

# INPLASY

## Correlation between Spiritual Health and Spiritual Care Competence among Nursing Students and Nurses: A Meta-Analysis

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### ADMINISTRATIVE INFORMATION

**Support** - No financial support.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202640083

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 April 2026 and was last updated on 24 April 2026.

### INTRODUCTION

**Review question / Objective** To synthesize the association between spiritual health and spiritual care competence among nurses and nursing students, assess heterogeneity, evaluate methodological quality, and explore potential moderators.

**Rationale** No prior meta-analysis has synthesized the magnitude of the correlation between spiritual health/well-being and spiritual care competence, leaving the strength, consistency, and potential moderators of this relationship unclear amid substantial heterogeneity across studies. This gap in a quantitative synthesis limits evidence-based guidance for nursing education and practice.

**Condition being studied** Spiritual health and spiritual care competence among nursing students and nurses.

### METHODS

**Search strategy** A systematic literature search was conducted across five databases on March 23, 2026. A comprehensive search strategy was developed based on the Population-Exposure-Outcome (PEO) framework. Detailed search terms and strategies for each database are provided in Supplementary Materials (Tables S1 and S2).

**Participant or population** Nurses and nursing students included in cross-sectional studies assessing the correlation between spiritual health and spiritual care competence.

**Intervention** There is no intervention in this article because this article is correlation meta-analysis.

**Comparator** There is no intervention in this article because this article is correlation meta-analysis.

**Study designs to be included** Meta-analysis.

**Eligibility criteria** This review included studies involving nursing students or registered nurses that assessed spiritual health and its relationship with spiritual care competence. Articles were identified through searches of PubMed, Embase, Scopus, PsycINFO, and CINAHL using relevant keywords, and were screened by title and abstract. No restrictions were applied to publication year or language. Full texts were assessed based on predefined inclusion and exclusion criteria.

**Information sources** Electronic databases including PubMed, Embase, Scopus, PsycINFO, and CINAHL were systematically searched. Additionally, reference lists of included studies were screened on March 23, 2026.

**Main outcome(s)** Primary outcome is the Pearson correlation coefficient ( $r$ ) quantifying the association between spiritual health (or spiritual well-being) and spiritual care competence among nurses and nursing students.

**Additional outcome(s)** Additional outcomes include heterogeneity measures ( $I^2$ ,  $Q$ ,  $\tau^2$ ), subgroup analyses (by population and measurement instruments), meta-regression (age and gender), publication bias assessment, sensitivity analysis (leave-one-out), and certainty of evidence using the GRADE approach.

**Data management** All records were managed using reference management software, duplicates removed, and data extracted independently by two reviewers using a standardized form. Effect sizes were handled using Fisher's  $z$ -transformation.

**Quality assessment / Risk of bias analysis** Two reviewers independently assessed the study quality using the Joanna Briggs Institute (JBI) cross-sectional checklist. Two reviewers independently rated each study quality as 'yes'/'no'/'unclear', and disagreements were resolved via discussion.

**Strategy of data synthesis** Analyses used Comprehensive Meta-Analysis software (version 3.7, Biostat, Inc., Englewood, NJ, USA) with a random-effects DerSimonian-Laird model. Correlations were Fisher's  $z$ -transformed, pooled, and back-transformed to  $r$  values with 95% confidence intervals (CIs). Heterogeneity was evaluated using  $Q$ ,  $I^2$ , and  $\tau^2$  statistics. Subgroup analyses examined population types and instrument categories. The meta-regression assessed moderators (e.g., % female and mean age) where data allowed. Publication bias was assessed via a funnel plot, Egger's test, Begg's

test, trim-and-fill, and Fail-Safe  $N$ . Sensitivity analyses used a leave-one-out method (Borenstein et al., 2021; Higgins & Green, 2009).

**Subgroup analysis** Subgroup analyses will be performed to explore potential sources of heterogeneity based on population characteristics (nurses vs nursing students) and measurement instruments (spiritual health vs spiritual well-being scales). Between-group differences will be assessed using  $Q$ -between statistics.

**Sensitivity analysis** Sensitivity analyses will be performed using a leave-one-out method under a random-effects model to evaluate the influence of individual studies on the overall pooled correlation. Changes in effect size estimates will be examined to assess robustness.

**Language restriction** English.

**Country(ies) involved** Indonesia.

**Other relevant information** This review focuses on cross-sectional studies with Pearson correlation coefficients and follows PRISMA 2020 guidelines. Most included studies originate from Asian contexts, which may influence generalizability. Certainty of evidence is assessed using GRADE."

**Keywords** spiritual health, spiritual care competence, nursing students, nurses, correlation, systematic review, meta-analysis.

**Dissemination plans** The results of this study will be disseminated through publication in a peer-reviewed international journal and presentations at national and international conferences. Findings may also be shared with nursing educators and healthcare professionals to inform practice and education.

#### Contributions of each author

Author 1 - Dwi Setiowati - Author 1 made substantial contributions to the conception and design of the study; developed the research questions and aims; designed and conducted the systematic literature search; performed study selection, data extraction, and methodological quality appraisal; conducted the statistical analyses and meta-analysis; interpreted the results; drafted the initial manuscript; and led the revision.

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Author 2 - I-Hui Chen - Author 2 contributed to the study design and methodology; independently conducted study screening and eligibility assessment; performed data extraction and quality

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appraisal using the Joanna Briggs Institute checklist; participated in resolving discrepancies through discussion; contributed to data interpretation and critical revision of the manuscript for important intellectual content; and approved.

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