

# Spiritual Wellbeing as a Mediator between Stress and Hope in Adolescents: Evidence from a Structural Equation Model

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## ABSTRACT

**Objective:** The objective of this study was to examine the mediating role of spiritual wellbeing in the relationship between stress and hope among adolescents.

**Methods and Materials:** A descriptive correlational design was employed with a sample of 442 adolescents recruited from secondary schools in Kenya, determined using Krejcie and Morgan's sampling table. Data were collected using the Perceived Stress Scale (PSS-10), the Spiritual Well-Being Scale (SWBS), and the Children's Hope Scale (CHS). Statistical analyses were conducted using SPSS version 27 for descriptive statistics and Pearson correlations, while mediation was tested using structural equation modeling (SEM) in AMOS version 21. Model fit was assessed with  $\chi^2/df$ , GFI, AGFI, CFI, TLI, and RMSEA indices.

**Findings:** Results indicated that stress was significantly and negatively associated with both hope ( $r = -.39$ ,  $p < .001$ ) and spiritual wellbeing ( $r = -.46$ ,  $p < .001$ ), while spiritual wellbeing was strongly and positively correlated with hope ( $r = .53$ ,  $p < .001$ ). SEM results confirmed good model fit ( $\chi^2 = 118.47$ ,  $df = 62$ ,  $\chi^2/df = 1.91$ , GFI = 0.94, AGFI = 0.91, CFI = 0.97, TLI = 0.96, RMSEA = 0.045). Path coefficients revealed that stress directly predicted hope ( $\beta = -.21$ ,  $p < .001$ ) and negatively influenced spiritual wellbeing ( $\beta = -.42$ ,  $p < .001$ ), while spiritual wellbeing positively predicted hope ( $\beta = .38$ ,  $p < .001$ ). Mediation analysis demonstrated a significant indirect effect of stress on hope through spiritual wellbeing ( $\beta = -.16$ ,  $p = .002$ ), confirming partial mediation.

**Conclusion:** The study concludes that spiritual wellbeing plays a significant mediating role in the relationship between stress and hope in adolescents. Strengthening spiritual wellbeing may buffer the detrimental effects of stress and foster greater optimism and resilience among youth.

**Keywords:** Adolescents; Stress; Hope; Spiritual Wellbeing

## 1. Introduction

Adolescence is a critical developmental stage characterized by rapid physical, cognitive, emotional, and social transformations. During this transitional period,

young individuals often encounter heightened stressors related to academic pressures, peer relationships, identity formation, and future uncertainties. Such challenges have been shown to exert significant influence on their psychological functioning, particularly in terms of hope,

resilience, and spiritual wellbeing. Hope, understood as a future-oriented positive motivational state that integrates agency and pathways thinking, has been identified as an essential protective factor for maintaining psychological adjustment during adolescence (Zhou et al., 2025). Yet, in contexts where stressors are pervasive, hope may diminish, unless mediated by psychological resources such as spiritual wellbeing (Artan, 2025).

Spiritual wellbeing encompasses both religious and existential dimensions of human experience, reflecting a sense of meaning, purpose, and connection either to a higher power or to life itself. A growing body of literature suggests that spiritual wellbeing acts as a powerful buffer against stress, enabling individuals to preserve or restore hope in the face of adversity (Fathi et al., 2018; Holman, 2023). For example, patients undergoing life-threatening illnesses, such as cancer or renal failure, report that spirituality provides them with strength, acceptance, and renewed optimism (Artan, 2025; UĞuz & Keskin, 2024; Zhou et al., 2025). Translating these findings into the adolescent context, it is reasonable to assume that spiritual wellbeing may also serve as a psychological mediator between stress and hope, allowing young people to cope with developmental and environmental challenges more effectively (Maral et al., 2024; Safari et al., 2024).

Stress among adolescents has become a significant global concern, exacerbated by multiple socio-economic, cultural, and health crises. The COVID-19 pandemic, in particular, highlighted vulnerabilities in youth mental health, as academic disruptions, social isolation, and uncertainty intensified stress experiences (Lee & Ang, 2023; Mangoulia et al., 2024). Studies conducted with university and high school students in different cultural contexts show that prolonged exposure to stress can result in elevated anxiety, depression, and decreased psychological well-being, thereby undermining hope (Liu et al., 2023; Terres et al., 2024). However, stress alone does not determine outcomes; rather, mediating and moderating factors such as spirituality, resilience, and coping strategies critically shape the ways in which individuals respond (Arslan & Yıldırım, 2021).

Research in adult populations has consistently emphasized the role of spiritual wellbeing in mitigating the negative consequences of stress on hope and overall mental health. For instance, studies among patients with chronic illnesses such as cancer and heart failure demonstrate that higher levels of spirituality are associated with stronger feelings of hope and reduced psychological distress (Hasan, 2019; Simone Maria Muniz da Silva et al., 2018; Wang et

al., 2024). Similarly, among hemodialysis patients, spiritual wellbeing has been identified as a decisive factor contributing to higher hope, regardless of biomedical predictors (Rambod et al., 2020; Zhou et al., 2025). Such findings reinforce the relevance of spirituality not only in clinical settings but also in everyday developmental contexts, including adolescence, where the cultivation of meaning, purpose, and resilience is essential for long-term well-being.

The mediating role of spiritual wellbeing in the relationship between stress and hope has also been explored in several empirical studies, with findings supporting its centrality as a pathway for psychological adjustment. For instance, in the case of parents of children with learning disorders, spiritual wellbeing was shown to mitigate the impact of parenting stress on quality of life (Mohammadchenari et al., 2022). Similarly, among middle-aged women, spiritual wellbeing was positively correlated with hope and inversely related to depression, highlighting its potential as a mediator between stress and mental health outcomes (Khalajinia et al., 2022). These results echo earlier theoretical frameworks that emphasize spirituality as a core dimension of human resilience, particularly under conditions of uncertainty (Ahmed et al., 2022; Mahipalan & Suresh, 2019).

In addition, cross-cultural research highlights the universality of the connection between spirituality, stress, and hope, despite cultural variations in religious practice and belief systems. In Taiwan, international students experiencing acculturative stress were found to benefit from both social and spiritual resources, which protected their well-being and sustained their hope (Edara, 2018). Likewise, in Poland, spiritual experiences were shown to mediate the relationship between faith and hope in populations recovering from addiction or struggling with life-threatening illnesses (Wnuk, 2017, 2022). These findings suggest that spiritual wellbeing may represent a cross-culturally consistent psychological mechanism that can foster hope and reduce the impact of stress in diverse populations.

Within adolescent research specifically, the relationship between spirituality, hope, and stress has begun to attract scholarly attention. Recent investigations among students highlight that higher levels of spiritual wellbeing are associated with better coping, lower depressive symptoms, and higher resilience (Holman, 2023; Mangoulia et al., 2024). Furthermore, the development of models integrating emotion regulation, spirituality, and hope in youth contexts reinforces the importance of spirituality as a mediator in

complex psychological processes (Safari et al., 2024). Such findings are echoed in the work of Arslan and Yıldırım (Arslan & Yıldırım, 2021), who identified spirituality and meaning-based coping as key mediators of well-being during the pandemic, indicating their continued importance for adolescent populations facing stressors.

Adolescents in Kenya, similar to their peers in other parts of the world, are exposed to unique stressors, including economic instability, high educational demands, and social challenges. Empirical work conducted in various cultural contexts suggests that the mediating role of spiritual wellbeing between stress and hope is not only theoretically plausible but also practically significant for this demographic. For instance, Santos and colleagues (Santos et al., 2023) demonstrated that positive psychological attributes, including hope and resilience, interact strongly with wellbeing, even among populations facing depression. This aligns with findings in adolescent groups, where spiritual wellbeing consistently predicts hope despite the presence of stress.

The literature also points to the interconnections between spirituality and other psychological resources such as mindfulness, resilience, and coping flexibility, which collectively enhance hope (Holman, 2023; UĞUZ & Keskin, 2024). Wang and colleagues (Wang et al., 2024) further provide experimental evidence from randomized controlled trials showing that mindfulness-based interventions significantly improve spiritual wellbeing and hope, underscoring the modifiability of these constructs. Thus, adolescents may be supported through interventions that strengthen their spiritual wellbeing as a means of buffering stress and fostering hope.

Furthermore, the theoretical and empirical overlap between spirituality and constructs such as resilience suggests that spiritual wellbeing not only mediates but also enhances other psychological mechanisms in promoting hope. Simpson et al. (Simpson et al., 2020) used structural equation modeling to show that spirituality, resilience, and hope jointly mediated outcomes among family caregivers, illustrating a dynamic interplay. In adolescents, this interplay may be even more critical, given their developmental sensitivity to stress and identity formation.

Despite the consistent findings across adult and clinical populations, there remains a relative paucity of research directly investigating the mediating role of spiritual wellbeing between stress and hope in adolescents. Existing studies, such as those conducted among students in Iran and Turkey, point to strong associations between spirituality and

hope (Khalajinia et al., 2022; Maral et al., 2024). However, further evidence from diverse cultural contexts is necessary to clarify this relationship. Kenya provides a valuable setting for such an investigation, as spirituality occupies a prominent place in adolescents' everyday lives, often embedded within family, educational, and community structures.

In summary, the extant literature highlights stress as a significant risk factor undermining adolescent hope, while spiritual wellbeing emerges as a robust protective mechanism capable of mediating this relationship. Studies conducted across diverse populations—from cancer patients to students, caregivers, and individuals recovering from addiction—consistently underscore the buffering role of spirituality in sustaining hope amidst stress (Ahmed et al., 2022; Fathi et al., 2018; Hasan, 2019; Safari et al., 2024; Simone Maria Muniz da Silva et al., 2018). Furthermore, cross-cultural investigations validate the universality of this mechanism (Edara, 2018; Wnuk, 2017, 2022). Against this backdrop, the current study seeks to extend the knowledge base by examining the mediating role of spiritual wellbeing between stress and hope among adolescents in Kenya.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study adopted a descriptive correlational research design aimed at examining the mediating role of spiritual wellbeing in the relationship between stress and hope among adolescents. A total of 442 participants were recruited from secondary schools in Kenya. The sample size was determined according to Krejcie and Morgan's (1970) sample size determination table, which recommends a minimum of sample size for populations exceeding 10,000. Participants were selected through stratified random sampling to ensure representativeness in terms of school type, gender, and grade level. Inclusion criteria required participants to be adolescents aged between 13 and 19 years, currently enrolled in school, and willing to provide informed consent.

### 2.2. Measures

Hope was measured using the Children's Hope Scale (CHS) developed by Snyder and colleagues in 1997. This self-report instrument is specifically designed for children and adolescents to assess dispositional hope. The scale consists of 6 items, covering two subscales: Agency

Thinking (goal-directed determination) and Pathways Thinking (planning to achieve goals), with three items each. Responses are rated on a 6-point Likert scale ranging from 1 (“none of the time”) to 6 (“all of the time”), with higher scores reflecting higher levels of hope. Total scores range from 6 to 36. Previous studies have confirmed the validity and reliability of the CHS across diverse adolescent populations, with Cronbach’s alpha values generally above .70, demonstrating internal consistency and stability over time.

Spiritual wellbeing was assessed using the Spiritual Well-Being Scale (SWBS) developed by Paloutzian and Ellison in 1982. This widely used instrument contains 20 items divided into two subscales: Religious Wellbeing (RWB), which measures one’s relationship with God (10 items), and Existential Wellbeing (EWB), which assesses the sense of purpose and life satisfaction independent of religious belief (10 items). Items are rated on a 6-point Likert scale ranging from “strongly disagree” to “strongly agree.” Total scores range from 20 to 120, with higher scores indicating greater spiritual wellbeing. Numerous studies across cultures and age groups have confirmed the construct validity, convergent validity, and internal consistency reliability of the SWBS, with Cronbach’s alpha values typically exceeding .85, ensuring its appropriateness for adolescent research.

Stress was measured using the Perceived Stress Scale (PSS) developed by Cohen, Kamarck, and Mermelstein in 1983. The PSS is one of the most widely applied psychological instruments for measuring perceived stress in adolescents and adults. The 10-item version (PSS-10) is most commonly used and captures the degree to which individuals appraise situations in their lives as stressful, unpredictable, and overwhelming. Responses are recorded on a 5-point Likert scale ranging from 0 (“never”) to 4 (“very often”), with total scores ranging from 0 to 40, where higher

scores indicate greater perceived stress. The scale is unidimensional but has been shown in factor analyses to reflect perceived distress and perceived coping. Extensive empirical research has confirmed its psychometric soundness, reporting Cronbach’s alpha values above .80 and test–retest reliability, making it highly suitable for adolescent populations.

### 2.3. Data Analysis

Data were coded and analyzed using SPSS version 27 and AMOS version 21. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were computed to summarize demographic and study variables. To address the study objectives, Pearson’s product–moment correlation coefficient was first employed to test the bivariate associations between stress, spiritual wellbeing, and hope. Subsequently, a Structural Equation Model (SEM) was constructed in AMOS to assess the mediating role of spiritual wellbeing in the stress–hope relationship, with model fit indices (e.g., CFI, TLI, RMSEA, and  $\chi^2/\text{df}$ ) used to evaluate adequacy. Statistical significance was set at  $p < .05$  for all analyses.

## 3. Findings and Results

The demographic characteristics of the sample indicated that out of the 442 participants, 228 (51.6%) were female and 214 (48.4%) were male. In terms of age distribution, 103 participants (23.3%) were aged 13–14 years, 172 participants (38.9%) were aged 15–16 years, and 167 participants (37.8%) were aged 17–19 years. Regarding grade level, 131 students (29.6%) were in lower secondary (Form 1–2), while 311 students (70.4%) were in upper secondary (Form 3–4). These figures reflect a balanced representation of gender and age categories within the Kenyan adolescent school population.

**Table 1**

*Descriptive Statistics of Study Variables (N = 442)*

| Variable            | Mean  | SD    |
|---------------------|-------|-------|
| Stress              | 21.47 | 6.82  |
| Spiritual Wellbeing | 81.63 | 14.29 |
| Hope                | 24.92 | 5.17  |

The descriptive statistics in Table 1 indicate that the mean stress score among adolescents was 21.47 (SD = 6.82), reflecting a moderate level of perceived stress. The mean score for spiritual wellbeing was 81.63 (SD = 14.29),

suggesting that participants reported relatively high levels of spirituality. The mean hope score was 24.92 (SD = 5.17), showing that most adolescents in the sample experienced a moderately high sense of hope. The variability across

measures demonstrates sufficient dispersion to justify further correlational and structural equation analyses.

Prior to conducting Pearson correlation and SEM analyses, statistical assumptions were tested and confirmed. The data were screened for normality using skewness and kurtosis values, which fell within the acceptable  $\pm 2$  range (skewness =  $-0.41$  to  $0.62$ ; kurtosis =  $-0.77$  to  $1.14$ ). Linearity and homoscedasticity were verified through

scatterplots, while multicollinearity was examined using variance inflation factor (VIF), with all values below 2.1, indicating no violation. Reliability of the scales was satisfactory, with Cronbach's alpha values of .87 for hope, .91 for spiritual wellbeing, and .84 for stress. These results confirmed that the dataset met the assumptions required for both correlation analysis and SEM.

**Table 2**

*Pearson Correlations Between Stress, Spiritual Wellbeing, and Hope (N = 442)*

| Variable               | 1                 | 2                | 3 |
|------------------------|-------------------|------------------|---|
| 1. Stress              | —                 |                  |   |
| 2. Spiritual Wellbeing | -.46** (p < .001) | —                |   |
| 3. Hope                | -.39** (p < .001) | .53** (p < .001) | — |

The correlation results in Table 2 reveal that stress was negatively correlated with hope ( $r = -.39$ ,  $p < .001$ ), indicating that adolescents with higher stress levels reported lower hope. Stress was also negatively correlated with spiritual wellbeing ( $r = -.46$ ,  $p < .001$ ). In contrast, spiritual

wellbeing was strongly and positively correlated with hope ( $r = .53$ ,  $p < .001$ ). These findings support the hypothesized associations among the study variables and suggest that spiritual wellbeing may serve as a mediator between stress and hope.

**Table 3**

*Fit Indices of the Structural Equation Model*

| Fit Index   | Value  | Recommended Threshold |
|-------------|--------|-----------------------|
| $\chi^2$    | 118.47 | —                     |
| df          | 62     | —                     |
| $\chi^2/df$ | 1.91   | < 3.00                |
| GFI         | 0.94   | > 0.90                |
| AGFI        | 0.91   | > 0.90                |
| CFI         | 0.97   | > 0.95                |
| TLI         | 0.96   | > 0.95                |
| RMSEA       | 0.045  | < 0.06                |

As presented in Table 3, the structural equation model demonstrated an excellent fit to the data. The chi-square statistic was 118.47 with 62 degrees of freedom, yielding a  $\chi^2/df$  ratio of 1.91, well within the acceptable range. Goodness-of-fit indices (GFI = 0.94, AGFI = 0.91, CFI =

0.97, TLI = 0.96) all exceeded recommended thresholds. The RMSEA value was 0.045, indicating close model fit. Together, these indices confirm that the hypothesized model adequately represents the observed data.

**Table 4**

*Direct, Indirect, and Total Effects in the Structural Model*

| Path                             | b     | S.E. | $\beta$ | p      |
|----------------------------------|-------|------|---------|--------|
| Stress → Hope (direct)           | -0.18 | 0.05 | -.21    | < .001 |
| Stress → Spiritual Wellbeing     | -0.32 | 0.04 | -.42    | < .001 |
| Spiritual Wellbeing → Hope       | 0.29  | 0.05 | 0.38    | < .001 |
| Stress → Hope (indirect via SWB) | -0.09 | 0.03 | -.16    | .002   |
| Stress → Hope (total effect)     | -0.27 | 0.05 | -.37    | < .001 |

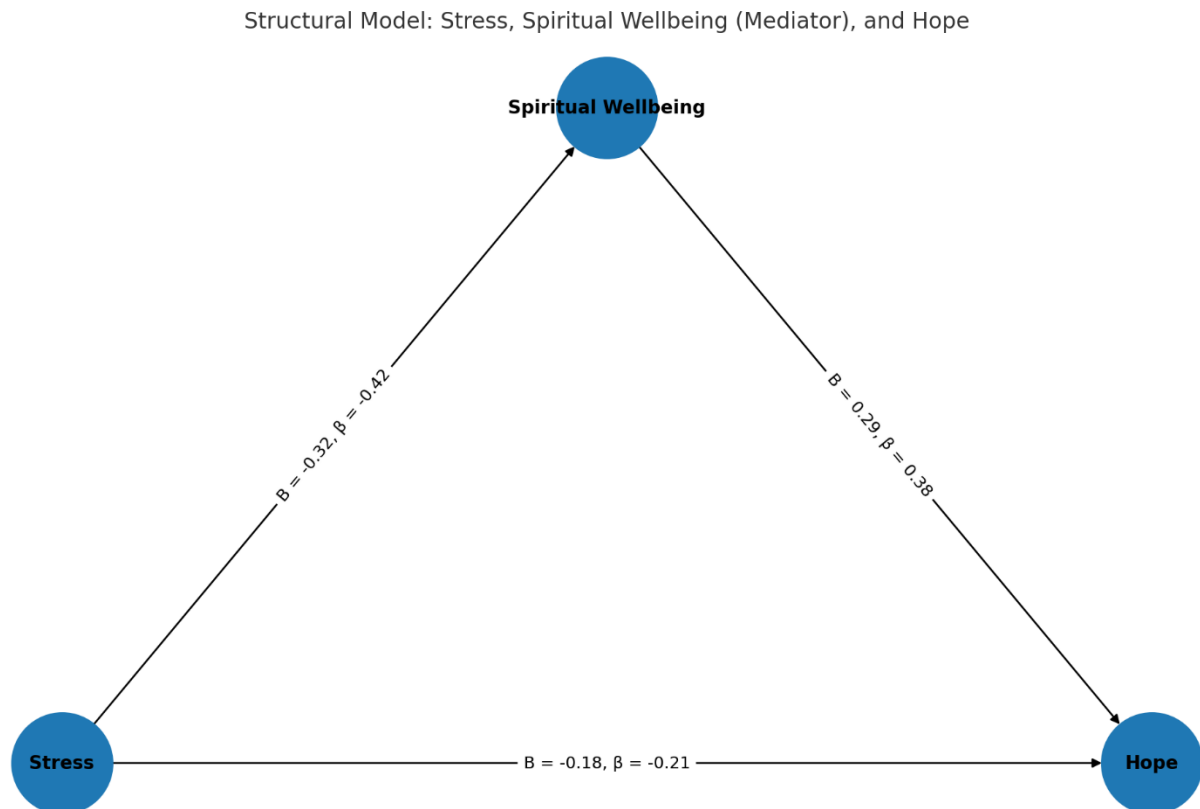


Table 4 presents the path coefficients from the structural model. The direct effect of stress on hope was significant and negative ( $b = -0.18$ ,  $\beta = -.21$ ,  $p < .001$ ). Stress also had a significant negative effect on spiritual wellbeing ( $b = -0.32$ ,  $\beta = -.42$ ,  $p < .001$ ). Spiritual wellbeing positively predicted hope ( $b = 0.29$ ,  $\beta = .38$ ,  $p < .001$ ). Importantly, the indirect

path from stress to hope through spiritual wellbeing was also significant ( $b = -0.09$ ,  $\beta = -.16$ ,  $p = .002$ ), confirming the mediating role of spiritual wellbeing. The total effect of stress on hope was  $-0.27$  ( $\beta = -.37$ ,  $p < .001$ ), indicating that both direct and indirect pathways contribute meaningfully to the relationship between stress and hope.

Figure 1

Structural Model of The Study



#### 4. Discussion and Conclusion

The present study aimed to investigate the mediating role of spiritual wellbeing in the relationship between stress and hope among adolescents in Kenya. Findings revealed that stress had a significant negative correlation with hope, indicating that higher levels of stress were associated with diminished levels of hopeful thinking. At the same time, spiritual wellbeing showed a strong positive correlation with hope, and mediation analysis demonstrated that spiritual wellbeing partially mediated the effect of stress on hope. This suggests that while stress tends to erode adolescents' sense of agency and optimism for the future, spiritual wellbeing provides a meaningful buffer that fosters resilience and sustains hope even under conditions of

psychological strain. These results contribute to a growing body of empirical literature that highlights the central role of spirituality as a psychological mechanism through which stress is transformed into more adaptive and hopeful outcomes.

The finding that stress is negatively associated with hope aligns with prior studies across various populations. Adolescents and young adults exposed to academic burdens, economic challenges, and health crises frequently report diminished hope and increased psychological distress (Lee & Ang, 2023; Mangoulia et al., 2024). For example, research conducted among Greek dentistry and nursing students after the COVID-19 pandemic revealed that elevated stress levels were consistently linked with lower resilience and hope (Mangoulia et al., 2024). Similarly, the work of Terres and

colleagues (Terres et al., 2024) highlighted how the pandemic significantly intensified stress and reduced wellbeing, suggesting that the interplay between stress and diminished hope is a universal phenomenon. In the Kenyan adolescent context, where economic instability, educational pressures, and social expectations converge, the negative relationship between stress and hope resonates with these global findings.

At the same time, the strong positive relationship observed between spiritual wellbeing and hope reinforces the centrality of spirituality in adolescent psychological adjustment. This is consistent with prior findings in clinical and non-clinical populations, which demonstrate that spirituality fosters meaning-making, resilience, and optimism. Zhou and colleagues (Zhou et al., 2025) showed through latent profile analysis that higher levels of spiritual wellbeing among hemodialysis patients predicted significantly higher levels of hope, even in the face of serious illness. Likewise, Artan (Artan, 2025) reported that patients with cancer who experienced stronger spiritual wellbeing were more capable of maintaining hope despite the interference of pain and suffering. These findings parallel the current results, suggesting that spirituality functions as a stable protective factor across different ages and contexts, including adolescence.

Our mediation analysis further clarified that spiritual wellbeing acts as a bridge between stress and hope. This mediating role indicates that adolescents who cultivate a sense of spiritual wellbeing—through religious or existential meaning—are less affected by the negative impact of stress on their hope levels. Such findings are in line with the work of Safari and colleagues (Safari et al., 2024), who proposed a hope model in heart failure patients in which spiritual wellbeing mediated the relationship between emotional regulation and hope, effectively reducing death anxiety. Similarly, UĞUz and Keskin (UĞUz & Keskin, 2024) identified resilience as another mediator linking hope and spiritual wellbeing in cancer patients, underscoring the dynamic ways in which spirituality enhances psychological resources. The consistency across studies reinforces the importance of spiritual wellbeing as a mediator, not only in health-compromised adult populations but also in developmental stages such as adolescence.

The present study's findings also correspond with prior evidence demonstrating that spirituality interacts with other psychological attributes to enhance hope. For instance, Maral and colleagues (Maral et al., 2024) found that positive childhood experiences and spiritual wellbeing were

associated with hope through the mediating role of psychological flexibility and meaning-based coping in a Turkish sample. Adolescents in Kenya, similarly, may draw on spiritual traditions and community practices to construct meaning and cope flexibly with their stressors, thereby maintaining hopeful perspectives about the future. Moreover, Simpson and colleagues (Simpson et al., 2020) demonstrated that spirituality, resilience, and hope collectively mediated outcomes among family caregivers after traumatic brain injuries, suggesting that spiritual wellbeing functions synergistically with resilience in shaping hopeful outcomes.

Our results also align with studies highlighting the protective role of spirituality in contexts of psychological distress. For example, Khalajinia et al. (Khalajinia et al., 2022) found that middle-aged women with higher spiritual wellbeing reported greater levels of hope and lower levels of depression, while Mohammadchenari and colleagues (Mohammadchenari et al., 2022) confirmed that spiritual wellbeing mediated the relationship between parenting stress and health-related quality of life in parents of children with learning disorders. In both cases, spiritual wellbeing was the central mediator transforming stressful life conditions into more hopeful and adaptive psychological states. Adolescents, similarly, face developmental stressors that threaten wellbeing, but spirituality provides an avenue for meaning, optimism, and resilience.

Additionally, our findings echo global research that highlights the universality of the spirituality–hope connection across cultures. Edara (Edara, 2018) demonstrated that spirituality protected international students in Taiwan from the negative effects of acculturative stress, sustaining their hope and subjective wellbeing. Wnuk (Wnuk, 2017, 2022) found that spiritual experiences mediated faith and hope among individuals recovering from addiction and cancer patients in Poland, again underscoring the cross-cultural relevance of this mechanism. Similarly, Santos et al. (Santos et al., 2023) used network analysis to show that positive psychological attributes, including spirituality and hope, supported wellbeing among elderly populations with depression. These consistent findings from diverse cultures validate the current study's results among Kenyan adolescents and suggest that spirituality may represent a universal mediator between stress and hope.

The observed mediation is further reinforced by experimental evidence demonstrating that spiritual wellbeing is modifiable through intervention. Wang and colleagues (Wang et al., 2024) showed in a randomized

controlled trial that mindfulness-based stress reduction significantly increased both spiritual wellbeing and hope in breast cancer patients. Likewise, Holman (Holman, 2023) highlighted that mindfulness and spirituality-based interventions enhanced resilience and wellbeing among teachers and students. These intervention-based findings are highly relevant for adolescent populations, as they suggest that structured programs that integrate mindfulness and spirituality could potentially buffer stress and foster hope.

The results also add to the growing understanding of how spirituality and stress interact to influence wellbeing in younger populations. Arslan and Yildirim (Arslan & Yildirim, 2021) emphasized that spirituality and meaning-based coping mediated the relationship between stress and subjective wellbeing during the pandemic. Their findings resonate with the current study, suggesting that spirituality helps adolescents reframe stress in a way that preserves hope. Moreover, Hasan (Hasan, 2019) and Fathi et al. (Fathi et al., 2018) both demonstrated in Iranian samples that spirituality significantly correlated with hope among patients undergoing stressful health treatments, reinforcing the broader principle that spiritual wellbeing provides resilience and optimism regardless of context.

Taken together, the results of this study affirm that spiritual wellbeing serves as a vital mediator between stress and hope in adolescents. While stress undermines hope, spirituality replenishes it by providing existential meaning, emotional support, and resilience. This dual function positions spiritual wellbeing as both a buffer and a pathway for adolescent mental health, offering theoretical and practical implications for interventions aimed at youth populations worldwide.

## 5. Limitations & Suggestions

Despite its contributions, this study has several limitations that should be acknowledged. First, the cross-sectional design precludes conclusions about causality between stress, spiritual wellbeing, and hope. Although mediation analysis was conducted, the temporal sequence of variables cannot be firmly established. Second, the reliance on self-report measures may have introduced biases such as social desirability or inaccurate self-perceptions, particularly in the domain of spirituality, where personal beliefs and cultural norms strongly influence responses. Third, while the sample size was robust and representative according to Krejcie and Morgan's guidelines, the study was limited to adolescents in Kenya, which may restrict the generalizability

of findings to adolescents in other cultural contexts. Finally, potential confounding variables such as family support, socio-economic status, and personality traits were not controlled, and these may have contributed to variations in hope and stress levels.

Future research should employ longitudinal or experimental designs to clarify the causal pathways between stress, spiritual wellbeing, and hope. Intervention studies are especially needed to test whether enhancing spiritual wellbeing through structured programs—such as mindfulness-based practices, meaning-focused interventions, or culturally grounded spiritual activities—can directly increase hope in adolescents under stress. Additionally, cross-cultural comparative studies would provide valuable insights into the universality and cultural specificity of the mediating role of spirituality. Researchers should also consider integrating other mediators, such as resilience, social support, and coping flexibility, into the models to capture the multidimensional pathways through which adolescents sustain hope. Finally, qualitative approaches could enrich the understanding of how adolescents subjectively experience the interplay between stress, spirituality, and hope.

The findings carry important practical implications for educators, mental health practitioners, and policymakers. Schools and community organizations should integrate programs that foster spiritual wellbeing—whether through mindfulness, reflective practices, or culturally relevant spiritual education—to strengthen adolescents' ability to cope with stress. Mental health professionals working with adolescents should recognize the protective role of spirituality and incorporate it into therapeutic frameworks when appropriate. At the policy level, creating supportive environments that nurture spiritual growth alongside academic and social development can serve as a preventive strategy against the erosion of hope in stressful contexts. By embedding spirituality as a central component of adolescent development programs, practitioners and policymakers can equip youth with the resources they need to remain resilient and optimistic in the face of challenges.

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## Declaration of Interest

The authors of this article declared no conflict of interest.



## Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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## Authors' Contributions

All authors equally contributed to this article.

## References

- Ahmed, R. R., Soomro, F. A., Channar, Z. A., E, A. R. H., Soomro, H. A., Pahi, M. H., & Salleh, N. Z. M. (2022). Relationship Between Different Dimensions of Workplace Spirituality and Psychological Well-Being: Measuring Mediation Analysis Through Conditional Process Modeling. *International journal of environmental research and public health*, 19(18), 11244. <https://doi.org/10.3390/ijerph191811244>
- Arslan, G., & Yildirim, M. (2021). Meaning-Based Coping and Spirituality During the COVID-19 Pandemic: Mediating Effects on Subjective Well-Being. *Frontiers in psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.646572>
- Artan, Y. (2025). From Pain Interference to Hope: Exploring Spiritual Well-Being as a Pathway for Patients With Cancer. *Cancer Nursing*. <https://doi.org/10.1097/ncc.0000000000001523>
- Edara, I. R. (2018). Social and Spiritual Dimensions as Protective Factors in the Relationship Between Acculturative Stress and Subjective Well-Being Among International Students in Taiwan. *Psychology*, 09(07), 1582-1604. <https://doi.org/10.4236/psych.2018.97096>
- Fathi, M., Hamzepour, H., Gammon, J., Roshani, D., & Valiee, S. (2018). Hope and Spiritual Well-Being in Iranian Patients Undergoing Chemotherapy. *Journal of Evolution of Medical and Dental Sciences*, 7(27), 3106-3111. <https://doi.org/10.14260/jemds/2018/698>
- Hasan, H. F. (2019). Detecting the Aspects of Life Satisfaction; Hope, Well-Being, Spirituality in Cancer Male Adults Patients. *لارک*, 31(203). <https://doi.org/10.31185/lark.vol4.iss31.203>
- Holman, K. C. (2023). Embracing Mindfulness and Spirituality to Enhance Well-Being and Resilience in Teachers and Students. 270-287. <https://doi.org/10.4018/978-1-6684-6371-0.ch014>
- Khalajinia, Z., Motlagh, E. A. B., Bagheri, Z., & Izadkhah, F. S. (2022). Relationship Between Spiritual Well-Being, Depression, and Hope in Middle-Aged Women Attending Community Health Centers in Qom, Iran. *Health Spirituality and Medical Ethics*, 9(2), 57-62. <https://doi.org/10.32598/hsmej.9.2.109.3>
- Lee, F. S., & Ang, C.-S. (2023). Positive Vibes Are Not Always Easy: Examining the Association Between Covid-19 Stress and Mental Well-Being. *Psychological Reports*, 127(5), 2245-2261. <https://doi.org/10.1177/00332941221149179>
- Liu, Q., Ho, K. Y., Lam, K. K. W., Lam, W., Ma, P., Abu-Odah, H., Belay, G. M., Yuen, J., Ling, D., Ching, S. S. Y., & Wong, F. K. Y. (2023). The Associations Between Spiritual Well-being, Hope and Psychological Symptoms in Chinese Childhood Cancer Patients: A Path Analysis. *Psycho-Oncology*, 32(9), 1452-1460. <https://doi.org/10.1002/pon.6198>
- Mahipalan, M., & Suresh, S. (2019). Workplace Spirituality, Psychological Well-Being and Mediating Role of Subjective Stress. *International Journal of Ethics and Systems*, 35(4), 725-739. <https://doi.org/10.1108/ijoes-10-2018-0144>
- Maral, S., Bilmez, H., & Satıcı, S. A. (2024). Positive Childhood Experiences and Spiritual Well-Being: Psychological Flexibility and Meaning-Based Coping as Mediators in Turkish Sample. *Journal of religion and health*, 63(4), 2709-2726. <https://doi.org/10.1007/s10943-024-02079-4>
- Mohammadchenari, B., Marashian, F. S., & Shoushtari, M. T. (2022). A Structural Model of Health-Related Quality of Life Based on Parenting Stress and Spiritual Well-Being With the Mediating Role of Locus of Control in Parents of Children With Specific Learning Disorder. *Caspian Journal of Health Research*, 7(1), 53-60. <https://doi.org/10.32598/cjhr.7.1.408.1>
- Rambod, M., Pasyar, N., & Mokhtarizadeh, M. (2020). <p>Psychosocial, Spiritual, and Biomedical Predictors of Hope in Hemodialysis Patients</p>. *International Journal of Nephrology and Renovascular Disease, Volume 13*, 163-169. <https://doi.org/10.2147/ijnrd.s255045>
- Safari, S., Parandin, S., & Akbari, M. (2024). Development of a Hope Model Based on Emotion Regulation With Spiritual Well-Being as a Mediator in Heart Failure Patients in Kermanshah and Its Effectiveness on Death Anxiety. *PDMD*, 3(4), 64-81. <https://doi.org/10.61838/kman.pdmd.3.4.5>
- Santos, S. B. d., Machado, W. d. L., Fernandez, L. L., Pádua, A. C. d., Hoffmann, S., Calvetti, P. Ü., Schaab, B. L., & Reppold, C. T. (2023). Positive Attributes in Elderly People With Different Degrees of Depression: A Study Based on Network Analysis. *Psicologia Reflexão E Crítica*, 36(1). <https://doi.org/10.1186/s41155-022-00244-w>
- Simone Maria Muniz da Silva, B., Gomes, E. T., Paulo César da Costa, G., & Souza, K. V. D. (2018). Spiritual Well-Being and Hope in the Preoperative Period of Cardiac Surgery. *Revista Brasileira de Enfermagem*, 71(2), 398-405. <https://doi.org/10.1590/0034-7167-2016-0642>
- Simpson, G., Anderson, M., Jones, K., Genders, M., & Gopinath, B. (2020). Do Spirituality, Resilience and Hope Mediate Outcomes Among Family Caregivers After Traumatic Brain Injury or Spinal Cord Injury? A Structural Equation Modelling Approach. *NeuroRehabilitation*, 46(1), 3-15. <https://doi.org/10.3233/nre-192945>
- Terres, M. d. S., Rohden, S. F., & Sebastião, L. V. (2024). COVID-sumers' Consumers' Feelings Due Covid-19 Pandemic in Brazil and Potential Implications for Services Marketing. *International Journal of Pharmaceutical and Healthcare Marketing*, 18(4), 649-674. <https://doi.org/10.1108/ijphm-04-2022-0034>
- Uğuz, Ö., & Keskin, G. (2024). The Mediating Role of Resilience in the Relationship Between Hope and Spiritual Well-Being in Cancer Patients. *Cancer Nursing*. <https://doi.org/10.1097/ncc.0000000000001379>

- Wang, Y., Beshai, S., Heshmati, R., Fakhim, S. A., & Golzar, T. (2024). The Effects of Mindfulness-Based Stress Reduction on Spiritual Well-Being and Hope in Patients With Breast Cancer: A Randomized Controlled Trial. *Psychology of Religion and Spirituality*, 16(2), 223-232. <https://doi.org/10.1037/rel0000519>
- Wnuk, M. (2017). Spiritual Experiences as a Mediator Between Faith as Well as Religious Practices and Hope Among Sex Addicted Individuals From Poland Participating in Sex and Love Addicts Anonymous (SLAA). *Clinical Psychiatry*, 03(02). <https://doi.org/10.21767/2471-9854.100044>
- Wnuk, M. (2022). Beneficial Effects of Spiritual Experiences and Existential Aspects of Life Satisfaction of Breast and Lung Cancer Patients in Poland: A Pilot Study. *Journal of religion and health*, 61(6), 4320-4336. <https://doi.org/10.1007/s10943-022-01601-w>
- Zhou, X. H., Chen, L., Zhang, Y., Li, H., Liu, L. C., Shi, M., & You, R. (2025). The Effect of Spiritual Well-Being on Hope Among Hemodialysis Patients: A Latent Profile Analysis. *Hemodialysis International*, 29(2), 222-230. <https://doi.org/10.1111/hdi.13210>
- Mangoulia, P., Kanellopoulou, A., Manta, G., Chrysochoou, G., Dimitriou, E., Kalogerakou, T., & Αντωνιάδου, M. (2024). Exploring the Levels of Stress, Anxiety, Depression, Resilience, Hope, and Spiritual Well-Being Among Greek Dentistry and Nursing Students in Response to Academic Responsibilities Two Years After the COVID-19 Pandemic. *Healthcare*, 13(1), 54. <https://doi.org/10.3390/healthcare13010054>