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**SPIRITUALITY, SPIRITUAL COPING AND MENTAL WELL-
BEING AMONG MALAYSIAN MEDICAL AND HEALTH
SCIENCES STUDENTS**

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Abstract:

This study aims to examines the relationship between mental health, spirituality, and spiritual coping among medical and health sciences university students in East Coast Peninsular Malaysia. Using the Depression, Anxiety, and Stress Scale (DASS-21), data were collected from 484 students predominantly in various medical and health sciences disciplines. The study explored how spirituality, measured by the Spirituality Scale (SS) and the Spiritual Coping Questionnaire (SCQ), influences depression, anxiety, and stress levels. Findings revealed that higher spirituality was significantly associated with lower depression, anxiety, and stress. Positive spiritual coping was linked to lower depression, while negative spiritual coping was associated with higher levels of depression, anxiety, and stress. These results indicate that spirituality can act as both a protective factor and a source of distress, depending on the coping mechanisms employed. The study underscores the necessity of culturally sensitive mental health interventions that incorporate spiritual dimensions, providing a holistic approach to support students' psychological well-being. This research contributes valuable insights for educators, mental health professionals, and policymakers, highlighting the

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complex interplay between spirituality and mental health in a multicultural context.

Keywords:

Mental Health, Depression, Anxiety, Stress, Spirituality, Coping

Introduction

Mental health issues among university students have become a significant global concern, with those in medical and health sciences programs being particularly susceptible due to their demanding academic environments. In Malaysia, this problem is acute, with recent data from the National Health and Morbidity Survey indicating that nearly 40% of Malaysian university students experience mental health challenges such as depression, anxiety, and stress (Ministry of Health Malaysia, 2023). The high prevalence of these issues among medical and health sciences students underscores the need for effective strategies to mitigate their mental health burdens.

Spirituality, which encompasses a personal quest for meaning and connection to the transcendent, has been identified as a potential protective factor against mental health issues (Lucchetti et al., 2021). It is particularly relevant in Malaysia, where diverse religious beliefs and practices are integral to cultural identity. Studies have shown that spirituality can provide individuals with a sense of purpose, hope, and community, which are crucial for mental well-being (Rosmarin et al., 2020; Koenig et al., 2017). In the context of Malaysian students, understanding how spirituality influences mental health can offer culturally tailored interventions that resonate with their lived experiences.

Spiritual coping, a subset of spiritual practices, involves utilising spiritual beliefs and activities to manage stress and adversity (Dunn & Robinson-Lane, 2020). Positive spiritual coping strategies, such as seeking spiritual support, prayer, and engaging in religious activities, have been linked to better mental health outcomes. Conversely, negative spiritual coping, which includes spiritual discontent and questioning one's faith, can exacerbate psychological distress (Dunn & Robinson-Lane, 2020; Saad & de Medeiros, 2012). For Malaysian medical and health sciences students, who face significant academic and clinical pressures, spiritual coping mechanisms might offer crucial support in navigating these challenges.

Despite the recognised importance of spirituality and spiritual coping, there is a notable gap in research focusing specifically on Malaysian medical and health sciences students. Most existing studies have been conducted in Western contexts (Graça & Brandão, 2024) which may not fully capture the unique cultural and religious dynamics in Malaysia. This oversight is critical as Malaysia's diverse cultural landscape includes major religions such as Islam, Buddhism, Christianity, and Hinduism, each contributing to the spiritual fabric of the nation (Ali, 2022; Milner et al., 2019). These religious and cultural contexts are pivotal in shaping the spiritual experiences and coping mechanisms of students.

Recent studies have begun to highlight the importance of this integration. For instance, Wong et al. (2023) found that Malaysian university students who engaged in regular spiritual practices reported lower levels of anxiety and depression. Similarly, a study by Musa et al. (2016) indicated that spiritual coping strategies were significantly associated with better psychological

adjustment among Malaysian students. These findings underscore the potential benefits of incorporating spirituality into mental health support systems. Hence, by contextualising this study within the Malaysian cultural and religious framework, we aim to enhance the relevance and applicability of the findings, providing a robust basis for developing effective mental health interventions for medical and health sciences students.

The current study aims to address this gap by investigating the relationship between mental health, spirituality, and spiritual coping among Malaysian medical and health sciences students. The objectives are to assess the prevalence of mental health issues (depression, anxiety, and stress) among these students and explore the associations between spirituality, spiritual coping, and mental health outcomes. By addressing these objectives, this study seeks to provide a comprehensive understanding of the role of spirituality and spiritual coping in the mental health of Malaysian medical and health sciences students. The findings are expected to inform the development of culturally sensitive interventions that integrate spiritual dimensions, thereby enhancing the mental well-being of this vulnerable population.

Methodology

Study Design

This cross-sectional study was designed to comprehensively analyse the interplay between socio-demographic factors, mental health, and religiosity among medical and health sciences students. By using a combination of self-report questionnaires, the study aims to capture a detailed picture of how these variables interact within the student population at universities across East Coast Peninsular Malaysia.

Study Population

The study population comprised undergraduate students enrolled in medical and health sciences programs at universities across East Coast Peninsular Malaysia. Inclusion criteria included students who were currently registered and actively attending courses, aged between 18 and 25 years, and who provided informed consent. Exclusion criteria included students with a history of neurological or psychiatric disorders, substance abuse, or any condition that could significantly impact cognitive function and mental health.

Sample Size Determination

Using G*Power Software version 3.1.9.7, using a t-test for linear multiple regression (one tail) the required sample size was calculated based on an effect size (f^2) of 0.02, a significance level of $p < 0.05$, and a power ($1 - \beta$ error probability) of 95%, number of predictors of 5 resulting in a total sample size of 543 students. However, after considering 10% of drop out we obtained the total number of students, $N = 488$. A purposive sampling method was employed to select participants from the medical and health sciences faculties. Finally, after successful recruitment, 4 students decided to withdraw from participating, making the final sample size of $N = 484$.

Data Collection Instruments and Procedures

Participants were recruited through announcements and email invitations. Informed consent was obtained from all participants. Permission was obtained from the instrument formulators to use their instruments and inventories. The items were digitised, and the language was made more applicable to the Malaysian context. Data was collected online using Google Forms. Data

collection was set to ensure that only the individuals willing to participate would be allowed to, according to inclusion and exclusion criteria and has read and understood the informed consent as well instructions for the study and were willing to proceed.

Socio-Demographic and Clinical Proforma Data

This self-report questionnaire collected data on age, gender, socio-economic status, family background, and other relevant socio-demographic variables.

DASS-21 (Depression, Anxiety, and Stress) Assessment

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) was used to measure participants' levels of depression, anxiety, and stress. It is a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

The DASS-21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety and stress experienced by normal subjects and clinical populations are essentially differences in degree. The DASS-21 therefore has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the DSM and ICD.

Students' Spirituality Assessment

To measure the spirituality among students the Spirituality Scale (SS) inventory (Jagers & Smith, 1996) was used. SS is a holistic instrument that attempts to measure the beliefs, intuitions, lifestyle choices, practices, and rituals representative of the human spiritual dimension and is designed to guide spiritual interventions. It is a 38-item questionnaire in a Likert-type format from (1. strongly disagree – 6. strongly agree) which is scored by summing the items together. The internal consistency for this scale ranged from $\alpha = 0.81$ - 0.94 for the subscales and $\alpha = 0.94$ for the total instrument. Test re-test reliability was $r = 0.85$ and the validity was rated as good (Delaney, 2005). Some sample items from the questionnaire include “*I find meaning in my life experiences*” and “*My spirituality gives me inner strength*”.

Students' Spirituality Coping Assessment

In accessing spiritual coping among students, we used the Spiritual Coping Questionnaire (SCQ) – a 32-item instrument constituting of two scales comprising of positive spiritual coping (P-SCOPE) and negative spiritual coping (N-SCOPE) (Charzyńska, 2015). It is responded to in terms of a 1-5 Likert scale. The P-SCOPE and N-SCOPE domains include four subscales-domains (personal, social, environmental, and religious). Various questions represent various domains and could be summed up either in terms of general positivity and negativity or positivity and negativity by domain. The internal consistency of the P-SCOPE scale was $\alpha = 0.92$, and of the N-SCOPE, $\alpha = 0.82$. In test-retest reliability it was $r = 0.78$ for the P-SCOPE scale, and $r = 0.72$ for the N-SCOPE scale. Construct validity was reported to be good

(Charzyńska, 2015). A few sample items are “*I convinced myself that there is no purpose in my life,*” “*I convinced myself that my life has no meaning,*” “*I tried to look at the beauty and the uniqueness of nature,*” and “*In my relationship with God/higher power I looked for strength to live*”.

Statistical Data Analysis

The collected data were analysed using Statistical Package for Social Sciences (SPSS) software version 26. An alpha (α) was set at 0.05 with a confidence interval (CI) at 95%. Descriptive statistical analysis, such as mean, standard deviation, chi-square, and analysis of variance (ANOVA) was applied to the data. The analyses were adjusted for covariates.

Ethical Considerations

The study protocol was reviewed and approved by the Universiti Sultan Zainal Abidin Human Research Ethics Committee (UHREC). This study has been assigned a study protocol code (UniSZA/UHREC/2023/590). All participants provided written informed consent, and their data were anonymised to ensure confidentiality. Participants were informed of their right to withdraw from the study at any time without penalty.

Results

Students' Depression, Anxiety, and Stress (DASS-21) Profiles

Table 1 outlines the depression, anxiety, and stress profiles of 484 students using the DASS-21 scoring system. This profile indicates varying levels of depression, anxiety, and stress among students, with a significant portion experiencing extreme levels of anxiety (mean score: 10.26 ± 7.88 , followed by depression (mean score: 9.69 ± 8.39), and stress (mean score: 11.32 ± 7.79).

Table 1: Students' Depression, Anxiety, and Stress (DASS-21) Profile

DASS-21 Scoring	Frequency, n (%)		
	Depression	Anxiety	Stress
Normal	177 (36.6)	104 (21.5)	149 (30.8)
Mild	30 (6.2)	42 (8.7)	53 (11)
Moderate	84 (17.4)	46 (9.5)	89 (18.4)
Severe	51 (10.5)	48 (9.9)	91 (18.8)
Extremely Severe	142 (29.3)	244 (50.4)	102 (21.1)

Socio-demographic Profiles

Table 2 provides a summary of the sociodemographic profiles of 484 students with an average age: of 21.26 years with a standard deviation of 3.07. Gender distribution shows 17.8% male, 80.2% female, and 2.1% undisclosed. Ethnicity is predominantly Malay (92.8%), followed by Chinese (1.7%), Indian (2.5%), and other ethnicities (3.1%). Most students are followers of Islam (95.2%), with minor representations from Buddhism, Taoism, Hinduism, Sikhism, and other religions. Nearly all students (98.6%) are non-smokers, with a few ex-smokers and a single light smoker. Most are single (97.3%), with a minimal number married or undisclosed. Academic programs vary, with significant numbers in medical and health sciences, nursing, pharmacy, dietetics, biomedical sciences, nutrition sciences, medical imaging, and allied health

sciences. Students are primarily in their first year (43.4%), with decreasing numbers in higher years.

Table 2: Students' Sociodemographic Profiles and Association With DASS-21 Scales

Socio-demography Variables	Frequency, n (%)	Chi-Square; X^2 (df)		
		Depression	Anxiety	Stress
Age**	21.26 ± 3.07	53.49 (40)	41.38 (40)	40.33 (40)
Gender				
Male	86 (17.8)			
Female	388 (80.2)	4.08 (8)	8.52 (8)	10.88 (8)
Undisclosed	10 (2.1)			
Ethnicity				
Malay	449 (92.8)			
Chinese	8 (1.7)	10.67 (12)	27.89 (12) *	21.28 (12) *
Indian	12 (2.5)			
Other	15 (3.1)			
Religion				
Islam	461 (95.2)			
Buddhism	4 (0.8)	21.37 (20)	45.18 (20) *	32.34 (20) *
Taoism	1 (0.2)			
Hinduism	13 (2.7)			
Sikhism	3 (0.6)			
Others	2 (0.4)			
Smoking Status				
Non-smoker	477 (98.6)	4.69 (8)	13.35 (8)	14.14 (8)
Ex-smoker	6 (1.2)			
Light smoker	1 (0.2)			
Spousal Status				
Single	471 (97.3)	6.87 (8)	17.76 (8) *	7.83 (8)
Married	2 (0.4)			
Undisclosed	11 (2.3)			
Program				
MBBS	48 (9.9)			
Medical & Health Sc.	105 (21.7)			
Nursing	90 (18.6)			
Dentistry	5 (1.0)	57.84 (36) *	46.18 (36)	66.66 (36) *
Pharmacy	53 (11)			
Dietetics	50 (10.3)			
Biomedical sciences	29 (6)			
Nutrition sciences	46 (9.5)			
Medical imaging	36 (7.4)			
Allied Health sciences	22 (4.5)			
Level of Study				
Year 1	210 (43.4)			
Year 2	130 (26.9)	21.09 (160)	24.79 (16)	26.11 (16)
Year 3	111 (22.9)			
Year 4	32 (6.6)			
Year 5	1 (0.2)			

Notes: N = 484, data values are presented as number of subjects (n), with percentage (%) in parentheses; ** Data are means ± standard deviations. Light smoker (≤ 10 per day). * The level of significance which is selected at $\alpha = 0.05$ (2-tailed)

Moreover, most students fall into normal stress ($n = 149, 30.7\%$) and depressive ($n = 177, 36.5\%$) levels. However, an alarmingly 244 (50.4%) students had extremely severe anxiety across different programs. Besides, the chi-square analysis also revealed significant associations between ethnicity and anxiety [X^2 (df): 27.89 (12); $p = 0.00 \leq 0.05$], ethnicity and stress [X^2 (df): 21.29 (12); $p = 0.00 \leq 0.05$], religion and anxiety [X^2 (df): 45.18 (20); $p = 0.00 \leq 0.05$], religion and stress [X^2 (df): 32.34 (20); $p = 0.00 \leq 0.05$]. Additionally, spousal status is also associated with anxiety [X^2 (df): 17.76 (8); $p = 0.00 \leq 0.05$]. Based on Figure 1, students from medical and health sciences, and the nursing program recorded the highest number of severe and extremely severe stress, anxiety, and depression, followed by students from the pharmacy program. Pearson chi-square revealed there is a significant association between the type of undergraduate program with stress level [X^2 (df): 66.66 (36); $p = 0.001 \leq 0.05$] and depression level [X^2 (df): 57.85 (36); $p = 0.012 \leq 0.05$], but not with anxiety level. Finally, DASS-21 scores are not associated with other students' sociodemographic profiles and clinical proforma.

Relationship Between DASS-21 and Spirituality and Spiritual Coping

Table 3 represents the results of a multiple linear regression analysis exploring the relationships between stress, anxiety, and depression (measured by DASS-21) and three independent variables: positive spiritual coping (P-SCQ), negative spiritual coping (N-SCQ), and spirituality.

Positive spiritual coping (P-SCQ) is negatively associated with depression, but the association with stress and anxiety is not significant. Negative religious coping (N-SCQ) is positively associated with stress, anxiety, and depression, with significant relationships across all three dependent variables. Spirituality (measured by SS) is negatively associated with stress, anxiety, and depression, indicating that higher levels of religiosity are associated with lower levels of these mental health issues. This relationship is significant for all three dependent variables. The R^2 values indicate that the independent variables explain a modest proportion of the variance in stress, anxiety, and depression.

The Mediating Role of SCQ in The Association Between Spirituality and DASS-21

The mediating variables investigated were spirituality (positive and negative) coping i.e., the P-SCQ and N-SCQ. Regression analysis using a percentile bootstrap estimation approach with 10000 samples (Shrout & Bolger, 2002), implemented with the PROCESS Macro Version 4.1 (Hayes, 2022, model 4) was used to investigate the mediating role of P-SCQ and N-SCQ on the relationship between spirituality and mental health i.e., in term of DASS-21 score (as per depression, anxiety, and stress). The mediating results are tabulated in Table 4.

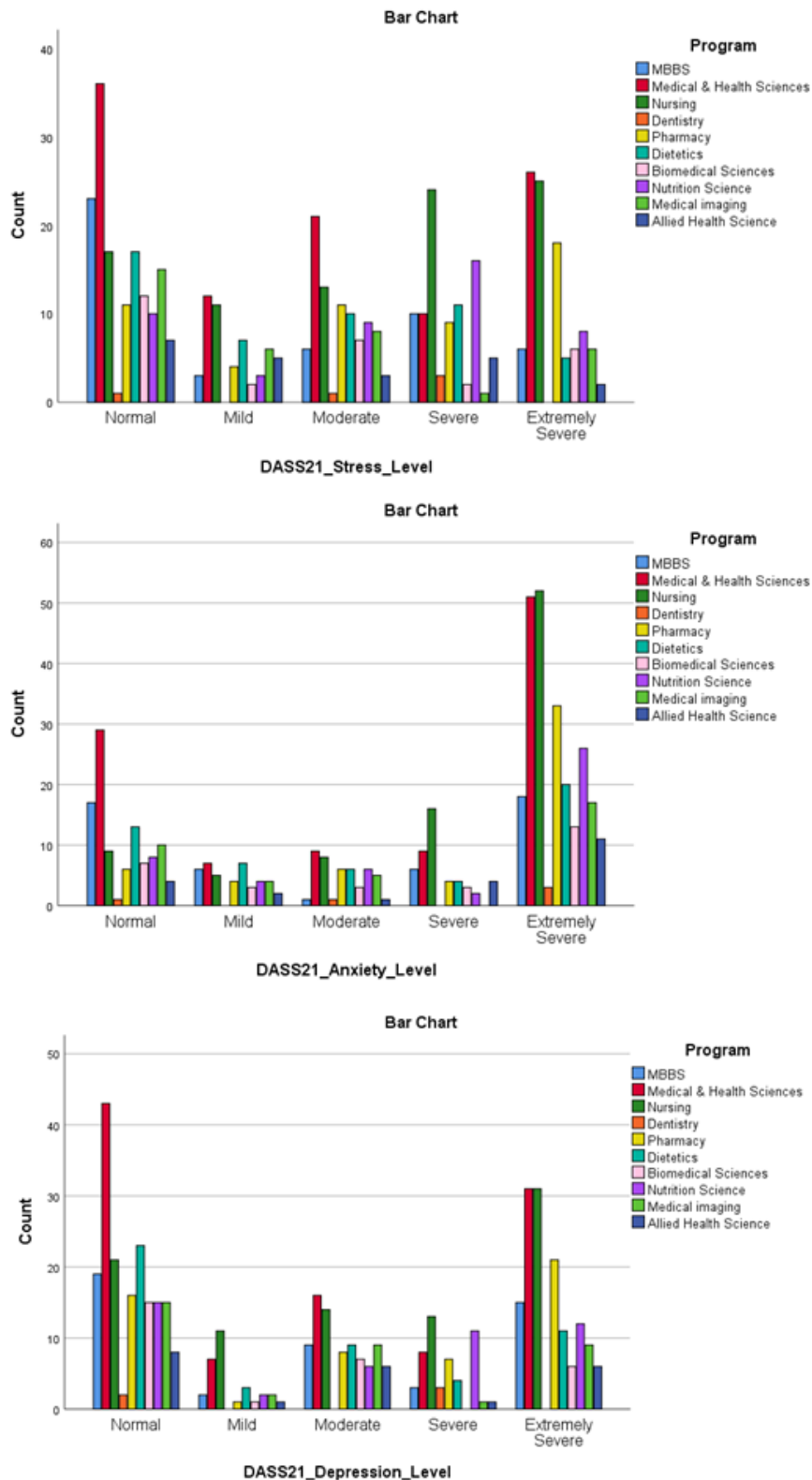


Figure 1: Bar Chart Indicating Stress, Anxiety, And Depression Levels Among Students From Each Program.

Table 3: Multiple Linear Regression of Relationship Between DASS-21, Spirituality and Spiritual Coping

Dependent variables	Independent variables	Std. Coefficient Beta (β)
DASS-21 Stress (y)	Constant	16.61
	P-SCQ x_1	-0.09
	N-SCQ x_2	0.48 *
	SS x_3	-0.21 *
R^2	0.092	
Adjusted R^2	0.086	
Regression equation	$\hat{y} = 16.61 + 0.48 x_2 - 0.21 x_3$	
DASS-21 Anxiety	Constant	13.80
	P-SCQ x_1	-0.07
	N-SCQ x_2	0.40 *
	SS x_3	-0.18 *
R^2	0.061	
Adjusted R^2	0.055	
Regression equation	$\hat{y} = 13.80 + 0.40 x_2 - 0.18 x_3$	
DASS-21 Depression	Constant	14.72
	P-SCQ x_1	-0.13 *
	N-SCQ x_2	0.73 *
	SS x_3	-0.29 *
R^2	0.162	
Adjusted R^2	0.156	
Regression equation	$\hat{y} = 14.72 - 0.13 x_1 + 0.73 x_2 - 0.29 x_3$	

Note: * significant levels, $p < 0.05$

Table 4: Summary of Spiritual Coping Mediation in Spirituality (SS) and DASS-21

Relationship	Total Effect	Direct Effect	Indirect Effect	CI at 95%		T-Statistic
				Lower	Upper	
DASS-21 Stress						
SS → P-SCQ → Stress	-0.22 (0.00)	-0.23 (0.00)	0.02	-0.003	0.070	-5.35
SS → N-SCQ → Stress	-0.21 (0.00)	-0.23 (0.00)	0.02	0.001	0.047	-5.35
DASS-21 Anxiety						
SS → P-SCQ → Anxiety	-0.17 (0.00)	-0.19 (0.00)	0.02	-0.004	0.069	-4.204
SS → N-SCQ → Anxiety	-0.17 (0.00)	-0.18 (0.00)	0.01	0.001	0.042	-4.204
DASS-21 Depression						
SS → P-SCQ → Depression	-0.28 (0.00)	-0.31 (0.00)	0.03	0.001	0.102	-6.632
SS → N-SCQ → Depression	-0.28 (0.00)	-0.31 (0.00)	0.03	0.001	0.068	-6.632

Based on Table 4, for DASS-21 stress, there is 5.8% ($R^2=0.058$) of the variance in P-SCQ is explained by SS, and there is a significant positive relationship between SS and P-SCQ (regression coefficient, β for SS is 0.300; $p=0.000$). Moreover, there is 6.2% ($R^2=0.062$) of the variance in stress is explained by SS and P-SCQ together. Besides, there is a significant negative relationship between SS and stress ($\beta=0.234$, $p=0.000$). On the other hand, P-SCQ does not significantly predict stress ($\beta=0.06$, $p=0.073$). The total effect model for stress shows an $R^2=0.056$, indicating that 5.6% of the variance in stress is explained by SS alone. There is a significant negative total effect of SS on stress ($\beta=-0.216$, $p=0.000$). The analysis also examines the direct and indirect effects of SS on stress through P-SCQ. There is a significant negative direct effect of SS on stress ($\beta=-0.234$, $p=0.000$). The indirect effect through P-SCQ is not significant (BootSE: 0.02, 95% CI: [-0.003, 0.07]) since confidence intervals include zero. In summary, the results indicate that higher spirituality (as in SS) is significantly associated with lower stress, both directly and through the positive spirituality construct (P-SCQ). However, it is not mediated through P-SCQ.

For N-SCQ, there is 1.3% ($R^2=0.013$) of the variance in N-SCQ is explained by SS. Whereby there is a significant positive relationship between SS and N-SCQ ($\beta=0.059$, $p=0.011$). Moreover, there is 8.5% ($R^2=0.085$) of the variance in stress is explained by SS and N-SCQ together. We found a significant positive relationship between N-SCQ and stress ($\beta=-0.306$, $p=0.000$). The total effect model for stress shows an $R^2=0.056$, indicating that 5.6% of the variance in stress is explained by SS alone. The indirect effects of SS on stress through N-SCQ are statistically significant (BootSE: 0.02, 95% CI: [0.001, 0.047]), with confidence intervals that do not include zero. In summary, the results indicate that higher spirituality (SS) is significantly associated with lower stress, both directly and through the N-SCQ. The mediating effect through N-SCQ is significant, suggesting that part of the effect of spirituality on stress is mediated by negative spiritual coping.

Furthermore, in DASS-21 anxiety, there is 5.8% ($R^2=0.058$) of variance in P-SCQ is explained by SS and, 4.1% ($R^2=0.041$) of the variance in anxiety is explained by SS and P-SCQ together. There is a significant negative relationship between SS and anxiety ($\beta=-0.191$, $p=0.000$), however, P-SCQ does not significantly predict anxiety ($\beta=0.058$, $p=0.088$). The total effect model for anxiety reveals that 3.5% ($R^2=0.035$) of the variance in anxiety is explained by SS alone. There is a significant negative total effect of SS on anxiety ($\beta=-0.173$, $p=0.000$). besides, there is a significant negative direct effect of SS on anxiety ($\beta=-0.191$, $p=0.000$). The indirect effect through P-SCQ is not significant as confidence intervals that include zero (BootSE: 0.02, 95% CI: [-0.004, 0.069]). In summary, the results demonstrate that higher spirituality (SS) is significantly associated with lower anxiety, both directly and through the positive spirituality coping construct (P-SCQ). However, the indirect effect through P-SCQ is not statistically significant, suggesting that the primary influence of spirituality on anxiety is direct rather than mediated by positive spirituality coping.

About the N-SCQ, there is 1.3% ($R^2=0.013$) of the variance in N-SCQ is explained by SS. There is a significant positive relationship between SS and N-SCQ ($\beta=0.059$, $p=0.000$). Moreover, 5.7% ($R^2=0.057$) of the variance in anxiety is explained by SS and N-SCQ together. A significant positive relationship between N-SCQ and anxiety was found ($\beta=0.269$, $p=0.000$). The indirect effect through N-SCQ is statistically significant, with confidence intervals that do not include zero (BootSE: 0.016, 95% CI: [0.001, 0.042]). In summary, the results show that higher spirituality (SS) is significantly associated with lower anxiety, both directly and through

the negative spiritual coping construct (N-SCQ). The indirect effect through N-SCQ is significant, suggesting that part of the effect of spirituality on anxiety is mediated by negative spiritual coping.

In DASS-21 depression, we found 5.8% ($R^2=0.058$) of the variance in P-SCQ is explained by SS and 10% ($R^2=0.100$) of the variance in depression is explained by SS and P-SCQ together. There is a significant negative relationship between SS and depression ($\beta=-0.315$, $p=0.000$) followed by a significant positive relationship between P-SCQ and depression ($\beta=0.104$, $p=0.003$). The total effect model for depression shows 8.4% ($R^2=0.084$) of the variance in depression is explained by SS alone. There is a significant negative total effect of SS on depression ($\beta=-0.284$, $p=0.000$). We also examine the indirect effects of SS on depression through P-SCQ. The indirect effect through P-SCQ is statistically significant (BootSE: 0.03, 95% CI: [0.001, 0.102]). In summary, the results indicate that higher spirituality (SS) is significantly associated with lower depression, both directly and through the positive spirituality coping construct (P-SCQ). The indirect effect through P-SCQ is significant, suggesting that part of the effect of spirituality on depression is mediated by positive spirituality coping.

Finally, for N-SCQ, there is 1.3% ($R^2=0.013$) of the variance in N-SCQ is explained by SS. There is a significant positive relationship between SS and N-SCQ ($\beta=0.059$, $p=0.011$). Besides, there is 14.7% ($R^2=0.147$) of the variance in depression is explained by SS and N-SCQ together. There is a significant positive relationship between N-SCQ and depression ($\beta=0.48$, $p=0.000$). We also examine the indirect effects of SS on depression through N-SCQ. The indirect effect through N-SCQ is statistically significant, with confidence intervals that do not include zero (BootSE: 0.03, 95% CI: [0.001, 0.068]). In summary, the results show that higher spirituality (SS) is significantly associated with lower depression, both directly and through the negative spiritual coping construct (N-SCQ). The indirect effect through N-SCQ is significant, suggesting that part of the effect of spirituality on depression is mediated by negative spiritual coping.

Discussion

The present study offers significant insights into the interrelation between mental health, spirituality, and spiritual coping among Malaysian medical and health sciences students. Our findings reveal a substantial mental health burden within this cohort, characterized by severe levels of anxiety, depression, and stress. These findings underscore the pressing need for effective mental health strategies tailored to this population.

Our results indicate that over half of the students experience extreme anxiety, with significant proportions also suffering from severe depression and stress. This aligns with national data, which shows that nearly 40% of Malaysian university students face mental health challenges (Ministry of Health Malaysia, 2023). The observed high prevalence of mental health issues among students in medical and health sciences programs is consistent with global trends. A meta-analysis by Quek et al. (2019) found that medical students worldwide exhibit high levels of anxiety and depression, attributed to the rigorous academic and clinical demands.

On the other hand, higher levels of spirituality were significantly associated with lower levels of depression, anxiety, and stress. This finding supports the role of spirituality as a protective factor, providing a sense of purpose, hope, and community (Koenig, 2012). Studies have shown

that spirituality can buffer against psychological distress by fostering resilience and positive coping mechanisms (Abdel-Khalek, 2019; Koenig, 2012). Moreover, our study differentiates between positive and negative spiritual coping mechanisms. Positive spiritual coping (P-SCQ) was negatively associated with depression but not significantly with anxiety and stress. This suggests that practices such as prayer and seeking spiritual support can mitigate depressive symptoms (Captari et al., 2022; Carpenter et al., 2012). Conversely, negative spiritual coping (N-SCQ) was positively associated with all three mental health outcomes, indicating that spiritual struggles and discontent can exacerbate psychological distress. This dual role highlights the need for nuanced mental health strategies that address both beneficial and harmful spiritual coping mechanisms (Rosmarin et al., 2020).

The multiple regression analysis showed that spirituality and positive spiritual coping significantly predicted lower depression, while negative spiritual coping was a strong predictor of higher depression, anxiety, and stress. The interplay between spirituality and mental health is complex and multifaceted. For instance, previous studies found that while spirituality generally acts as a protective factor, the type of spiritual coping mechanism employed can significantly alter its impact on mental health (Koenig, 2012; Cotton et al., 2006; Gall et al., 2005). Similarly, Wong et al. (2023) noted that students who engaged in regular spiritual practices reported lower levels of anxiety and depression, suggesting that consistent engagement in positive spiritual activities can foster resilience and psychological well-being.

Despite robust findings, this study has limitations. The cross-sectional design limits causal inferences between spirituality, spiritual coping, and mental health outcomes. Longitudinal studies are needed to establish causality and explore how changes in spiritual practices impact mental health over time. Additionally, the predominantly Malay sample may limit generalizability to other ethnic groups, suggesting the need for more ethnically diverse samples in future research.

Finally, self-report measures used in this study may be subject to social desirability and recall biases. Future research could benefit from incorporating qualitative methods to gain deeper insights into the subjective experiences of spirituality and mental health among students. Moreover, investigating other potential mediating variables, such as social support and resilience, could offer a more comprehensive understanding of how spirituality influences mental health.

Conclusion

This study underscores the significant role of spirituality and spiritual coping in the mental health of Malaysian medical and health sciences students. The findings highlight the dual nature of spiritual coping, with positive coping mechanisms offering protective benefits and negative coping exacerbating mental health issues. These insights call for culturally sensitive mental health interventions that integrate spiritual dimensions, providing a holistic approach to support the psychological well-being of students. Future research should continue to explore these relationships longitudinally and across diverse cultural settings to develop effective, inclusive mental health strategies.

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References

- Abdel-Khalek, A. M. (2019). *Religiosity and subjective well-being in the Arab context*. Cambridge Scholars Publishing.
- Ali K. K. (2022) A discourse on the Malay cultural identity within the Malaysian society. *Kajian Malaysia* 40(1): 83–107.
- Captari, L. E., Cowden, R. G., Sandage, S. J., Davis, E. B., Bechara, A. O., Joynt, S., & Counted, V. (2022). Religious/spiritual struggles and depression during COVID-19 pandemic lockdowns in the global south: Evidence of moderation by positive religious coping and hope. *Psychology of Religion and Spirituality*, 14(3), 325.
- Carpenter, T. P., Laney, T., & Mezulis, A. (2012). Religious coping, stress, and depressive symptoms among adolescents: A prospective study. *Psychology of religion and Spirituality*, 4(1), 19.
- Charzyńska, E. (2015). Multidimensional approach toward spiritual coping: Construction and validation of the Spiritual Coping Questionnaire (SCQ). *Journal of Religion and Health*, 54, 1629-1646.
- Cotton, S., Zebracki, K., Rosenthal, S. L., Tsevat, J., & Drotar, D. (2006). Religion/spirituality and adolescent health outcomes: A review. *Journal Of Adolescent Health*, 38(4), 472-480.
- Delaney, C. (2005). The spirituality scale: Holistic assessment of the human spiritual dimension. *Journal of Holistic Nursing*, 23, 145-167.
- Dunn, K. S., & Robinson-Lane, S. G. (2020). A Philosophical Analysis of Spiritual Coping. *ANS. Advances in Nursing Science*, 43(3), 239–250.
- Gall, T. L., Charbonneau, C., Clarke, N. H., Grant, K., Joseph, A., & Shouldice, L. (2005). Understanding the nature and role of spirituality in relation to coping and health: A conceptual framework. *Canadian Psychology/Psychologie Canadienne*, 46(2), 88.
- Graça, L., & Brandão, T. (2024). Religious/Spiritual Coping, Emotion Regulation, Psychological Well-Being, and Life Satisfaction among University Students. *Journal Of Psychology and Theology*, 0(0).
- Jagers, R. J., & Smith, P. (1996). Further examination of the spirituality scale. *Journal Of Black Psychology*, 22(4), 429-442.
- Koenig, H. G., Perno, K., & Hamilton, T. (2017). The spiritual history in outpatient practice: attitudes and practices of health professionals in the Adventist Health System. *BMC Medical Education*, 17(1), 102.
- Koenig, H. G. (2012). Religion, spirituality, and health: The research and clinical implications. *International Scholarly Research Notices*, 2012(1), 278730.
- Lucchetti, G., Koenig, H. G., & Lucchetti, A. L. G. (2021). Spirituality, religiousness, and mental health: A review of the current scientific evidence. *World Journal of Clinical Cases*, 9(26), 7620–7631.
- Milner, K., Crawford, P., Edgley, A., Hare-Duke, L., & Slade, M. (2019). The experiences of spirituality among adults with mental health difficulties: a qualitative systematic review. *Epidemiology And Psychiatric Sciences*, 29, e34.
- Ministry of Health Malaysia, 2023, National strategic plan for mental health (2020 – 2025)
- Musa, A. S. (2016). Correlates and predictors of spiritual, existential, and religious well-being among Malaysian Muslim college students. *Research on Humanities and Social Sciences*, 6(16), 82-91.
- Quek, T. T. C., Tam, W. W. S., Tran, B. X., Zhang, M., Zhang, Z., Su, K. J., ... & Ho, C. S. H. (2019). The global prevalence of anxiety among medical students: A meta-analysis. *International Journal of Environmental Research and Public Health*, 16(15), 2735.

- Rosmarin, D.H., Pargament, K., & Koenig, H.G. (2020), Spirituality and mental health: challenges and opportunities. *The Lancet*, 8(2) 92-93.
- Saad, M., & de Medeiros R. (2012). Spiritual-Religious Coping – Health Services Empowering Patients’ Resources. InTech. doi: 10.5772/50443
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods*, 7(4), 422.
- Wong, S. S., Wong, C. C., Ng, K. W., Bostanudin, M. F., & Tan, S. F. (2023). Depression, anxiety, and stress among university students in Selangor, Malaysia during COVID-19 pandemics and their associated factors. *PloS One*, 18(1), e0280680.