

# A PILOT STUDY ON EMOTIONAL AND SPIRITUAL INTELLIGENCE AS PREDICTORS OF PSYCHOLOGICAL WELL-BEING AMONG NURSES AT HOSPITAL CANSELOR TUANKU MUHRIZ (HCTM)

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**Abstract:** *This study aimed to examine the reliability of research instruments measuring emotional intelligence, spiritual intelligence, and psychological well-being through a pilot test. A quantitative pilot study was conducted among 30 nurses from a teaching university hospital, Hospital Canselor Tuanku Muhriz UKM (HCTM). Emotional intelligence as independent variable was measured using the Schutte Self-Report Emotional Intelligence Test (SSEIT) developed by Mayer and Salovey. Spiritual intelligence as moderating variable was assessed using the Spiritual Intelligence Self-Report Inventory (SISRI-24) developed by King (2008), while psychological well-being as dependent variable was measured using Ryff's Psychological Well-Being Scale (1989). Data collected from the pilot study were analyzed using the Statistical Package for the Social Sciences (SPSS) 28. Reliability analysis was conducted using Cronbach's alpha to evaluate the internal consistency of each instrument. The results indicated that all scales demonstrated acceptable to good reliability, with Cronbach's alpha values exceeding the recommended threshold of 0.70. The findings of this pilot study confirmed that the instruments used are reliable and suitable for the main study. The pilot testing process ensured the validity and consistency of the measurement tools prior to full-scale data collection.*

**Keywords:** *Emotional intelligence; Spiritual intelligence; Psychological well-being*

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## Introduction

Nurses are a vital component of the healthcare workforce and play a central role in ensuring the delivery of safe and high-quality patient care. In teaching university hospitals, healthcare services are delivered within a dual-function environment that integrates clinical practice and medical education (Azhari et al., 2025). While nurses in such settings are not formally responsible for supervising students, they work in a clinical environment where patient care is provided alongside ongoing teaching and training activities involving medical students and trainee healthcare professionals. This context may increase workflow complexity, communication demands, and emotional labour among nurses (Nuphanudin et al., 2023).

Emotional intelligence (EI), spiritual intelligence (SI), and psychological well-being (PWB) have been widely recognized as important constructs influencing nurses' ability to cope with workplace demands. In this study, emotional intelligence is considered the independent variable, as it directly affects how nurses perceive, understand, and regulate their own emotions and those of others in clinical practice. Spiritual intelligence is treated as a moderating variable, as it may influence the strength or direction of the relationship between emotional intelligence and psychological well-being. Psychological well-being serves as the dependent variable, representing nurses' overall mental health, resilience, and capacity to sustain high-quality care under stress.

Emotional intelligence, defined as the ability to perceive, understand, and regulate emotions in oneself and others (Mayer & Salovey, 1997), is particularly relevant in nursing practice, where interpersonal interactions and emotional regulation are essential. Previous studies have shown that higher emotional intelligence among nurses is associated with improved job performance, reduced stress, and better patient care outcomes (Gao, 2024). Spiritual intelligence refers to the capacity to derive meaning, purpose, and values from life experiences and to apply these spiritual resources in daily functioning (King, 2008). In healthcare settings, spiritual intelligence may support nurses in coping with emotional challenges related to patient suffering, ethical dilemmas, and high work demands. Research has suggested that spiritual intelligence contributes to resilience and adaptive coping among healthcare professionals, particularly in high-stress environments (Widhiastuti & Dewi, 2025).

Psychological well-being, as conceptualized by Ryff (1989), encompasses multiple dimensions, including self-acceptance, positive relationships, autonomy, environmental mastery, purpose in life, and personal growth. Psychological well-being is a key indicator of mental health and work sustainability among nurses. Studies have reported that nurses with higher psychological well-being experience lower levels of burnout and emotional exhaustion, as well as greater job satisfaction (Abualruz et al., 2024).

In the context of Hospital Canselor Tuanku Muhriz (HCTM), nurses operate within a teaching hospital environment that involves continuous interaction with multidisciplinary teams and exposure to academic and clinical training activities. Although nurses do not hold formal teaching responsibilities, the presence of students and trainees may influence work processes and emotional demands. Understanding factors that contribute to nurses' emotional and psychological resources, including the interplay between EI and SI in predicting PWB, is therefore important in promoting well-being within this setting (Pujiati et al., 2025).

Prior to conducting a full-scale study, it is essential to ensure that the measurement instruments used are reliable and appropriate for the target population. A pilot test serves as a critical preliminary step to evaluate the clarity, feasibility, and internal consistency of research instruments (Polit & Beck, 2017). This is particularly important when standardized questionnaires are administered to nurses working in a specific institutional and cultural context. Pilot testing allows researchers to assess the reliability of the instruments using Cronbach's alpha and to identify potential issues that may affect data quality in the main study (Amran et al., 2025).

Therefore, this pilot study was conducted among 30 nurses at HCTM to examine the reliability of instruments measuring emotional intelligence, spiritual intelligence, and psychological well-being, with EI as the independent variable, SI as the moderating variable, and PWB as the dependent variable. Establishing reliable measurement tools strengthens the methodological rigor of the research and ensures that the instruments are suitable for use in the main study. The findings of this pilot study are expected to support subsequent research aimed at enhancing nurses' well-being in teaching university hospital settings.

### Problem Statement

Nurses are frequently exposed to high levels of emotional, psychological, and occupational demands due to the nature of healthcare work. In teaching university hospitals, such as HCTM, nurses operate within a complex clinical environment where patient care is delivered alongside medical education and clinical training activities. Although nurses are not formally responsible for supervising students, the presence of students and trainees may increase workflow complexity, communication demands, and emotional labour. These factors highlight the importance of understanding nurses' emotional and psychological resources in such settings. Emotional intelligence (EI), spiritual intelligence (SI), and psychological well-being (PWB) have been widely studied as important factors influencing nurses' coping abilities, work performance, and mental health. In this study, emotional intelligence is treated as the independent variable, representing nurses' capacity to perceive, understand, and regulate emotions. Spiritual intelligence serves as a moderating variable, as it may enhance or buffer the effects of EI on psychological well-being. Psychological well-being is considered the dependent variable, reflecting nurses' overall mental health, resilience, and capacity to sustain high-quality care under stress.

Although standardized instruments such as the Schutte Self-Report Emotional Intelligence Test (SSEIT), the Spiritual Intelligence Self-Report Inventory (SISRI-24), and Ryff's Psychological Well-Being Scale have demonstrated good reliability in previous studies, their internal consistency must be confirmed within the specific population and setting of interest. Without establishing reliability in the target population, findings from the main study may be questionable and lack methodological rigor.

Despite the growing interest in nurses' well-being, there is limited evidence on the reliability of these instruments among nurses working in teaching university hospitals in Malaysia, particularly at HCTM. Conducting a pilot study to assess the internal consistency of these instruments is therefore essential before proceeding with large-scale data collection. Failure to conduct such a pilot test may result in measurement errors, reduced data quality, and inaccurate conclusions.

Therefore, this study seeks to address this gap by conducting a pilot test to examine the reliability of instruments measuring emotional intelligence (independent variable), spiritual intelligence (moderator), and psychological well-being (dependent variable) among nurses at HCTM. Establishing reliable measurement tools will strengthen the validity of the main study and contribute to producing accurate and meaningful findings related to nurses' well-being in teaching university hospital settings.

## Literature Review

### Psychological Well-Being in Nursing

Psychological well-being (PWB) refers to an individual's overall mental health and optimal functioning, encompassing dimensions such as self-acceptance, positive relationships, autonomy, purpose in life, and personal growth (Ryff, 1989). PWB is critical in nursing, as it directly influences work performance, job satisfaction, and resilience against burnout (Moqaddam et al., 2024). Previous research demonstrates that nurses with high PWB experience lower levels of emotional exhaustion, stress, and turnover intentions (Gannamraju & Chembrolu, 2025).

Given the demanding environment of teaching university hospitals, PWB serves as a key dependent variable, reflecting nurses' ability to sustain well-being under the combined pressures of clinical practice and exposure to medical education activities. Interventions aimed at improving PWB, such as mindfulness programs, counseling, or training in EI and SI, have shown positive outcomes in nurse populations (Awad Ibrahim et al., 2023). Nonetheless, limited research exists on how emotional intelligence and spiritual intelligence interact to influence PWB among nurses in teaching hospital settings, particularly in Malaysia.

### Emotional Intelligence in Nursing

Emotional intelligence (EI) is defined as the ability to perceive, understand, manage, and regulate emotions in oneself and others (Mayer & Salovey, 1997). In nursing, EI is considered essential due to the high emotional demands of patient care and complex interpersonal interactions (Ruiz et al. 2023). Research has shown that nurses with higher EI are better equipped to handle stress, communicate effectively with colleagues and patients, and maintain professional competence under pressure (Matjie, 2025).

In the context of this study, EI is treated as the independent variable, directly influencing nurses' psychological well-being. Studies have consistently found positive associations between EI and job satisfaction, patient care quality, resilience, and overall mental health (Akkani et al., 2022). However, most of these studies were conducted in general hospital settings or Western contexts. There is limited focus on EI among nurses in Malaysian teaching university hospitals, where the simultaneous delivery of patient care and clinical training may create unique emotional and cognitive demands.

### Spiritual Intelligence in Nursing

Spiritual intelligence (SI) refers to the ability to apply spiritual resources, meaning, and values to problem-solving, decision-making, and coping with life challenges (King, 2008). SI contributes to resilience, empathy, and moral reasoning, which are particularly important in

healthcare professions where nurses frequently encounter ethical dilemmas, patient suffering, and high-stress situations (Pinto et al., 2024).

In this study, SI functions as a moderating variable, as it may influence the strength or direction of the relationship between EI and PWB. Nurses with higher SI are more likely to apply spiritual coping strategies and derive meaning from challenging experiences, which can enhance the positive effect of EI on psychological well-being. Research indicates that nurses with higher SI report better stress management, enhanced coping mechanisms, and improved PWB (Jamwal & Kamboj, 2025). However, studies examining the moderating role of SI in the relationship between EI and PWB among nurses in Malaysian teaching hospitals are scarce, highlighting a gap in the literature.

### Methods

A pilot cross-sectional study was conducted among 30 nurses at HCTM to evaluate the reliability of instruments measuring emotional intelligence (EI), spiritual intelligence (SI), and psychological well-being (PWB). Participants were recruited using convenience sampling during a routine training program, and inclusion criteria were being a registered nurse, currently employed at HCTM, and able to read either English or Malay. Questionnaires were administered in hardcopy format and distributed by the in-charge nurse during the training session. A bilingual questionnaire (English and Malay) was used to ensure comprehension and reduce misinterpretation. Hardcopy administration was preferred over online forms to enhance accessibility, improve response rates, allow immediate clarification of items, and ensure data collection was limited to the target population.

Three standardized instruments were used: SSEIT (33 items) for EI, SISRI-24 (24 items) for SI, and Ryff's PWB Scale (18 items). Responses were recorded on Likert-type scales, ranging from 1 to 5 for EI, 0 to 4 for SI, and 1 to 6 for PWB. Data were analyzed using SPSS version 28. Descriptive statistics summarized participants' demographics, while Cronbach's alpha assessed internal consistency. Items with item-total correlations  $<0.30$  were reviewed for potential revision.

### Results

A total of 30 nurses participated in the pilot study. The majority were female (73.3%) and aged between 50–59 years (77%). Descriptive statistics for the three instruments are presented in Table 1. The mean scores for emotional intelligence (SSEIT), spiritual intelligence (SISRI-24), and psychological well-being (Ryff PWB Scale) were 115.4 (SD = 12.6), 68.7 (SD = 7.8), and 85.3 (SD = 9.2), respectively. Reliability analysis indicated that all instruments demonstrated acceptable to excellent internal consistency, with Cronbach's alpha values ranging from 0.79 to 0.87. These results confirm that the instruments are reliable and suitable for use in the main study among nurses at HCTM.

**Table 1. Reliability and Descriptive Statistics of Study Instruments (N = 30)**

Instrument	Items	Mean	SD	Cronbach Alpha
<b>DEPENDENT VARIABLE</b>				
Ryff PWB Scale – Psychological Well-Being	18	85.3	9.2	0.79
<b>INDEPENDENT VARIABLE</b>				
SSEIT – Emotional Intelligence	33	115.4	12.6	0.87
<b>MODERATING VARIABLE</b>				
SISRI-24 – Spiritual Intelligence	24	68.7	7.8	0.82

## Discussions

Pilot testing is a crucial step in survey-based research to ensure that instruments are reliable, valid, and appropriate for the target population (Hulley et al., 2013). In this study, the Cronbach's alpha values for the SSEIT (0.87), SISRI-24 (0.82), and Ryff PWB Scale (0.79) indicate good to excellent internal consistency, confirming that these instruments can reliably measure emotional intelligence, spiritual intelligence, and psychological well-being among nurses at HCTM. Conducting the pilot study also allowed for item-level analysis, which identified one SISRI-24 item with slightly lower correlation, highlighting the importance of reviewing and refining items before full-scale administration to improve clarity and consistency.

The use of hardcopy questionnaires distributed during a training program ensured high response rates and allowed participants to seek clarification on any ambiguous items, enhancing the accuracy of responses. Compared with online surveys, such as Google Forms, hardcopy administration minimizes barriers related to internet access or technological literacy, particularly in healthcare settings where nurses' schedules may be demanding and variable. Furthermore, offering a bilingual questionnaire (English and Malay) ensured that participants could understand the items in their preferred language, reducing the risk of misinterpretation and improving data quality.

Overall, the findings from this pilot study provide confidence that the instruments are suitable for the main study and demonstrate that pilot testing is essential for optimizing survey design, ensuring reliability, and addressing practical considerations in data collection. The results support the feasibility of conducting the larger study among nurses in Malaysian teaching hospitals, while minor revisions to one SISRI-24 item will further strengthen the instrument's applicability.

## Recommendation

Based on the findings of this pilot study, it is recommended that future large-scale research among nurses in teaching university hospitals, such as HCTM, incorporate the validated instruments of emotional intelligence (SSEIT), spiritual intelligence (SISRI-24), and psychological well-being (Ryff PWB Scale) to ensure reliable measurement of key constructs. Nursing administrators and hospital management should consider implementing structured interventions aimed at enhancing both emotional and spiritual intelligence, as these constructs appear crucial for promoting nurses' psychological well-being, resilience, and capacity to manage workplace demands effectively. Programs such as emotional intelligence training workshops, reflective practices, mindfulness sessions, and spiritual development activities could be integrated into continuous professional development initiatives to support nurses in coping with the dual pressures of patient care and clinical teaching. Additionally, healthcare

institutions should recognize the moderating role of spiritual intelligence, promoting environments that allow nurses to derive meaning and purpose from their work, engage in ethical decision-making, and employ adaptive coping strategies in high-stress situations. Considering the bilingual and culturally sensitive administration of instruments, future research should also explore potential differences in responses across language preference, demographic characteristics, and work experience to tailor interventions more effectively. Moreover, longitudinal studies are recommended to examine causal relationships between emotional intelligence, spiritual intelligence, and psychological well-being, as well as the long-term impact of targeted interventions on nurses' performance, job satisfaction, and retention in teaching hospital settings.

### Conclusion

The pilot study confirms that the instruments measuring emotional intelligence, spiritual intelligence, and psychological well-being are reliable for use among nurses at HCTM, with Cronbach's alpha values ranging from 0.79 to 0.87, indicating good to excellent internal consistency. The findings underscore the importance of emotional intelligence in supporting nurses' psychological well-being and highlight the potential moderating role of spiritual intelligence in enhancing the beneficial effects of emotional intelligence. By demonstrating that these measurement tools are appropriate for the target population, this study provides a solid foundation for a larger-scale investigation aimed at understanding and promoting nurses' mental health and resilience within teaching university hospital environments. Overall, the study emphasizes that fostering both emotional and spiritual capacities among nurses is essential to sustain high-quality patient care, improve coping mechanisms under complex clinical and educational demands, and enhance overall well-being in the healthcare workforce.

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