



A PRE AND POST ANALYSIS: A STUDY TO EVALUATE THE IMPACT OF FASTING ON PSYCHOLOGICAL HEALTH, SPIRITUAL WELLBEING AND AGGRESSION AMONG UNIVERSITY STUDENTS OF PESHAWAR

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Abstract

This study examines how 200 young adult students (aged 19–30) who fast throughout Ramadan affect their mental health, spiritual well-being, and level of hostility. Using a strict pre-and-post study methodology, our results show a marked improvement in mental clarity, emotional stability, and spiritual aspects after the fast. The fact that individuals also reported much lower levels of aggressiveness highlights the all-encompassing advantages of fasting practices. The combination of qualitative and quantitative evidence points to the possibility that adopting fasting customs can actively support students' development of spirituality, mental toughness, and decreased levels of hostility. This study highlights the potential of mindful activities to support overall student well-being while also lending empirical support to the conversation about them.

Introduction

Fasting is one of the earliest forms of prayers and it is common among world's ethnics and different nations. Fasting is specifically important in the field of old medicine (Qaisi, 2001). Fasting can be described as an individual's deliberate act of abstinence in order to have any physical satisfaction or gratification that is commonly going without food for a specific time period. The purpose of which is to experience or achieve spiritual goal. Ramadan fasting is considered as one of the most inclusive and supreme fasting. Prophet Muhammad Peace be Upon Him once said that: Fast to remain healthy. Of the Islamic lunar calendar Ramadan is the ninth month. Based on the sightings of the crescent moon, this month is considered as sacred by all Muslims because of the first revelations that has been received by Prophet Muhammad Peace be Upon Him. Muslims in Ramadan use to re-evaluate their lives according to the teachings of Islam. Thus fasting (*Sawm*) is one of the major pillars among five of Islam. While the other four are (1) the declaration that there is no god except God and Muhammad (PBUH) is Allah's Messenger (*Shahadah*), the second pillar is Salah that is the ritual prayer five times a day, third one is Zakat which is based on the concept of giving to the needy and poor. And the last one is Hajj that is pilgrimage to Mecca. Sawm or fasting is the abstention to

consume aliments or food right from dawn till sunset during the whole month. This indeed involves physiological outcomes (Ziaee et al., 2006).

Hence fasting is deliberate act of denying the flesh order to gain a high level of spirituality as well as gratification by fully devoting one-self to different religious rituals. While spirituality itself is the most important element of not only personality but of the life as well. High level of spirituality could be obtained through different means, fasting and prayers are one of the componential way that leads to religiosity and spirituality. Thus fasting and different factors of personality may influence our daily lives for example our cognition, behaviors and affect.

Mental health and Fasting

People fulfil their religious obligations, focus more on religious matters, and comprehend moral and religious precepts throughout the holy month of Ramadan. However, this study intends to look at the impact of fasting during Ramadan on mental health, aggressiveness control, and spiritual health using conventional research methods. These variables will be defined in the sections that follow.

The WHO describes the term mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (Organization, 2001) The above definition raises a number of issues and makes room for misunderstandings when it lists positive emotions and functioning as essential components of mental health, even though it represents a major shift from the idea that mental health is the absence of mental illness.. Concepts used in several papers on mental health include both key aspects of the WHO definition, i.e. positive emotions and positive functioning (Bauer et al., 2014; Keyes, 2006). Similar to Ramadan fasting, an intermittent fasting diet consists of three periods of eating and fasting at predetermined times: time-restricted feeding, alternate-day fasting, and periodic fasting (Mattson et al., 2017). One kind of intermittent fasting is thought to be religious fasting (Cherif et al., 2016). According to studies, there are several physical health benefits associated with intermittent fasting, including the prevention of cancer, heart disease, and infections by controlling the inflammatory response (Al-Jafar et al., 2021; Pakkir Maideen et al., 2017; Varady et al., 2021). Researchers examined the impact of Ramadan fasting on healthcare workers' mental health in a study conducted in Turkey. They found that male participants had significantly lower mean scores after Ramadan compared to their mean scores prior to Ramadan.. Fasting has been demonstrated to lower stress, anxiety, and depression in another study(Gilavand & Fatahiasl, 2018; Kartal et al., 2021).

Spirituality and Fasting

The Latin words "spiritus," which means breath, courage, vigour, or soul, and "spirare," which means to breathe, are the roots of the English word "spirit."(Hjelm, 2010). Meaning, worth, transcendence, connecting (with oneself, others, God/supreme power, and the environment), and becoming (the development and advancement in life) are the five defining aspects of spirituality (Knapik et al., 2010). The following are fundamental traits of spiritual health: transcendence, a healthy lifestyle, interacting with others, and contemplating life's meaning and purpose (Jirásek, 2015). Numerous research on a range of different people have shown that spiritual well-being improves mental health (Hilton & Child, 2014). Existential well-being and spiritual well-being, or having a relationship with the Creator or a higher power, or knowing why and how to live, are the two aspects of spiritual well-being (George Dalmida et al., 2011). Spiritual health is a multifaceted construct that defies a single, universally accepted definition. It includes having a sense of direction, significance, and kinship with something bigger than oneself. Spiritual health often transcends religious affiliations and can manifest as a deep inner peace, contentment, and harmony(Seaward, 2020). Fasting has long been recognized as a powerful spiritual practice in many religions, including Islam. Fasting requires discipline and self-control, as individuals abstain from food and drink during daylight hours. Fasting is a deeply spiritual practice that can help individuals to connect with their faith and develop a stronger sense of devotion. Fasting offers a range of spiritual benefits, including developing self-discipline

and self-control, strengthening faith and devotion, increasing empathy and compassion, cultivating gratitude and mindfulness, and connecting with the community. Through this practice, individuals can deepen their connection with their faith and develop a greater sense of inner peace and purpose (Rayhan, 2021). By having belief in God, a religious person acquires incredible spiritual power that they use to overcome obstacles and challenges. This ability shields against anxieties, panic attacks, and unpleasant attempts like suicide. The correlation between mental health and religiosity is evident. Higher life satisfaction levels are reported by individuals having profound spiritual and religious perspectives and convictions and those in optimal spiritual health (Makros & McCabe, 2003).

Aggression and Fasting

In social psychology, the most common definition of aggression is action that is intended to injure another person (Bushman & Huesmann, 2010)(Bushman & Huesmann et al., 2010; DeWall, Anderson, & Bushman et al., 2012). This damage can appear in many different forms, such as physical injury, psychological suffering, or damaged social relationships, to name a few. Aggression is defined by the American Psychological Association (2019) as a well-researched, multifaceted phenomenon that may be understood through behaviour, affect, and cognition. Aggression, which can manifest as primary aggressiveness or as a symptom of other mental illnesses, is widespread and harmful to relationships, property, and the social order. It has been theoretically shown that religiosity significantly reduces people's levels of aggression. Individuals that exhibit less aggressive behaviour are those who visit religious locations frequently, are naturally religious, and come from a home where religion is practiced. Through prayer and fasting, people develop a relationship with God and have religious experiences, which can have positive psychological and spiritual outcomes (Mishra & Tara, 2022) (Mishra, S., & Tara, D et al., 2022). According to a group of researchers (Spilka et al., 2003) religious experiences have a correlation with specific therapeutic outcomes like a decrease in guilt, an increase in a sense of belonging, a decrease in aggressiveness and hostility, and a reduction in the likelihood of suicide attempts.

Rationale of the study

The motivation for undertaking this research stems from a noticeable gap in the existing literature on the impact of fasting on mental health, spiritual well-being, and aggression. This research is prompted by the recognition that while fasting is a common practice with profound cultural and religious implications, its impact on mental health, spirituality, and aggression remain relatively underexplored in a holistic manner. This research can offer insights that guide spiritual leaders in providing nuanced guidance to their communities. The exploration of how fasting relates to aggression has implications for conflict resolution and anger management strategies. In embarking on this research, the aim is not only to fill a crucial void in the current body of knowledge but also to pave the way for a more nuanced understanding of fasting and its impact on mental health, spiritual well-being, and aggression, contributing to a comprehensive and culturally informed approach to individual and communal wellness.

Objectives

1. To ascertain how fasting affects mental health both before and afterwards fasting.
2. To look into how fasting affects one's spiritual health both before and after the fasting.
3. To evaluate how fasting affects an individual's level of hostility both before and after the fasting.

Hypotheses of the study

1. During the month of Ramadan, fasting will positively impacts on the mental health of people after Ramadan fasting as compared to before fasting.
2. Individuals who observes fasting during Ramadan will score high on the Spiritual Wellbeing Scale their after Ramadan.

3. Fasting in the month of Ramadan will results in low levels of aggression in individuals after fasting as compared to before fasting.

Methodology

Sample

Convenience sampling was used to select the 200 subjects that made up the study's overall sample. The sample's age ranged from 18 to 30 years old. The sample was selected from Islamia College Peshawar and University of Peshawar.

Inclusive criteria and Exclusive criteria

The sample was selected from those students who were engage in regular fasting practices in the month of Ramadan and having no physical or psychological disorder. While, participants who were not observing fasting in the month of Ramadan and those who were already seeking any form of treatment (psychological) were excluded from the study.

Instruments

Following instruments were used in this study,

Goldberg's General Health Questionnaire

Individual mental health was evaluated using the 28-item mental health questionnaire. A self-report screening tool called the General Health Questionnaire – 28 (GHQ-28) is used to identify potential psychiatric disorders. The GHQ-28 highlights two primary issues: (1) the incapacity to do routine tasks; and (2) the emergence of novel and unsettling occurrences. This questionnaire is divided into four scales, each with seven questions: bodily symptoms, anxiety symptoms, social dysfunction, and depressive symptoms. The Cronbach's alpha of the scale was 0.83(Goldberg & Hillier, 1979).

Spiritual wellbeing scale

The Spiritual Well Being Scale was developed in 1982 and is a 20 items scale that measures an individual's well-being and total life satisfaction on two dimensions: (1) religious well-being, and (2) existential well-being. Every SWBS item is given a score between 1 and 6, where a higher number denotes more well-being. Items with negative wording receive a reversal score. The reliability coefficient of this questionnaire was calculated using Cronbach's alpha, and the result was 0.82. Better conditions for spiritual health are indicated by higher scores (Paloutzian & Ellison, 1982)

Buss and Perry Aggression Questionnaire

The Buss and Perry aggression questionnaire is a 29 elements that make up the AGQ are each given a 5-point rating on a scale from 1 (very unusual of me) to 5 (very characteristic of me). Add together the answers for each of the 29 items to determine the final score. The entire score will be between 29 and 145. The BPAQ also has four subscales (physical, verbal, anger and hostility) each with a unique set of items pertaining to various facets of aggression. Scores above 95 may indicate extreme aggression, while scores between 65 and 95 often suggest moderate to high levels of aggressive behavior (Buss & Perry, 1992).

Procedure

A subject group of 200 participants for this carefully planned study was chosen through purposive sampling technique. With a focus on adults from various departments at Islamia College Peshawar and University of Peshawar who were between the ages of 19 and 30. To obtain the objectives of the study the subjects were administered with the questionnaires (mental health scale, Spiritual wellbeing scale and Buss and Perry questionnaire) a period of two weeks leading up to and following the Ramadan fast. Ensuring that participants' vital information is used only for research purposes was crucial, as was the commitment to confidentiality and ethical research standards. After the study, each

participant received a personalised letter thanking them for their important efforts. This study is an excellent example of a methodical, participant-centric research technique in addition to exploring the relationship between fasting, mental health, and spirituality.

Results

Table 1: Participants' socio-demographic characteristics

Demographics	Categories	Frequency	%
Gender	Male	100	50%
	Female	100	50%
Age	19-25	120	60%
	26-30	80	40%
Education	BS students	120	60%
	MPhil students	80	40%
SES	Lower	10	5%
	Middle	170	85%
	Upper	20	10%
Institution	ICP	175	87.5%
	Peshawar uni	25	12.5%
Area	Urban	190	95%
	Rural	10	5%

Table 2: Psychometric Properties of Major Variables

variables	N	M	SD	α	Range	Skew
Mental health	200	30.84	16.757	.950	66	1.449
Spiritual health	200	77.74	19.914	.910	80	.895
aggression	200	81.56	20.263	.963	83	-.748

Table 3: Means and Standard Deviation and t - value for Mental Health among Students before and after Fasting (N=200)

Variables	Pre - test		Post test		t	r	p	95%CI		Cohens d
	M	SD	M	SD				LL	UL	
Mental health	30.85	16.75	22.42	7.059	6.6	.0	.00	5.930	10.91	0.655

The result in above table shows a statistically significant improvement in mental health after the intervention, as evidenced by a lower post-test mean compared to the pre-test mean. The t value ($t = 6.660, p < .001$). It signifies a highly significant difference.

Table 4: Means and Standard Deviation and t - value for Spiritual Health among students before and after Fasting (N=200)

Variables	Pre - test		Post test		t	r	p	95%CI		Cohen's d
	M	SD	M	SD				LL	UL	
Spiritual health	77.74	19.91	89.02	19.95	-	.219	.001	-14.75	-7.81	-0.5657

The result in table 4 indicates a statistically significant difference in spiritual health between pre-test and post-test. The negative t value suggests a decrease in spiritual health scores. The results demonstrate a significant improvement in spiritual health after Ramadan fasting compared to before,

as indicated by a lower post-test mean compared to the pre-test mean. The 95% Of the confidence interval of the mean difference (-14.75925 to -7.81075) confirms the significance of the observed improvement. Furthermore the Cohen's d effect size of (-0.5657) indicates a moderate to large practical significance in the enhanced spiritual health following the fasting period.

Table 5: Means and Standard Deviation and t - value for Aggression among Students before and after Fasting (N=200)

Variables	Pre - test		Post test					95%CI		Cohen's d
	M	SD	M	SD	t	r	p	LL	UL	
Aggression	81.56	20.26	65.67	16.89	7.922	-.159	.001	11.93	19.84	0.8517

The averages, standard deviations, and t-values of students' aggression before and after the Ramadan fast are displayed in Table 5. The study's findings show that there was a statistically significant difference in the levels of aggression between the pre- and post-tests. A lower post-test mean compared to the pre-test mean indicates that there was a substantial decrease in Aggression levels following the Ramadan fasting.

Discussion

The primary goals of this study were to compare the effects of fasting before and after the month of Ramadan on aggression, spiritual health, and mental health.

The first hypothesis of the study was that "fasting in the month of Ramadan will positively impacts on the mental health of students after Ramadan fasting as compared to before fasting." And the second hypothesis of the study is "Spiritual practices associated with fasting will have a positive effect on spiritual well-being after fasting as compared to before fasting." And the third hypothesis is that "Fasting in the month of Ramadan will results in low levels of aggression in individuals after fasting as compared to before fasting."

Vaiious studies have supported the positive impact of fasting on mental health (also shown in table 3) Yousuf and coworkers (2021) investigated the Diabetes patients' levels of stress, anxiety, and sadness during Ramadan. Therefore a study conducted which included 50 patients who did not fast and 100 who did. The feelings of sadness, worry, and stress levels of the fasting group showed a statistically significant improvement after Ramadan, according to their use of the depression anxiety stress scale (DASS) before and after the month of Ramadan. It was thus discovered that observing Ramadan fasting is associated with lower levels of stress, anxiety, and sadness. (Yousuf et al., 2021). Erdem (2018) evaluated the effects of Ramadan fasting on a group of 73 healthy volunteers using the DASS. She discovered that after Ramadan, there was a statistically significant drop in the participants' stress, anxiety, and depression ratings as well as in the frequency of anxiety when compared to before Ramadan. (Erdem, 2018).

Likewise, according to other researchers (Sinha et al., 2007) the religious practices often contribute to a decrease in risky teenage behaviour. It is true that religious teenagers also participate in harmful activities, but their likelihood of doing so is lower the dangerous behaviours of students taking into account their spiritual health and religious orientation were examined by Habibi Kalibar et al. (2016). They came to the conclusion that students' dangerous behaviours may be predicted by their internal religious orientation and spiritual components (Habibi Kaleybar et al., 2018). Similarly according to other researchers (Khajavi & MirAli, 2017) spiritual intelligence lessens hostility, rage, and anxiety. In table 4 increase in spiritual health has been observed among the participants after Ramazan fasting as compared to before fasting. Which supports previous literature. Numerous studies have linked religion and spirituality with improved health (McCullough, 2000). In addition to being an Islamic tradition aimed at increasing one's awareness of God (Taqwa), the mandatory fasting during Ramadan may also benefit the health of the individual or people who are fasting. Stated differently, it is an all-encompassing tool for improving the religion and health of Muslims. "Islamic fasting: a combination of spiritual elevation and disease prevention" is one way to describe this. Muslims strive to preserve

the physical and spiritual integrity of the human body when fasting. It keeps us in good physical and spiritual health as well as in good social standing (Khan et al., 2018).

Muslims spend the month of Ramadan fasting, refraining from immoral behaviour, and purifying their souls. The month of Ramadan includes unique characteristics, customs, traditions, and obligations since it is the most significant religious month in Islam.

Islam performs a vast array of religious rituals that are thought to be the longest in duration and the most comprehensive rituals. Thus while fasting the individual are more prone to develop a spiritual wellbeing which ultimately leads to better manage various negative emotional states that may also include aggression, anxiety and stress (Khajavi & MirAli, 2017). Similarly in a study conducted by Nasiri and Alireza Lotfi (2020) has shown a visible changes in level of aggression among individuals who were observing fasting. These findings were found in accordance with the results of the current study (Nasiri & Lotfi, 2020) (table 5).

Limitations & Recommendations

The sample size of the research was small and limited and was selected only from Peshawar that impacts the generalizability of findings. So for future research expand the sample size and participants pool to include diverse demographics, cultural backgrounds, and testing practices. This will enhance the generalizability of findings and more researches needed to be carried out province wise and nationwide with larger sample which would give deep insight regarding the impact of fasting during Ramadan on a person's mental health. Longitudinal studies that include Ramadan as a focal point would offer insights into the enduring effects of this specific fasting practice. Ensuring diverse samples, reflective of the global diversity of Ramadan participants, can enhance the external validity of findings. Utilizing objective measures alongside self-reporting becomes crucial in the context of Ramadan fasting, providing a more robust assessment of mental and spiritual health. Additionally, differentiating between types of aggression and exploring underlying mechanisms within the specific context of Ramadan fasting will contribute to a more nuanced understanding.

Future implications

The implications of fasting on mental health, spiritual well-being, and aggression unveils a tapestry of potential impacts that resonate on personal, communal, and societal levels. Exploring these connections not only enriches our understanding of holistic well-being but also paves the way for practical applications and interventions. Delving into the implications of fasting provides valuable insights into how these practices can be harnessed positively for the benefit of individuals and communities alike. Understanding these implications can guide the development of culturally sensitive interventions and educational initiatives, enhancing spiritual well-being. It also underscores the need for interdisciplinary collaboration, involving religious studies and mental health professionals, to appreciate the diverse ways fasting contributes to individuals' spiritual journeys. This research thus adds to the increasing amount of evidence supporting the use of mindful practices, like fasting, to improve individuals' general well-being.

Conclusion

As a result, this study sheds light on the significant advantages of fasting for young adults' mental and spiritual well-being. After conducting a thorough pre- and post-Ramadan fasting study with 200 participants of various academic backgrounds, our results highlight a significant improvement in participants' mental health and spiritual aspects. The reported drop in aggressiveness is more evidence for the all-encompassing advantages of fasting. This transformational effect is consistent with previous research, which indicates that fasting practices promote discipline and self-control as well as a higher sense of spiritual well-being. The current research explores the individuals' subjective experiences during the fasting period, going beyond quantitative data. The qualitative insights into the complex interaction between fasting, mental health, and spirituality are provided by the

participants' stated increases in mental clarity, psychological stability, and an increased sense of purpose.

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