

# The Effects of Fasting on the Level of Happiness in the General Population of Kermanshah, Iran

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## ABSTRACT

**Introduction:** Fasting in the month of Ramadan has several positive effects on the emotional and mental state and improves happiness in the community. This study aimed to investigate the effects of fasting on the level of happiness in the general population.

**Methods:** In this study, we used pretest-posttest analysis to evaluate the hypothesis, and the study population consisted of the people of Kermanshah, Iran. In total, 110 individuals were selected randomly, and the evaluation of happiness was performed using MUNSH happiness survey including four scales of positive appreciation (PA), positive experience (PE), negative appreciation (NA) and negative experience (NE). Data analysis was performed using T-test in SPSS V.18.

**Results:** In this study, a significant difference was observed between the level of happiness before and after the month of Ramadan. Moreover, there was a significant difference between the pre-test and post-test in terms of NA ( $P=0.032$ ,  $T=2.16$ ) and NE ( $P=0.001$ ,  $T=3.302$ ). However, no significant difference was observed in PA and PE before and after Ramadan in the study population.

**Conclusion:** According to the results of this study, fasting could positively affect the level of happiness in a community. Therefore, further attention needs to be drawn to the religious beliefs of people and their effects on the mental health of a society.

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## Introduction

Despite the remarkable social, economic and scientific advancements in the modern world, many people suffer from psychological disorders such as anxiety, depression, stress and nihilism. It seems that the identity of man has been undermined, and self-alienation has plagued the human community (1).

According to the World Health Organization (WHO), spirituality, religion and personal beliefs are essential factors in the evaluation of the quality of life. Several studies have investigated the association between spirituality, religiosity and mental health in the past few decades (2).

Religion is normally studied in the three main categories of organizational religion, subjective religion and religious beliefs. The organizational aspect of religion discusses the participation of individuals in religious institutions (e.g. membership in the church),

while the mental aspect refers to the religious commitment and the significance of religion in the individuals' life. As for religious beliefs, the topic mainly revolves around the core beliefs of individuals about God.

The effects of religious beliefs have frequently been disregarded in religious studies despite their strong influence on the beliefs, values and lifestyle in a society. Nevertheless, several British physicians are of the opinion that religious beliefs could have healing effects on different disorders, and 75% of these experts have confirmed that prayers could accelerate the process of treatment in many diseases (3).

Historically, religion and health have been known to have a close bond; however, the relationship between religion and mental health has been a matter of debate in modern psychology giving rise to a variety of theories and conflicting results. While some theorists

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essentially consider theological beliefs as a mental illness and religious practices as obsessive psychoneurosis, many other scientists affirm the key role of religion in the enhancement of mental health in human community (4).

Recently, several studies have focused on the role of spirituality in health improvement investigating the association between religious beliefs and diseases, happiness, well-being and self-actualization; for instance, the American Psychological Association has reported the field of spiritual health research to be flourishing inherently. Similarly, Islamic beliefs emphasize the importance of worship and practical religious devotion, and demand individuals to train piety in the society (5).

Fasting has been considered as a way of purification for the soul and body throughout history, and different religions have demanded their followers to practice this rule. In Islam, fasting has become an organized form of religious practice, and several studies have investigated the benefits of fasting for the physical and mental health in recent years (6).

Obligatory fasting during the month of Ramadan is a common practice in Islam, and a vital pronouncement for Muslims. Fasting has also been demanded of the followers of other religions; however, the time and conditions are different from Ramadan fasting (7). During this month, actions such as eating, drinking and smoking have to be avoided from the dawn to sunset. In healthy individuals, prolonged fasting could result in the inhibition of the hypothalamic-pituitary-thyroid axis (8). Ramadan is one of the months of the lunar calendar, and the length of fasting is between 18-11 hours depending on the corresponding season (9).

Numerous benefits have been acknowledged for fasting (Afifi, 1997), while in the Islamic point of view, fasting is also a spiritual dimension which contributes to the promotion of mental and physical health (10). Over a billion Muslims live across the world, millions of which keep fast during the month of Ramadan every year. Fasting has many benefits for healthy, growing individuals as well as numerous positive effects on the emotional, physical, mental and social aspects of life (11); over the past four years, several epidemiological studies have confirmed the health benefits of fasting (12).

One of the most important aspects of mental health and quality of life is happiness. Happiness is defined as the presence of positive emotions, life satisfaction and absence of negative emotions such as depression and anxiety (13).

Happiness is a positive emotion, and accumulative research has been conducted on the subject of happiness over the past 40 years. These studies have mainly focused on three components: degree of positive emotions and happiness, absence of negative emotions such as depression and anxiety, and a moderate level of life satisfaction in a specific period of time. Happiness grows with the achievements made by individuals, and the term "bliss" is alternatively synonymous with happiness. In fact, understanding and facilitating happiness and well-being are the key concepts of positive psychology.

Martin Seligman classified positive emotions into the three categories of associated with the past, present and future experiences. Positive emotions involving the future are optimism, hope, trust, faith and reliance, while satisfaction, pleasure, prosperity, pride and dignity are among the positive emotions associated with the past. Other positive sensations such as temporary happiness and stable pleasure mainly focus on the present. On the other hand, happiness is denoted as a sustainable, long-term satisfaction (14).

Various definitions have been proposed for the concept of happiness; however, the interpretation given by Ruut Veenhoven seems to be comparatively more comprehensive; he defines the concept of happiness as "the degree to which an individual judges the overall quality of his/her life as very good". Other researchers have defined happiness as the overall psychological well-being, mental health or subjective well-being.

According to Archly, Martin and Lou, three essential components of happiness include positive emotions, life satisfaction and absence of negative emotions such as depression and anxiety. Furthermore, they regarded a purposeful life, personal growth and affection towards others and nature as other essential elements of happiness.

In another study, researchers found a significant correlation between having a social support network and the level of happiness in a

community. In other words, individuals with secure attachments are happier compared to those with insecure attachments to the people around them (15).

With the remarkable advancements in the field of positive psychology in recent years, happiness has been a prominent subject of study (16). The teachings of Islam ensures mental health in the relationship of the man with himself as well as others, as numerous verses of The Holy Quran focus on mental health and happiness of all God's creatures.

In a study by Alimohammadi and Janbozorgi on the relationship between religious beliefs and mental health, a significant positive correlation was observed between these two factors. According to their findings, religious people tend to enjoy a higher level of happiness, which is a direct result of their mental health (Chapter Ra'd, verse 28, The Holy Quran).

Religious practices have been proven to play a pivotal role in reducing depression; a number of studies conducted in the United States have also claimed that religious people tend to be happier since practices such as going to church and participation in religious ceremonies positively influence the level of life satisfaction in these individuals (12). On the same subject, fasting is known to be associated with the enhancement of mental health.

Religious beliefs and faith in God are considered as effective, cognitive behavioral approaches to overcome stressful situations, manage physical and psychological problems, and control internal and external pressures. Given the notable effects of fasting on the strengthening of religious beliefs, the month of Ramadan is a great opportunity to improve mental health and consequently, achieve a higher level of inner peace and happiness. Apart from the spiritual aspect, fasting involves other elements such as starvation and changes in the lifestyle, which could separately influence the mental health and sleep cycle of the fasting individual (17).

Regarding the key role of culture and religious beliefs in the mental health and happiness of a community, this study aimed to evaluate the effects of fasting on the level of happiness in the general population of Kermanshah city, Iran.

## Materials and Methods

This one-group, pretest-posttest study was conducted in 2012 on 110 healthy individuals randomly selected from the general population of Kermanshah city, Iran who were fasting during the month of Ramadan. The inclusion criteria of the study were the decision of the subjects to keep fasting during Ramadan, and their consent to participate in the research. The exclusion criteria were as follows: 1) presence of physical illnesses; 2) mental disorders; 3) use of psychiatric medications and 4) drug abuse.

By the end of Ramadan, subjects who were not able to fast for at least 21 days for any reason were excluded from the study. Regarding the ethical considerations, participants were enrolled in the study if informed consent was provided, and in order to maintain confidentiality, a number or a specific code was applied to refer to each individual in the study. The required data were collected via Happiness Questionnaires (MUNSH)<sup>1</sup> from all the participants.

The subjects had to fast for at least 21 days during Ramadan and they were reassessed via two questionnaires at the end of the fasting month. The study population included the residents of Kermanshah city, and the sample size consisted of 110 people who were randomly selected from public places such as parks, mosques, districts and guilds. The subjects included 13 men and 97 women who completed the questionnaires twice; before and after the month of Ramadan.

### ***The MUNSH Questionnaire (Memorial University of Newfoundland Scale of Happiness)***

In this study, the MUNSH happiness survey was used to measure the level of happiness in the subjects; these questionnaires consist of 24 sections, which could be completed individually or in a group. This test is divided into four scales of positive apperception (PA), positive experience (PE), negative apperception (NA) and negative experience (NE). Each section has three possible answers: "Yes" (2 points), "No" (0 point) and "I do not know" (1 point). Internal consistency of this scale with Cronbach's alpha coefficient was reported to be equal to 71.0, and the validity coefficient was 84.0 (18).

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1. Memorial University of Newfoundland Scale of Happiness (MUNSH)

The MUNSH questionnaires were completed by the subjects in two stages within an interval of 50 days (between 1-2 weeks before Ramadan and 1-2 weeks after Ramadan) in order to measure the level of happiness in the fasting individuals. The allocated codes of the participants were used for further accessibility as well as to persuade the subjects to reply to the questions correctly. Data analysis was performed using independent T-test in SPSS V.18.

## Results

In this study, all the sub-criteria were measured during pre-test and post-test before and after Ramadan in order to evaluate the happiness level in the general population of Kermanshah. The measured parameters signified the level and shift of the MUNSH happiness scores before and after Ramadan and were analyzed using one-sample T-test. The classification of the participants into two groups, mean and standard deviation of the raw scores in four sub-criteria, and total scale of happiness questionnaires in the pre-test and post-test are shown in (Table 1). For the accurate evaluation of the obtained scores, the

four criteria and total scores in the pre-test and post-test were analyzed using one-sample T-test, and the results are depicted in (Table 2).

The mean scores of all the measured parameters in the scales before and after Ramadan were presented in the Table 2.

Data analysis revealed a significant difference between the scales of happiness and fasting ( $P=0.003$ ,  $T=3.078$ ). Furthermore, there was a significant difference between fasting and NA ( $P=0.032$ ,  $T=2.167$ ) and NE ( $P=0.001$ ,  $T=3.302$ ). However, no significant differences were observed between fasting and PA ( $P=0.715$ ,  $T=0.367$ ) and PE ( $P=0.058$ ,  $T=1.913$ ).

## Discussion

In this study, we investigated the effects of fasting on the level of happiness in different individuals, and the happiness scale of the study sample was evaluated and compared before and after the month of Ramadan. In total, 110 individuals, consisting of 97 women and 13 men, were surveyed in this study.

This study lacked a control group because of implementation problems that was a performance limitation.

**Table 1.** Study population, Mean and Standard Deviation of Criteria in pre- and post-test

| Variant                    | Group Criteria | Mean  | Standard Deviation (SD) | Population |    |
|----------------------------|----------------|-------|-------------------------|------------|----|
| Positive apperception (PA) | Pre- test      | Women | 5/02                    | 2/887      | 97 |
|                            |                | Men   | 5/69                    | 2/463      | 13 |
|                            | Post-test      | Women | 5/11                    | 2/741      | 97 |
|                            |                | Men   | 6/15                    | 2/940      | 13 |
| Positive experience (PE)   | Pre-test       | Women | 7/38                    | 3/709      | 97 |
|                            |                | Men   | 8/62                    | 2/902      | 13 |
|                            | Post-test      | Women | 7/99                    | 4/014      | 97 |
|                            |                | Men   | 10/00                   | 2/198      | 13 |
| Negative apperception (NA) | Pre-test       | Women | 6/82                    | 3/007      | 97 |
|                            |                | Men   | 5/54                    | 2/602      | 13 |
|                            | Post-test      | Women | 6/04                    | 3/198      | 97 |
|                            |                | Men   | 5/31                    | 3/250      | 13 |
| Negative experience (NE)   | Pre-test       | Women | 6/85                    | 4/055      | 97 |
|                            |                | Men   | 5/31                    | 3/250      | 13 |
|                            | Post-test      | Women | 5/58                    | 4/028      | 97 |
|                            |                | Men   | 3/23                    | 2/242      | 13 |
| Happiness                  | Pre-test       | Women | -1/21                   | 11/184     | 97 |
|                            |                | Men   | 3/31                    | 7/718      | 13 |
|                            | Post- test     | Women | 1/30                    | 11/546     | 97 |
|                            |                | Men   | 7/38                    | 4/770      | 13 |

**Table 2.** Mean and SD of score differentiations in the Criteria and Total scores of Happiness in the Four Study Groups and One-sample T-test results

| Variant                    | Group criteria   | SD    | Mean  | T     | P value |
|----------------------------|------------------|-------|-------|-------|---------|
| Positive apperception (PA) | Pretest-posttest | 2/612 | -0/09 | 0/367 | 0/715   |
| Positive experience (PE)   | Pretest-posttest | 3/555 | -0/65 | 1/913 | 0/058   |
| Negative apperception (NA) | Pretest-posttest | 3/316 | 0/69  | 2/167 | 0/032   |
| Negative experience (NE)   | Pretest-posttest | 4/090 | 1/29  | 3/302 | 0/001   |
| Happiness                  | Pretest-posttest | 9/170 | -2/69 | 3/078 | 0/003   |

According to the obtained results, fasting significantly increased the level of happiness, which was consistent with the findings of Zare Bahramabadi et al. in 2011. In their study, they observed that the scale of happiness in fasting individuals increased significantly by the end of Ramadan compared to the beginning of the month, while a significant reduction was observed in the control group (5).

Moreover, Mousavi et al. reported a significant correlation between mental health and fasting; accordingly, fasting individuals had a higher level of mental health compared to normal individuals (19). In another study, Hussein Khanzadeh and Niazi investigated 96 married students in Tehran using regression analysis and observed that religious inclination could be a proper predictor for mental health (20). In addition, fasting in Ramadan was proven to have a significant impact on the improvement of self-esteem in these students (21).

In another study conducted on 401 students, it was reported that a pattern of positive religious coping had a significant positive correlation with happiness and mental health. Moreover, the surveyed students exhibited positive religious coping in most cases, and happiness and mental health were significantly different in patterns of negative religious coping depending on the gender of the studied subjects (22).

The same study was also indicative of a significant positive correlation between religiosity and the level of happiness. Furthermore, a significant positive correlation was observed between the three components of religious behavior, religious knowledge and religious attitude with the scale of happiness (23). According to the literature, fasting results in the enhancement of mental health status, reduction of anxiety and depression and improvement of social performance (24).

With regard to the sub-criteria of the present study, there were significant differences between fasting scores, NA and NE in pre-test and post-test.

In one study, Fallah and Nikfarjam demonstrated that I'tikaf, an Islamic ceremony in the month of Ramadan, could significantly increase the level of happiness in individuals ( $\alpha=0.01$ ). The interventional programs performed during this ceremony lay the perfect grounds for the enhancement of spiritual happiness in the attendants (25), which is correspondent with the

findings of the current study.

In another research in this regard, the total scores of "Mental Health Questionnaire" in individuals who fasted throughout Ramadan and the ones who leisurely fasted for only a few days were indicative of an improvement in the general public health after the month of Ramadan. However, individuals who could not keep fast due to religious or medical conditions, or those who did not fast at all suffered a decline in the level of their mental health after Ramadan (4). Therefore, fasting could be an essential factor in reducing depression and improving the mental health of students (26).

According to several studies, there is a significant correlation between religious attitudes, mental health, life satisfaction, self-esteem and happiness of students. Furthermore, religious attitudes and mental health could predominantly explain the variance of happiness, and therefore, could be considered as the most appropriate predictors of happiness (27).

Religious inclinations, especially belief in afterlife, have been known to positively affect mental health. Although the image of life after death varies in different religions, hoping for spiritual and heavenly rewards in the presence of God is a remarkable solace for those who have faith. Therefore, these individuals tend to enjoy higher levels of happiness and satisfaction with life compared to other people. Moreover, recent studies have indicated that believing in afterlife could result in lower levels of psychological disorders such as depression, anxiety, anger and paranoia (28).

## Conclusion

The results of the current study were indicative of a significant relationship between fasting and happiness in the general population, which could help the members of the society to reach happiness and mental relaxation through resorting to religion and spirituality. Thus, the authorities of the society need to designate religious programs emphasizing the importance of fasting and prayers for the enhancement of public mental health and happiness.

In conclusion, since Muslims believe Islam to be an ideology which offers the followers the most innovative and complete set of health and lifestyle rules covering all the aspects of human life, further scientific study is required as to

investigate the pivotal role of religious variables in the improvement of mental health, happiness and peace of mind.

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