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Burnout and Patient Safety Culture among Emergency Department Nurses: A Cross-Sectional Analysis

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ABSTRACT

Background: Emergency departments (EDs) in major tourist destinations face intensified patient volume and cultural diversity, posing risks to nurse well-being and patient safety.

Purpose: This study examined the effects of tourism-pressure workload and intercultural nursing competence on patient safety culture among emergency nurses in Bali, testing burnout as a mediating mechanism within the Job Demands Resources (JD–R) framework.

Methods: A quantitative, cross-sectional survey was conducted from May to September 2025, coinciding with Bali's peak tourist season. Using a total-sampling (census) approach, all eligible emergency nurses in participating public and private hospitals across Bali were invited, yielding 283 fully usable responses. Data were analyzed with partial least squares structural equation modeling (PLS-SEM): measurement quality was tested via Cronbach's α, composite reliability, average variance extracted, and Fornell Larcker/HTMT discriminant-validity criteria, and structural paths and bootstrapped indirect (mediation) effects were tested with 5,000 resamples and bias-corrected 95% confidence intervals.

Results: Tourism-pressure workload strongly increased burnout ($\beta = 0.511$, $p < .001$) and was negatively associated with patient safety culture ($\beta = -0.249$, $p < .001$). Contrary to the hypothesized protective direction, intercultural nursing competence was positively associated with burnout ($\beta = 0.336$, $p < .001$), while directly strengthening patient safety culture ($\beta = 0.382$, $p < .001$) as its strongest predictor. Burnout was negatively related to patient safety culture ($\beta = -0.314$, $p < .001$) and partially mediated the workload–safety relationship; the indirect path from intercultural competence through burnout was small and of the opposite sign to its direct effect (competing partial mediation). The model explained 55.2% of the variance in burnout and 65.6% in patient safety culture.

Conclusion: Burnout is a central pathway through which tourism-driven demands erode safety culture, and intercultural competence carries a dual character protecting safety culture directly while imposing emotional demands when organizational support is insufficient. Integrated workload management, structured intercultural training, and burnout prevention are required.

Keywords: Burnout, Emergency Nurses, Intercultural Nursing Competence, Patient Safety Culture, Tourism-Pressure Workload

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BACKGROUND

Burnout has become one of the most consistently documented occupational hazards in emergency nursing. Recent evidence indicates that burnout prevalence among emergency department (ED) nurses can reach 56.6%, driven by high psychological demands combined with low job control (Brassington et al., 2025; Fernandes et al., 2025), and that the resulting cognitive strain is linked to adverse patient outcomes and diminished nurse well-being (Surendran et al., 2025). Burnout, in turn, predicts poorer patient safety culture and more frequent errors among critical care nurses (Al Ma'mari et al., 2020), a conclusion reinforced by meta-analytic evidence that provider burnout compromises patient safety (Garcia et al., 2019). High workload shows parallel effects: it is associated with weaker safety culture among Iranian emergency nurses (Darabi et al., 2023), Jordanian ED nurses where burnout, job satisfaction, and workload jointly predicted safety-culture perceptions (Mansour & Abu Sharour, 2021) and Saudi Arabian ICU nurses (Alrabae et al., 2021). Intercultural nursing competence is generally conceptualized as a countervailing resource: greater cultural competence and intercultural sensitivity are associated with lower perceived stress (Purabdollah et al., 2021), intercultural empathic skills buffer time pressure in Finnish hospitals (Wesołowska et al., 2018), and intercultural training equips nurses to deliver culturally sensitive and therefore safer care (Berhanu et al., 2021; Kula et al., 2021). Yet the evidence is not uniformly protective: in highly multicultural emergency settings, sustained cross-cultural demands may add emotional labor, particularly where organizational support is limited (Abubshait & Rizek, 2025; Lee & Choi, 2024).

These prior studies share three limitations. First, they typically examined workload, burnout, cultural competence, and safety culture in isolation or in pairwise combinations, so the joint and indirect pathways among them remain untested. Second, they were conducted almost exclusively in settings where workload arises from conventional hospital demand, and they measured workload generically; none isolated workload attributable to tourism. Third, most relied on samples from Europe, the Middle East, or East Asia, while Indonesian evidence remains limited to general burnout–safety correlations (Febriani & Musharyanti, 2023), leaving the country's most tourism-exposed emergency workforce Bali's ED nurses unexamined.

Tourism-pressure workload also constitutes an occupational challenge that is qualitatively distinct from conventional nursing workload, for four reasons. It is episodic and seasonal, producing surge–trough cycles that complicate staffing and recovery rather than a stable baseline load; it is externally driven by destination-level forces flight arrivals, holiday calendars, mass events beyond hospital control; each additional case carries elevated per-encounter complexity, because foreign patients more often present with language barriers, unfamiliar expectations, travel-insurance and medico-legal requirements (Credé et al., 2018; Tuohy & Wallace, 2022), and in Bali these surges coincide with genuinely acute presentations among visitors (Junior Rina Artha et al., 2024). Consequently, the research gap addressed here is the absence of any study that jointly models tourism-attributable workload and intercultural nursing competence as antecedents of patient safety culture, with burnout as the mediating mechanism, among ED nurses in a high-tourism destination. The novelty of the present study lies precisely in that integration a contextually specific job demand and a resource with a potentially dual character tested in a single structural model during peak season and its objective is to examine whether tourism-pressure workload and intercultural nursing competence predict patient safety culture among emergency nurses in Bali, and whether burnout mediates these relationships.

This study is based on Job Demands and Resources Theory (JD–R) (Demerouti et al., 2001), according to which excessive job demands can damage employees' health and

performance due to burnout, however, job resources can reduce these effects and enhance positive outcomes. This study was conducted in the region of Bali, Indonesia, where the tourism industry is highly intensive. The connection between the stress of tourism pressure and exhaustion among emergency nurses is a complicated issue, influenced by various factors, including the external pressure of seasonal tourism changes, individual adjustment strategies, and organizational interventions. During peak tourism seasons, emergency nurses face heightened workloads, increasing stress and burnout. High psychological demands combined with low job control significantly contribute to emotional exhaustion, with odds ratios indicating a strong correlation (Brassington et al., 2025; Fernandes et al., 2025). High workload directly undermines nurses' perception of patient safety culture, as seen in Jordanian emergency departments (Mansour & Abu Sharour, 2021) and Saudi Arabian ICUs (Alrabae et al., 2021).

This burden leads to burnout and emotional exhaustion, which further erode safety perceptions, evidenced among critical care nurses in Oman (Al Ma'mari et al., 2020). The resulting cognitive strain is linked to adverse outcomes and nurse well-being issues (Surendran et al., 2025). Thus, hypotheses were formulated:

H1a	Tourism-Pressure Workload has a positive effect on Burnout among emergency nurses.
H1b	Tourism-Pressure Workload has a negative effect on Patient Safety Culture among emergency nurses.

A supportive and inclusive organizational culture in nursing is strongly linked to lower burnout rates (Moon & Park, 2025). This reduction is further supported by implementing Diversity, Equity, and Inclusion (DEI) initiatives, which enhance staff well-being (Young et al., 2022). In emergency care, providing culturally sensitive care is critical, and strategies to improve cultural competence can help nurses manage stress and mitigate burnout (Abubshait & Rizek, 2025). Enhanced intercultural competence and sensitivity are vital for decreasing nursing stress and improving patient care. Greater competence in this area is associated with reduced stress levels among nurses, benefiting patient safety (Purabdollah et al., 2021). Training programs designed to boost intercultural skills better equip nurses to deliver culturally sensitive care, which is fundamental to safe practice (Berhanu et al., 2021; Kula et al., 2021). Thus, hypotheses were formulated:

H2a	Intercultural Nursing Competence has a negative effect on Burnout among emergency nurses.
H2b	Intercultural Nursing Competence has a positive effect on Patient Safety Culture among emergency nurses.

Burnout contributes to a decline in attention and commitment to patient safety protocols. One study found that even low levels of burnout had a measurable negative effect on safety culture (Febriani & Musharyanti, 2023). Specifically, emotional exhaustion a key dimension of burnout shows a significant negative correlation with safety attitudes; higher exhaustion correlates with poorer safety scores among nurses (Flynn et al., 2024). Elevated burnout levels are directly associated with a greater frequency of adverse clinical events. This includes increased rates of medication errors and patient misidentification (Saleh et al., 2025). Furthermore, burnout is linked to more frequent reports of substandard care, patient falls, medication errors, and infections acquired in healthcare settings (Srikasem et al., 2025). Hypothesis is proposed :

H3	Burnout has a negative effect on Patient Safety Culture among emergency nurses.

Burnout acts as a key mediator between high workload and poor patient safety culture. Excessive workload leads to burnout, which then reduces job satisfaction and increases depressive symptoms, ultimately harming safety practices (de Oliveira et al., 2023; Garcia et

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al., 2019). Theories like JD-R explain this pathway, where demands such as tourism pressure deplete resources, cause burnout, and damage safety culture (Üngüren et al., 2025). Specifically, tourism-pressure workload raises burnout rates among staff. High patient volume, long hours, and poor teamwork contribute significantly to burnout in these settings (Garcia et al., 2019; Jarrar et al., 2023). This burnout is prevalent in such high-stress environments and is directly linked to worse patient safety outcomes (Garcia et al., 2019). Based on the Conservation of Resources model, burnout serves as a mediator that impairs nurses' patient safety attitudes. This reduction in engagement and resources leads to more medical errors and a weaker perceived safety culture (Bilal & Yildirim Sari, 2020). In diverse settings, cultural competence the ability to understand and respect different cultural backgrounds is vital for effective communication and care delivery (Lee & Choi, 2024). Research indicates that burnout acts as a partial mediator between a nurse's patient safety competency and their actual safety practices (Ma et al., 2025). This means higher burnout levels can weaken how effectively safety knowledge and skills translate into safe behaviors, underscoring the importance of tackling burnout to enhance patient safety. Thus, hypotheses were formulated:

H4	Burnout mediates the relationship between Tourism-Pressure Workload and Patient Safety Culture.
H5	Burnout mediates the relationship between Intercultural Nursing Competence and Patient Safety Culture.

The hypotheses examined in this research are grounded in established theory and empirical data, with their conceptual relationships outlined in Figure 1.

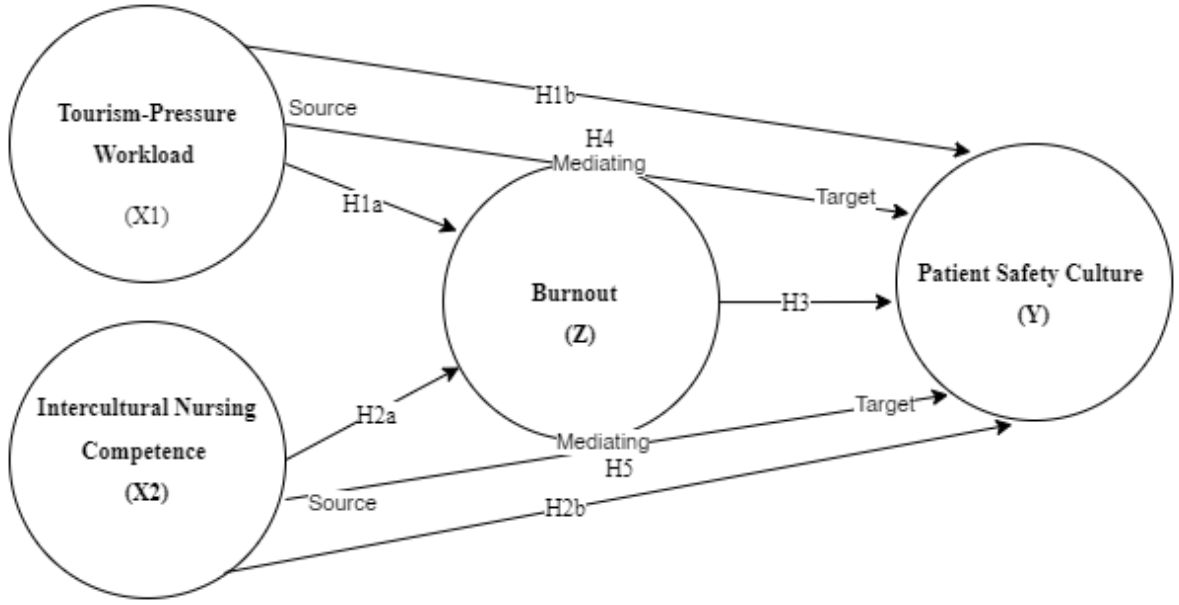

Figure 1. Conceptual Framework

OBJECTIVE

To examine whether tourism-pressure workload and intercultural nursing competence predict patient safety culture among emergency nurses in Bali, and to test whether burnout mediates these relationships.

METHODS

Design and Samples

This study used a quantitative, cross-sectional survey design framed by JD–R theory (Demerouti et al., 2001). Data were collected from May to September 2025 in the EDs of public and private hospitals across Bali, Indonesia, encompassing both ownership types across the province's main service areas. The period was chosen to coincide with Bali's peak tourist season; official statistics subsequently confirmed record international arrivals during these months (BPS-Bali, 2026), enhancing the contextual validity of the tourism-pressure measures.

The target population comprised registered nurses providing direct clinical care in the participating EDs. A total-sampling (census) approach was adopted: because the accessible population of eligible ED nurses was finite and enumerable through unit rosters, all eligible nurses were invited rather than a probability subsample, avoiding within-unit selection bias. After completeness screening, 283 fully usable responses were retained for analysis. This sample size exceeds the minimum of approximately 155 respondents indicated by the inverse square-root method for detecting path coefficients of at least 0.20 at the 5% significance level (Kock & Hadaya, 2018) and satisfies conventional PLS-SEM guidelines (Hair et al., 2019). The sample was diverse in shift pattern, weekly working hours, ED experience, recent exposure to foreign patients, and hospital ownership.

Research Instrument

Data were collected with a structured, self-administered questionnaire comprising four multi-item scales, each rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) (Sullivan & Artino, 2013). Scoring: higher scores on the Tourism-Pressure Workload and Burnout scales indicate greater perceived demand and greater burnout, respectively; higher scores on the Intercultural Nursing Competence and Patient Safety Culture scales indicate greater competence and a stronger safety culture. No items required reverse-coding.

The Tourism-Pressure Workload (TPW) scale, newly developed for this study, measured nurses' perceptions of increased workload, time pressure, and patient volume attributable to tourism-driven service demand through three indicators tourist traffic intensity, environmental pressure, and tourism carrying capacity constructed by translating destination-level tourism-pressure concepts (Chen, 2025; Vagiona & Palloglou, 2021) into individual-level statements about nurses' perceived job demands, representing the demand dimension of the JD–R model. The Intercultural Nursing Competence (INC) scale assessed four dimensions cultural knowledge, cultural skills, cultural attitudes, and cultural encounters structured around the domains of Campinha-Bacote (2002) model of cultural competence in healthcare delivery (Ličen & Prosen, 2023). The Burnout (BO) scale was anchored in the three core dimensions of the Maslach framework emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981) extended with a physical-symptoms dimension relevant to sustained ED work. The Patient Safety Culture (PSC) scale was adapted from four dimensions of the AHRQ Hospital Survey on Patient Safety Culture (Sorra & Dyer, 2010) teamwork, error feedback and communication, management support for patient safety, and non-punitive response to errors previously applied in hospital safety-climate research (Mazurenko et al., 2019; Mohammadpour et al., 2024).

All items were administered in Indonesian following forward–backward translation, and item wording was refined through expert review to represent conditions in EDs located in high-tourism settings accurately, consistent with the contextual-adaptation approach described above.

Data Collection

Questionnaires were distributed through routine unit channels to reach all eligible emergency nurses on rotating and fixed shifts. Each participant received an information sheet describing the study. To protect confidentiality and minimize peer influence, questionnaires were completed individually and returned directly to the research team or to a designated secure collection point. Returned questionnaires were screened for completeness before coding; questionnaires with missing responses on any study variable were excluded listwise, no imputation was performed, and only fully usable responses entered the final dataset.

Data Analysis

Analyses were performed with PLS-SEM in SmartPLS 3. The measurement model was evaluated for internal consistency (Cronbach's α and composite reliability ≥ 0.70), convergent validity (AVE ≥ 0.50), and discriminant validity via the Fornell Larcker criterion and the heterotrait monotrait (HTMT) ratio (Fornell & Larcker, 1981; Hair et al., 2019; Henseler et al., 2015). The structural model was then assessed. Path coefficients and bias-corrected 95% confidence intervals (2.5th and 97.5th percentiles) were derived by nonparametric bootstrapping with 5,000 resamples (Chin, 1998; Hair et al., 2019); a path was considered significant at $p < .05$ (two-tailed) when its confidence interval excluded zero. Explanatory power was evaluated with R^2 (substantial > 0.67; moderate 0.33–0.67; weak 0.19–0.33; Chin, 1998), predictive relevance with blindfolding-based Q^2 (> 0 indicating predictive capability), effect sizes with f^2 (small ≥ 0.02; medium ≥ 0.15; large ≥ 0.35; Cohen, 1988), and collinearity with inner VIF values < 5 (Hair et al., 2019). Mediation strength was quantified with the upsilon (υ) statistic, interpreting 0.02, 0.075, and 0.175 as minimal, moderate, and high mediation, respectively (Lachowicz et al., 2018; Ogbeibu et al., 2022). Because all data were self-reported by the same respondents at a single time point, common method bias was evaluated using the full collinearity approach: all inner VIF values (1.386–2.246; Table 4) remained below the conservative 3.3 threshold (Kock, 2015), indicating that method bias was unlikely to threaten the results.

Ethical Consideration

The study received ethical approval from an accredited Health Research Ethics Committee (KEPK) operating under the Ministry of Health's national research-ethics oversight framework, and administrative authorization was granted by the leadership of all participating hospitals. Participation was voluntary; all respondents provided written informed consent and were advised of their right to withdraw at any time without consequence, in accordance with national guidelines (KEPPKN, 2021). No directly identifying information was collected, data were stored under restricted access, and results are reported only in aggregate (KEPPKN, 2021). Ethical conduct adhered to the national accreditation and oversight framework for health research ethics committees under the Ministry of Health (KEPPKN, 2023).

RESULTS

Table 1. Demographic and Professional Characteristics of Respondents (N = 283)

Variable	Category	n	%
Gender	Female	176	62.2
	Male	107	37.8
Age group (years)	20–29	68	24.0
	30–39	124	43.8
	40–49	67	23.7
	≥50	24	8.5
Highest nursing education	Diploma (D3)	128	45.2

	Bachelor (S1/Ners)	141	49.8
	Master (S2) or above	14	4.9
ED work pattern	Rotating shift	231	81.6
	Fixed shift (day/night)	52	18.4
Weekly working hours	<40 hours	99	35.0
	≥40 hours	184	65.0
Years working in ED	<1 year	44	15.5
	1–5 years	129	45.6
	≥6 years	110	38.9
Foreign/tourist patient exposure (last 30 days)	Low (≤10%)	41	14.5
	Moderate (11–30%)	86	30.4
	High (31–50%)	91	32.2
	Very high (>50%)	65	23.0
Intercultural / cross-cultural training	Yes	112	39.6
	No	171	60.4
Language proficiency used in care	English—functional/clinical	148	52.3
	English—basic or none	135	47.7
Hospital ownership	Public	129	45.6
	Private	154	54.4

(Source: Author(s) Data, 2025)

Table 1 shows that the sample comprised 283 ED nurses, predominantly female (62.2%) and most frequently aged 30–39 years (43.8%). Nearly half held a Bachelor's degree as their highest nursing qualification (49.8%). Most worked rotating shifts (81.6%) for 40 or more hours per week (65.0%), and 45.6% had 1–5 years of ED experience. More than half (55.2%) reported high or very high exposure to foreign or tourist patients in the preceding month; however, 60.4% had received no formal intercultural training, and 47.7% rated their English proficiency for clinical care as basic or nonexistent. Participants were nearly evenly distributed between public (45.6%) and private (54.4%) hospitals.

Table 2. Reliability and Validity

Variable/Indicator	Loading	Alpha	CR	AVE
Tourism-Pressure Workload (TPW)		0.797	0.881	0.712
Tourist Traffic Intensity	0.886			
Environmental Pressure	0.846			
Tourism Carrying Capacity	0.798			
Intercultural Nursing Competence (INC)		0.777	0.857	0.601
Cultural Knowledge	0.849			
Cultural Skills	0.766			
Cultural Attitudes	0.710			
Cultural Encounters	0.769			
Burnout (Bo)		0.876	0.911	0.671
Emotional Exhaustion	0.860			
Depersonalization	0.812			
Reduced Personal Accomplishment	0.757			
Physical Symptoms	0.779			
Patient Safety Culture (PSC)		0.834	0.889	0.668

Teamwork	0.852
Error Feedback and Communication	0.798
Management Support for Patient Safety	0.838
Non-Punitive Response to Errors	0.779

(Source: SmartPLS Output, 2026)

Note. One initial Burnout indicator (workplace stress) was removed during measurement-model refinement because it did not reach the 0.70 loading threshold required for indicator retention (Hair et al., 2019); all statistics reported for the Burnout construct refer to the four retained indicators.

All retained indicator loadings exceeded 0.70, all AVE values exceeded 0.50, and all constructs showed Cronbach's α > 0.77 and composite reliability > 0.85, establishing convergent validity and internal consistency (Hair et al., 2019). Burnout was the most robust construct (α = 0.876; CR = 0.911; AVE = 0.671), with emotional exhaustion as its strongest indicator (loading = 0.860), while cultural knowledge (0.849) was the strongest indicator of intercultural competence.

Table 3. Discriminant Validity: Fornell–Larcker Criterion and HTMT Ratios

Variables	**Bo**	**INC**	**PSC**	**TPW**
Fornell-Larcker(diagonal = √AVE)				
Bo	0.819			
INC	0.605	0.775		
PSC	0.716	0.703	0.817	
TPW	0.688	0.528	0.667	0.844
Heterotrait–Monotrait ratio (HTMT)				
INC	0.730			
PSC	0.838	0.868		
TPW	0.818	0.658	0.812	

(Source: SmartPLS Output, 2026)

Table 3 shows that the square root of the AVE for each construct exceeded its correlations with all other constructs, satisfying the Fornell Larcker criterion (Fornell & Larcker, 1981), and all HTMT ratios fell below the liberal 0.90 threshold recommended for conceptually related constructs (Henseler et al., 2015). It should be acknowledged, however, that four HTMT values (Bo–PSC = 0.838; INC–PSC = 0.868; TPW–Bo = 0.818; TPW–PSC = 0.812) exceeded the stricter 0.85 criterion. Given the theoretical relatedness of these constructs within the JD–R framework, the 0.90 threshold was retained, but the borderline values indicate some conceptual overlap and are noted as a limitation.

Table 4. Structural Model Assessment and Hypothesis-Testing Results

Path	**β**	**t**	**p**	**VIF**	**f^2 / υ**	**R^2**	**Result**
Direct effects							
H1a: TPW → Bo	0.511	11.05	<.001	1.386	0.423	0.552	Supported
H1b: TPW → PSC	−0.249	4.480	<.001	1.972	0.092		Supported
H2a: INC → Bo	0.336	7.203	<.001	1.386	0.183		Significant, opposite direction
H2b: INC → PSC	0.382	6.666	<.001	1.639	0.261	0.656	Supported

H3: Bo → PSC	−0.314	5.024	<.001	2.246	0.129		Supported
Indirect (mediation) effects							
H4: TPW → Bo → PSC	−0.160	4.383	<.001		υ = 0.026		Supported (partial)
H5: INC → Bo → PSC	−0.105	3.790	<.001		υ = 0.011		Significant; competing mediation

(Source: SmartPLS Output, 2026. $Q^2 = 0.546$ for Burnout and 0.610 for Patient Safety Culture.)

Beyond statistical significance (all paths $p < .001$; inner VIF 1.386–2.246, indicating no collinearity), the results carry substantial practical weight. The effect of tourism-pressure workload on burnout ($\beta = 0.511$) is large by conventional standards ($f^2 = 0.423$): tourism-driven demand is not one stressor among many but the dominant driver of exhaustion in this workforce, supporting H1a. Contrary to H2a, intercultural competence was positively not negatively associated with burnout ($\beta = 0.336$; $f^2 = 0.183$, medium), an unexpected finding of practical importance in its own right, examined in the Discussion. Together the two predictors explained more than half of the variance in burnout ($R^2 = 0.552$), and the Q^2 of 0.546 indicates that the model does not merely fit this sample but predicts burnout out-of-sample nearly as well evidence that these two levers are the right intervention targets.

For patient safety culture, the practical ordering of the predictors matters more than their shared significance. Intercultural competence was the strongest direct predictor ($\beta = 0.382$; $f^2 = 0.261$, medium-to-large; H2b supported), implying that investment in cross-cultural capability yields the largest direct safety-culture return available in this model. Burnout ($\beta = 0.314$; $f^2 = 0.129$; H3 supported) and tourism-pressure workload ($\beta = −0.249$; $f^2 = 0.092$; H1b supported) exerted negative effects of small-to-medium size individually modest, but compounding, because workload also operates through burnout. The model explained 65.6% of the variance in safety culture with strong predictive relevance ($Q^2 = 0.610$), an unusually high figure for an attitudinal outcome that underscores how tightly safety culture is coupled to these three factors in tourism-intensive EDs.

The mediation results specify how demand is converted into safety risk. The indirect workload effect through burnout ($\beta = −0.160$; $\upsilon = 0.026$) was significant and of the same sign as the direct effect complementary partial mediation meaning roughly 39% of workload's total damage to safety culture travels through exhausted nurses (H4 supported). Practically, staffing fixes alone will recover only part of the loss unless burnout itself is treated. The intercultural pathway behaved differently: its direct effect on safety culture was positive while its indirect effect through burnout was negative ($\beta = 0.105$), a competing (inconsistent) partial mediation in which competence strengthens safety culture directly yet leaks part of that benefit wherever intercultural work elevates burnout. Because this indirect effect's upsilon ($\upsilon = 0.011$) falls below the 0.02 threshold for even a minimal mediation effect (Lachowicz et al., 2018), the leak is real but small, and the net contribution of intercultural competence to safety culture remains clearly positive.

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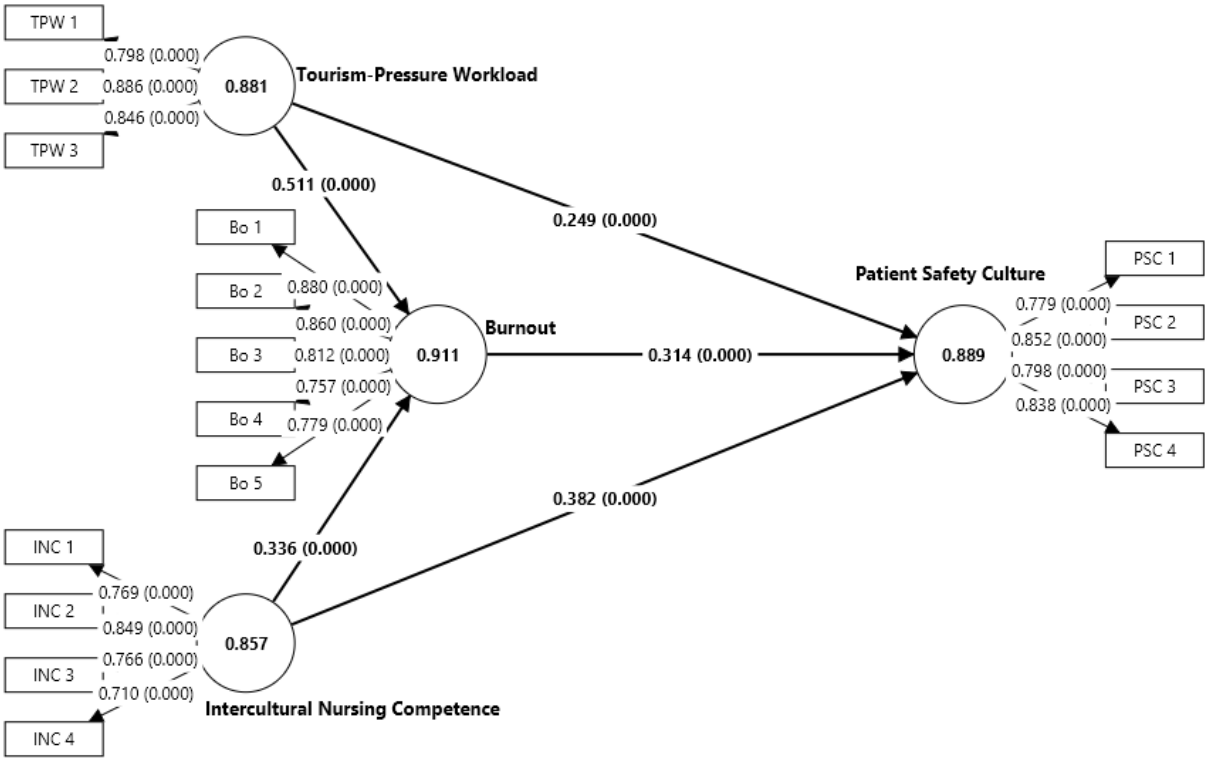

Figure 2. Structural Equation Model
(Source: SmartPLS Output, 2026)

DISCUSSION

This study examined how tourism-pressure workload and intercultural nursing competence influence patient safety culture among emergency nurses in Bali, with burnout as a mediating mechanism. The findings broadly support the JD–R health-impairment pathway (Demerouti et al., 2001) demands elevate burnout, and burnout erodes safety culture—while also yielding one theoretically important deviation: intercultural competence behaved simultaneously as a resource for safety culture and as a correlate of burnout.

Tourism-Pressure Workload and Burnout

Tourism-pressure workload showed a strong positive effect on burnout, indicating that tourism-attributable increases in patient volume, service intensity, and time pressure substantially elevate emotional and psychological exhaustion. The magnitude of this effect (β = 0.511) is comparable to, or larger than, workload burnout associations reported among emergency nurses in the United States and Portugal (Brassington et al., 2025; Fernandes et al., 2025), plausibly because seasonal tourist surges compound baseline ED demand. Consistent with the JD–R health-impairment process, prolonged exposure to such demands depletes personal resources and drives burnout (Demerouti et al., 2001; Üngüren et al., 2025).

Intercultural Nursing Competence and Burnout: An Unexpected Direction

Contrary to H2a and to studies reporting protective associations between cultural competence and stress (Purabdollah et al., 2021; Wesołowska et al., 2018), intercultural competence was positively associated with burnout. Several non-exclusive explanations warrant consideration. First, in a setting where 60.4% of nurses lacked formal intercultural training, competence may be acquired chiefly through repeated, effortful cross-cultural encounters; the same exposure that builds competence imposes emotional labor (Abubshait & Rizek, 2025; Lee & Choi, 2024). Second, more competent nurses may be preferentially

assigned to foreign patients, concentrating intercultural demands on them—a reverse-causal or selection mechanism that the cross-sectional design cannot rule out. Third, partial content overlap between the cultural-encounters dimension of INC and demand-related experiences may inflate the association, a possibility consistent with the borderline HTMT values reported above. The finding should therefore be read not as evidence that competence causes burnout, but that under-supported intercultural work is itself a job demand; longitudinal designs are needed to disentangle these mechanisms.

Determinants of Patient Safety Culture

Intercultural nursing competence emerged as the strongest direct predictor of patient safety culture, underscoring the centrality of cross-cultural communication, cultural sensitivity, and mutual understanding to safe practice in diverse emergency settings (Mazurenko et al., 2019; Mohammadpour et al., 2024). Burnout showed a significant negative association with safety culture, consistent with evidence linking exhaustion to reduced vigilance, weaker compliance with safety procedures, and more frequent adverse events (Al Ma'mari et al., 2020; Flynn et al., 2024; Garcia et al., 2019; Saleh et al., 2025). Tourism-pressure workload retained a smaller negative direct effect, indicating that workload undermines safety culture both directly and through its impact on nurses' well-being.

The Mediating Role of Burnout

Burnout partially mediated the workload–safety relationship (complementary mediation, ≈39% of the total effect), corroborating prior mediation evidence (Bilal & Yildirim Sari, 2020; de Oliveira et al., 2023; Ma et al., 2025) and identifying burnout as the principal psychological conduit through which tourism-driven demand damages safety culture. The intercultural-competence pathway displayed competing mediation: a robust positive direct effect on safety culture partially offset by a small negative indirect effect through burnout. Because the upsilon value for this indirect path fell below the minimal-effect threshold, this offsetting mechanism though statistically significant is of limited practical magnitude and should not be overstated. The persistence of significant direct effects alongside the indirect ones indicates that structural factors and psychological states shape safety culture through partially independent channels.

Theoretical and Practical Implications

Theoretically, the findings extend JD–R theory to a high-tourism emergency context in which job demands are driven by an external, seasonal environmental force, and they illustrate that a construct conventionally classified as a resource intercultural competence can operate with a dual character, protecting outcomes directly while functioning as a demand where organizational support is thin. Practically, the results point to specific levers for Indonesian hospital management: (a) season-sensitive staffing and workload models in tourism destinations, with surge rosters aligned to arrival statistics; (b) formal intercultural-competence and clinical-English training currently absent for a majority of respondents embedded in continuing professional development, so that competence is built through structured training rather than unsupported exposure; (c) interpreter services and translation technology to reduce the emotional labor of cross-cultural encounters; and (d) routine burnout surveillance integrated into the patient-safety programs required under national hospital accreditation standards. Two contextual factors unique to tourism-intensive healthcare settings sharpen these implications: demand is forecastable from external data (airline seat capacity, arrival statistics, event calendars), which makes anticipatory rather than reactive staffing feasible in a way ordinary ED crowding is not; and part of the demand burden originates outside the hospital, which argues for policy-level coordination in which provincial health authorities, the tourism office,

and hospital associations share arrival forecasts, co-fund interpreter pools, and set seasonal minimum-staffing norms for destination EDs.

Limitations

Several limitations qualify these findings. First, the cross-sectional design precludes causal inference; the mediation results describe a theoretically specified ordering of statistical associations, not demonstrated causal pathways, and reverse causality (e.g., burnout coloring perceptions of workload or competence) cannot be excluded. Second, all constructs were self-reported by the same respondents at one time point; although the common-method-bias assessment (all inner VIF values < 3.3) suggested no serious threat, method variance cannot be fully ruled out. Third, several HTMT values approached the stricter 0.85 criterion, indicating conceptual overlap among the JD–R constructs. Fourth, the newly developed tourism-pressure workload scale, while internally consistent, requires further validation across settings and seasons. Finally, the sample was drawn from a single high-tourism province during peak season, which bounds generalizability to lower-demand periods and non-tourism regions.

CONCLUSION

This study makes one central contribution: it demonstrates, in a high-tourism emergency setting, that burnout is the principal mechanism converting tourism-driven demand into a weakened patient safety culture, and that intercultural nursing competence carries a dual character the strongest direct protector of safety culture, yet an additional demand—where training and organizational support are absent. For healthcare leaders in tourism destinations, the implication is a dual investment: season-sensitive workload management to prevent burnout, and structured intercultural training with language support so that competence is built without exhausting the nurses who hold it.

Future research should (a) employ longitudinal or diary designs across peak and low seasons to establish temporal ordering and rule out reverse causality between competence and burnout; (b) link nurses' perceived tourism-pressure workload to objective indicators such as monthly foreign-patient volumes and arrival statistics to validate the new scale; (c) replicate the model in other high-tourism destinations to test generalizability; (d) evaluate intercultural-training and interpreter-service interventions experimentally, testing whether supported competence loses its association with burnout; and (e) extend the outcome side of the model from perceived safety culture to observed safety behavior and incident data.

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CONFLICTS OF INTEREST

This research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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