1
	West Manggarai	10	5
	East Manggarai	4	2
	Nagakeo	5	2,5
	Ngada	10	5
	Rote Ndao	10	5
	Sabu Rai Jua	1	0,5
	Sikka	18	8,9
	West Sumba	1	0,5
	Southwest Sumba	7	3,5
	East Sumba	8	4
	Timor Tengah Selatan	32	15,8
	Timor Tengah Utara	14	6,9
	Kupang City	12	5,9
Total		202	100

Table 1 presents the demographic profile of respondents, most of whom were female (61.9%) and aged 20–29 years (43.1%). All were practicing doctors in ENT, representing nearly all districts and cities except one due to non-responsiveness. The sample exceeded the required size, ensuring a representative analysis of turnover intention among doctors in the region.

TABLE 2. RESPONDENT JOB PROFILE FOR STUDY RESPONDENTS

Variables			Sample (n)	Percentage (%)
Profession	General practitioners		161	79,7
	Specialists	Internist	8	4
		Pediatrician	7	3,5
		Obstetrician and gynecologist	4	2
		General surgeon	3	1,5
		Neurologist	3	1,5
		Otolaryngologist	3	1,5
		Clinical pathologist	1	0,5
		Physical and rehabilitation medicine specialist	1	0,5
		Clinical microbiologist	1	0,5
		Forensic pathologist	1	0,5
		Anatomy pathologist	1	0,5
		Psychiatrist	2	1
		Cardiologist	2	1
		Orthopedic surgeon	1	0,5
		Anesthesiologist	1	0,5
		Ophthalmologist	1	0,5
		Radiologist	1	0,5
Total			202	100
Working place	Public/government hospital		64	31,7
	Private hospital		19	9,4
	Primary healthcare facilities (*Puskesmas*)		66	32,7
	Clinic		9	4,5
	>1 working place		44	21,8
Total			202	100
Working duration	< 1 year		52	25,7
	1-5 years		109	54
	6-10 years		17	8,4
	>10 years		24	11,9
Total			202	100
Working hour/week	<40 hours		37	18,3
	40-80 hours		145	71,8
	>80 hours		20	9,9
Total			202	100
Employment status	Honorary employee		115	56,9
	Permanent medical officer		68	33,7
	Government employees / civil servant		8	4
	Health worker special employment program		11	5,4
Total			202	100

As shown in Table 2, most respondents were general practitioners (79.7%). A significant proportion worked in government hospitals (64%). Most respondents had been in their current positions for 1–5 years (54%), were contractual or honorary staff (56.9%), and worked 40–80 hours per week (71.8%). A smaller portion reported working more than 80 hours per week, with some indicating they were on-call 24 hours a day, seven days a week.

TURNOVER INTENTION AMONG PARTICIPANTS

Turnover intention refers to an employee's inclination or decision to voluntarily leave their current position within an organization [24] To measure this, the Turnover Intention Scale (TIS-6), a commonly used tool, was employed. The TIS-6 consists of six items in a self-report format, and research has shown it to be a reliable instrument for evaluating turnover intention and forecasting actual employee departure. A five-point Likert scale was employed to rate the responses, and the items were totaled to generate a score. The midpoint of the scale is 18. Scores below 18 suggest a preference to remain in the organization, while scores above 18 indicate an intention to leave. The possible score range for participants is between 6 and 30, with higher scores reflecting stronger turnover intentions.

In this study, 92 out of 202 participants had a TIS-6 score greater than 18, indicating that 45.54% of doctors in ENT have turnover intention [25].

PLS-SEM ANALYSIS RESULTS

The initial data analysis using SmartPLS (version 4.1.0.8) begins with evaluating the outer model for validity and reliability. Convergent validity is assessed via average variance extracted (AVE ≥ 0.50) and outer loadings (≥ 0.708), with low-loading indicators removed if needed to improve validity. Reliability is measured using Cronbach's Alpha and composite reliability, both required to exceed 0.70 but remain below 0.95 to avoid redundancy [23]. While Cronbach's Alpha values for most variables fall within the acceptable range, job satisfaction exceeds 0.95, indicating high internal consistency. This could stem from deliberate item selection to comprehensively capture the multidimensional nature of Job Satisfaction. Although high alpha values may indicate potential redundancy, the decision to retain all items ensures a thorough representation of the construct's domain.

Table 3 presents the results of reliability and convergent validity testing, indicating that all constructs have AVE values above 0.50 and reliability values between 0.70 and 0.95, demonstrating adequate validity and reliability.

TABLE 3. EVALUATION OF MEASUREMENT MODEL TEST RESULTS

Variables	Items	Outer loadings	Cronbach's Alpha	Composite reliability	Average Variance Extracted (AVE)
Resilience	R12	0,820	0,914	0,919	0,742
	R14	0,865			
	R16	0,858			
	R17	0,887			
	R20	0,875			
Working engagement	WE1	0,824	0,910	0,917	0,689
	WE2	0,869			
	WE3	0,865			
	WE4	0,779			
	WE5	0,848			
	WE6	0,790			
Pay Satisfaction	PS5	0,878	0,941	0,943	0,658

	PS6	0,815			
	PS8	0,770			
	PS9	0,804			
	PS10	0,876			
	PS11	0,872			
	PS13	0,714			
	PS14	0,785			
	PS15	0,862			
	PS16	0,715			
Opportunity to learn and develop	OD1	0,790	0,824	0,835	0,654
	OD2	0,820			
	OD3	0,861			
	OD4	0,760			
Work-life balance	WB1	0,790	0,805	0,827	0,625
	WB2	0,785			
	WB3	0,827			
	WB4	0,759			
Burnout	BO1	0,748	0,931	0,937	0,618
	BO2	0,763			
	BO4	0,835			
	BO6	0,848			
	BO7	0,812			
	BO8	0,862			
	BO9	0,768			
	BO10	0,732			
	BO13	0,751			
	BO14	0,729			
Personal Accomplishment	PA2	0,786	0,900	0,910	0,624
	PA3	0,762			
	PA4	0,820			
	PA5	0,749			
	PA6	0,778			
	PA7	0,812			
	PA8	0,820			
Job Satisfaction	JS1	0,788	0,957	0,958	0,627
	JS2	0,744			
	JS3	0,743			
	JS4	0,829			
	JS6	0,854			
	JS7	0,840			
	JS8	0,796			
	JS9	0,771			
	JS10	0,788			
	JS13	0,750			
	JS14	0,827			
	JS17	0,791			
	JS18	0,804			
	JS19	0,807			

	JS20	0,732			
Turnover intention	TI1	0,833	0,855	0,857	0,696
	TI3	0,838			
	TI4	0,852			
	TI6	0,814			

Discriminant validity was assessed using the HTMT ratio, with all values below 0.90, confirming well-differentiated constructs (Table 4). Multicollinearity was evaluated using the Variance Inflation Factor (VIF), with all values below 3.0, indicating no multicollinearity issues among independent variables.

TABLE 4. DISCRIMINANT VALIDITY

Variable	BO	JS	OD	PS	R	TI	WB	PA	WE
BO									
JS	0,331								
OD	0,259	0,716							
PS	0,210	0,607	0,551						
R	0,341	0,261	0,196	0,113					
TI	0,749	0,494	0,377	0,484	0,325				
WB	0,514	0,631	0,599	0,567	0,252	0,450			
PA	0,503	0,505	0,382	0,244	0,617	0,397	0,507		
WE	0,571	0,555	0,547	0,434	0,456	0,613	0,598	0,716	

In this study, the coefficient of determination (R^2) for job satisfaction was found to be 0.584. This indicates that 58.4% of the variance in job satisfaction can be explained by the predictor variables in the model, while the remaining 42.6% is attributed to variables outside the scope of this study. Similarly, the R^2 value for turnover intention was 0.511, meaning that 52.7% of its variance can be explained by the variables in the model, with the remaining 47.3% explained by external factors. Both R^2 values fall within the category of moderate explanatory power.

Furthermore, the predictive relevance test yielded a Q^2_predict value of 0.506 for turnover intention, and 0.536 for job satisfaction. These values are classified as having large predictive relevance. Based on these findings, it can be concluded that the model demonstrates strong predictive capabilities for forecasting turnover intention among doctors working in ENT. If this research model is applied to other studies with similar contextual assumptions and sample criteria, but in a different population, there is a high probability of obtaining similar results.

FACTORS INFLUENCING TURNOVER INTENTION

Table 5 presents the results of hypothesis testing conducted using the bootstrapping method in SmartPLS, revealing that six out of nine hypotheses are supported. The hypothesis testing process is based on two empirical metrics: significance levels and path coefficients. Since the hypotheses are directional, a one-tailed test was employed. A relationship between variables is considered significant if the bootstrapped T-statistic exceeds the T-table value of 1.645 at a 0.05 significance level [26]. Accordingly, all analyses in this study were performed using a one-tailed hypothesis test with a 5% significance threshold.

TABLE 5. HYPOTHESIS TEST RESULTS

Hypothesis		Standardized coefficient	T-Statistics	p-value	Results
H1	Resilience → Job Satisfaction	-0,007	0,137	0,445	*Hypothesis not supported*
H2	Work Engagement → Job Satisfaction	0,031	0,370	0,356	*Hypothesis not supported*
H3	Pay Satisfaction → Job Satisfaction	0,274	5,048	<0,001	*Hypothesis supported*
H4	Opportunity to Learn and Develop → Job Satisfaction	0,343	4,647	<0,001	*Hypothesis supported*
H5	Work Life Balance → Job Satisfaction	0,159	1,852	0,032	*Hypothesis supported*
H6	Burnout → Job Satisfaction	-0,000	0,005	0,498	*Hypothesis not supported*
H7	Personal Accomplishment → Job Satisfaction	0,204	2,801	0,003	*Hypothesis supported*
H8	Burnout → Turnover Intention	0,599	12,140	<0,001	*Hypothesis supported*
H9	Job Satisfaction → Turnover Intention	-0,261	4,311	<0,001	*Hypothesis supported*

The analysis reveals that turnover intention is significantly influenced by both burnout and job satisfaction. Burnout has a strong positive effect on turnover intention ($T = 12.140$, $p < 0.001$), indicating that higher burnout levels lead to an increased desire to leave. Conversely, job satisfaction negatively affects turnover intention ($T = 4.311$, $p < 0.001$), suggesting that greater job satisfaction reduces the likelihood of turnover. Furthermore, job satisfaction serves as a mediating variable, influenced by multiple factors. Pay satisfaction ($T = 5.048$, $p < 0.001$), opportunity to learn and develop ($T = 4.647$, $p < 0.001$), work-life balance ($T = 1.852$, $p = 0.032$), and personal accomplishment ($T = 2.801$, $p = 0.003$) all significantly contribute to job satisfaction, reinforcing its crucial role in retaining employees. However, resilience ($T = 0.137$, $p = 0.445$), work engagement ($T = 0.370$, $p = 0.356$), and burnout ($T = 0.005$, $p = 0.498$) do not significantly impact job satisfaction. These results suggest that improving job satisfaction through pay, development opportunities, work-life balance, and personal accomplishment can help mitigate turnover intention, particularly in environments where burnout is prevalent. Table 6 shows that the opportunity to learn and develop, pay satisfaction, work-life balance, and personal accomplishment significantly influence turnover intention through job satisfaction, with p-values below 0.05 and T-statistics above 1.645. The strongest indirect effect is from opportunity to learn and develop, with a path coefficient of 0.343.

TABLE 6. SPECIFIC INDIRECT EFFECTS

Path	Standardized Coefficient	T-Statistics	p-value
Burnout → Job satisfaction → Turnover intention	0,000	0,005	0,498
Opportunity to Learn and Develop → Job Satisfaction → Turnover intention	-0,090	3,383	<0,001
Pay Satisfaction → Job Satisfaction → Turnover Intention	-0,072	2,934	0,002
Resilience → Job Satisfaction → Turnover Intention	0,002	0,134	0,447
Work-life Balance → Job Satisfaction → Turnover intention	-0,041	1,746	0,040

Personal Accomplishment → Job Satisfaction → Turnover intention	-0,053	2,498	0,006
Work Engagement → Job Satisfaction → Turnover Intention	-0,008	0,351	0,363

Figure 2 presents the significance levels, p-values, and coefficients for the nine paths in the research model. Yellow boxes highlight statistical test results between constructs and indicators, while blue circles show R^2 values, reflecting the model's explanatory and predictive power. The findings validate the model's effectiveness in explaining factors influencing doctors' turnover intention in ENT.

FIGURE 2. RESULTS MODEL FOR THIS STUDY

DISCUSSION

This study examines organizational factors influencing doctors' turnover intention in ENT, a remote area. Findings show that six of nine hypotheses are supported, with the research model effectively predicting turnover intention. Key factors explored include resilience, work engagement, pay satisfaction, learning opportunities, work-life balance, personal accomplishment, burnout, and job satisfaction, which serves as a crucial mediator. The study addresses a critical gap, offering insights into retention strategies to ensure healthcare continuity and quality in remote regions.

The first factor examined is resilience. Resilience enhances doctors' ability to adapt to challenges and maintain job satisfaction in remote areas. While previous studies link resilience to job satisfaction, this study finds no significant relationship between resilience, job satisfaction, and turnover intention. Despite high resilience levels among ENT doctors known from descriptive analysis, resilience alone does not ensure job satisfaction or retention. This highlights the need for resilience-building efforts alongside workload management and other supportive measures to address stress and burnout. Educational programs on resilience, stress management, and emotional regulation should be integrated into medical training to better equip doctors for rural challenges where doctors may feel isolated and face unique occupational demands [27].

The study also found that work engagement does not significantly relate to job satisfaction or turnover intention. While work engagement is associated with enthusiasm, energy, and involvement in work, in resource-limited rural settings, high engagement levels may inadvertently lead to physical and emotional exhaustion. Extended working hours and intense caseloads, which is common in rural areas, can exacerbate burnout instead of enhancing job satisfaction. These findings call for a reassessment of engagement strategies in rural healthcare environments. Organizations must adopt workload management strategies to sustain engagement without causing excessive fatigue or emotional strain. For instance, reducing administrative tasks and reallocating resources for patient care can create a more manageable workload, enabling meaningful engagement without risking burnout [28].

Pay satisfaction emerges as a significant positive predictor of job satisfaction, emphasizing the importance of adequate compensation in shaping doctors' attitudes toward their work. This is particularly relevant in rural healthcare, where high demands on these roles make adequate compensation critical. Financial remuneration serves as acknowledgment of the unique challenges and sacrifices faced by doctors in remote areas. However, financial compensation alone may not suffice. Offering context-specific benefits, such as housing allowances, relocation assistance, or educational opportunities for doctors' families, can make rural positions more appealing [29].

Besides financial rewards, non-financial rewards also play an important role. Non-financial rewards, such as learning and development opportunities, strongly influence job satisfaction, emphasizing the importance of professional growth in remote healthcare settings. A lack of opportunities for further education, including specialist training, significantly drives turnover intention [30]. Clear agreements on service tenure and study recommendations are needed between local governments, healthcare organizations, and doctors.

Also, work-life balance is particularly relevant in rural settings, where excessive workloads can impact well-being. Flexible work schedules and reduced administrative burdens can improve job satisfaction by enabling doctors to maintain a balance between work and personal life.[31].

In this study, burnout presents a complex dynamic. While it did not significantly reduce job satisfaction, it directly increases turnover intention. Burnout's dimensions—emotional exhaustion, depersonalization, and personal accomplishment—affect job satisfaction inconsistently, particularly in high-stress environments with low support [18]. Doctors may maintain satisfaction through personal fulfillment even when experiencing moderate burnout. However, burnout often drives turnover intention as a coping mechanism, independent of satisfaction levels. A person with good job satisfaction but high burnout levels may reach a point where leaving their job is seen as an escape rather than merely a response to job

dissatisfaction. Addressing burnout requires creating supportive work environments through counseling, peer support, and structured breaks during shifts [32].

Job satisfaction acts as a mediating variable that mitigates the adverse effects of poor working conditions on doctors' turnover intentions. Policymakers and managers in healthcare organizations can promote job satisfaction through resilience training, fair and adequate compensation, opportunities for growth, and balanced working conditions.

Qualitative descriptive surveys of doctors in ENT reveal dissatisfaction due to inadequate pay, delayed payments, unmet incentives, minimal raises, limited opportunities for further education, and poor organizational management. Poor living conditions, including unreliable utilities, lack of transportation, and insufficient recreational facilities, further exacerbate turnover intention. Addressing these issues requires targeted policies, such as improving living conditions, flexible work arrangements, supportive communities, and clear career advancement mechanisms. Revisiting regional contracts could also help retain doctors in remote areas, ensuring essential healthcare services in underserved regions.

MANAGERIAL IMPLICATIONS:

This study provides actionable recommendations to improve doctor retention in underserved areas like ENT, targeting policymakers, hospital management, and medical education institutions:

1. Resilience: Integrate resilience-building into medical education to prepare doctors for challenging environments.
2. Work Engagement: Create supportive workplaces by addressing resource shortages, fostering open communication, and promoting community integration through housing and family support.
3. Pay Satisfaction: Ensure transparent, workload-based salary structures with timely payments and regularly updated regional incentives.
4. Learning and Development: Offer clear career pathways and transparent contracts for specialization and professional growth.
5. Work-Life Balance: Conduct workload analyses to ensure adequate staffing, manageable schedules, rest periods, and flexible policies to prevent burnout.
6. Job Satisfaction: Protect doctors' autonomy by creating standardized operational procedures free from political interference. These measures will provide clarity and safeguard clinical decision-making.

Addressing these areas holistically can mitigate burnout, reduce turnover intention, and sustain a stable, motivated healthcare workforce in remote regions.

LIMITATIONS, RECOMMENDATIONS, AND FUTURE RESEARCH

This study aimed to identify turnover intention among doctors in ENT and the factors influencing it. Data were collected from 21 of the 22 districts in ENT, with no responses obtained from Central Sumba due to non-responsiveness. Additionally, the distribution of respondents across districts was uneven. Methodological limitations include reliance on probability sampling with purposive sampling, which, while effective for targeting specific groups, limits the generalizability of findings. A larger, more evenly distributed sample across districts would enhance the validity and representativeness of the results.

CONCLUSION

This study examines turnover intention among doctors in ENT, highlighting job satisfaction as a key mediator influenced by pay, development opportunities, work-life balance, and personal accomplishment. Resilience and work engagement showed no significant impact on job satisfaction, while burnout directly affected turnover intention without reducing job satisfaction. A multifaceted approach, including fair pay, growth opportunities, balanced workloads, and supportive environments, is essential to improving doctor retention and ensuring healthcare delivery in remote regions.

ETHICAL APPROVAL

This study was approved by the research committee ethic (KEP FEB) Faculty of Economic and Business, Pelita Harapan University with the reference number of 034/MARS/EC/X/2024.

DECLARATION OF INTEREST:

There are no competing interests to be declared.

References:

1. Rakmawati T, Hinchcliff R, Pardosi JF. District-level impacts of health system decentralization in Indonesia: A systematic review. The International Journal of Health Planning and Management. 2019;34(2):e1026–53.
2. Nurrizka RH, Setiawati ME. Evaluasi Pelaksanaan Sistem Rujukan Berjenjang dalam Program Jaminan Kesehatan Nasional. Jurnal Kebijakan Kesehatan Indonesia. 2019 Mar 31;8(1):35–40.
3. Risky S, Nofitasari A. Evaluation of the Implementation of A Referral System in the Community Health CENTER of Abeli, Kendari, Indonesia. PHI. 2017 Sep 19;3(3):112–6.
4. Ilboudo TP, Chou YJ, Huang N. Compliance with referral for curative care in rural Burkina Faso. Health Policy Plan. 2012 May;27(3):256–64.
5. Salesman F, Jap J. Analysis of Professional Health Provider Need in East Nusa Tenggara Until 2019. Health Systems and Policy Research. 2018 Jan 1;05.
6. Ali Jadoo SA, Aljunid SM, Dastan I, Tawfeeq RS, Mustafa MA, Ganasegeran K, et al. Job satisfaction and turnover intention among Iraqi doctors - a descriptive cross-sectional multicentre study. Human Resources for Health. 2015 Apr 19;13(1):21.
7. Handoyo NE, Rahayu GR, Claramita M, Keraf MKPA, Octrisdey K, Yuniarti KW, et al. Developing Personal Resilience Questionnaire for rural doctors: an indigenous approach study in Indonesia. BMC Psychology. 2021 Oct 15;9(1):158.
8. Wen T, Zhang Y, Wang X, Tang G. Factors influencing turnover intention among primary care doctors: a cross-sectional study in Chongqing, China. Human Resources for Health. 2018 Feb 13;16(1):10.
9. Zhang X, Bian L, Bai X, Kong D, Liu L, Chen Q, et al. The influence of job satisfaction, resilience and work engagement on turnover intention among village doctors in China: a cross-sectional study. BMC Health Services Research. 2020 Apr 6;20(1):283.
10. Mbemba GIC, Gagnon MP, Hamelin-Brabant L. Factors Influencing Recruitment and Retention of Healthcare Workers in Rural and Remote Areas in Developed and Developing Countries: An Overview. J Public Health Africa. 2016 Dec 31;7(2):565.
11. Kuntz J, Malinen S, Naswall K. EMPLOYEE RESILIENCE: DIRECTIONS FOR RESILIENCE DEVELOPMENT. Consulting Psychology Journal: Practice and Research. 2017 Sep 1;69:223–42.
12. Matos PS, Neushotz LA, Griffin MTQ, Fitzpatrick JJ. An exploratory study of resilience and job satisfaction among psychiatric nurses working in inpatient units. International Journal of Mental Health Nursing. 2010;19(5):307–12.
13. Mache S, Vitzthum K, Klapp BF, Danzer G. Surgeons' work engagement: Influencing factors and relations to job and life satisfaction. The Surgeon. 2014 Aug 1;12(4):181–90.
14. Judge TA, Piccolo RF, Podsakoff NP, Shaw JC, Rich BL. The relationship between pay and job satisfaction: A meta-analysis of the literature. Journal of Vocational Behavior. 2010 Oct 1;77(2):157–67.
15. Weng QD, Mcelroy J. The relationship between career growth and organizational commitment. Journal of Vocational Behavior. 2010 Dec 1;77:391–400.
16. Abendroth AK, den Dulk L. Support for the work-life balance in Europe: the impact of state, workplace and family support on work-life balance satisfaction. Work, Employment and Society. 2011 Jun 1;25(2):234–56.
17. Malik M, Hussain A. Perceived emotional intelligence, work life balance and job satisfaction among healthcare professionals in Pakistan. Journal of Pharmaceutical and Allied Sciences. 2019 Oct 22.
18. Leiter MP, Maslach C. Burnout and engagement: Contributions to a new vision. Burnout Research. 2017 Jun 1;5:55–7.
19. Alrawashdeh HM, Al-Tammemi AB, Alzawahreh MKh, Al-Tamimi A, Elkholy M, Al Sarireh F, et al. Occupational burnout and job satisfaction among physicians in times of COVID-19 crisis: a convergent parallel mixed-method study. BMC Public Health. 2021 Apr 28;21(1):811.

20. Schaufeli W. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. Journal of Organizational Behavior. 2004 May 1;25:293–315.
21. Wang H, Jin Y, Wang D, Zhao S, Sang X, Yuan B. Job satisfaction, burnout, and turnover intention among primary care providers in rural China: results from structural equation modeling. BMC Fam Pract. 2020 Jan 15;21(1):12.
22. Malik MI, Gomez SF, Ahmad M, Saif MI. Examining the Relationship of Work Life Balance, Job Satisfaction and Turnover in Pakistan [Internet]. Rochester, NY; 2010 [cited 2024 Sep 14]. Available from: https://papers.ssrn.com/abstract=1689323
23. Hair JF, Risher JJ, Sarstedt M, Ringle CM. When to use and how to report the results of PLS-SEM. European Business Review. 2019 Jan 1;31(1):2–24.
24. Treglown, L., Zivkov, K., Zarola, A., & Furnham, A. (2018). Intention to quit and the role of dark personality and perceived organizational support: A moderation and mediation model. *PLOS ONE, 13*(3), e0195155. https://doi.org/10.1371/journal.pone.0195155
25. Milanek, D. (2024). Variables Predicting Turnover Intention among Mental Health and Addictions Therapists. Doctoral Dissertations and Projects. https://digitalcommons.liberty.edu/doctoral/5721
26. Ringle CM, Sarstedt M. Gain more insight from your PLS-SEM results. Industrial Management & Data Systems. 2016 Jan 1;116(9):1865–86.
27. Jackson D, Firtko A, Edenborough M. Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: a literature review. J Adv Nurs. 2007 Oct;60(1):1–9.
28. Bogaert P, Clarke S, Willems R, Mondelaers M. Staff engagement as a target for managing work environments in psychiatric hospitals: Implications for workforce stability and quality of care. Journal of clinical nursing. 2012 Dec 7;22.
29. Gahlawat N, Kundu SC. Progressive human resource management and firm performance. International Journal of Organizational Analysis. 2019 Jan 1;27(3):471–93.
30. Mitchell T, Holtom B, Lee T, Sablynski C, Erez M. Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover. Academy of Management Journal. 2001 Dec 1;44:1102–21.
31. Shanafelt TD, Boone S, Tan L, Dyrbye LN, Sotile W, Satele D, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Arch Intern Med. 2012 Oct 8;172(18):1377–85.
32. Gardiner M, Kearns H, Tiggemann M. Effectiveness of cognitive behavioural coaching in improving the well-being and retention of rural general practitioners. Aust J Rural Health. 2013 Jun;21(3):183–9.