



Research Article

The Moderator Role of Spirituality on the Relationship between Fear of COVID-19 and Psychological Well-Being

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Abstract

This study aims to investigate the relationship between fear of the COVID-19 Pandemic and psychological well-being in Turkey, by concentrating on spirituality as a moderator role. Keeping in mind Turkey's religious and spiritual beliefs, and with the pandemic, the relationship between spirituality, fear of COVID-19 and well-being, needs to be discussed. It is hypothesized that the relationship between fear of COVID-19 and psychological well-being will be moderated by individuals' spirituality. The survey method was used, and online data was gathered by a snowballing sample. The total of the sampling group consisted of 473 participants. In the analysis process, Process Macro v3.5 was used for moderation analysis. The findings indicate that spirituality has a moderator role on the model, especially when the spirituality of individuals' was at a high or medium level. The results indicate that there is a moderator role of spirituality between the relationship of fear of COVID-19 and well-being, and it was so among individuals who have medium to high spirituality. The importance of the findings are discussed.

Keywords:

pandemic • COVID-19 • spirituality • psychological well-being • COVID-19 fear

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The Coronavirus disease (COVID-19) is a dangerously infectious disease, which was caused by SARS-CoV-2 (Li et al., 2020; Zu et al., 2020). It was previously called 2019-nCoV, since it shared an identity to two-bat-derived SARS-like Corona Viruses (Weston & Frieman, 2020; Zu et al., 2020), but is far more severe than acute Respiratory Syndrome Coronavirus (Velavan & Meyer, 2020; Zu et al., 2020;). There were six coronaviruses before COVID-19 (Weston & Frieman, 2020), which infected both humans and animals (Velavan & Meyer, 2020). Four of these captured less interest at a public health level, and the other two, SARS-CoV (severe acute respiratory coronavirus) and MERS-CoV (Middle East respiratory syndrome coronavirus) resulted in fatality ratios of 10% and 35%, respectively (Weston & Frieman, 2020). Though it spreads rapidly worldwide with a high degree of lethality (Weston & Frieman, 2020), and is not yet controlled (Arpaci et al., 2020), it is not lethal as SARS-CoV or MERS-CoV, with a fatality ratio of two to four percent (Weston & Frieman, 2020). According to a recent report (World Health Organization, [WHO], 2022), there were 450,229,635 confirmed cases and 6,019,085 deaths worldwide by 10 March, 2022. In Turkey there have been 14,457,990 confirmed cases of COVID-19, with 95,954 deaths by 10 March, 2022 (WHO, 2022). The first case of COVID-19 was reported in China, Wuhan city, Hubei Province, on 31 December, 2019, (Gralinski & Menachery, 2020; Qiu et al., 2020; Velavan & Meyer, 2020; Weston & Frieman, 2020) and by 9 January, this new 2019-nCoV sequence had been definitively detected (Gralinski & Menachery, 2020). The first sign of the disease was pneumonia, which occurs at the second or third week of the infection (Velavan & Meyer, 2020). Individuals who become infected with COVID-19 exhibit fever, coughing, upper respiratory tract infections, difficulty breathing, and fatigue (Gralinski & Menachery, 2020; Velavan & Meyer, 2020) similar to SARS-CoV and MERS-CoV. Since both public and health care workers have been infected, it is easily and rapidly spread (Weston & Frieman, 2020). Though the source of the disease is yet unknown, the first cases were linked with the Huanan South China Seafood Market, which involves bats, snakes, birds and others creatures in it (Gralinski & Menachery, 2020). On the other hand, as it is widely spread, it affects 'normal' life and restricts the behavior/movements of people (Sahin, 2020). In Turkey, for instance, citizens are prohibited from going outside and entering specific cities unless there is a mandatory situation (Sahin, 2020). It not only endangers physical health, but also impacts mental health as well (Li et al., 2020; Zhang et al., 2020). It causes stress, depression, psychosocial disorders, panic disorder, and anxiety (Arpaci, et al., 2020; Qiu et al., 2020). Similarly, it was found that there is an increased level of depression in individuals who experienced COVID-19 infection, and also in the general public, and those people show more depressed moods, somatic symptoms, and anxiety-like behavior (Zhang et al., 2020), just as previous epidemics caused fear, panic or anxiety (Arpaci et al., 2020). Moreover, Qiu et al. (2020) found that 35% of the participants reported psychological distress, and it was reported more between the ages of 18 to 30, and 60 and above. After

COVID-19, individuals' negative emotions, such as anxiety and depression increased, while positive emotions, such as happiness and life satisfaction, decreased (Li et al., 2020). Moreover, Li et al. (2020) found that, as opposed to their expectations, positive emotions increased after January, with words, such as faith and blessing. It was further discussed that religion can ease the tense moods and bring out positive emotions. Therefore, this research explores the moderating role of spirituality, and its relationship with well-being and fear, during COVID-19 pandemic.

As Keyes et al. (2002) propose, well-being can be defined by two forms, subjective and psychological well-being, for defining psychological functioning. Subjective well-being involves 'more global evaluations of affect and life quality' (Keyes et al., 2002, p.1007), while psychological well-being examines 'perceived thriving vis-a-vis the existential challenges of life (for example, pursuing meaningful goals, establishing quality ties to others)' (Keyes et al., 2002, p.1007). Subjective well-being, also expressed as 'happiness', is one's assessment of his life (Diener & Diener, 1996) and psychological well-being, on the other hand, is managing existential challenges faced in life (Keyes et al., 2002). Since its association with challenges, the current study will investigate the psychological well-being of the participants during the pandemic. Psychological well-being serves as an umbrella construct involving positive and negative affect, life satisfaction, life goals and so on. (Levin & Chatters, 1998; Lucas & Diener, 2010). Since people are experiencing stress, anxiety and other negativities (Arpaci, et al., 2020; Qiu et al., 2020) it can be assumed that their psychological well-being will be affected by these negativities as well. Interestingly, one study, mentioned above (Li et al., 2020), found that individuals' positive emotions increased with encountering words such as faith and blessing, which are connected to the studies of religion and well-being. Petersen and Roy (1985) explain religion as a function that serves a meaning and purpose for individuals, making life understandable, which leads to well-being and health being positive (Emmons et al., 1998). Since people are experiencing fear and anxiety, they can decrease the severity of it with religion, Koenig (2020) suggests, and Christianity, Buddhism, Judaism, and Islam encourage their followers to believe in happiness, peace, security and hope. However, caution must be made here in that though religion can help to cope with negative events, if individuals take religion too seriously, that is they put too much value on it, it may also result in poorer mental health and negative feelings (Greenway et al., 2007) since religion 'can be judgmental, alienating and exclusive' (Williams & Sternthal, 2007, p. 48). Indeed, religiosity and spirituality are related to better health, life satisfaction, happiness and psychological well-being (Greeley & Hout, 2006; Haslam et al., 2009; Ivtzan et al., 2011; Mishra et al., 2017) and religious involvement, such as church attendance and prayer, is positively associated with happiness, lack of distress, recovery from illness, mental health and depressive symptoms, life satisfaction, optimism and anxiety (Emmons et al., 1998; Levin

& Chatters, 1998; Petersen & Roy, 1985; Tiliouine et al., 2009) as well as with a healthy immune system (see for instance Koenig et al., 1997) or having better results from the viral infection hepatitis C (Raghavan et al., 2013). Another study (Gillum & Ingram, 2006) found that religious commitment has a blood pressure-lowering effect. Though the effect sizes between religiosity and well-being ranges, overall, it was concluded that religion is positively associated with subjective well-being, and with increased age the relationship increase as well; that is, this relationship increases with older individuals (Chamberlain & Zika, 1988; Witter et al., 1985). Moreover, as a superior authority's support (here God's) is an understanding in the religious side of spirituality, the more spiritual people are, the less they feel hopeless in negative situations (Abdollahi, & Talib, 2015) and their resilience is boosted by spirituality when faced with burdensomeness (Gülerce & Maraj, 2021).

Furthermore, until the mid-1900s spirituality and religion was used interchangeably and inseparably. Then, with the rise of secularism, the two separated, yet both constructs share some overlapping characteristics; spirituality meant more positive light, and religion being related to theology and certain rituals (Ivtzan et al., 2011). Spirituality resembles an inner experience in the understanding of life, whereas religion involves practices by its members, such as worship (Ivtzan et al., 2011). Although spirituality was considered as a personal and philosophical structure in the past, it has been concluded in recent academic studies that spirituality includes a sense of integrity (Milliman et al., 2003), and can be explained as one's beliefs about a higher being, which has an impact on decisions, personality and even health, while religiosity is the construct that informs those beliefs (Mishra et al., 2017). Spirituality is associated with positive aspects of subjective well-being (Emmons et al., 1998), and with psychological well-being (Kim et al., 2011). Interestingly, one study measuring both religiosity and spirituality (Ivtzan et al., 2011) shows that spirituality is better at explaining well-being. The researchers measured spirituality and religiosity and their relationship with well-being. There were four groups, but the first group (a high level of religious involvement and spirituality) and the second group (a low level of religious involvement with a high level of spirituality) got higher scores on well-being, which indicates that spirituality plays an important role in well-being, regardless of religious participation. Moreover, fear of the pandemic has been related to low levels of well-being (Turska & Stepien-Lampa, 2021). The negative relationship between a fear of the pandemic and psychological well-being was also found among pregnant women as well, when fear increases, well-being decreases (Mortazavi et al., 2021). In Turkey, Durmuş and Durar (2021) examine the relationship between spiritual well-being levels and COVID-19 fear levels. They investigate this relationship on individuals over sixty-five years. They used the Spiritual Well-Being Scale and found a moderate relationship between spiritual well-being and coronavirus fear in individuals over sixty-five. Moreover, their

study indicates that there is a negative relationship between spirituality and fear of COVID-19; that is, as individuals' spirituality increases, their fear of coronavirus levels decreases. Another study conducted regarding spirituality and the COVID-19 pandemic was by Gülerce and Maraj (2021). The researchers investigated the mediator role of spirituality between resilience and hopelessness in Turkey. Just as expected, there was positive relationship between resilience and spirituality and a negative between hopelessness and spirituality. There was also an inverse relationship between resilience and hopelessness, and eventually there was a mediating role of spirituality between the variables, which led authors to conclude that individuals who are more spiritual are less prone to have an anxiety and depression (Gülerce & Maraj, 2021). A similar study by Maraj et al. (2020) was also conducted in Pakistan. The researchers investigated spirituality's mediator role between resilience and hopelessness during the COVID-19 pandemic in Pakistan. The mediator effect was again also found; therefore, we can say that spirituality boosts resilient behavior, which in turn lessens hopelessness (Maraj et al., 2020).

In the light of these findings, and the increase of spiritual and religious practices during the pandemic in Turkey (Gülerce & Maraj, 2021) the question, 'Does spirituality have an effect on the relationship between fear of COVID-19 and psychological well-being' arises. Accordingly, the current study aims to investigate the relationship between fear of the current pandemic and psychological well-being in Turkey, as well as looking for the moderator role of spirituality. It is hypothesized that the relationship between fear of COVID-19 and psychological well-being will be moderated by individuals' spirituality. The reason moderation analysis was chosen is that spirituality will moderate the direction or strength of the relationship between COVID-19 phobia and psychological well-being. Spirituality is worth researching in Turkey as it may be protective against fear of the pandemic's effects on psychological well-being. Furthermore, if the results meet the expectancy, interventions can be made, not only for Turkey, but also around the world.

Method

Participants

A correlational study design was used to conduct the research in Turkey during the COVID-19 pandemic. The current research was carried out during May and June, 2020. Doing a priori analysis of linear multiple regression from G*Power Software (installed from www.gpower.hhu.de), with a power of .95 and with an effect size of .15, resulted at least 119 participants being required. Therefore, according to G*Power, this number was set as a minimum participant number and, in total, 473 participants participated for the research. However, twenty of the participants were excluded. The

age range of the participants was not restricted, but a requirement was that they should be 18 and above because of spirituality. The survey method was used and snowballing sample was conducted, meaning that the participants were recruited from the social media and such networks, and the participants were encouraged to share the study's link through the use of those networks. Age, educational level and accommodation status was asked from the participants. The average age of the participants was thirty-four, with the educational level being, primary school (21 participants), high school (55 participants), and university (377 participants). The accommodation status of the participants was also asked, and with whom they were staying during the COVID-19 pandemic. Twenty-eight of the participants stated that they were staying on their own, 399 with their family or relatives, 18 with friends, and 8 with someone else. The table of demographics can be seen below (see Results Section, Table 1).

Measures

The Fear of COVID-19 Scale. To measure fear concerning COVID-19, the *Fear of COVID-19 Scale* developed by Arpacı et al. (2020) was used. The scale has 20-items, and is a self-reporting instrument with a 5-point Likert-scale (1-strongly disagree, 5-strongly agree) to measure COVID-19 phobia (abbreviated to C19P). The 20-item scale has four factors; psychological, psycho-somatic, economic and social. The internal consistency coefficients for the sub-scales range between 0.85 and 0.90 and the Cronbach alpha for the overall scale is 0.92, and is .95 for this study. High scores indicate high levels of fear of COVID-19. It has items such as, 'The fear of coming down with corona virus makes me very anxious', and 'The possibility of food supply shortages due to the corona virus pandemic causes me anxiety'.

The Psychological Well-Being Scale. To assess the participants' well-being, the Turkish version of the Warwick-Edinburgh Mental Well-Being Scale, translated and validated by Keldal (2015) was used. The scale is a one-factor, 14-item, self-report instrument with a 5-point Likert-scale (1-strongly disagree, 5-strongly agree) to measure mental well-being. The Cronbach alpha for the overall scale is 0.92, and is .96 for this study. The scale has items such as, 'I am optimistic about the future' and 'I can cope well with problems'.

Spirituality. The participants' spirituality was assessed using the *Spirituality Scale* developed by Karairmak and Korkut-Owen (2009). The scale is a three-factor, 15-item, self-reporting instrument with a 5-point Likert-scale (1-strongly disagree, 5-strongly agree) to measure the spirituality of the individuals. High scores on the scale indicate higher levels of spirituality. The Cronbach alpha for the overall scale is 0.82, and is .94 for this study. Later, by Ozturk (2013), the Cronbach alpha was found to be 0.88. The scale has items such as, 'I haven't found my purpose in life yet' and 'I feel the presence of a protective and comforting power within me'.

Procedure

Before conducting the participation call, ethical committee approval was obtained from the Ministry of Health in May, 2020, and from Yasar University. After getting the necessary permission, the participation call was made through social media and networking sites (WhatsApp, Twitter, and Instagram), and the participants were also encouraged to share this participation call. The call was made informing that it concerns the relationship between COVID-19 and psychological well-being, and that only those who were eighteen years old and above could participate. The participants were encouraged to share the study link through social media networks to get more participants, with the proviso that an individual could participate in the study only once. Clicking on the study link, the participants first read the aim of the study and information relating to it. The participants were assured that their answers would be used only for research purposes and not shared with any third party. They read the informed consent and clicked on the statement which stated that s/he was over eighteen, understood the study and the information, voluntarily participated, and could withdraw from the study whenever s/he wanted to. Unless pressing this statement, the participants were not be allowed to skip onto the next page. On the next page, they answered demographic information, such as sex, age, educational level, and living situation (who, if any, that they lived with). After this, they were asked to fill in the Fear of COVID-19 Scale (Arpaci et al., 2020). No blank statements were accepted. On the next page, they completed the Warwick-Edinburgh Mental Well-Being Scale (Keldal, 2015). Lastly, they filled in the Spirituality Scale (Karairmak & Korkut-Owen, 2009) and were thanked for their involvement.

Statistical Analysis

Twenty items of data were excluded from the overall data, since more than one option on the scale answers had been chosen. As a result the data from 453 participants was analyzed in the study. Using SPSS 21 and Process Macro v3.5, moderation analysis will be conducted to investigate the relationship between fear of COVID-19 and psychological well-being. The independent variable will be fear of COVID-19, the dependent variable will be psychological well-being, and the moderating variable will be spirituality.

Results

It was expected that the relationship between fear of COVID-19 and psychological well-being will be moderated by spirituality, and among people who are high on spirituality the relationship will be weaker or neutral. To test this hypothesis, a moderation analysis was used by Process Macro v3.5. Table 1 shows the demographic statistics, and Table 2 shows the summary of the model of moderation analysis for variables predicting psychological well-being.

Table 1*Descriptive statistics*

Sample Characteristics		<i>n</i>	%	<i>M</i>	<i>SD</i>
Sex					
	Female	314	69.3		
	Male	139	30.7		
Education					
	Primary school	21	4.6		
	High school	55	12.1		
	University	377	83.2		
Accommodation					
	On my own	28	6.2		
	With my family/relatives	399	88.1		
	With my friends	18	4		
	Other	8	1.8		
Age				33.61	13.469

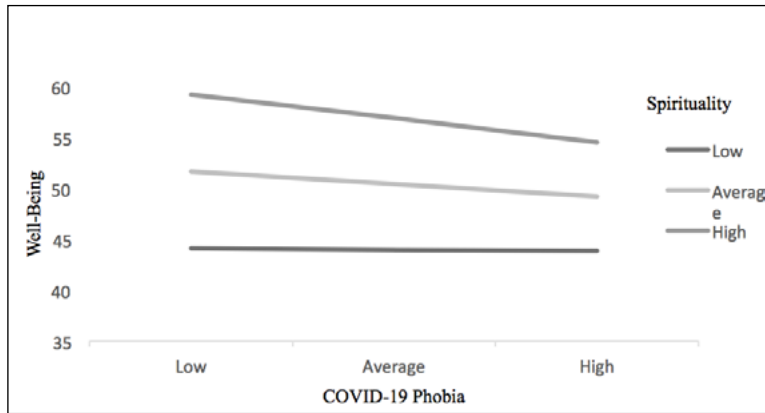
Note. *N*=453

Table 2*Summary of Moderation Analysis for Variables Predicting Psychological Well-Being*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	13.37	5.58	2.40	0.02	2.41	24.33
C19P	0.19	0.11	1.70	0.09	-0.03	0.41
SPI	0.74	0.09	7.50	0.00	0.55	0.94
Interaction	0.00	0.00	-2.44	0.01	-0.01	-0.0009

Note: $R^2 = .31$

The moderation analysis was conducted using Process Macro v3.5. Figure 1 shows the relationship between COVID-19 phobia and well-being, under the influence of spirituality; overall, model $F(3, 449) = 68.11, p < .001, R^2 = .31$. Moderation is shown by a significant interaction effect, and in this case the interaction is highly significant, $b = -0.0047, 95\% \text{ CI} [-0.0085, -0.0009], t = -2.44, p = .015$, indicating that the relationship between the fear of COVID-19 and psychological well-being is moderated by spirituality. When we look at the conditional effects, when spirituality is low, the relationship between fear of COVID-19 and psychological well-being was not statistically significant, $b = -0.0145, 95\% \text{ CI} [-0.0862, .0572], t = -0.4, p = .7$. When spirituality is medium, the relationship between fear of COVID-19 and psychological well-being was statistically significant, $b = -.0807, 95\% \text{ CI} [-.1337, -.0276], t = -2.99, p = .003$. Lastly, when spirituality is high, the relationship between fear of COVID-19 and psychological well-being was also statistically significant, $b = -0.1279, 95\% \text{ CI} [-.1959, -.0600], t = -3.70, p = .0002$.

Figure 1*Relationship between COVID-19 phobia and well-being under the influence of spirituality***Table 3***Conditional Effects of the Focal Predictor at Values of the Moderator(s)*

<i>SPI</i>	<i>Effect</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
43.0000	-.0145	.0365	-.3969	.6917	-.0862	.0572
57.0000	-.0807	.0270	-2.9898	.0029	-.1337	-.0276
67.0000	-.1279	.0346	-3.6995	.0002	-.1959	-.0600

When we look at the conditional effects, when spirituality is low the relationship between fear of COVID-19 and psychological well-being was not statistically significant, $b = -0.0145$, 95% CI [-.0862, .0572], $t = -0.4$, $p = .7$. When spirituality is medium, the relationship between fear of COVID-19 and psychological well-being was statistically significant, $b = -.0807$, 95% CI [-.1337, -.0276], $t = -2.99$, $p = .003$. Lastly, when spirituality is high, the relationship between fear of COVID-19 and psychological well-being was also statistically significant, $b = -0.1279$, 95% CI [-.1959, -.0600], $t = -3.70$, $p = .0002$

Discussion and Limitations

The aim of the current study is to investigate the relationship between fear of the Covid-19 pandemic and psychological well-being in Turkey, as well as to look for the moderator role of spirituality. It is indeed about the relationship between psychological well-being, fear of the pandemic and spirituality as people are affected by the Covid-19 pandemic. The study hypothesizes that the relationship between fear of COVID-19 and psychological well-being will be moderated by individuals' spirituality, making this study the first to investigate it. This study is one of the earliest studies, based on its start date, to investigate the relationship of spirituality to fear of the Covid-19 pandemic and psychological well-being among Turkish people, during the pandemic period.

The literature shows that spirituality is linked to a person's well-being and is used to cope with illnesses and other stressful events (Koenig, 2012). For instance, in a study by Prazeres et al. (2020), they investigated the role of spiritual-religious coping's relationship between fear and anxiety of COVID-19 with healthcare workers. They found that religiosity is not related to coronavirus-related anxiety of fear, however, spirituality was found to be related with lower levels of coronavirus-related anxiety. Therefore, it can be stated that belief/spirituality may lead to a positive psychological state (Del Castillo, 2020). Moreover, Lucchetti et al. (2020) investigated the relationship between religiosity and spirituality and the consequences of mental health during the pandemic in Brazil. They found that high religious, in contrast to Prazeres et al. (2020), and spiritual beliefs are associated with high levels of hope and low levels of fear, worry and sadness. More interesting findings from Turkey were also conducted recently. Similar to our research, Durmuş and Durar (2021) and Kasapoğlu (2020) examined the relationship between spiritual well-being levels and COVID-19 fear levels. Durmuş and Durar (2021) investigated this relationship on individuals aged above 65 years. They used the Spiritual Well-Being Scale, the same as Kasapoğlu (2020), which differs from our study, and found a moderate relationship between spiritual well-being and coronavirus fear in individuals above 65 years of age. Moreover, their study indicates that there is a negative relationship between spirituality and COVID-19 fear, that is, as individuals' spirituality increases, their fear of coronavirus levels decreases. Similarly, Kasapoğlu (2020) found that as spiritual well-being and transcendence increase, the fear of COVID-19 decrease.

This study's main strength is investigating spirituality as a moderator between a fear of the pandemic and psychological well-being. The results are indeed explanatory, since there has been no study in the literature regarding COVID-19 and psychological well-being together before, or while our study was being conducted. Moreover, the results show that when there is a medium or high level of spirituality, the relationship between fear and well-being is negative. This may be related with people's faith. People who have medium to high levels of spirituality may have more faith, and their beliefs may lead them to be less afraid of the virus. This may be because of fate or a belief in God's power; this will be investigated. The age range of the participants did not have an effect on this relationship. Nonetheless, this study has certain limitations. One significant limitation is that it was conducted through the use of an online Google form. Since the study was conducted during the pandemic, we could not control the participants' environment, and it may have had an effect on them while completing the questionnaire, or if they had the slightest idea about what the study was actually testing, they may have chosen the answers accordingly. In addition, the actual location of the participants was not tracked, which raises the issue of true representation of the Turkish community. Therefore, more appropriate testing conditions should be used in future studies. In addition, since the data was collected at

the end of May to June, people may have lost their fear of the Coronavirus, because, during these months the weather became warmer, people got bored quickly and started to think less about the virus. This will be investigated in further research when the second, third or more waves of the illness affect the country. Further studies may also use an experimental design to assess the relationship between fear of Covid-19, psychological well-being and spirituality. Moreover, one may think that spirituality is generally high in Turkey, since it is considered to be a religious country. Therefore, for future studies, any differences with another country, or would the situation be the same, could be investigated. Researchers could investigate whether it is only the case for Turkey or for a muslim country, or is it the same for everyone, regardless of religious view? The current study suggests that increased spirituality may reduce the possibility of a negative relationship between fear of the pandemic and psychological well-being among Turkish people.

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