

ORIGINAL ARTICLE

The Relationship of Islamic Lifestyle and Mental Health in Pregnancy: A Cross-Sectional Analysis

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ABSTRACT

Objective: This study aimed to examine the association between adherence to Islamic lifestyle practices and mental health outcomes among pregnant women attending a tertiary care center in Karachi.

Study Design: A cross-sectional analytical study.

Place and Duration of Study: The Obstetrics and Gynecology outpatient department of Jinnah Postgraduate Medical Centre, Karachi, from April 15th to June 15th 2025.

Materials and Methods: The study included 300 pregnant Muslim women aged 15 to 49 years with gestational age over 28 weeks, selected via purposive sampling. Data were gathered using a demographic questionnaire, the 75-item Islamic Lifestyle Questionnaire (covering ten domains), and the DASS-21. Descriptive statistics were calculated, and associations were analyzed using Pearson correlation and linear regression.

Results: The mean age of participants was 30.8 ± 8.2 years, with a mean Islamic lifestyle score of 241.6 ± 51.7 . Average depression, anxiety, and stress scores were 4.7, 5.1, and 3.8, respectively. Islamic lifestyle was significantly and inversely correlated with total DASS score ($r = -0.350$, $p < 0.001$). Regression analysis identified Islamic lifestyle as the sole significant predictor of mental health ($\beta = -0.350$, $p < 0.001$), while demographic variables were not significant.

Conclusion: Stronger adherence to an Islamic lifestyle is linked to lower depression, anxiety, and stress during pregnancy. Integrating culturally and spiritually tailored interventions into antenatal care could improve maternal psychological well-being.

Keywords: Anxiety, Depression, Mental Health, Pregnancy, Religion.

Introduction

Pregnancy is a critical period that poses physical, physiological, and psychosocial changes that may increase a woman's vulnerability to psychological distress. These changes can take a substantial toll on mental and social health, adversely affecting maternal quality of life. Maintaining the mother's mental health during this period is vital to her well-being and for fetal development and long-term outcomes for the child such as healthy neurodevelopment, behaviors, and emotional stability.¹ Moreover, negative maternal mental health during pregnancy can also lead to development of psychiatric problems in children. Common mental health challenges faced by

pregnant women include anxiety, depression and psychological distress with a meta-analysis including 31 studies having reported an incidence of 37% perinatal depression in Pakistani women alone.² According to WHO, mental health is the ability to cope up with stress, and be able to learn and work well and contribute to the community. While it has multiple individual and social determinants, lifestyle factors including behaviour, beliefs and values, play an essential role in maintaining the psychological well-being of an individual.³ Lifestyle is a concept that describes the expression of an individual's values and attitude through their opinion, interests and personal and social behaviour and practices. It is reflective of their social standing and socioeconomic conditions.⁴

Since pregnancy brings physical, mental and social tensions, the prevalence of stress and anxiety in pregnant women increases, which can be a risk factor of preterm birth, low birth weight, high-risk pregnancy, increased nausea and vomiting and increased cesarean sections.^{1,4} Maternal stress results in increased concentrations of stress

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hormones within the fetal bloodstream, which can restrict normal growth and maturation of the fetal nervous system. Moreover, negative maternal mental health during pregnancy can also lead to development of psychiatric problems in children.¹ The essence of Islamic lifestyle is in performing a set of practices based on Islamic teachings which encompasses faith (iman), trust in God (tawakkul), regular prayer (salat), charity (zakat), patience (sabr), and adherence to Islamic rules.⁴ Following the Islamic teachings has been linked with healthier cognitive and emotional responses during demanding situations. A belief system that puts their faith in a higher power, engages in disciplined acts of worship, and following Islamic principles such as patience, gratitude, and self-restraint may help individuals regulate negative thoughts and emotions that lead to anxiety and depression.⁴ There remains a significant gap in the literature regarding the role of spiritual practices, strong belief in Allah, and religious engagement in addressing depression and anxiety during pregnancy in Pakistan. Although recent studies from Pakistan have examined anxiety-focused cognitive behavioral therapy for the prevention of postnatal depression and explored the relationship between resilience and prenatal mental health, quantitative evidence evaluating faith-based or Islamic spiritual practices as potential protective factors remains limited.^{5,6} Unlike Pakistan, in Iran there has been numerous studies that address this concern and evaluate the effect of religious inclination towards combating anxiety and depression during pregnancy.⁷ Within the Pakistani sociocultural setting, many women encounter societal, cultural, and familial barriers when seeking help for mental health concerns, including stigma, limited emotional support, and reduced access to mental health services. In such settings, faith and religious practices may function as important internal coping resources. Strengthening resilience may therefore be associated with greater spiritual awareness and understanding of one's rights and responsibilities within Islam. Importantly, religious engagement may act as a complementary approach alongside professional medical care and family support. Examining these factors may help identify culturally acceptable strategies to support maternal mental health in Pakistan.

The objective of the present study is to examine the relationship between following an Islamic lifestyle and mental health status among pregnant women attending a tertiary care hospital in Pakistan. The findings of this study are expected to contribute to the limited literature on faith-related determinants of maternal mental health. Once published, this research may support clinicians in integrating psychosocial and spiritual considerations into routine maternal healthcare, encourage further large-scale research in this underexplored area, and create awareness among population, and ultimately help improve maternal well-being and pregnancy outcomes in Pakistan.

Materials and Methods

This analytical cross-sectional study was carried out at the Outpatient Department of Obstetrics and Gynecology at Jinnah Postgraduate Medical Centre (JPMC), Karachi, over a duration of three months, from 15th April to 15th June 2025.

Ethical approval for this study was obtained from the Ethics Committee of Jinnah Postgraduate Medical Centre, Karachi, Pakistan, under reference number NO.F.2-81/2025-GENL/323/JPMC.

A total of 300 pregnant women were recruited by non-probability purposive selection. Participants were chosen according to specific eligibility criteria, including being aged 15 to 49 years, having a confirmed gestational age exceeding 28 weeks via ultrasound, a planned pregnancy, no known obstetric complications as assessed by the attending consultant, no prior psychiatric illness, and self-identification as Muslim. Individuals failing to meet these criteria were excluded from the study.

Following the acquisition of formal written informed consent from each participant, data collection was conducted utilizing three instruments, the questionnaire was accessible to all the authors and participants authorized to collect and document the responses. The initial component was a demographic questionnaire that documented essential details including age, number of pregnancies, gestational age, body mass index (BMI), and the family's monthly income. The second instrument utilized was the Islamic Lifestyle Questionnaire (ILQ), initially created by Kaviani in 2011, consisting of 75 items aimed at assessing adherence to Islamic values and practices across ten

lifestyle domains, which include prayer and worship, moral conduct, health behavior, financial transactions, familial and social relationships, beliefs, punctuality, pursuit of knowledge, and accountability towards oneself and others.⁸ This questionnaire was obtained from an openly accessible source and was free to use.

Each item was evaluated on a 5-point Likert scale, from 'Strongly Disagree' (1) to 'Strongly Agree' (5), where higher scores signify increased conformity with Islamic teachings. The Islamic Lifestyle Questionnaire developed by Kaviani (2011) contains 75 items rated on a five-point Likert scale, producing overall scores that may range from 75 to 375. These totals were grouped into three distinct levels of adherence. Scores from 75 to 187 were interpreted as low adherence, reflecting limited incorporation of Islamic lifestyle practices. Totals between 188 and 262 were categorized as moderate adherence, indicating a partial or variable alignment with Islamic principles. Scores from 263 to 375 were considered high adherence, signifying a strong faith in Islamic lifestyle behaviors. In this classification, a higher score corresponds to a greater degree of adherence.⁸ The measure has previously exhibited adequate psychometric qualities, evidenced by a Cronbach's alpha of 0.71 and acceptable construct and concurrent validity, including a correlation coefficient of 0.64 with the Religious Orientation Test. It has been successfully utilized in previous studies investigating the correlations between Islamic living and diverse mental health and psychosocial consequences.

The third instrument employed was the Depression, Anxiety and Stress Scale-21 (DASS-21), a standardized and validated instrument consisting of 21 items categorized into three subscales, each addressing a specific mental health topic. Each question was evaluated using a four-point Likert scale, with scores ranging from 0 to 3, and subscale values ranging from 0 to 21. Scores were classified into severity levels from normal to highly severe, and subjects were thereafter characterized as either mentally stable or unstable according to these thresholds. Normal DASS-21 scores show no clinically relevant signs of stress, anxiety, or depression. Standard standards state that, after doubling the initial scores, the usual ranges are 0–9

for depression, 0–7 for anxiety, and 0–14 for stress. Individuals who fall within these categories are regarded as having typical emotional functioning.⁹

Data were analyzed using **SPSS version 16.0**. Descriptive statistics that included sociodemographic, obstetric, and clinical variables are presented as means with standard deviation for continuous variables and, frequencies with percentages for categorical variables. **Pearson's correlation analysis** was used to assess the relationships between age, family monthly income, gravida, Islamic Lifestyle Score, and total DASS-21 score. To identify predictors of mental health outcomes, **linear regression analysis** with a stepwise method was performed, with the total DASS-21 score as the dependent variable. Variables that did not show statistical significance were excluded from the final analysis. A **p-value < 0.05** was considered statistically significant for all analyses.

Results

The study sample consisted of 300 pregnant women aged 30.82 ± 8.185 years, with a mean BMI of 25.78 kg/m^2 . The literacy rate was 79.33%, with 18% graduates and 20% postgraduates. The majority were in their first trimester, with 74 (24.7%) experiencing their first pregnancy. The mean weight was healthy, with a healthy BMI of 18.5–24.9. The majority were obese, with 23.3%) being underweight. Almost 31% had a family monthly income below PKR 20,000, indicating poor economic status. 27 participants had unstable mental status, with DASS-21 scores between 30–51.

The findings indicate that only the Islamic lifestyle was significant, whereas the other demographic characteristics were disregarded. With each unit increase in the Islamic lifestyle score, the average mental health score declines by 0.6 units. The model indicates that depression, anxiety, and stress (DASS-21) were adversely correlated with the number of prior pregnancies and positively correlated with family monthly income.

In order to study the correlations between age, family monthly income, number of pregnancies (gravida), Islamic Lifestyle Score, and DASS-21 total score, Pearson's correlation analysis was utilized. The analysis revealed a statistically significant negative correlation between the Islamic Lifestyle Score and the DASS-21 total score ($r = -0.350$, $p <$

0.001). This suggests that a higher level of adherence to Islamic lifestyle practices was associated with reduced levels of stress, anxiety, and depression. Age ($r = -0.002$), family monthly income ($r = 0.103$), and gravida ($r = -0.050$) did not exhibit any significant correlations with the DASS-21 total score. (Table I)

A linear regression analysis was performed with the total DASS score as the dependent variable to further investigate these relationships. The findings indicated that the Islamic Lifestyle Score significantly predicted psychological well-being in pregnant women ($\beta = -0.350$, $p < 0.001$). The regression model accounted for approximately 12.3% of the variance in DASS scores ($R^2 = 0.123$), suggesting a modest yet significant relationship (Table II). Other demographic variables, such as gravida, maternal education, family income, residence, and BMI, were excluded from the final model due to lack of statistical significance in the stepwise regression analysis. (Table III) The model indicated that the Islamic Lifestyle Score was the sole significant predictor, exhibiting a negative correlation with psychological distress ($B = -0.060$, $\beta = -0.350$, $p < 0.001$). This suggests that increased adherence to Islamic lifestyle practices is associated with reduced levels of depression, anxiety, and stress. Other demographic factors, such as gravida, maternal education, family monthly income, place of residence, and BMI, did not demonstrate statistically significant associations with mental wellness in this sample ($p > 0.05$). The findings indicate that demographic characteristics had minimal impact, whereas adherence to an Islamic lifestyle was identified as a significant factor influencing the mental well-being of the pregnant women examined. (Table III).

Table I: Descriptive Statistics of Participant age and Study Variables

Variable	Mean	SD	Min	Max
Age (Years)	30.82	8.19	18	44
BMI (kg/m ²)	25.78	6.11	18.5	40.8
Gravida	2.49	1.13	1	4
Islamic Lifestyle Score	241.61	51.65	99	299
Depression Score	4.72	3.52	0	14
Anxiety Score	5.10	3.30	0	13
Stress Score	3.76	3.11	0	12
DASS-21 Total Score	13.58	8.85	0	51

Table II: Pearson Correlation Matrix of Family Income and Number of Children with Depression, Anxiety and Stress and Islamic Lifestyle

Variable	Age (years)	Family Monthly Income (PKR)	Gravida (number)	Islamic Lifestyle Score (0 – 375)	DASS Total Score (0–63)
Age (years)	1	0.006	0.061	0.000	-0.002
Family Monthly Income (PKR)		1	-0.018	-0.029	0.103
Gravida (number)			1	0.079	-0.050
Islamic Lifestyle Score				1	-0.350*
DASS Total Score					1

*indicates correlation significant at $p < 0.001$.

Table III: Linear Regression Model Predicting DASS-21 Total Score Based On Islamic Lifestyle And Demographic Characteristics (n = 300)

Predictor	B	SE	Beta	t	p-value
Constant	28.073	2.297	—	12.223	<0.001
Islamic Lifestyle Score	-0.060	0.009	-0.350	-6.454	<0.001
Gravida	-0.023	0.056	-0.023	-0.414	0.679
Maternal Education	-0.061	0.054	-0.061	-1.127	0.261
Family Monthly Income (PKR)	0.093	0.054	0.093	1.711	0.088
Residence	0.067	0.054	0.067	1.231	0.219
BMI (kg/m ²)	-0.032	0.055	-0.032	-0.580	0.563

Model statistics: $R = 0.350$, $R^2 = 0.123$, Adjusted $R^2 = 0.120$, $F(6, 293) = 7.95$, $p < 0.001$

Discussion

This study aimed to evaluate the association between adherence to an Islamic lifestyle and pregnancy-specific stress in women receiving antenatal care at Jinnah Hospital Karachi in 2025. The findings demonstrated statistically significant inverse correlation between Islamic lifestyle adherence and mental health concerns during pregnancy. Pregnant women who followed Islamic principles exhibited reduced levels of stress and anxiety, aligning with existing literature that emphasizes the protective role of religious and spiritual engagement in promoting maternal mental well-being.

significant inverse correlation between Islamic lifestyle adherence and mental health concerns during pregnancy. Pregnant women who followed Islamic principles exhibited reduced levels of stress and anxiety, aligning with existing literature that emphasizes the protective role of religious and spiritual engagement in promoting maternal mental well-being.

In clinical practice, religiosity is one of the frequent coping strategies noted in patients dealing with stressful situations, and as such constitutes the spiritual/religious coping (SRC). This method is often used to cope with pregnancy-related stress, and these beliefs are directly related to low stress and decreased levels of anxiety and depressive symptoms.^{10,11} Islamic lifestyle can bring a beneficial influence on human health.¹²

Our findings showed a statistically significant inverse correlation ($r = -0.350$, $p < 0.001$) between Islamic lifestyle practices and the incidence of mental health struggles like depression and anxiety. The result of a regression analysis highlighted Islamic lifestyle as the primary predictor influencing maternal psychological well-being, accounting for 12.3% of the variance in DASS-21 scores. As opposed to other studies, demographic variables such as age and income did not show a statistically significant relationship with mental health outcomes in our final model. This result suggests how Muslim women who practice the Islamic way of life avoid antenatal psychological distress.

A negative relation ($r = -0.310$) was also established between the implementation of an Islamic lifestyle and mental health concerns among Iranian pregnant women. This reinforces our findings which suggest that conforming to Islamic beliefs lead to decreased incidence of mental health disorders for these women.⁴ It also implies how religious practices bridge geographical differences especially among Muslim populations. It was also observed that unique Islamic rituals like prayer (Salah) and supplication (Dua), are helpful in reducing perinatal anxiety by establishing belief in a higher authority.¹³

It has also been studied that positive religious coping mechanisms like treating pregnancy as a trial that would be rewarded tenfold, reduced ill thoughts. On the other hand, negative religious coping mechanisms like attributing the pain of pregnancy as punishment from God, increased stress and anxiety.¹¹ In our study, the strong inverse correlation suggests that our participants employed positive coping strategies. However, a faint positive correlation between positive religious coping mechanisms and depression was established among Turkish pregnant women. The COVID-19 pandemic might have been a major stressor that explains this

discrepancy.¹⁰ Our study was conducted in a non-pandemic structure and hence avoided the uncertainty and stress factor. Being spiritually healed and healthy reduced fear during the childbirth process which supports our observation that the Islamic lifestyle adherence leads to lower psychological distress.¹²

Different methods like relaxation techniques, mindfulness, and listening to Quranic verses have also been highly sought out for reducing anxiety in both high-risk and low-risk pregnant women.¹⁴ Our data encourages the incorporation of these culturally redundant practices into routine prenatal care. By introducing spiritual history-taking and propagating Islamic practices, healthcare providers can pioneer a holistic care model that addresses the psychological needs of the mother.

This study has numerous limitations. First, this is a cross-sectional study design which does not determine cause and effect. An Islamic lifestyle reduces anxiety but women with better mental health would be more likely to follow through that lifestyle with discipline. Secondly, there remains a risk of social desirability bias. Third, we only included one tertiary setup in our study. The incidence of depression and anxiety in pregnancy vary by many factors including social and demographic factors.¹⁵ Therefore, our study might not justify the experiences of rural women or those from different socioeconomic backgrounds beyond urban Karachi. To counter these limitations, future research projects should employ a longitudinal design by following Islamic lifestyle practices among pregnancies throughout the perinatal duration. Practices that involve active mindfulness in line with Islamic beliefs should be encouraged along with educational initiatives. This will contribute substantially towards their clinical implementation.^{7,14}

Conclusion

Pregnancy is a period of heightened psychological vulnerability, and this study demonstrates that stronger adherence to Islamic lifestyle practices is significantly associated with lower levels of depression, anxiety, and stress among pregnant women. These findings highlight the importance of integrating culturally and spiritually sensitive approaches into antenatal care to support maternal

mental health and enhance overall well-being. Promoting Islamic lifestyle practices may serve as an effective, accessible strategy to reduce psychological distress during pregnancy in Muslim populations.

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Disclaimer

The views expressed in this study are solely those of the authors and do not necessarily reflect the official policy or position of Jinnah Postgraduate Medical Centre or any affiliated institutions.

Conflict of interest:

The authors declare no conflict of interest related to this study.

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CONFLICT OF INTEREST

Authors declared no conflicts of Interest.

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DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon request.

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