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The mediating role of self-efficacy in the relationship between spirituality and burnout among intensive care unit nurses: a pathway analysis

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ABSTRACT

Background: Burnout is a critical issue among intensive care unit (ICU) nurses, impacting both their well-being and excellence in care. Spiritual wellbeing and self-efficacy have been identified as potential protective factors against burnout, yet their interrelationships remain unclear, particularly in the Indonesian nurse's context.
Objectives: This study examines the role of spirituality and self-efficacy in burnout and explores the mediating effect of self-efficacy.
Methods: A cross-sectional correlational design with convenience sampling was conducted among 410 ICU nurses in public hospitals in East Java, Indonesia. Participants completed validated measures of burnout, spirituality and self-efficacy. Partial least squares structural equation modelling was employed to test direct and indirect relationships between variables.
Results: Most participants were female, with a mean age of around 31 years and more than two years of ICU experience. Higher workload significantly predicted greater burnout ($\beta = 0.21$, $p < 0.001$), while spirituality ($\beta = -0.17$, $p = 0.001$) and self-efficacy ($\beta = -0.24$, $p < 0.001$) negatively predicted burnout. Mediation analysis confirmed that self-efficacy mediated the relationship between spirituality and burnout ($\beta = -0.13$, $p < 0.001$), indicating that ICU nurses with higher levels of spiritual wellbeing reported stronger self-efficacy, which in turn predicted lower burnout.
Conclusion: The findings reveal that self-efficacy is a key mechanism through which spirituality mitigates burnout among ICU nurses. These insights may inform the development of healthy work environment initiatives that incorporate spiritual support and self-efficacy training through structured mentorship and organisational systems, ultimately reducing burnout and enhancing nurses' resilience in high-stress settings.

1. Introduction

Burnout among intensive care unit (ICU) nurses is a growing concern worldwide (Ramírez-Elvira et al., 2021), with significant implications for healthcare systems, patient safety and quality of care (Li et al., 2024). Characterised by emotional exhaustion, depersonalisation and reduced personal accomplishment, burnout has been widely recognised as a critical issue affecting healthcare professionals, particularly among those working in high-stress environments such as ICUs (Maslach & Leiter, 2016). Nurses in ICUs face excessive workloads, prolonged shifts, high patient acuity and frequent exposure to traumatic events, all of which contribute to an increased risk of burnout (Ramírez-Elvira et al., 2021). The consequences of burnout extend beyond the individual, as studies have linked it to increased medical errors, reduced quality of care, higher absenteeism and nurse turnover (Garcia et al., 2019; Lee et al., 2023).

Globally, the prevalence of high burnout symptoms among nurses has been estimated at 14.36 %, with the highest rates reported in Southeast Asia and the Pacific region (13.68 %), followed by Latin America (10.51 %) and North America (10.27 %) (Woo et al., 2020). In

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Indonesia, where nurses frequently contend with high patient loads, inadequate staffing and limited organisational support, burnout prevalence among general nurses has reached 49.2 % (Juanamasta et al., 2024; Nursalam et al., 2020). However, despite these statistics, there remains a notable gap in research focusing specifically on ICU nurses in Indonesia, a population at particularly high risk due to the demanding nature of their work. Addressing burnout in this group is essential for ensuring nurse retention, safeguarding patient safety and maintaining healthcare system efficiency.

Previous studies have identified a range of contributors to burnout, including sociodemographic factors (e.g., age, marital status, educational level) and work-related variables (e.g., staffing ratios, shift length, workload) (Ramírez-Elvira et al., 2021; Yestiana et al., 2019). Nevertheless, despite global efforts to mitigate burnout, research remains limited in examining protective factors, especially in Indonesia's ICU settings. Among the potential protective factors, spirituality and self-efficacy have, however, received increasing attention.

Spirituality, defined as a sense of purpose, connection and inner strength, has been identified as a buffer against occupational stress (De Diego-Cordero et al., 2022). It has been found that nurses with higher levels of spirituality report lower burnout, as spirituality helps them cope with workplace stress by fostering resilience and inner strength. Evidence from South Korea (Kim & Yeom, 2018), Greece (Ntantana et al., 2017) and Indonesia (Putri et al., 2022) has demonstrated a negative correlation between spirituality and burnout. However, this relationship has not been fully explored in Indonesian ICU nurses, whose stress levels and work environments differ significantly from those of other nursing populations.

Another key psychological factor influencing burnout is self-efficacy, defined as the belief in one's ability to manage challenges (Bandura, 1997). In this study, self-efficacy specifically refers to ICU nurses' confidence in handling work-related stressors and patient care demands in high-pressure critical care environments. High self-efficacy is associated with greater adaptability, stronger coping mechanisms and lower emotional exhaustion in demanding work environments (de la Fuente et al., 2023) and several studies have confirmed a negative relationship between self-efficacy and burnout (Hussien et al., 2025; Xie et al., 2024), suggesting that nurses with higher self-efficacy are better equipped to handle stress and maintain job satisfaction (Morales-García et al., 2024). Nevertheless, inconsistencies remain regarding the extent to which self-efficacy directly influences burnout, particularly across different cultural and healthcare contexts (Alidosti et al., 2016).

Emerging evidence suggests that spirituality may also enhance self-efficacy, as individuals with a strong sense of meaning and purpose develop greater confidence in handling workplace stress (Jun & Lee, 2016; Kasapoğlu, 2022; Kown & Oh, 2019). Self-efficacy, in turn, is a critical psychological resource for ICU nurses, who routinely face complex clinical situations, emotional exhaustion and moral distress (Hussien et al., 2025). Thus, it is plausible that spirituality reduces burnout both directly and indirectly by reinforcing self-efficacy (Kasapoğlu, 2022; Kown & Oh, 2019; Xie et al., 2024). Despite theoretical support for this pathway, the mediating role of self-efficacy in the relationship between spirituality and burnout has, however, not been systematically tested in ICU settings, particularly in Indonesia, where cultural and religious values strongly influence coping mechanisms (Putri et al., 2022).

This study addresses that gap by examining the influence of spirituality and self-efficacy on burnout and testing whether self-efficacy mediates this relationship among ICU nurses in Indonesia. By clarifying this mechanism, the study contributes to a deeper understanding of the psychological determinants of burnout and provides practical guidance for nurse leaders and educators seeking to promote resilience and reduce burnout in high-stress ICU environments.

2. Methods

2.1. Aims of the study

This study examines the role of spirituality and self-efficacy in burnout and explores the mediating effect of self-efficacy.

2.2. Design, setting, and participants

This study employed a cross-sectional correlational design, using structural equation modelling to examine the interrelationships between spirituality, self-efficacy and burnout among ICU nurses in Indonesia. This study followed the STROBE guidelines for reporting observational research (Vandenbroucke et al., 2014) (Supporting file).

A convenience sampling method was used to recruit participants from four public regional hospitals in East Java, Indonesia, which were selected based on their accreditation status and ICU capacity. Recruitment was facilitated through the head nurses and ICU nursing administrators, who distributed study information sheets and invitations to all eligible nurses during staff meetings and through internal communication channels. Nurses who expressed interest were provided with a secure online link to the questionnaire (Google Forms). These hospitals serve as major referral centres, providing critical care services with a high patient load. Eligible participants were ICU nurses with certified critical care training, registered nurses with at least one year of ICU work experience, and nurses who were actively employed at the time of data collection. Nurses who held administrative roles (e.g., head nurses), had multiple simultaneous jobs, were pregnant, or declined to participate were excluded from the study.

The required sample size was determined using G*Power 3.1. for multiple regression (Faul et al., 2009). Using Cohen's small effect size of 0.05, an alpha level of 0.05, a power of 0.80, and 11 predictor variables, the minimum required sample was 346 participants. The 11 predictors included sociodemographic variables (age, gender, marital status, education level, religion), work-related characteristics (ICU experience, patient load per shift, ICU staffing, extended work hours), and the two psychological variables of interest (spirituality and self-efficacy). Adjusting for a 20 % potential non-response rate, a final target sample of 410 ICU nurses was set. Data collection was conducted using self-administered questionnaires distributed via Google Forms from August 5th to September 7th, 2024, after obtaining institutional approvals.

2.3. Instruments

Three validated scales were used to measure burnout, spirituality and self-efficacy among ICU nurses. Additionally, a demographic and work characteristics questionnaire was used to collect participant background information.

2.3.1. Burnout

Burnout was measured using the Copenhagen Burnout Inventory (CBI), a validated instrument that assesses three dimensions: personal burnout (6 items), work-related burnout (7 items), and client-related burnout (6 items) (Kristensen et al., 2005). Item responses were recorded on a 5-point frequency scale (e.g., "Always," "Often," "Sometimes," "Seldom," "Never") and were transformed to a 0–100 scale, with higher scores indicating greater burnout. Previous studies have reported high reliability for the CBI among nurses (Cronbach's $\alpha = 0.91$–0.92) (Montgomery et al., 2021), and the Indonesian version has demonstrated excellent internal consistency (Cronbach's $\alpha = 0.95$) (Putri et al., 2022). In this study, the overall Cronbach's alpha for the CBI was 0.88, indicating good reliability.

2.3.2. Spirituality

Spirituality was assessed using the Spiritual Wellbeing Scale (SWBS), a 20-item instrument measuring two subscales: Religious Wellbeing

(RWB) and Existential Wellbeing (EWB) (Paloutzian & Ellison, 1991). The Indonesian version of the SWBS used in this study was adapted to a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree), with higher scores indicating greater spiritual wellbeing. Total scores range from 0 to 80, and each subscale from 0 to 40. Previous research has confirmed the psychometric validity of the Indonesian version, with Cronbach's α exceeding 0.80 (Rostiana et al., 2022). In the present study, the Cronbach's α was 0.89, indicating excellent internal consistency.

2.3.3. Self-efficacy

Self-efficacy was measured using the 12-item General Self-Efficacy Scale (GSES-12), which had been adapted and revised for Indonesian populations following cross-cultural guidelines. The scale employs a 4-point Likert format (1 = strongly disagree to 4 = strongly agree). While most items were positively worded, several items were negatively worded and subsequently reverse-coded. Although the GSES-12 is designed to assess general coping confidence, in this study it was applied to reflect ICU nurses' confidence in managing work-related challenges and stressors in critical care practice. Higher total scores of GSES-12 indicated greater self-efficacy. Validation among Indonesian populations supported the scale's factor structure with good model fit, indicating acceptable construct validity (Putra et al., 2019). In this study, internal consistency was modest (Cronbach's α = 0.66).

2.3.4. Demographic and work characteristics

A structured questionnaire was developed to collect demographic information (age, gender, marital status, education level, religion) and work characteristics (ICU experience, patient load per shift, ICU staffing, and extended workload). These variables were included as potential covariates in the analysis.

2.4. Ethical approval

This study was approved by the Institutional Review Board (IRB) of The Hajj Regional Hospital of East Java, Indonesia (Approval No: 445/145/KOM.ETIK/2024) on July 29, 2024. Before participation, nurses were informed about the study through information sheets and invitations distributed by head nurses and ICU nursing administrators during staff meetings and via internal communication channels. The online questionnaire link included details of the study's objectives, potential risks and the voluntary nature of participation. Written informed consent was obtained electronically prior to completing the survey. To ensure confidentiality, no personal identifiers such as names, employee ID numbers, contact details, or IP addresses were collected in the Google Forms survey. Responses were stored anonymously and downloaded into password-protected files accessible only to the research team.

2.5. Data analysis

All collected data were coded, entered and analysed using SmartPLS version 4, which applies partial least squares structural equation modelling (PLS-SEM). Descriptive statistics were used to summarise participants' demographic and work-related characteristics, with frequencies and percentages reported for categorical variables, and means and standard deviations (SD) for continuous variables.

PLS-SEM was employed to examine the hypothesised relationships between spirituality, self-efficacy and burnout, including the mediating role of self-efficacy. As a variance-based approach, PLS-SEM is suitable for complex models and does not require data to meet multivariate normality or homoscedasticity assumptions. The significance of path coefficients and indirect effects was tested using a bootstrapping procedure with 5000 resamples.

Model evaluation followed standard PLS-SEM criteria. Reliability was assessed using composite reliability, while convergent validity was examined through the average variance extracted (AVE). Discriminant validity was evaluated using the Fornell–Larcker criterion. The model's explanatory power was assessed with R^2 values for endogenous constructs, and predictive relevance was examined using Q^2. Global model fit was evaluated with the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). Mediation analysis was conducted within the PLS framework to determine whether self-efficacy mediated the relationship between spirituality and burnout (Hair et al., 2019). Effect sizes (f^2) were calculated for each structural path by comparing the R^2 of endogenous constructs with and without the predictor in the model, and interpreted using conventional thresholds (0.02 = small, 0.15 = medium, 0.35 = large) (Pereira et al., 2024). A significance level of $p < 0.05$ was used for all hypothesis tests.

3. Results

3.1. Demographic and work-related characteristics of ICU nurses and main variables

A total of 410 ICU nurses participated in the study. Most participants were female (70.0 %), with a mean age of 36.87 years (SD = 7.88), with the largest proportion of participants falling within the 31–40 years age group (42.7 %), followed by those aged 20–30 years (26.8 %). Most participants were married (86.6 %) and identified as Muslim (95.4 %), reflecting the dominant religious affiliation in the study region (Table 1).

Regarding educational background, 53.4 % held a diploma in nursing, 45.4 % had a bachelor's degree, and 1.2 % had a master's degree. Most nurses had more than two years of ICU experience (87.6 %). The study also found that 45.6 % of ICU nurses cared for ≤10 patients per shift, while 44.4 % managed 11–20 patients per shift. The majority worked in small ICU teams of five or fewer nurses per shift (72.2 %). Additionally, the mean extended workload per shift was 0.74 h (SD = 0.82), highlighting the time constraints nurses face in managing patient care.

Descriptive statistics for spirituality, self-efficacy and burnout are summarised in Table 1. Participants self-reported spirituality scores ranging from 32 to 80, with a mean of 65.17 (SD = 11.69), reflecting generally high levels of spirituality. Self-efficacy scores ranged from 25 to 48, with a mean of 38,77 (SD = 9.56), indicating that most participants demonstrated strong confidence in managing work-related challenges. Burnout scores ranged from 22 to 76, with a mean of 31.18 (SD = 10.79), suggesting that participants experienced relatively low levels of burnout overall.

3.2. Determinants of burnout among ICU nurses

The results of the PLS-SEM analysis revealed three significant determinants of burnout among Indonesian ICU nurses: extended workload, spirituality and self-efficacy (Table 2). Higher extended workload significantly predicted higher levels of burnout ($\beta = 0.21$, $t = 4.73$, $p < 0.001$, $f^2 = 0.053$), representing a small effect size. Spirituality negatively predicted burnout ($\beta = -0.17$, $t = 3.20$, $p = 0.001$, $f^2 = 0.023$), suggesting that higher levels of spirituality protected nurses from burnout with a small effect. Similarly, self-efficacy was a negative predictor of burnout ($\beta = -0.24$, $t = 4.65$, $p < 0.001$, $f^2 = 0.048$), indicating that nurses with greater self-efficacy experienced less burnout, also with a small effect. Other sociodemographic variables, such as age, gender and marital status, were not significantly associated with burnout in the final model ($p > 0.05$).

3.3. Mediation analysis of self-efficacy between spirituality and burnout symptoms

A mediation analysis was conducted to test whether self-efficacy mediated the relationship between spirituality and burnout. To establish the logical foundation for this analysis, it was necessary first to

Table 1
Descriptive statistics of demographic, work-related characteristics, and main variables.

Category	Frequency	(%)	Mean	SD
Gender:				
Male	123	30.0		
Female	287	70.0		
Age:				
20–30 years old	110	26.8	36.87	7.87
31–40 years old	175	42.7		
41–50 years old	101	24.6		
51–60 years old	24	5.9		
Marital status:				
Not Married	55	13.4		
Married	355	86.6		
Education:				
Diploma of Nursing	219	53.4		
Bachelor of Nursing	186	45.4		
Master of Nursing	5	1.2		
Work experience:				
<2 Years	51	12.4		
>2 Years	359	87.6		
Religion:				
Islam	391	95.4		
Christian	17	4.1		
Hindu	2	0.5		
ICU patient load per shift:				
≤10	187	45.6		
11–20	182	44.4		
21–30	19	4.6		
≥31	22	5.4		
ICU staffing per shift:				
≤5	296	72.2	4.83	1.22
>6–	114	27.8	13.32	7.35
Extended workload:				
0.5–1.5 Hours	335	81.7	0.74	0.816
2–3 Hours	75	18.3		
Spirituality			65.17	11.68
Self-efficacy			38.77	9.56
Burnout			31.18	10.79

Note: SD, standard deviation.

Table 2
Pathway analysis towards burnout.

Path relationship	B coefficient	*t*-value	*p*-value
Extended workload → burnout	0.21	4.73	<0.001
Spirituality→ burnout	−0.17	3.20	0.001
Self-Efficacy → burnout	−0.24	4.65	<0.001

explore the direct association between spirituality and self-efficacy. Higher spirituality levels were found to significantly predict stronger self-efficacy ($\beta = 0.55$, $t = 16.14$, $p < 0.001$, $f^2 = 0.42$), representing a large effect size. The results confirmed that self-efficacy partially mediated the relationship between spirituality and burnout, with a significant indirect effect ($\beta = -0.13$, $t = 4.33$, $p < 0.001$). This finding suggests that spirituality helps reduce burnout directly and also indirectly by enhancing self-efficacy. The direct effect of spirituality on burnout remained significant ($\beta = -0.17$, $t = 3.20$, $p = 0.001$), indicating that while spirituality directly lowers burnout, its impact is stronger when it also boosts self-efficacy. The PLS-SEM model demonstrated good fit (SRMR = 0.07, NFI = 0.80), acceptable reliability and validity, and strong predictive relevance ($Q^2 > 0$) (Fig. 1). The structural model accounted for 17 % of the variance in burnout ($R^2 = 0.17$; adjusted $R^2 = 0.16$) and 30 % of the variance in self-efficacy ($R^2 = 0.30$; adjusted $R^2 = 0.29$), which represents a modest but meaningful explanatory power in this context (Fig. 1) (see Table 3).

4. Discussion

This study provides new insights into the factors contributing to burnout among ICU nurses in Indonesia, highlighting the role of workload, spirituality and self-efficacy in shaping their experiences of occupational stress. Using PLS-SEM, the findings demonstrate that spirituality and self-efficacy serve as protective factors against burnout, while workload significantly contributes to burnout risk. Furthermore, self-efficacy partially mediates the relationship between spirituality and burnout, suggesting that higher levels of spirituality enhance self-efficacy, which in turn reduces burnout.

The results confirm that a higher extended workload is significantly associated with increased burnout levels among ICU nurses. This finding is consistent with previous studies indicating that excessive job demands contribute to emotional exhaustion, depersonalisation and reduced professional efficacy (Ifdil et al., 2019; Ramírez-Elvira et al., 2021; Yestiana et al., 2019). ICU nurses are often called upon to manage high patient acuity, continuous monitoring responsibilities and prolonged working hours, all of which exacerbate stress and increase the likelihood of burnout. In this study, 44.4 % of nurses reported their ICU units caring for 11–20 patients per shift, and 72.2 % reported working in teams of five or fewer nurses per shift, underscoring structural workload pressures in ICU care. This pattern is consistent with prior reports of workload constraints in Indonesian hospitals (Yestiana et al., 2019). Previous research has identified that burnout not only affects nurses' psychological wellbeing but also negatively impacts patient safety, job satisfaction and turnover rates (Gomez-Urquiza et al., 2017; Jun et al., 2021). In Indonesia, where nurse staffing shortages remain a persistent challenge, these findings underscore the urgent need for hospital administrators to optimise nurse workloads, implement safe staffing policies and introduce workload redistribution strategies. Reducing workload through appropriate staffing ratios and structured work shifts could significantly alleviate burnout among ICU nurses.

Among Indonesian ICU nurses, spirituality was found to be a significant negative predictor of burnout. This finding is consistent with prior research showing that spirituality enhances emotional resilience in stressful work environments (Kim & Yeom, 2018; Ryu & Shim, 2021), and supports meaning, emotional stability and endurance in high-pressure settings (Putri et al., 2022). By fostering meaning-making and helping nurses reframe stress, spirituality can buffer workplace strain and may be strengthened through initiatives such as reflective practice, access to chaplaincy, and dedicated spaces for spiritual engagement.

In Indonesia, spirituality is closely tied to religious practice and communal life; beliefs about meaning and moral living are shaped by personal experience and cultural–religious norms. In turn, high religiosity and family involvement support meaning-making and emotion regulation (e.g., prayer, gratitude, acceptance), which can buffer ICU nurses' stress (Putri et al., 2022; Tahir et al., 2021). At the same time, spiritual care is recognised as a domain of holistic nursing, but is frequently delivered in collaboration with hospital religious/spiritual services (e.g., chaplaincy/pastoral care, Islamic religious guidance), and actual delivery depends on unit assignment and prior training (Baguna et al., 2024; Sinaga et al., 2021). These cultural and organisational features may amplify spirituality's protective role and, through social persuasion and vicarious learning (e.g., observing competent peers, receiving encouragement), translate into higher self-efficacy in line with social cognitive theory (Bandura, 1997).

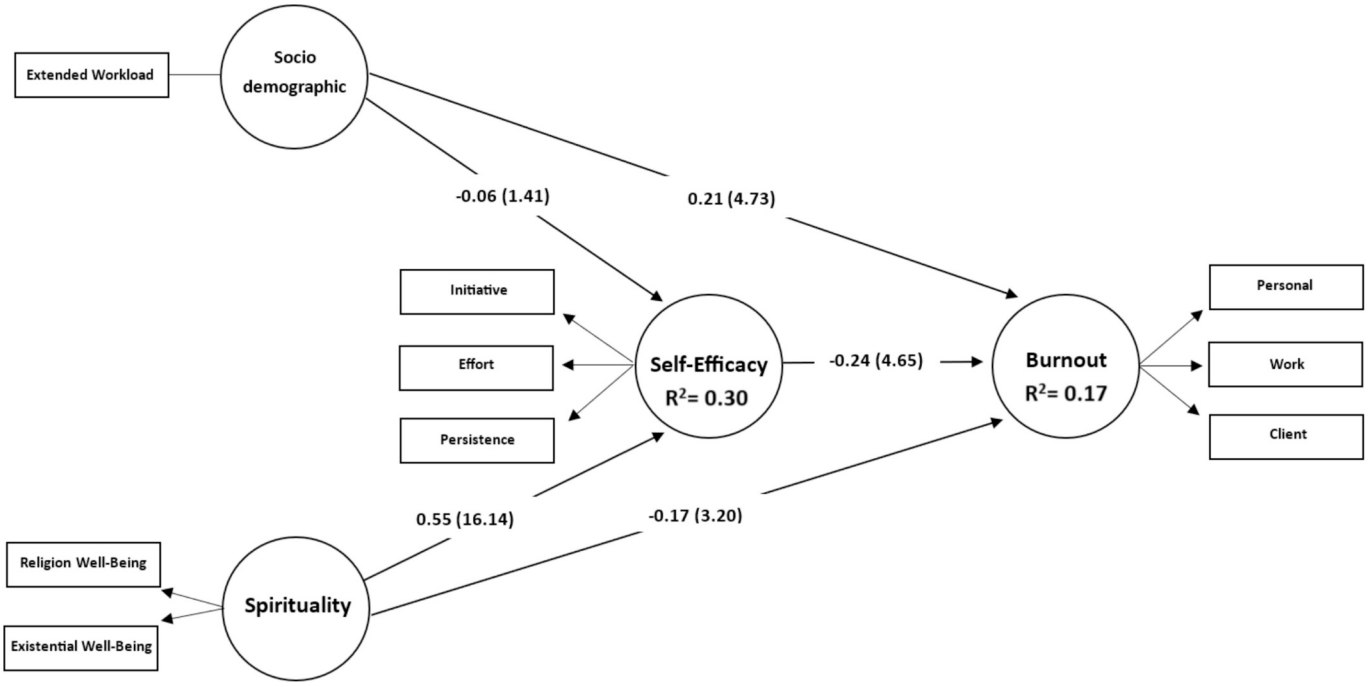

Fig. 1. Confirmed structural model on burnout.

Table 3
Mediation analysis.

Path relationship	B coefficient	*t*-value	*p*-value
Spirituality→ self-efficacy	0.55	16.14	<0.001
Spirituality→ self-efficacy → burnout	−0.13	4.33	<0.001

The findings highlight self-efficacy, interpreted here as ICU nurses' confidence in managing workplace stressors and clinical challenges, as a significant protective factor against burnout. This result aligns with Bandura's social cognitive theory, which posits that individuals with stronger self-efficacy are better equipped to handle workplace stress, persist in the face of challenges, and maintain motivation under demanding conditions (Baguna et al., 2024; de la Fuente et al., 2023; Schwarzer & Renner, 2009). A previous study reported that higher self-efficacy is associated with greater professional resilience and adaptive coping among nurses (Baguna et al., 2024), with nurses having high self-efficacy tending to exhibit greater confidence in managing clinical responsibilities, solving problems independently, and making critical patient care decisions. This finding reinforces the importance of incorporating professional development programmes that strengthen nurses' self-efficacy, such as mentorship programmes, simulation-based training and cognitive-behavioural interventions aimed at boosting confidence in clinical decision-making.

One of this study's key contributions is identifying self-efficacy as a partial mediator between spirituality and burnout. While spirituality directly reduces burnout, its protective effect is amplified when it also increases self-efficacy. Nurses with higher spirituality reported stronger self-efficacy, which in turn was associated with lower burnout. This clarifies the mechanism proposed in prior work (Kim & Yeom, 2018), and aligns with social cognitive theory that holds that efficacy beliefs channel the impact of personal resources on outcomes. Thus, spirituality functions not only as a protective psychological factor but also as a mechanism that strengthens self-efficacy, thereby catalysing resilience and reducing burnout (Bandura, 1997). These insights support interventions that integrate spiritual engagement with self-efficacy building strategies, such as mindfulness training, reflective journaling and resilience workshops (Harris & Tao, 2022).

4.1. Limitations

This study has several limitations that should be acknowledged. First, its cross-sectional design limits causal inferences regarding the relationships among spirituality, self-efficacy and burnout. Future longitudinal or experimental studies are needed to assess how these variables evolve over time. Second, the reliance on self-reported data may introduce response bias, as participants could over- or under-estimate their levels of burnout, spirituality, or self-efficacy. Third, the General Self-Efficacy Scale demonstrated a modest Cronbach's alpha ($\alpha = 0.66$) in this study. Although this value is slightly below the conventional benchmark, such results are not uncommon in cross-cultural adaptations of brief scales. While this may have introduced some measurement error, the scale has, however, shown acceptable validity in Indonesian populations (Putra et al., 2019), and the observed associations in this study remain consistent with theoretical expectations. Lastly, although this study was conducted at multiple centres, it was exclusively conducted in the eastern part of Java Island, and the findings may not be generalisable to other cultural contexts.

4.2. Study implications

Based on our finding that spirituality and self-efficacy protect against burnout, Indonesian hospitals can adopt two low-cost, evidence-informed strategies and an optional adjunct. First, a brief spiritual care programme for nurses that blends short didactic content, group reflection, scripture-based readings, stories and simple practice prompts that were found to improve nurses' spiritual wellbeing in a randomised trial can be scheduled around prayer times and delivered in Bahasa Indonesia (Mehdipoorkorani et al., 2019). Second, Stress First Aid (SFA) is a peer-support framework for healthcare workers that cultivates safety, calm, connectedness, self- and community-efficacy, and hope via seven core actions (cover, calm, connect, competence, confidence, check, coordinate); practical rollout includes 15-minute awareness briefings, unit SFA champions, colour check-ins and calming activities in huddles, with longitudinal data showing increases in SFA self-efficacy and resilience and subsequent reductions in burnout (Bellehsen et al., 2024). As a complementary option, evidence-informed herbal tea breaks such as

Stachys lavandulifolia may help reduce stress, with adoption contingent on institutional policy and screening for contraindications (Jadidi et al., 2023). To ensure uptake and equity, these should be integrated within existing meetings, use existing staff, provide materials in local language, and monitor attendance.

5. Conclusion

This study provides empirical evidence highlighting the protective roles of spirituality and self-efficacy, while confirming workload as a significant contributor to burnout among ICU nurses. Notably, self-efficacy emerged as a partial mediator in the relationship between spirituality and burnout, indicating that fostering both spiritual well-being and professional confidence may help mitigate burnout in high-stress settings. Although the effect sizes observed were small, the findings remain practically meaningful and offer direction for targeted interventions. A multifaceted approach that combines workload management, organisational support for spiritual practices and self-efficacy training may be effective in addressing burnout. Future research should expand on these findings by exploring longitudinal effects, intervention efficacy and cross-cultural variations in burnout prevention strategies.

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CRediT authorship contribution statement

Fatin Lailatul Badriyah: Writing – review & editing, Writing – original draft, Methodology, Investigation, Data curation, Conceptualization. **Mundakir Mundakir:** Writing – review & editing, Writing – original draft, Investigation, Conceptualization. **Tita Rohita:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Bih-O Lee:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Data curation, Conceptualization. **Santo Imanuel Tonapa:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Investigation, Data curation, Conceptualization.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors utilised Grammarly to enhance manuscript readability. After using this tool/service, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

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Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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