

Uneven Translation of Online Spiritual-Care Education into Psychiatric Nursing Practice: A Control-Adjusted Competency-Profile Study

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ABSTRACT

Online education can increase psychiatric nurses' confidence in spiritual care, but a high total score does not establish whether learning reaches every part of clinical work. Knowledge, communication, referral, and practice behavior may respond to instruction while organizational feasibility remains constrained. This study examined whether an eight-hour online course produced balanced improvement across spiritual-care domains or concentrated gains in activities under an individual nurse's immediate control. Arm-level means and standard deviations from a controlled pretraining–post-training trial were organized as 24 arm–time outcome records: six Spiritual Care Competence Scale (SCCS) domains, four Religious/Spiritually Integrated Practice Assessment Scale (RSIPAS) domains, and both total scores. The trial included 50 nurses receiving four weekly online sessions and 45 controls, with follow-up one month later. Reported between-group tests, covariance analyses, and demographic regression findings were retained. Added calculations were percentage-of-maximum attainment, difference in changes, small-sample-corrected Hedges' g , and control-adjusted headroom closure, defined as the between-arm difference in change divided by the training arm's attainable pretraining headroom. Total SCCS and RSIPAS scores increased by 54.70 and 69.32 points in the training arm, compared with changes of -1.71 and 1.00 points in controls. The corresponding control-adjusted changes were 56.41 and 68.32 points. At follow-up, training-arm attainment reached 92.8% of the SCCS maximum and 84.5% of the RSIPAS maximum. Headroom closure was consistently high for SCCS domains (80.2–95.4%) and for RSIPAS practice behavior (86.4%), attitudes (76.8%), and self-efficacy (75.1%). Perceived feasibility closed only 22.7% of available headroom and reached 59.3% of its scale maximum. Its post-training standardized separation was $g = 0.59$ (95% confidence interval 0.18–1.01), whereas all other domain estimates exceeded 1.6. The course translated strongly into assessment, communication, referral, counseling, attitudes, self-efficacy, and reported practice behavior, but it did not similarly alter nurses' perception that time, access, and institutional conditions permit spiritually integrated care. The research question is therefore answered asymmetrically: education closed most individual competency headroom, while organizational feasibility remained the principal limiting domain. Education should be paired with protected assessment time, accessible referral arrangements, documentation fields, and supervision if competence is expected to become routine care.

Keywords: psychiatric nursing; spiritual care; religion and spirituality; online education; competency profile; implementation feasibility; controlled pretraining–post-training study

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– Published: 5 November 2024

1. INTRODUCTION

Religion and spirituality can shape how people interpret illness, suffering, hope, identity, treatment, and recovery. In mental healthcare, these concerns may become especially salient because psychiatric symptoms can disrupt meaning, relationships, moral agency, and belonging. A clinically appropriate response does not require a nurse to endorse a patient's beliefs. It requires the capacity to ask permission, listen without coercion, distinguish supportive beliefs from distressing or harmful experiences, document relevant preferences, and refer when needs exceed nursing competence. Reviews of spiritual-care interventions associate responsive care with improved spiritual well-being and quality of life, while controlled studies in other clinical populations suggest that carefully bounded spiritual support can reduce loneliness or depressive symptoms.^{4–6} These findings do not imply that spiritual interventions are universally indicated. They do establish that omission can be consequential when a patient identifies religion or spirituality as important.

Mental-health service users generally favor respectful discussion when it is patient-led and clinically relevant. National survey evidence shows that many clients want clinicians to be open to religion and spirituality in treatment, although preferences vary and some clients do not want such content introduced.⁷ Scale-development research similarly indicates that acceptability depends on consent, professional boundaries, and attention to the client's stated goals.¹⁵ Co-produced work in mental-health chaplaincy adds that service users value availability, nonjudgmental presence, and support that is not reduced to formal worship.²⁹ Psychiatric nursing therefore faces a dual obligation: avoid neglecting a meaningful dimension of recovery, and avoid imposing a clinician's worldview on a vulnerable person.

Competence in this area is multidimensional. The SCCS distinguishes assessment and implementation, professionalization and care quality, personal support and counseling, referral, attitudes to patient spirituality, and communication.²³ The RSIPAS approaches the neighboring construct through self-efficacy, attitudes, practice behaviors, and perceived feasibility.^{14,25} This distinction matters because willingness, confidence, action, and opportunity are not interchangeable. A nurse may become more comfortable asking a spiritual-history question yet still lack time, privacy, documentation options, or a reliable referral contact. Conversely, an institution may employ chaplains while nurses remain uncertain about when and how to initiate a referral. Treating either scale as a single undifferentiated total can conceal this divergence.

Professional education has been the most common response to limited competence. Nursing and midwifery programs that address self-awareness, assessment, communication, ethical boundaries, and referral generally improve learners' knowledge and confidence.⁸ Concept

analysis has identified relational presence, meaning, connection, and purposeful nursing action as central features of spiritual care.²⁷ European curriculum work has likewise emphasized explicit learning outcomes rather than assuming that general compassionate care automatically produces spiritual-care proficiency.²⁸ A later consensus-based educational standard strengthened this position by connecting competence to observable preparation across nursing and midwifery programs.³⁰ These educational developments place spiritual care within professional accountability rather than private religiosity.

Evidence from training studies is encouraging but heterogeneous. Oncology nurses who completed sustained spiritual-care education improved both spiritual health and professional competence.²¹ Reflection groups have improved nursing students' spiritual well-being and attitudes toward spiritual care,³¹ while skills-oriented programs for elder-care students have increased perceived spiritual support competence.²² A randomized educational intervention across health-related disciplines improved spirituality-and-health knowledge, attitudes, and skills.²⁶ Multidisciplinary instruction in palliative-care trajectories has also produced gains in staff attitudes and competence.³³ Systematic reviews nevertheless note variation in program content, delivery time, outcome instruments, follow-up, and clinical setting, which complicates direct comparisons.^{32,34}

Online delivery is attractive for psychiatric nurses because rotating shifts and workload can make fixed classroom attendance difficult. Internet-based health-professions education can achieve learning outcomes comparable to conventional instruction when content, interaction, feedback, and practice are well designed.³⁹ In spiritual care specifically, an online program for mental-health professionals improved competence and integration of clients' religion and spirituality into practice.² An online nursing program also increased competence in religiously and spiritually integrated care.²⁰ The delivery medium, however, cannot by itself resolve whether learners are permitted to enact what they learn. An accessible course may overcome scheduling barriers to education while leaving bedside staffing, referral access, and clinical documentation unchanged.

The Iranian nursing literature reinforces the distinction between competence and opportunity. Reviews have found room for improvement in nurses' attitudes and spiritual-care competence.¹⁶ Hospital studies describe lack of time, discomfort, limited training, and resource constraints as concrete impediments.¹⁰ Other surveys show generally favorable attitudes toward spirituality and spiritual care but continued uncertainty regarding role boundaries and clinical delivery.^{18,19} Training can address knowledge and self-efficacy, yet staffing and managerial arrangements may continue to determine whether assessment and referral occur during routine care. Awareness of one's own spirituality may help clini-

cians recognize bias and engage patients more carefully, but self-awareness is not a substitute for organizational capacity.¹⁷

Multicultural and interprofessional considerations add further complexity. Spiritual competence has been cultivated in counselor training through constructivist learning, reflection, and guided engagement with difference.¹¹ Social-work research has shown that integration varies across professions and is influenced by practitioner characteristics, training, and organizational context.^{12,13} Direct comparisons among nurses, psychologists, counselors, marriage and family therapists, and social workers suggest that professional role and preparation influence both attitudes and behaviors.³ Psychiatric nurses occupy a distinctive position because they maintain continuous contact, observe coping and distress over time, coordinate medication and daily care, and often identify needs before specialist consultation is available. Their competence must therefore include both appropriate first-line response and recognition of limits.

Existing evaluations frequently emphasize statistical significance or total-scale effects. Large total-score changes can be persuasive, but they answer only whether the average measured construct moved. They do not show whether all domains approached their attainable maxima, whether the control arm changed concurrently, or whether a low-response domain reflects limited learning rather than limited opportunity. Percentage-of-maximum values permit comparison across subscales with different item counts. A difference in changes separates training-arm movement from concurrent control-arm movement. Standardized between-group effects express separation relative to post-training variability. Combining these quantities can reveal whether education produces a balanced competence profile or leaves a clinically important bottleneck.

The present study therefore asks: after a four-session online spiritual-care course for psychiatric nurses, what proportion of attainable pretraining headroom was closed in each SCCS and RSIPAS domain after accounting for change in the control arm, and which domain remained least translated into perceived clinical possibility? The question is deliberately narrower than whether the course increased total scores. It concerns the distribution of improvement across domains and the location of residual constraint. The expectation was that domains closely linked to individual knowledge and conduct would show substantial closure, whereas perceived feasibility, which includes time, training access, and resources, would show less change because these conditions cannot be fully altered by an educational course.

2. METHODS

This aggregate-data competency-profile study examined a two-arm controlled pretraining–post-training trial. The unit of analysis was the reported arm–time summary for each outcome, not an individual nurse. Twenty-four

records were organized: twelve outcomes observed in two arms at two measurement occasions. The twelve outcomes comprised six SCCS domains, four RSIPAS domains, and the two instrument totals. This organization created a cross-domain dataset suitable for comparing attainment and change while preserving the trial's actual group sizes, means, standard deviations, scale limits, and follow-up interval.

The primary estimand was control-adjusted headroom closure for each domain. Secondary estimands were post-training percentage-of-maximum attainment, raw difference in changes, and Hedges' g for post-training group separation. Reported independent and paired t tests, covariance analyses, and multivariable regression findings were retained as complementary evidence; the added calculations did not replace them. The analytical focus was the balance of response across domains rather than another test of the total-score null hypothesis.

2.1. Values, participants, and course

The numerical values were transcribed from the article by Shamsi, Khoshnood, and Farokhzadian.¹ The controlled trial was conducted in a psychiatric hospital affiliated with Kerman University of Medical Sciences in southeast Iran between September and November 2021. Of 120 nurses working in the hospital, 100 eligible volunteers were allocated with a random-number table to training ($n = 50$) and control ($n = 50$) groups. All 50 training participants and 45 controls completed the follow-up questionnaires, yielding 95 completers. Eligibility required a bachelor's or master's nursing degree, at least six months of psychiatric-hospital experience, and willingness to participate. The published analysis used completers rather than an intention-to-treat population.

The training arm was divided into two groups of 25 to accommodate shift schedules. Participants completed four synchronous two-hour sessions, one per week, with recorded audio and video materials available afterward. Delivery combined lectures, tutorials, case discussion, role play, storytelling, work-based examples, assignments, and question-and-answer periods. Content progressed from definitions, attitudes, spiritual health, diversity, and professional boundaries to spiritual assessment; nursing diagnoses and interventions; communication, coping, referral, and multidisciplinary work; and evaluation, documentation, discharge, and follow-up. The control arm did not receive the course during the study period. Questionnaires were administered before training and one month after completion.

Participant characteristics calculated directly from the arm counts are summarized in Table 1. The groups were broadly similar on the listed variables. The sample was predominantly female, married, bachelor-prepared, engaged in rotating shifts, and without prior spiritual-care education. Moderate self-ratings of religiosity, spirituality, and frequency of spiritual care were the most common categories. These characteristics define the popula-

tion to which the domain profile most directly applies: experienced psychiatric nurses in one Iranian hospital, most of whom had not previously received relevant training.

The participant distribution indicates both relevance and constraint. Rotating shifts and the near absence of prior training support the practical rationale for online delivery. At the same time, the single-hospital sample and high proportion of nurses with 10–20 years of experience limit direct transfer to students, newly qualified nurses, or health systems with different spiritual-care services. The arm imbalance at follow-up also requires cautious interpretation because the five losses occurred only in the control arm.

2.2. Outcome instruments

The SCCS contains 27 items scored from 1 to 5, producing a total range of 27–135. Domain maxima are 30 for assessment and implementation, professionalization and quality, and support and counseling; 15 for referral; 20 for attitudes to patient spirituality; and 10 for communication. The instrument was developed to assess nursing competencies in spiritual care and has demonstrated construct validity and internal consistency.²³ A Persian version had previously been examined for validity and reliability.²⁴ Because domain lengths differ, raw means alone are not suitable for judging which domain approached its attainable maximum.

The RSIPAS contains 40 items scored from 1 to 5 and ranges from 40 to 200. It measures self-efficacy (13 items; maximum 65), attitudes to integration (12 items; maximum 60), perceived feasibility (six items; maximum 30), and practice behaviors (nine items; maximum 45). Its development and validation established a multidimensional assessment of religiously and spiritually integrated practice;¹⁴ subsequent testing across helping professions supported the instrument's structure and use.²⁵ The distinction between self-efficacy and feasibility is central here: the former concerns a practitioner's confidence, whereas the latter concerns whether conditions allow the practice to occur.

2.3. Statistical analysis

The trial's distributional check used the Kolmogorov–Smirnov test. Demographic comparability was examined with chi-square tests. Between-arm comparisons used independent *t* tests, within-arm comparisons used paired *t* tests, and covariance analysis evaluated post-training total scores with pretraining scores entered as covariates. Multivariable linear regression assessed whether demographic and religion/spirituality variables predicted score changes. Statistical significance was set at $p \leq 0.05$. Covariance adjustment can improve precision in randomized clinical trials when individual records are available.³⁵ Because only arm-level summaries were available here, reported covariance results were described but not reconstructed.

The transcription adopted conventional mean $\pm$ standard-deviation order. In the printed RSIPAS table, each cell visually places the standard deviation before the mean; the prose and exact sum of the training-arm subscale means identify the intended mean values. For example, the training-arm total is printed as 20.90 $\pm$ 99.74 before training and 14.10 $\pm$ 169.06 afterward, while the narrative gives 99.74 $\pm$ 20.90 and 169.06 $\pm$ 14.10. The latter order is analytically coherent and was used. The four post-training control subscale means sum to 92.86, whereas the printed total is 95.97, a difference of 3.11 points. Total-scale calculations therefore use the printed total, and domain calculations use the printed domain values; no unreported correction was imposed.

2.4. Added calculations

For outcome *j*, percentage-of-maximum attainment in the training arm was calculated as

$$A_j = 100 \frac{\bar{Y}_{I,\text{post},j}}{U_j}, \quad (1)$$

where U_j is the highest attainable score. This quantity places domains of different lengths on a common 0–100% scale. A high value indicates proximity to the instrument ceiling, not verified bedside performance. Quality criteria for health-status instruments warn that ceiling concentration can reduce the ability to distinguish further improvement;³⁸ attainment was therefore interpreted alongside variability and change.

The raw control-adjusted change was

$$D_j = (\bar{Y}_{I,\text{post},j} - \bar{Y}_{I,\text{pre},j}) - (\bar{Y}_{C,\text{post},j} - \bar{Y}_{C,\text{pre},j}). \quad (2)$$

This difference in changes removes concurrent movement in the control arm from the training-arm change. It is descriptive because arm-level values do not permit adjustment for individual pretraining scores or missing follow-up records.

Control-adjusted headroom closure was then defined as

$$H_j = 100 \frac{D_j}{U_j - \bar{Y}_{I,\text{pre},j}}. \quad (3)$$

The denominator is the training arm's attainable headroom before the course. A value of 0% indicates no improvement beyond control-arm change; 100% indicates that the control-adjusted change equals all initially available headroom. Values can exceed 100% if the control arm deteriorates while the training arm approaches its ceiling, and values can be negative when relative change is unfavorable. Equation 3 answers the paper's domain-balance question directly: it expresses how much room for improvement was closed, rather than how many raw points were gained on scales of unequal length. Its interpretation remains instrument-referenced; it is not a clinical cutoff.

Post-training group separation was estimated with Hedges' *g*. The pooled standard deviation was calculated

Table 1. Participant characteristics at pretraining.

Characteristic	Training, <i>n</i> (%)	Control, <i>n</i> (%)	Combined, <i>n</i> (%)
Female	42 (84.0)	33 (73.3)	75 (78.9)
Married	44 (88.0)	33 (73.3)	77 (81.1)
Staff nurse position	40 (80.0)	36 (80.0)	76 (80.0)
Permanent employment	26 (52.0)	28 (62.2)	54 (56.8)
Rotating shift	44 (88.0)	36 (80.0)	80 (84.2)
Men's psychiatric ward	22 (44.0)	21 (46.7)	43 (45.3)
Bachelor's degree	41 (82.0)	38 (84.4)	79 (83.2)
10–20 years of experience	31 (62.0)	24 (53.3)	55 (57.9)
No previous spiritual-care training	45 (90.0)	41 (91.1)	86 (90.5)
Moderate religiosity	31 (62.0)	31 (68.9)	62 (65.3)
Moderate spirituality	32 (64.0)	32 (71.1)	64 (67.4)
Moderate frequency of spiritual care	26 (52.0)	24 (53.3)	50 (52.6)

Percentages use the completer denominators of 50 and 45. Combined percentages use *N* = 95.

from the two arm standard deviations, and the standardized mean difference was multiplied by the usual small-sample correction. Approximate 95% confidence intervals used the standard sampling variance for independent groups. Reporting both magnitude and uncertainty follows recommendations for cumulative interpretation of intervention effects.³⁷ Pretraining–post-training effect-size methods can incorporate within-person correlations when individual data or the correlation is available;³⁶ no correlation was imputed here. Hedges' *g* was consequently calculated at follow-up, while Equation 2 retained the temporal contrast in raw scale units.

All calculations were performed in a reproducible Python script using the included comma-separated files. Means were entered to the precision printed in the article. Derived values were not given more than two decimal places in narrative interpretation. Confidence intervals describe sampling uncertainty under the independent-group approximation; they do not account for clustering within wards, selective follow-up, transcription error in the published table, or uncertainty arising from the absent participant records.

3. RESULTS AND DISCUSSION

3.1. Completer profile and analytical integrity

Ninety-five nurses contributed follow-up measurements: 50 in the training arm and 45 in the control arm. The participant counts in Table 1 show close arm distributions for work position, education, shift pattern, experience, prior training, religiosity, and spirituality. Several combined percentages stated in the article's prose do not agree with the arm counts; the present table recalculates combined values from those counts. For example, 42 training-arm women and 33 control-arm women give 75 women, or 78.9% of 95. The table therefore privileges internally checkable arithmetic over prose summaries. Attrition was small in absolute terms but asymmetric.

Five controls did not complete follow-up, whereas no training participants were lost. If noncompleters had systematically lower or higher competence, completer-only group differences could be biased. The direction cannot be established from aggregate values. The CONSORT statement emphasizes transparent participant flow, analysis populations, and harms because random assignment does not by itself eliminate bias introduced after allocation.⁴⁰ The results below should thus be read as a profile among completers, supported but not fully protected by the controlled design.

The printed RSIPAS values require a second integrity qualification. Reversing the visual order of mean and standard deviation is justified by the narrative and by exact summation of the training-arm domain means to the total. The post-training control domains, however, do not sum to the printed total. The discrepancy affects neither the training-arm domain attainment values nor each domain's direct group comparison, but it prevents treating the four control domain means as a perfect decomposition of the control total. Domain and total results are accordingly reported in parallel rather than forced into artificial agreement.

3.2. Total-scale response

The training arm's SCCS total rose from 70.62 ± 17.52 to 125.32 ± 12.87 , a 54.70-point increase. The control total declined from 65.30 ± 12.67 to 63.59 ± 21.70 , a 1.71-point decrease. The resulting control-adjusted change was 56.41 points. At follow-up, the training mean occupied 92.8% of the 135-point scale maximum, compared with 47.1% for controls. The post-training standardized separation was $g = 3.48$ (95% CI 2.84–4.12), and the published covariance analysis gave a group effect of $F = 279.40$, $p = 0.001$, after accounting for the pretraining score.

The RSIPAS total increased from 99.74 ± 20.90 to 169.06 ± 14.10 in the training arm, a 69.32-point gain. Controls changed from 94.97 ± 17.57 to 95.97 ± 28.15 , an increase

of 1.00 point. The control-adjusted change was therefore 68.32 points. Training-arm attainment reached 84.5% of the 200-point maximum, whereas control attainment was 48.0%. The post-training standardized separation was $g = 3.31$ (95% CI 2.69–3.93), and the published covariance group effect was $F = 254.55$, $p = 0.001$.

The total results provide strong evidence that measured competence changed, but their magnitude warrants disciplined interpretation. Effects above 3 standard deviations are uncommon in educational and behavioral research. Several features can contribute: the course content closely matched the questionnaire domains; follow-up occurred only one month later; outcomes were self-reported; the same nurses knew whether they had received training; and some post-training means approached instrument ceilings. The large values are therefore best read as pronounced separation in questionnaire responses under the study conditions, not as proof that observed patient care improved by an equivalent amount.

The two totals also conceal a meaningful difference. SCCS attainment was above 90%, suggesting that the course moved the average response close to the upper scale boundary. RSIPAS attainment remained lower at 84.5%. Because RSIPAS includes perceived feasibility, its total incorporates conditions less amenable to education. The contrast anticipates the domain findings: nurses could report strong gains in competence and behavior while remaining substantially less convinced that clinical circumstances permit regular integration.

3.3. Domain movement on common scale ranges

The domain profiles in Figure 1 convert every mean to a percentage of its subscale maximum. Before training, SCCS domain positions in the training arm ranged from 47.6% for assessment and implementation to 68.5% for attitudes to patient spirituality. One month after the course, every SCCS domain exceeded 91% attainment: assessment and implementation reached 91.0%, professionalization and quality 92.7%, support and counseling 93.3%, referral 93.1%, attitudes 94.0%, and communication 94.6%. Control positions were static or lower, with changes between -4.6 and 1.4 percentage points of the relevant maxima.

The SCCS pattern indicates breadth rather than a gain confined to one favored topic. Assessment, professional role, counseling, referral, attitudes, and communication all moved toward the top of their ranges. This breadth is compatible with the course design, which paired conceptual material with cases, role play, assignments, and discussion across the nursing process. Prior educational studies have found that multifaceted spiritual-care teaching improves knowledge, attitudes, and perceived competence.^{8,34} The present profile adds that a short online course can produce simultaneous movement across all six SCCS dimensions when curriculum and instrument

content are closely aligned.

RSIPAS movement was less uniform. Self-efficacy rose from 43.0% to 90.5% of its maximum, attitudes from 57.4% to 87.0%, and practice behaviors from 46.1% to 89.5%. Perceived feasibility moved only from 55.1% to 59.3%. Controls showed a modest increase in self-efficacy and declines in the other three domains. The result is not a weak overall RSIPAS response; it is a sharply asymmetric response within an otherwise strong total gain.

The contrast between self-efficacy and feasibility is especially informative. Both can be described loosely as confidence about integration, but they refer to different constraints. Self-efficacy can respond to knowledge, modeled language, rehearsal, feedback, and clearer role boundaries. Feasibility includes available time, resources, and institutional permission. An online course can change the first set directly. It can name the second set and teach coping strategies, but it cannot create staffing capacity or guarantee specialist access. The figure therefore visualizes a distinction that total scores cannot express.

3.4. Control-adjusted headroom closure

Domain estimates are presented in Table 3. SCCS control-adjusted changes ranged from 3.64 points for communication to 13.59 for support and counseling, reflecting different subscale lengths. Once divided by available headroom, closure ranged from 80.2% for assessment and implementation to 95.4% for support and counseling. Communication, referral, attitudes, and support all exceeded 90%, in part because control means declined while training means approached their maxima. Professionalization and quality closed 84.5%, and assessment and implementation closed 80.2%.

The numerical pattern in Table 3 shows why both raw and normalized quantities are needed. Communication gained only 3.38 points within the training arm, but the subscale maximum is 10 and pretraining headroom was 3.92; its control-adjusted closure was consequently 92.9%. Self-efficacy gained 30.84 points, the largest raw domain change, yet its maximum is 65 and pretraining headroom was 37.02; after subtracting the 3.05-point control gain, closure was 75.1%. Raw gain alone would rank self-efficacy first and communication last, while headroom closure reveals that communication completed more of its attainable journey.

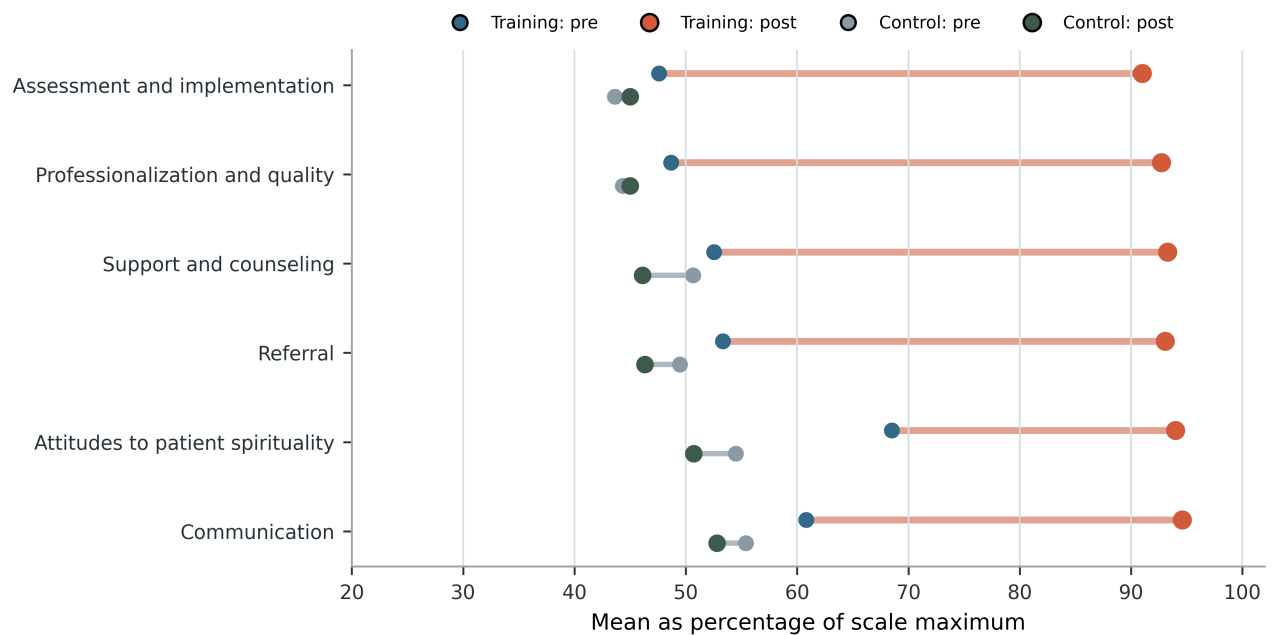
The ranked display in Figure 2 makes the asymmetry explicit. Nine domains closed at least three quarters of their available headroom, and seven exceeded 80%. Perceived feasibility closed 22.7%, more than 50 percentage points below the next-lowest domain. The distance is too large to be treated as routine sampling fluctuation in a generally consistent profile, although uncertainty in the underlying arm summaries prevents a definitive domain-by-domain hypothesis test.

Table 2. Total-score changes and post-training separation.

Instrument	Training pre	Training post	Control pre	Control post	<i>D</i>	Hedges' <i>g</i> (95% CI)
SCCS	70.62 ± 17.52	125.32 ± 12.87	65.30 ± 12.67	63.59 ± 21.70	56.41	3.48 (2.84–4.12)
RSIPAS	99.74 ± 20.90	169.06 ± 14.10	94.97 ± 17.57	95.97 ± 28.15	68.32	3.31 (2.69–3.93)

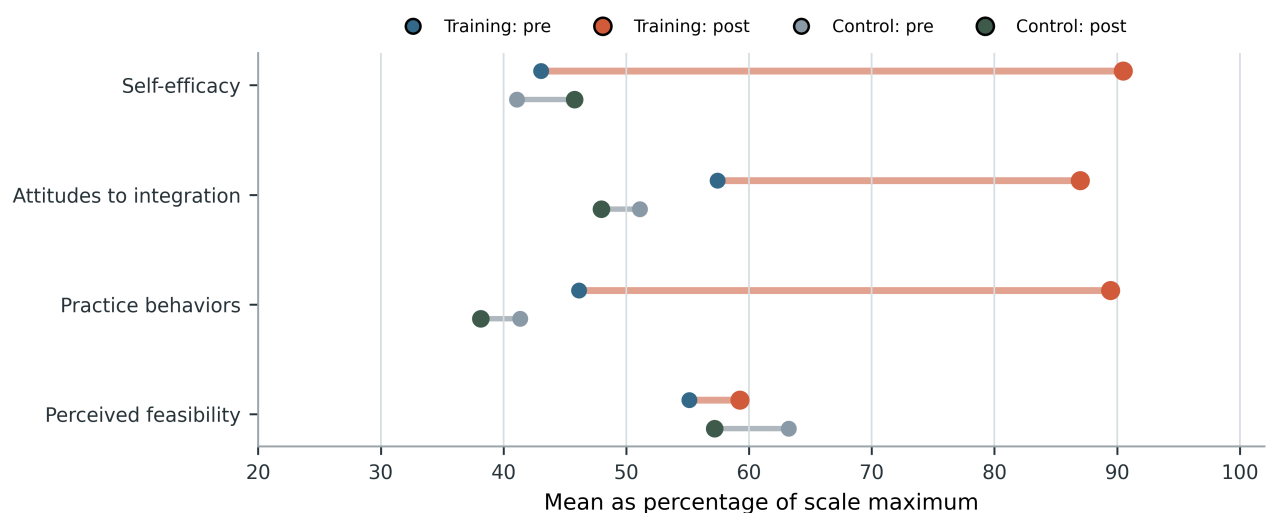
Values are mean ± standard deviation. *D* is the control-adjusted change in raw points. Confidence intervals use an independent-group approximation at follow-up.

SCCS domain positions before and after training

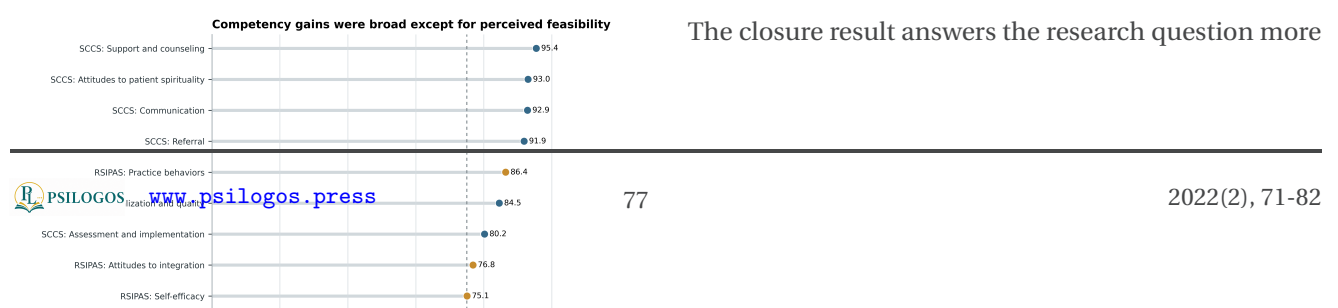


(a) SCCS domains.

RSIPAS domain positions before and after training



(b) RSIPAS domains.

Figure 1. Competency positions on common scale ranges. Points show group means at pretraining and one-month follow-up.

The closure result answers the research question more

Table 3. Domain-level competency response.

Domain	Training pre	Training post	Control pre	Control post	<i>D</i>	Closure (%)
<i>SCCS</i>						
Assessment and implementation	14.28	27.30	13.09	13.50	12.61	80.2
Professionalization and quality	14.60	27.82	13.30	13.50	13.02	84.5
Support and counseling	15.76	27.98	15.20	13.83	13.59	95.4
Referral	8.00	13.96	7.42	6.95	6.43	91.9
Attitudes to patient spirituality	13.70	18.80	10.90	10.14	5.86	93.0
Communication	6.08	9.46	5.54	5.28	3.64	92.9
<i>RSIPAS</i>						
Self-efficacy	27.98	58.82	26.71	29.76	27.79	75.1
Attitudes to integration	34.46	52.20	30.66	28.78	19.62	76.8
Practice behaviors	20.76	40.26	18.61	17.16	20.95	86.4
Perceived feasibility	16.54	17.78	18.97	17.16	3.05	22.7

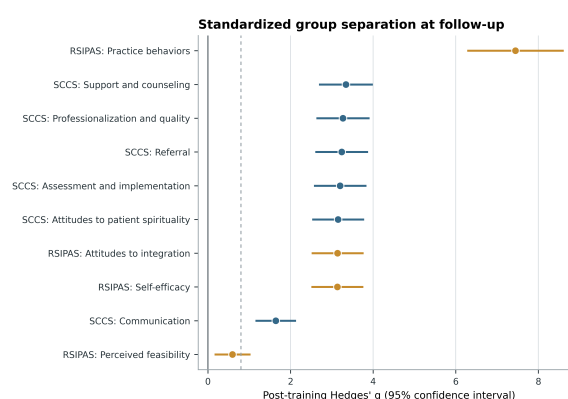
D is the difference between training-arm change and control-arm change. Closure is $100D$ divided by the training arm's pretraining distance from the subscale maximum.

directly than the total-score tests. Learning translated broadly into domains that a nurse can enact through questioning, listening, communication, counseling, documentation, referral initiation, and reflective professional conduct. It translated far less into the belief that sufficient time and resources exist to integrate religion and spirituality routinely. The result aligns with Iranian evidence that workload, discomfort, and limited institutional provision restrict spiritual care even when nurses recognize its importance.¹⁰ It also accords with the broader observation that favorable attitudes do not automatically yield frequent integration in clinical practice.^{12,13}

Perceived feasibility did improve relative to control because the training arm rose by 1.24 points while controls declined by 1.81. The 3.05-point difference should not be dismissed. Its modest size, however, left the training mean at 17.78 of 30. Unlike a near-ceiling communication score, this value leaves 12.22 points of unused scale range. The course may have clarified how to work within existing conditions without persuading nurses that the conditions themselves were adequate.

3.5. Standardized post-training separation

Post-training Hedges' *g* estimates in Figure 3 were large for every SCCS domain and for three RSIPAS domains. SCCS effects ranged from 1.64 for communication to 3.34 for support and counseling. RSIPAS self-efficacy and attitudes were both approximately 3.1. Perceived feasibility was the smallest estimate at 0.59 (95% CI 0.18–1.01), consistent with the headroom result.

**Figure 3.** Post-training standardized group differences with 95% confidence intervals.

Practice behavior produced $g = 7.45$ (95% CI 6.30–8.59), an estimate that demands caution rather than celebration. The printed post-training control standard deviation is 1.14, compared with 4.10 in the training arm and 5.52 before training in controls. Such a small value compresses the pooled standard deviation and inflates a standardized mean difference. The exact duplication of the control post-training mean and standard deviation across practice behavior and perceived feasibility further raises the possibility of a table error. The raw 23.10-point post-training group difference and 20.95-point control-adjusted change still indicate strong separation, but $g = 7.45$ should not be used for planning without confirmation from participant records.

This example illustrates a broader interpretive principle. Standardized effects depend on both mean separation and observed variability. Percentage attainment and headroom closure depend on scale bounds and mean changes. Agreement across the three quantities strengthens interpretation; disagreement reveals where scale compression, ceiling proximity, or transcription problems may dominate. Support and counseling shows concordant evidence: 93.3% attainment, 95.4% closure, and $g = 3.34$. Perceived feasibility also shows concor-

dance in the opposite direction: 59.3% attainment, 22.7% closure, and $g = 0.59$. Practice behavior combines high attainment and closure with an unstable standardized estimate, so the first two quantities deserve greater weight.

3.6. Joint location of attainment and translation

The two-dimensional map in Figure 4 plots post-training attainment against headroom closure. All six SCCS domains occupy the upper-right region, with attainment above 90% and closure above 80%. RSIPAS self-efficacy, attitudes, and behaviors also appear high on both axes, though their attainment is slightly lower. Perceived feasibility lies alone in the lower-left region at 59.3% attainment and 22.7% closure.

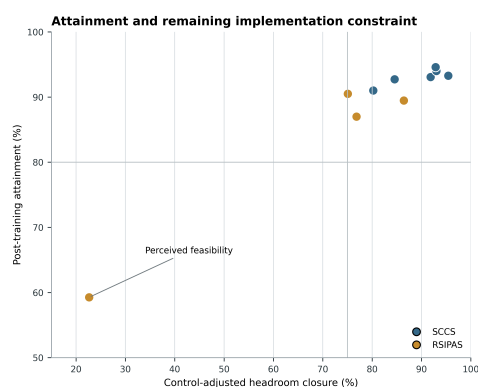


Figure 4. Joint position of post-training attainment and control-adjusted headroom closure.

The map distinguishes two questions that are often conflated. Attainment asks where the training arm finished relative to the instrument maximum. Closure asks how much of its initial opportunity for improvement was realized beyond control change. A domain could attain a high score while closing little headroom if it began high, or close substantial headroom while ending at a moderate score if its starting point was very low. Here, most domains are high on both axes, which supports a genuine broad shift in self-reported competence. The feasibility domain is low on both, making the residual limitation difficult to attribute solely to an unfavorable starting position.

Educational theory and prior training evaluations offer a plausible interpretation. Reflective exercises can increase awareness of personal beliefs and reduce discomfort.^{17,31} Cases, modeled questions, and role play can improve assessment and communication. Clear referral criteria can increase willingness to involve chaplains or other religious and spiritual care providers. Skills programs can change perceived ability within a limited period.^{22,26} By contrast, protected time, staffing ratios, private space, electronic documentation, and access to qualified referral personnel are properties of service delivery. Education may help nurses navigate them but cannot manufacture them.

The course's online format may have amplified learning accessibility while leaving workplace capacity intact. Participants could attend one of two weekly times, review recordings, discuss questions, and upload assignments. These features are well suited to rotating shifts and accord with evidence that structured internet learning can be effective in health professions.³⁹ The same flexibility does not necessarily carry into a busy ward. A nurse may complete an online module outside peak clinical activity yet still lack five uninterrupted minutes for a patient-led spiritual history during a shift.

3.7. Relation to prior spiritual-care education

The broad SCCS gains are consistent with the systematic review by Paal and colleagues, which found that spiritual-care education often improves perceived competence and professional responsibility.³⁴ Oncology nursing education has likewise increased competence and spiritual health,²¹ while multidisciplinary palliative-care training improved attitudes and competencies.³³ The current analysis does not merely reproduce that direction. It identifies a distributional property: nurse-centered competencies moved together, whereas perceived organizational possibility did not.

Mental-health-specific online education provides the closest comparison. Pearce and colleagues reported improved spiritual competencies among mental-health professionals after online training.² An online program for nurses also improved integration competence.²⁰ These studies support the delivery mode and content, but their practical implication should not stop at offering more courses. If feasibility remains low, repeated instruction may produce diminishing returns unless management changes the conditions in which competence is expected to operate.

Client preference research further sharpens the implication. Clients do not uniformly request religious or spiritual discussion, and acceptable integration must remain patient-led.^{7,15} Feasibility should therefore not be interpreted as pressure to conduct a spiritual intervention with every patient. It should mean that nurses have the time, privacy, language, referral access, and documentation support needed to respond when a patient indicates that these concerns matter. Improving feasibility is an ethical enabling condition, not a target for indiscriminate spiritual content.

The professional-boundary literature also argues against equating competence with theological expertise. Nurses need sufficient knowledge to recognize distress, ask respectful questions, offer presence, support coping that the patient identifies as helpful, and seek specialized assistance when appropriate. Counselor and social-work research emphasizes self-awareness and ethically bounded integration.^{3,11} Psychiatric nurses additionally must distinguish spiritual experiences from psychopathology without automatically pathologizing cul-

turally normative beliefs or romanticizing experiences that contribute to risk. Multidisciplinary consultation is therefore part of competence, not evidence of deficiency.

3.8. Implications for clinical implementation

The domain pattern supports a paired educational and organizational response. First, the four-session curriculum should retain its progression through concepts, assessment, intervention, referral, evaluation, and documentation. The high closure of SCCS domains suggests that this sequence was intelligible and closely connected to the measured competencies. Second, clinical services should address the specific conditions represented by perceived feasibility. Protected time can be created by including a brief permission-based spiritual question within routine nursing assessment rather than treating it as an optional separate interview. Documentation systems can provide a concise field for patient preference, relevant coping, distress, requested support, and referral status. A named referral pathway can identify which professional or community contact is available, what consent is required, and how urgent concerns are escalated.

Supervision should focus on observable practice rather than repeated self-report alone. A brief audit can examine whether patient preference was documented when relevant, whether referrals were completed, and whether notes avoided assumptions or proselytizing language. Case review can test nurses' ability to differentiate a culturally congruent belief, a source of resilience, a spiritual struggle, and a symptom requiring psychiatric assessment. Feedback should be provided by a multidisciplinary group that includes psychiatric nursing, psychology or psychiatry, and qualified spiritual-care personnel where available. This approach gives practical meaning to recommendations for interdisciplinary spiritual-care training.^{9,30}

Assessment should also respect scale limitations. SCCS means above 90% of the maximum may leave little room to detect further self-reported improvement. Future evaluation should therefore add observed or record-based outcomes: performance in standardized patient encounters, quality of spiritual histories, appropriateness and completion of referrals, documentation quality, patient-reported respect, and reports of unwanted spiritual discussion. A delayed follow-up beyond one month would show whether confidence persists after the immediate course effect. These additions would move evaluation from perceived competence toward enacted and patient-experienced care.

The feasibility finding suggests that implementation targets should be stated concretely. An institution could specify that nurses have access to a current referral directory, a private location for sensitive conversations, a concise assessment field, and supervisory review of difficult cases. Staffing or workload data should be collected during follow-up so that feasibility scores can be com-

pared with actual patient-to-nurse ratios and time pressure. Such measurement would determine whether low feasibility reflects perception, local workflow, absence of personnel, or several conditions together.

4. CONCLUSION

The study asked whether an eight-hour online spiritual-care course closed a comparable proportion of attainable competency headroom across psychiatric nursing domains. The answer is no, but the asymmetry is clinically informative rather than evidence of general failure. Assessment, professionalization, support and counseling, referral, attitudes, communication, self-efficacy, and reported practice behaviors each closed at least 75% of available headroom after control-arm change was removed; most closed more than 80%. Perceived feasibility closed 22.7% and finished at 59.3% of its scale maximum. Education therefore appears capable of changing what nurses know, feel able to do, and report doing. It appears much less capable of changing whether they believe time, resources, and service arrangements permit integration during routine psychiatric care. The practical conclusion is specific: further courses should be coupled with protected assessment time, concise documentation, named referral pathways, access to qualified consultation, and supervision using observable practice. Without these conditions, the largest remaining limitation is not another knowledge deficit; it is the clinical possibility of acting on the competence already acquired.

COMPETING INTERESTS

The author declares no competing interests.

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