

Beyond Religious Salience: Robustness-Calibrated Construct Triage for Youth Depressive Symptoms, with Implications for Anxiety Interventions

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ABSTRACT

Religiosity and spirituality are frequently treated as interchangeable exposures in youth mental-health research, although their constituent dimensions may differ in direction, magnitude, stability, and suitability for intervention. This study asks which construct offers the strongest translation signal for depressive symptoms among people aged 10–24 years when statistical uncertainty, between-study inconsistency, intervention quality, and geographic concentration are considered together, and whether intervention evidence permits cautious extension to anxiety. A construct-level analytic dataset was assembled from published aggregate evidence covering 74 studies: 45 longitudinal investigations and 29 intervention studies. Four pooled longitudinal estimates for depressive symptoms were examined: religious salience, negative religious coping, positive religious coping, and spiritual wellbeing. We introduce robustness-calibrated construct triage, a probability-based procedure that reconstructs uncertainty on the Fisher-transformed correlation scale, generates 500,000 Monte Carlo draws per construct and stress condition, tests a smallest worthwhile absolute correlation of 0.05, and inflates standard errors by factors of 1.25, 1.50, and 2.00. Translation eligibility required a probability above 0.95 for the expected direction, a probability above 0.80 of exceeding the worthwhile-correlation threshold under 1.50-fold uncertainty, and at least one high-quality intervention study aligned with the construct. Spiritual wellbeing was the sole eligible construct. Its pooled correlation with depressive symptoms was $r = -0.153$ (95% CI -0.187 to -0.118); under 1.50-fold uncertainty, the probability of a protective direction was 1.000 and the probability of exceeding $|r| = 0.05$ was 0.99994. Negative religious coping showed a possible adverse association ($r = 0.090$), but its corresponding stressed probabilities were 0.881 and 0.700. Religious salience was probably protective in direction yet very unlikely to reach the worthwhile magnitude, whereas positive religious coping remained statistically indeterminate. Intervention evidence reinforced the distinction: six of ten spiritual-wellbeing intervention studies were high quality, compared with two of twelve practice-oriented studies and none of seven salience-oriented studies. The answer to the research question is therefore construct-specific: depression-focused intervention development should prioritize spiritually inclusive meaning, acceptance, compassion, and connectedness rather than religious importance alone, while negative religious coping should be assessed as a possible vulnerability signal. Anxiety-related use remains provisional because anxiety-specific longitudinal estimates are sparse.

Keywords: spiritual wellbeing; religious coping; adolescent depression; youth anxiety; Monte Carlo uncertainty; evidence translation

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1. INTRODUCTION

Depression and anxiety commonly emerge during adolescence and early adulthood, a developmental interval marked by rapid changes in identity, affiliation, autonomy, and social role. The boundaries of this interval have widened as puberty begins earlier and adult role transitions occur later, making the ages from approximately 10 to 24 years especially important for preventive mental-health research.¹ During the same period, young people form or revise beliefs about purpose, moral obligation, transcendence, belonging, and the meaning of adversity. These beliefs can be expressed through institutional participation, private practice, personal importance, coping responses, or a broader sense that life is coherent and worthwhile. Treating all of these expressions as one exposure obscures differences that matter clinically. A young person who regards religion as important does not necessarily experience supportive connection or meaning, while another who seldom attends organized services may nevertheless draw strength from compassion, meditation, gratitude, or a stable sense of purpose.

The need for sharper distinctions is reinforced by contemporary accounts of mental health as the product of interacting social, cultural, economic, and developmental conditions. Cross-national evidence shows that poverty, violence, discrimination, educational exclusion, and insecure social environments shape the distribution and course of mental disorders.² Religious communities may moderate some of these pressures by offering belonging, material assistance, adult mentorship, collective ritual, and a language for interpreting suffering. They may also intensify distress through guilt, rejection, coercion, unresolved doubt, or the belief that adversity reflects abandonment or punishment. Religion and spirituality are therefore neither uniformly protective nor uniformly harmful. Their consequences depend on what is measured, how the belief is experienced, the social setting in which it operates, and the developmental stage of the young person.

Developmental scholarship has long connected religion with identity formation, meaning, and prosocial concern.³ Measurement work, however, shows that adolescent religiosity is multidimensional and cannot be represented adequately by attendance or affiliation alone.⁴ Religious coping illustrates the distinction clearly. Positive coping may involve seeking strength, benevolent reinterpretation, or collaborative problem solving with a perceived higher power, whereas negative coping may involve spiritual discontent, interpersonal religious conflict, punitive interpretations, or a perceived loss of connection.⁵ Longitudinal trajectories of coping also change between adolescence and early adulthood and can relate differently to prosocial and externalizing behavior.⁶ These observations imply that research intended to guide intervention should identify the operative construct rather than ask whether “religion” in the aggregate is beneficial.

School and community settings add another layer of complexity. Religious education can support mental health when it develops reflection, respect, self-understanding, and social responsibility, yet any benefit depends on implementation and cultural fit.⁷ Clinical accounts likewise emphasize that spirituality may facilitate hope and coping but may also contribute to guilt or conflict.⁸ Among adolescent psychiatric outpatients, the coexistence of religious involvement and depressive symptoms demonstrates that affiliation is not a substitute for clinical assessment.⁹ Studies of college students further associate spiritual involvement with both lower and higher stress-related experiences, depending on the quality of belief and involvement.¹⁰ A construct-specific approach is thus required at both preventive and treatment levels.

Earlier quantitative syntheses have established that the average relation between religiosity or spirituality and depression is generally small. A review of prospective studies across the life course found modest beneficial associations for many religious or spiritual dimensions and adverse associations for religious struggle.¹¹ A meta-analysis focused on adolescents and emerging adults also found that the direction and strength of associations varied according to the psychological outcome and the way spirituality or religiosity was operationalized.¹² Randomized trials of religious or spiritual interventions have produced encouraging results, but wide variation in intervention content and methodological quality limits generalization.¹³ The unresolved issue is therefore not whether any statistically detectable association exists. The more consequential question is which dimension retains enough directional certainty and magnitude to warrant further development when the evidence is deliberately subjected to stronger uncertainty than the published confidence interval alone implies.

The distinction is especially important for depression and anxiety. Spiritual wellbeing refers to meaning, purpose, connectedness, inner coherence, and a sense of relation to something larger than oneself. These elements can be approached without prescribing a religious identity and can be adapted to secular, multifaith, or faith-specific contexts. Religious salience, by contrast, indicates the subjective importance of religion but does not specify whether that importance is supportive, conflictual, freely chosen, or socially imposed. Positive religious coping names potentially helpful responses to difficulty, yet its apparent benefit may vary greatly among samples and measures. Negative religious coping is different again: its primary clinical relevance may lie in detecting vulnerability rather than supplying a treatment ingredient. Combining these dimensions in one average effect can therefore produce a result with little practical meaning.

Longitudinal findings illustrate these contrasts. Daily or weekly stress can interact with religious coping so that spiritual struggle predicts more depressive symptoms.¹⁴

Prospective adolescent research also indicates that negative religious coping may intensify the association between stress and depression.¹⁵ Among young people with asthma or other chronic conditions, spiritual struggle can accompany poorer psychological adjustment,¹⁶ while a loss of faith among psychiatric patients has been associated with less improvement in depressive symptoms.¹⁷ Chronic-illness research similarly distinguishes adaptive spiritual coping from struggle rather than assuming that all spiritual responses operate alike.¹⁸ These findings support the idea that adverse religious coping should be assessed directly, particularly when a young person experiences illness, interpersonal loss, or high stress.

Evidence for spiritual wellbeing is conceptually more coherent. Studies have examined whether meaning and spirituality buffer the emotional effects of stress¹⁹ and whether spiritual characteristics predict depressive symptoms among adolescents over time.²⁰ Mediation analyses have connected spirituality with self-esteem, self-efficacy, and other aspects of positive identity.²¹ Race and gender may alter these associations, demonstrating that social location cannot be treated as incidental.²² Religiosity also changes during the transition to young adulthood, and within-person change may be more informative than a single measurement occasion.²³ These developmental findings caution against interpreting a small pooled estimate as a universal effect, but they also suggest that meaning-centered constructs may be more stable intervention targets than institutional importance alone.

Methodological weaknesses further complicate translation. A conventional confidence interval quantifies sampling uncertainty under the assumptions of the fitted model; it does not automatically reflect measurement heterogeneity, residual confounding, selective reporting, cultural concentration, or the instability introduced by a small number of contributing studies. Very high statistical heterogeneity may coexist with a mean estimate close to zero, and a nominally favorable direction may be driven by effects too small to matter. Conversely, an effect may be modest yet consistent enough to justify targeted development if it aligns with credible intervention evidence. A decision-oriented synthesis must therefore separate four questions: whether the association probably points in the expected direction, whether its magnitude exceeds a prespecified minimum, whether those conclusions survive deliberate uncertainty inflation, and whether intervention studies provide an empirical route to action.

The present study addresses the following research question: among religious and spiritual constructs examined longitudinally in young people, which retain sufficient directional certainty, worthwhile magnitude, robustness to additional uncertainty, and high-quality intervention alignment to justify priority in depression-focused intervention research, and how far can intervention find-

ings support cautious extension to anxiety? To answer it, we use a construct-level evidence matrix and introduce robustness-calibrated construct triage (RCCT). The procedure is not presented as a substitute for a new randomized trial. It is a transparent way to decide which construct is ready for such testing and which should remain a target for measurement or surveillance. The analysis deliberately separates spiritual wellbeing, religious salience, positive religious coping, and negative religious coping; examines evidence volume and quality among intervention studies; and quantifies geographic concentration. This structure yields a decision that conventional statistical significance alone cannot provide.

2. MATERIALS AND ANALYTIC DESIGN

The unit of analysis was the religious or spiritual construct rather than the individual publication or participant. Aggregate information came from a systematic review of young people aged 10–24 years that included 45 longitudinal studies and 29 intervention studies and supplied pooled estimates for four constructs.²⁴ This publication is the provenance of the assembled counts and pooled correlations used below. No participant-level records were available, and no claim of newly recruited participants is made.

Four longitudinal estimates were entered into the analytic dataset: religious salience, negative religious coping, positive religious coping, and spiritual wellbeing. For each construct, the stored fields were the number of contributing high-quality studies, the number of analytic samples when available, the pooled Pearson correlation with depressive symptoms, the lower and upper limits of the 95% confidence interval, the reported *p* value, and *I*². Direction was coded before simulation. Correlations below zero were defined as favorable for religious salience, positive religious coping, and spiritual wellbeing because lower depressive symptoms were expected. Correlations above zero were defined as adverse for negative religious coping because higher depressive symptoms were expected.

The intervention component retained the predominant content assigned to each of the 29 studies. Twelve interventions emphasized religious or spiritual practices, seven emphasized religious salience, and ten emphasized spiritual wellbeing. The corresponding numbers judged high quality were two, zero, and six. These categories describe the dominant therapeutic content; they do not imply that interventions contained only one element. Geographic concentration was represented by 50 studies from the United States, 16 studies from low- and middle-income countries (one longitudinal and 15 intervention studies), and eight studies from other high-income countries. The last count follows arithmetically from the full set of 74 studies after assigning the reported United States and low- and middle-income country counts.

The contrasts in Table 1 are more consequential than

Table 1. Construct-level longitudinal estimates

Construct	Studies	Samples	<i>r</i>	95% CI	<i>I</i> ² (%)
Religious salience	16	18	−0.024	[−0.053, 0.004]	87.2
Negative religious coping	4	4	0.090	[−0.009, 0.188]	36.0
Positive religious coping	3	3	−0.054	[−0.348, 0.250]	91.7
Spiritual wellbeing	2	2	−0.153	[−0.187, −0.118]	0.0

CI, confidence interval. Study counts refer to high-quality longitudinal studies entering each pooled estimate.

a ranking by absolute correlation alone. Spiritual wellbeing has the largest absolute pooled association and the narrowest interval. Negative religious coping has a smaller adverse estimate whose interval crosses zero. Religious salience is estimated precisely enough to indicate that any average association is likely to be very small, despite its high heterogeneity. Positive religious coping has an interval spanning moderately protective to moderately harmful values, which means that its point estimate should not guide a decision without substantial qualification.

2.1. Uncertainty reconstruction

Pearson correlations were transformed to Fisher’s *z* scale to obtain a quantity that is approximately normally distributed. For pooled correlation *r_j* belonging to construct *j*, the transformation was

$$z_j = \operatorname{atanh}(r_j) = \frac{1}{2} \log \left(\frac{1 + r_j}{1 - r_j} \right).$$
 (1)

The confidence limits were transformed in the same way. Because the analysis used published aggregate intervals rather than raw sampling variances, the standard error on the Fisher scale was reconstructed as

$$\widehat{SE}_{z_j} = \frac{\operatorname{atanh}(r_{j,U}) - \operatorname{atanh}(r_{j,L})}{2 \times 1.96},$$
 (2)

where *r_{j,L}* and *r_{j,U}* are the lower and upper 95% confidence limits. This reconstruction preserves the asymmetry that arises when intervals on the correlation scale approach the boundaries of −1 and 1. It does not recover the full random-effects likelihood or the covariance among estimates. Its role is narrower: it creates a reproducible uncertainty distribution that agrees closely with each published interval and can be subjected to identical stress conditions.

2.2. Monte Carlo construct triage

For each construct and each stress condition, 500,000 values were drawn on the Fisher scale using a fixed random seed of 20260814:

$$z_{j,m}^{(b)} \sim \mathcal{N} \left(z_j, \left[m \widehat{SE}_{z_j} \right]^2 \right), \quad r_{j,m}^{(b)} = \tanh \left(z_{j,m}^{(b)} \right),$$
 (3)

where *b* indexes the draw and *m* ∈ {1.00, 1.25, 1.50, 2.00} is the uncertainty multiplier. Multipliers greater than one deliberately widen uncertainty. They do not purport to estimate a particular omitted bias. Instead, they answer a controlled robustness question: how much confidence remains if the aggregate standard error is understated by 25%, 50%, or 100%?

Two probabilities were calculated. Let *d_j* = −1 for constructs expected to reduce depressive symptoms and *d_j* = +1 for negative religious coping. Directional certainty was

$$P_{D,j,m} = \Pr \left(d_j r_{j,m}^{(b)} > 0 \right).$$
 (4)

The second quantity used a prespecified smallest worthwhile absolute correlation of 0.05:

$$P_{W,j,m} = \Pr \left(d_j r_{j,m}^{(b)} > 0.05 \right).$$
 (5)

The value 0.05 was not described as a universal clinical threshold. Correlations at this level explain only 0.25% of outcome variance when interpreted without covariates, yet a small association may still matter at population scale or when it represents a modifiable process. The threshold was used to prevent a precisely estimated but negligible mean association from receiving priority merely because its sign was stable. Threshold-survival curves were also calculated for values from 0 to 0.20, allowing readers to evaluate conclusions under a stricter or more permissive minimum.

2.3. Translation rule and intervention alignment

A construct qualified for translation priority only if it passed three conditions: *P_D* > 0.95 under 1.50-fold uncertainty, *P_W* > 0.80 under the same stress, and at least one high-quality intervention study predominantly targeting that construct. These thresholds were selected before inspecting the simulated probabilities. The rule favors false-negative caution because an intervention recommendation may influence culturally sensitive clinical practice. Failure to qualify does not mean that a construct is unimportant. It means that the present aggregate evidence does not justify assigning it the highest development priority.

Negative religious coping required separate interpretation. An adverse construct can be clinically important even when it is unsuitable as a therapeutic ingredient. It was therefore eligible for a surveillance designation if $P_D > 0.80$ under 1.50-fold uncertainty, regardless of intervention count. Religious salience or positive coping that failed the translation rule remained unresolved. This separation prevents the analysis from forcing protective and harmful constructs into one scale.

Intervention alignment was treated as an external decision axis rather than multiplied into a single composite score. A large numerical index can conceal whether a construct succeeds because of statistical certainty, study quantity, or design quality. Reporting the axes separately keeps the decision inspectable. It also avoids equating ten weak studies with a smaller number of better controlled studies. The quality counts were not used to generate confidence intervals because denominators were too small and the classifications were inherited at aggregate level.

3. RESULTS AND DISCUSSION

3.1. Uncertainty distributions distinguish meaning from importance

At the reported level of uncertainty, spiritual wellbeing had a median simulated correlation of -0.153 with a 95% simulation interval from -0.187 to -0.118 . Every sampled value was protective to six reported decimal places, and every sampled value exceeded the prespecified absolute threshold of 0.05 . Negative religious coping had a median of 0.090 with a 95% interval from -0.009 to 0.188 ; the probability of an adverse direction was 0.962 and the probability of exceeding $r = 0.05$ was 0.785 . Religious salience had a high probability of a favorable sign (0.950) but only a 0.036 probability of a correlation more protective than -0.05 . Positive religious coping had directional probability of 0.635 and worthwhile-magnitude probability of 0.511 , reflecting its broad interval.

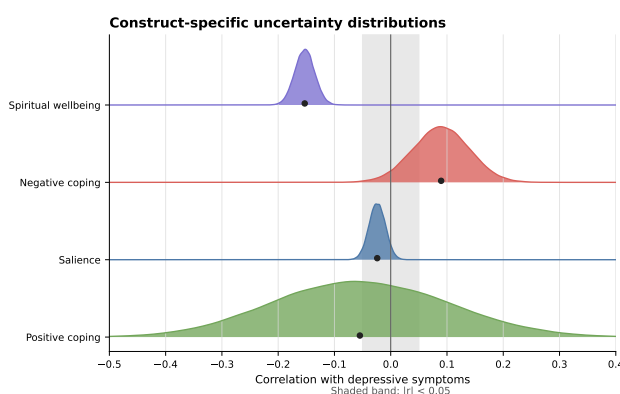


Figure 1. Construct-specific uncertainty.

The density display in Fig. 1 makes three inferential distinctions visible. First, the distribution for spiritual wellbeing is separated completely from both zero and the

negligible-association band. Second, negative religious coping lies mainly on the adverse side but retains appreciable mass near zero, so the result supports vigilance more strongly than causal certainty. Third, salience is concentrated near zero. Its narrow ridge should not be mistaken for useful protection: precision around a negligible value is evidence against prioritizing religious importance as a stand-alone ingredient. The wide positive-coping distribution conveys a different problem, namely insufficient resolution rather than evidence of no effect.

These contrasts are consistent with the content of the constructs. Spiritual wellbeing names experiences such as meaning, coherence, peace, compassion, and connectedness that can plausibly influence emotion regulation and coping. Salience identifies importance but not valence or function. Strong importance may accompany comfort, guilt, community support, family pressure, spiritual struggle, or several of these simultaneously. Averaging such experiences can yield a stable near-zero association even when important subgroup effects exist. Positive coping is conceptually narrower than salience, but its high heterogeneity and broad confidence interval indicate that measurement and context still prevent a reliable average estimate.

The evidence on developmental timing supports cautious interpretation. Outcome-wide longitudinal research has linked religious upbringing with later health and wellbeing, but the magnitude and direction vary across outcomes.²⁵ National trajectory work likewise shows that associations between religion and depressive symptoms can differ by gender and age.²⁶ Indonesian longitudinal evidence demonstrates that religious and spiritual experiences can relate differently to socioemotional functioning outside predominantly Judeo-Christian settings.²⁷ These studies make it unlikely that one pooled correlation can describe every culture and developmental phase. RCCT does not remove that heterogeneity; it reveals which mean construct signal remains defensible despite it.

3.2. Threshold survival separates sign certainty from useful magnitude

The probability of exceeding a progressively stricter absolute correlation is shown in Fig. 2. Spiritual wellbeing retained a probability near one until the threshold approached 0.11 , after which the curve declined rapidly around its estimated magnitude. Negative religious coping declined more gradually: its probability was 0.785 at 0.05 , approximately 0.42 near 0.10 , and close to zero by 0.20 . Religious salience fell below 0.50 before the threshold reached 0.025 and approached zero at 0.075 . Positive religious coping started near 0.635 at a zero threshold and declined slowly because its uncertainty distribution was extremely wide, not because a moderately protective association was well supported.

The curve shapes in Fig. 2 prevent a common error in evidence translation. A high probability of the expected

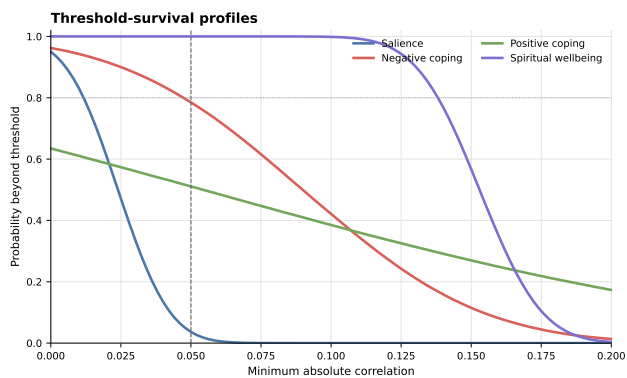


Figure 2. Threshold survival.

sign is not equivalent to a high probability of an effect that clears a meaningful minimum. Religious salience demonstrates this difference most sharply: its expected direction is fairly probable, but almost all of its distribution lies inside the $|r| < 0.05$ region. Spiritual wellbeing succeeds under both questions. Negative coping occupies an intermediate position and therefore warrants assessment in vulnerable young people, while additional longitudinal work is needed before its mean magnitude is treated as established.

The choice of minimum can be inspected rather than accepted on authority. If a reader sets the requirement near zero, salience appears relatively certain. At 0.05, it is not competitive. If a reader requires at least 0.10, only spiritual wellbeing retains a high probability. A requirement around 0.15 would be too strict for every construct, including spiritual wellbeing, because it sits close to that construct’s point estimate. The analysis therefore supports a bounded claim: spiritual wellbeing is the strongest available candidate among the four constructs, not a large or guaranteed determinant of depression.

Protective associations in other longitudinal studies give useful context without resolving causality. Intrinsic religiosity has buffered the longitudinal relation between peer victimization and depressive symptoms in some adolescents.²⁸ Population-attributable analyses have also considered religious participation among possible targets for preventing adolescent depression,²⁹ and representative cohort work has examined religious activity alongside vulnerability factors for new depressive episodes.³⁰ Such findings may reflect social support, family cohesion, health behavior, selection, or reciprocal effects as well as spiritual processes. The current results indicate that intervention design should measure these pathways separately instead of assuming that participation or importance supplies the active element.

3.3. Uncertainty inflation leaves one translation candidate

Deliberate error inflation produced a clear hierarchy. With standard errors multiplied by 1.50, spiritual wellbeing retained directional probability of 1.000 and worthwhile-magnitude probability of 0.99994. Negative

religious coping declined to 0.881 for direction and 0.700 for magnitude. Religious salience declined to 0.864 for direction and rose only to 0.117 for worthwhile magnitude; the latter increase occurs because widening a near-zero distribution places more mass in both tails and should not be interpreted as strengthening evidence. Positive religious coping fell to 0.590 for direction while remaining approximately 0.506 for the threshold.

Table 2. Monte Carlo probabilities

Construct	Reported uncertainty		1.50-fold uncertainty	
	P_D	P_W	P_D	P_W
Religious salience	0.950	0.036	0.864	0.117
Negative religious coping	0.962	0.785	0.881	0.700
Positive religious coping	0.635	0.511	0.590	0.506
Spiritual wellbeing	1.000	1.000	1.000	0.99994

The probabilities in Table 2 show why the stress condition was necessary. Nominal uncertainty alone places negative coping close to the rule for direction and only slightly below the rule for magnitude. Once an additional 50% uncertainty is allowed, neither criterion is met. The finding is still clinically relevant because the adverse direction remains more likely than not by a substantial margin. Salience fails for a different reason: the mean effect is too small, not merely uncertain. Positive coping fails because its uncertainty is too large to support even a stable direction.

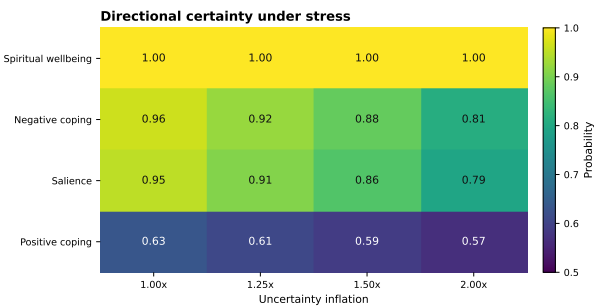


Figure 3. Uncertainty stress test.

The tile pattern in Fig. 3 confirms that spiritual wellbeing is insensitive to even a doubling of the reconstructed standard error: directional probability remains 0.999984. Negative coping and salience both lose certainty as uncertainty expands, reaching approximately 0.81 and 0.79, respectively, under doubling. Their similar end probabilities should not be conflated because their decision meanings differ. Negative coping retains a possible adverse magnitude, whereas salience remains centered close to zero. Positive coping approaches an uninformative probability of 0.50.

Stress testing is particularly valuable when pooled estimates rest on few studies. The spiritual-wellbeing result includes only two high-quality longitudinal investigations. Its narrow interval and zero reported heterogeneity produce exceptional simulated stability, but neither property guarantees transportability or absence of selec-

tive reporting. The correct conclusion is that the available estimate is internally robust to interval widening. It is not that two studies establish universal effectiveness. Replication with comparable measurement across countries and developmental stages remains essential.

3.4. Intervention alignment changes the practical ranking

Study quantity alone favored practice-oriented interventions, which accounted for 12 of 29 studies. Quality altered that impression. Only two of the twelve were high quality. Salience-oriented interventions accounted for seven studies and none were high quality. Spiritual-wellbeing interventions accounted for ten studies, six of which were high quality. Thus, the construct with the clearest longitudinal association also had the strongest intervention-quality alignment.

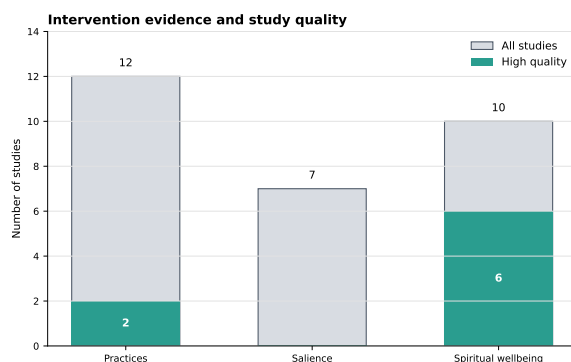


Figure 4. Intervention evidence quality.

The nested columns in Fig. 4 distinguish volume from credibility. Practice-oriented research is numerically common but contains a small high-quality fraction. Spiritual wellbeing has slightly fewer studies yet three times as many high-quality investigations. The absence of a high-quality salience intervention is important because the longitudinal estimate already indicates that importance alone is unlikely to produce a worthwhile average association. Together, these results argue against designing a program whose essential feature is stronger religious commitment. They favor programs that offer meaning-centered, compassion-oriented, or connectedness-oriented activities while allowing the participant to define whether those activities are spiritual, religious, both, or neither.

Specific intervention studies illustrate the range of possible delivery formats. A randomized trial of behavioral activation for religious behaviors reduced depression among college students and tested whether religious behavior and spiritual wellbeing mediated change.³¹ Online spiritual counselling has been studied with deaf and hard-of-hearing university students across India, Kenya, Nepal, and South Africa.³² Meditation courses grounded in Tibetan Buddhist practice³³ and yoga interventions among university students³⁴ demonstrate that practice-based programs can plausibly influence anxiety or de-

pression, although the active components may include attention training, physical activity, expectancy, group support, and instructor contact.

Comparative meditation trials are particularly revealing. Spiritual meditation has sometimes produced better anxiety-related outcomes than secular meditation or relaxation,³⁵ while another comparison examined spiritual and secular meditation across psychological, cardiac, and pain outcomes.³⁶ These findings do not imply that spiritual language is necessary for every participant. They indicate that congruence between a practice and the participant's worldview may matter. Islamic patterned art therapy offers another culturally located approach,³⁷ and spiritual care has been evaluated after suicide attempts among young people.³⁸ The clinical lesson is not to merge these interventions under one label. Future trials should specify content, participant choice, facilitator competence, comparator intensity, and the hypothesized mediating process.

3.5. Geographic concentration limits transportability

The complete evidence base is strongly concentrated in the United States. Fifty of 74 studies originated there, compared with 16 from low- and middle-income countries and eight from other high-income countries. Moreover, only one of the 45 longitudinal studies came from a low- or middle-income country, whereas 15 intervention studies did. This imbalance matters because religion may be woven into family, schooling, public life, and help-seeking in ways that differ substantially across settings.

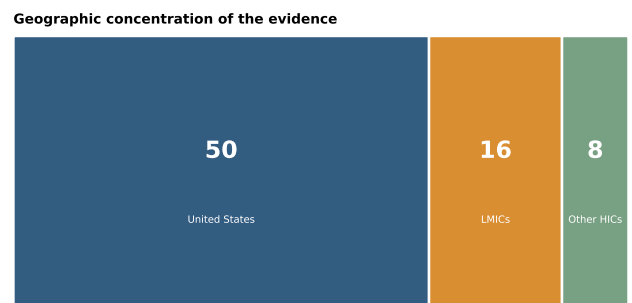


Figure 5. Geographic coverage.

The proportional mosaic in Fig. 5 shows that the United States occupies more than two thirds of the evidence area. The 16-study segment for low- and middle-income countries appears substantial until study type is considered: longitudinal evidence in those settings is nearly absent. Intervention effects observed over short periods cannot reveal whether spiritual wellbeing precedes reduced symptoms, follows improvement, or changes reciprocally with distress. The remaining eight studies from other high-income countries are too few to counterbalance the dominant cultural assumptions embedded in United States measures and interventions.

This concentration has direct implications for construct validity. Spiritual wellbeing may be expressed through religious devotion in one setting, secular purpose in another, and family or communal obligation in a third. Negative religious coping may be disclosed differently where doubt is stigmatized. Service attendance can represent personal choice, family expectation, minority identity, or access to social resources. A numerical scale developed in one cultural setting may therefore exhibit measurement non-equivalence elsewhere. Global comparative work confirms that relationships between religiosity and health vary across national settings.³⁹ Reviews of pathways to mental-health care also show that religious and traditional healers can strongly influence access and delay in some regions.⁴⁰ Transportable intervention research must therefore test measurement equivalence and document local meanings rather than translate wording alone.

The World Psychiatric Association has emphasized that religion and spirituality are relevant to psychiatric assessment and professional training.⁴¹ The present results refine that broad position for youth depression and anxiety. Clinicians should neither ignore a belief system that is central to a young person’s coping nor assume that more religiosity is therapeutic. Assessment should ask whether beliefs provide meaning, compassion, connection, guilt, fear, conflict, or abandonment; whether the young person wants these issues included in care; and whether family or community expectations create support or pressure. Negative coping responses deserve attention because they may mark distress that is not captured by attendance or affiliation.

3.6. Decision outcome

Applying the prespecified rules yielded one translation candidate, one surveillance construct, and two unresolved constructs. Spiritual wellbeing passed both probability thresholds under 1.50-fold uncertainty and had six high-quality intervention studies. Negative religious coping passed the surveillance criterion because the probability of an adverse direction remained 0.881, but it did not pass the translation rule and is not a treatment ingredient. Religious salience failed the worthwhile-magnitude condition and lacked a high-quality intervention study. Positive religious coping failed the directional-certainty condition.

Table 3. Construct triage decisions

Construct	Direction	Magnitude	Intervention	Decision
Spiritual wellbeing	Pass	Pass	Pass	Translation priority
Negative religious coping	Surveillance	Not passed	Not applicable	Assess as vulnerability
Religious salience	Not passed	Not passed	Not passed	Do not prioritize alone
Positive religious coping	Not passed	Not passed	Insufficient	Resolve uncertainty

The decision table answers the paper’s research question directly. Among the four constructs, spiritual wellbeing is the only one that combines a robust longitudinal association with credible intervention alignment. This does not justify replacing cognitive-behavioral therapy, inter-

personal therapy, medication when indicated, or crisis care. It justifies testing spiritually inclusive meaning and connectedness as optional components within established care. Negative coping belongs in assessment and formulation. Salience should not be used as a proxy for expected benefit. Positive coping requires better harmonized longitudinal measurement before a general conclusion is warranted.

4. CONCLUSION

This paper asked which religious or spiritual construct retains enough directional certainty, worthwhile magnitude, robustness to additional uncertainty, and intervention-quality support to justify priority for depression-focused research in young people, and whether the intervention literature permits extension to anxiety. The answer is spiritual wellbeing. Its association with lower depressive symptoms remained essentially certain after the reconstructed standard error was increased by 50% and even 100%, and it was supported by the largest high-quality intervention subset. Religious salience did not qualify because its average association was concentrated near zero and no high-quality salience-oriented intervention was identified. Positive religious coping remained unresolved because its interval was too broad. Negative religious coping retained a probable adverse direction and should be assessed as a vulnerability signal, but it did not meet the rule for a stable worthwhile magnitude. Anxiety remains an intervention-research implication rather than a quantitatively established longitudinal conclusion.

The practical conclusion is deliberately narrow. Intervention development should test optional, culturally adaptable components centered on meaning, compassion, acceptance, and connectedness rather than attempting to increase religious importance. Clinical assessment should distinguish spiritual support from conflict or abandonment and should respect the young person’s preferences. These components must complement, not displace, established care. The next decisive study is a culturally diverse randomized trial with an attention-matched comparator, repeated mediator measurement, separate depression and anxiety outcomes, and follow-up long enough to test durability and reciprocal change.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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