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The Mediating Effect of Religiousness in the Relationship Between Psychological Resilience and Fear of COVID-19 in Turkey

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Abstract

The purpose of this study was to examine if religiousness has a mediation influence on the link between psychological resilience and fear of COVID-19. Data were collected from 372 participants by using the convenience sampling method. There is a positive significant relationship between psychological resilience and religiousness, a negative significant relationship between religiousness and fear of COVID-19, a negative significant relationship between psychological resilience and a fear of COVID-19. This study was tested with structural equation modeling and bootstrapping was applied. Significant relationships were found between psychological resilience, fear of COVID-19 and religiousness. In addition, it was found that religiousness had a mediating effect on the relationship between psychological resilience and fear of COVID-19. These results suggest that the inverse relationship between psychological resilience and fear of COVID-19 is at least partly explained by level of religiousness.

Keywords Psychological resilience · COVID-19 · Religiousness · Structural equation modeling

Introduction

The COVID-19 pandemic is a major health disaster that has impacted the entire world. After emerging in China in December 2019, this novel coronavirus quickly spread to other countries. The international community continues to cope with

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COVID-19, the acute respiratory disease caused by the virus. The number of deaths from this disease is increasing around the world, including Turkey, the focus of this study. One characteristic that distinguishes a pandemic-level disease from other diseases is that it frightens people. For instance, reports have indicated that people fear contact with those infected with COVID-19 (Lin, 2020). Additionally, the virus's rapid spread, fatal consequences, stigmatization have contributed to this fear (Pappas et al., 2009). Furthermore, an increasing number of concerns and higher levels of anxiety have emerged throughout the pandemic, causing negative effects in many individuals (Gashi, 2020). Among these numerous fears caused by the COVID-19 pandemic, one of the most divisive is the fear of vaccination.

Fear of Vaccines

Vaccine studies conducted around the globe have increased individuals' hopes for effective COVID-19 treatment. On the other hand, the growing number of viral mutations could impede a cure, a fact that has perpetuated public fears. At the same time, Guan et al. (2020) discovered that fear of the COVID-19 vaccine can increase this virus's potential harm to individuals. However, according to experts, it may take time to see the results of vaccination studies, so the number of COVID-19 infections may periodically fluctuate.

In Turkey, with the arrival of summer and an increased vaccination rate, the number of people infected with the coronavirus decreased. In turn, this decrease in cases has motivated more individuals to get vaccinated. According to the Turkish Minister of Health, approximately 95% of COVID-19 patients currently being treated in hospitals are unvaccinated individuals (Minister of Health, 2020). The reasons such people refuse vaccination include potential side effects and a lack of confidence in the vaccine's safety and efficacy. With these concerns and the coming winter, the number of cases has begun to increase. Accordingly, vaccine delays and rejection in the European Union have caused a decrease in immunity rates in many countries, leading to an increase in infections (Larson et al., 2018). Elsewhere, in one study, a significant portion of the U.S. population reported that they were not planning to get the vaccine or were unsure about being vaccinated against COVID-19 (Associated Press-University of Chicago National Opinion Research Center, 2020; Suffolk University Political Research Center, 2020; The City University of New York School of Public Health, 2020; Thigpen & Funk, 2020). These findings confirm the growing concern and distrust of the vaccine, meaning that fear of COVID-19 is ongoing. However, the fear of COVID-19 is believed to decrease with an increase in vaccination rates, as shown in a study by Bendau et al. (2021). This team found a negative relationship between a population's level of vaccination and that group's fear of COVID-19. Thus, research has indicated that public fear of COVID-19 is lowering with growing vaccine acceptance.

Again, an increase in the mutated virus both worldwide and in Turkey has revealed fears and concerns about vaccines. Notably, the efficacy of vaccines against newly mutations has become a controversial subject. For instance, research conducted in response to this situation has revealed that conspiracy theories aiming

to instill distrust in experts and government institutions, especially regarding the mutated virus, are common in anti-vaccine groups' social media posts (Bronatowski et al., 2018; Mitra et al., 2016). Such emotionally charged arguments, used to elicit fear, have contributed to vaccine hesitancy and a decline in vaccine uptake (Dubé et al., 2014; Jolley & Douglas, 2014). Distrust in the vaccine's not tested enough development is another related concern.

Additionally side effects, and rapid vaccine development have been cited as barriers to vaccination (Associated Press-University of Chicago National Opinion Research Center, 2020; Fisher et al., 2020). Although COVID-19 preventive behaviors have been shown to effectively curb the spread of the virus (World Health Organization, 2020), the most effective prevention depends on vaccination. Furthermore, Mahase (2021) suggested that existing vaccines may be effective against mutations of the virus. Aware of the increasing importance of vaccinations, experts have emphasized that those who are unvaccinated pose various risks to society.

Although vaccinations have begun to reduce public fear of COVID-19 (Bendau et al., 2021), unvaccinated individuals poses a risk. For example, unvaccinated individuals may be in contact with other unvaccinated individuals rather than those who are vaccinated (Barclay et al., 2014). This situation allows the COVID-19 virus to spread. Therefore, individuals who aim to overcome their susceptibility to COVID-19 through vaccination may develop fear and anxiety toward those who are not vaccinated. On the other hand, those who are unvaccinated in may be frightened to hear that restrictions will be imposed on them because of their vaccination status.

At the beginning of the pandemic, social distancing and mask requirements to enter indoor areas forced individuals to comply with rules established to contain the virus. These adaptations were easily adopted by most of society. However, these early efforts also elevated unvaccinated individuals' concerns about being barred from entering indoor areas (even if the ban news is fake). Thus, a fear of not being vaccinated along with COVID-19 has emerged. Based on these factors, the extent of concerns involving COVID-19 is constantly changing, as is public anxiety about those who remain unvaccinated. For all of these reasons, people have been forced to deal with various negative aspects of the pandemic.

The Role of Religion

Related studies have indicated that in addition to its physical threat, COVID-19 has also affected people's mental health. Thus, some have tried to find a greater meaning for the pandemic. For example, a person who feels weak and powerless may choose to cope with the situation by waiting for a supernatural being to intercede (Gashi, 2020). Such a perspective often correlates with one's concept of religion. For a person who aims to make sense of everything, religion can become a way to find meaning in life, making it easier for a person to establish a cause-and-effect relationship for challenging events, fulfilling such a person's need for meaning (Yapıcı, 2020). Supporting this idea, some researchers have found that the more strongly one adheres to a religion, the lower that person's acceptance is of pandemic restrictions (Piwko, 2021). According to Alport (2006), religion answers existential questions

by offering people meaning and purpose, thus protecting them from anxiety, doubt, and despair. In this way, such people can turn to religion and spirituality to explain the difficulties they face during the COVID-19 pandemic.

Psychological Resilience

In positive psychology, an individual's ability to quickly recover and return to their daily life after negative experiences is explained by psychological resilience (Akar, 2018). Psychological resilience is defined as the ability to (a) recover in a short time after disturbances, negative conditions, and changes (Earvolino-Ramirez, 2007); (b) cope with and successfully rebound from stressful life events (Murphy, 1987, s.100); and (c) adapt and develop in the face of significant challenges (Masten & Coatsworth, 1998).

One study conducted on individuals between the ages of 18–65 revealed that psychological resilience significantly predicts the level of one's fear of COVID-19 (Tutal & Efe, 2020). In a study conducted on healthcare workers during the pandemic, Lai et al. (2020) found that workers were suffering from insomnia and extreme stress. These researchers concluded that poor working conditions caused by the pandemic were detrimental to individuals' mental health. In the same vein, an earlier study conducted on health workers during the MERS outbreak (Saudi Arabia-2012) found that psychological resilience had decreased, and workers were experiencing a fear of stigmatization (Park et al., 2018). Thus, these results demonstrate that psychological resilience significantly affects even health workers' mental health during situations as extreme as the COVID-19 pandemic.

Religiousness and Psychological Resilience

During the COVID-19 pandemic, researchers have speculated that as individuals' mental health may be affected, they may turn to religion and spirituality, thus increasing their psychological resilience levels. The term "religious" refers to individuals who fulfill the conditions required by a religion, but the concept of religiousness can vary depending on the religion. Yapıcı (2008) suggested that the difficulty of defining religiousness is caused by an inability to give precise answers to the questions of its determinants. The latter include who should be called religious and the typologies of religiousness. According to various definitions, religiousness is defined as (a) the state of experiencing religion, as well as the tendency to be religious on Earth (Allport, 2004); (b) a person having strong religious beliefs (Turkish Language Association, 2021); (c) the state of a religion reflecting in an individual's life (Peker, 2012); (d) the state of expressing oneself through religious concepts and living one's life according to religious boundaries (Sönmez, 2017).

Furthermore, religious people internalize and try to practice the common teachings of their religions. In the present context, the religious people in Turkey discussed here are individuals who are loyal to Allah, who have a conscience, who act righteously, and who reject injustice. This commitment is reflected in

their lives, beliefs, and personalities by motivating them to focus on various moral or worship-related behaviors (Cirhinlioglu et al., 2013). Ayten (2004) stated that a muslim and religious person has the ability to believe in the first place. Next, such an individual organizes their life according to this belief. In Turkey, being muslim religious means living life in accordance with the Qur'an and the Sunnah of the Prophet Muhammad (peace and blessings be upon him).

In this vein, Ayten (2004) considered muslim religious people to be those who believe in Allah, trying to live according to the teachings of Islam, develop their religious practices, and find the meaning of life in religion. Accordingly, although many different views about religiousness have been put forward, religion occupies an important place in the religious individual's life and acts as a regulator of behaviors, emotions, and thoughts. In this context, religiousness also impacts mental health, affecting the level of an individual's psychological resilience.

Many studies have investigated the relationship between religiousness and fear. For instance, Gashi (2020) discovered a significant negative relationship between individual religiousness and fear of COVID-19. That is, this research indicated that the fear of COVID-19 decreased as individual religiousness increased. In the same way, Yapıcı (2007) revealed that as individuals' religiousness increased, their depression and unhappiness decreased. Another study found a significant negative relationship between strong religious coping and anxiety and depression (Abu Raiya et al., 2018). Research has also revealed that in addition to having a significant impact on mental health, religiousness impacts an individual's anxiety levels. Studies investigating this subject have revealed the following: (a) Those who frequently attended church experienced less anxiety than those who attended infrequently (Koenig, 1997); (b) a negative correlation existed between religiousness and anxiety (Abdel-Khalek & Singh, 2014; Gürsu, 2011; Sengül, 2007); and (c) as religiousness increased, the fear of death decreased (Kandemir, 2020).

Psychologically, higher religiousness levels have been show to potentially enable individuals to develop a more optimistic mental state. On this subject, Küçükcan & Köse (2000) found that many people who experienced post-traumatic stress disorder after an earthquake turned to religion to recover from the earthquake's impact. In another study, prayer was found to play a significant role in helping individuals cope with problems (Arıcı, 2006). Furthermore, the combination of believing in a God and having religious tendencies has been shown to have a significant positive relationship with psychological resilience (Erdogan, 2015). Similarly, one study revealed a significant positive relationship between the emotional extent of religiousness and psychological resilience (Sezgin, 2016).

Based on these results, individuals with high levels of psychological resilience are expected to experience less psychologically negative effects from the COVID-19 pandemic. Psychologically resilient individuals can be said at an more advantage in negative situations such as pandemics, earthquakes, and wars compared with individuals possessing weaker psychological resilience. Therefore, the aim

of the present study is to examine the mediating effect of religiousness in the relationship between psychological resilience and the fear of COVID-19.

Study Hypotheses

H1 Psychological resilience has significant direct effect on the fear of COVID-19.

H2 Psychological resilience has significant direct effect on religiousness.

H3 Religiousness has significant direct effect on the fear of COVID-19.

H4 Religiousness has mediate effect between psychological resilience and fear of COVID-19.

Method

In this research, the convenience sampling method was used. In this research, structural equation modeling (SEM) was used. (Kline, 2005). Psychological resilience was determined as the exogenous variable, and fear of COVID-19 was determined as the endogenous variable. Religiousness was the mediating variable measured in terms of its effect on the correlation between dependent and independent variables.

Collection of Data

Research data were collected from online platforms due to the COVID-19 pandemic. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Social Sciences and Humanities Research Ethics Committee of Karabük University. (Date: 25.03.2021 / No: 2021-03).

Participant Demographic Characteristics

The study participants were university students, consisting of 227 men (61%) and 145 women (39%), for a total of 372 people. All of the university students involved in the study are Muslim and belong to the Sunni sect (Just as the majority of the country). Of the participants, 97 (26.1%) were aged 18–24, 138 (37.1%) were aged 25–34, 86 (23.1%) were aged 35–44, and 51 (13.7%) were aged 45 and over. In addition, 271 (72.8%) of the participants reported that they had a relative(s) that tested

as COVID-19 positive, and 101 (27.2%) reported that they had a relative(s) that tested as COVID-19 negative. 10.8% of the participants stated that the COVID-19 pandemic would end in less than one year; 40.6% said in 1–2 years; 22% said in 2–3 years, and 26.6% said in more than three years. When we asked if they considered getting psychological help during COVID-19, 9.7% answered "yes," and 90.3% answered "no." All of the students voluntarily participated in the research. Demographic information of the participants is given in Table 1.

Data Collection Tools

Online data collection for researchs has become more common after COVID-19. The fact that the scales selected in the online environment are more inclusive and contain fewer items increases the quality of the answers given. For this reason, the short resilience scale (5 items) was preferred. Likewise, considering both the practice dimension and the dimension of influence on life, the religiousness scale was preferred because it was within this scope. In addition, the high Confirmatory Factor Analysis (EFA) results confirmed this thesis. Since COVID-19 is a newly developing situation, the absence of a valid and reliable higher scale for fear of COVID in our country has enabled us to use the COVID-19 fear scale.

Short Psychological Resilience Scale

It was developed by Smith et al., (2008) to measure the psychological resilience of individuals. The scale adapted to Turkish by Dogan (2015) is a 5-Likert type measuring tool consisting of 6 substances. The 'I don't agree at all' option on the scale is 1, and the 'I agree' option is scored at 5. A high score from the scale shows high psychological resilience. In Doğan's (2015) study, the scale's Cronbach alpha internal consistency coefficient was calculated as 0.83. The findings showed that scale is a valid and reliable measuring tool used in Turkish culture. In this study, the Cronbach alpha value of the scale was calculated as ($\alpha = 0.86$).

Table 1 Demographic characteristics ($N = 372$)

Characteristic	n	Percent (%)
Gender		
Male	227	61
Female	145	39
Religion		
Islam-muslim-sunni	372	100
Relative COVID-19 status		
Positive	271	72.8
Negative	101	27.2

Religiousness Scale

The study used the 'Individual Religion Inventory' developed by Zagumny, Pierce, Adams, and Fallos to measure participants ' level of religiousness (Zagumny et al., 2012). The developed scale consists of unidimensional six units that aim to measure the impact of religion in the personal lives of the participants, their religious knowledge levels, and the importance of religious thought and activities to the individuals. The items on the scale are:

- I often read information about my religion.
- I'm trying to understand my religion more.
- Since it contains the answers to many questions about the meaning of life.
- Religion is important to me.
- My religious beliefs affect my entire view on life.
- Religion affects all the pursuits in my life, therefore, it is important for me to personally devote a certain amount of time to religious thought and prayers.

The scale was translated into Turkish by Ayten (2013), and a study of credibility and reliability was conducted. The six questions on the scale were subjected to factor analysis, and it was observed that the items that make up the scale were collected in one dimension and that the variance explanation rate of the scale was 57.7%. Kaiser-Mayer-Olkin (KMO) value of the scale was determined as (,758); Bartlett's test of Sphericity value was determined as ($\chi 2 = 819,682$; $p < 0.001$). The Cronbach alpha value that indicates the credibility of the scale was recorded as ($\alpha = 0.85$). The correlation coefficients that demonstrate the relation of the items in the scale vary between $r = 0.394$ and $r = 0.736 (p < 0.001)$. Since the scale consists of 6 items, the lowest possible score on the scale is six and the highest possible score is 30.

In addition, an Exploratory Factor Analysis (EFA) was used for the validity of the religiousness scale in this research. As for the credibility, the Cronbach alpha value was calculated. Factor analysis was performed for the six items on the scale, and it was found that the items that constitute the scale were collected in a single, and the variance explanation rate of the scale was 69.5%. According to the EFA results, Kaiser-Mayer-Olkin (KMO) value of the scale was determined as (0,768); Bartlett's Test of Sphericity value was determined as ($\chi 2 = 1249,257$; $p < 0.001$). Cronbach alpha value that indicates the credibility of the scale was found as ($\alpha = 0.89$). The correlation coefficients that indicate the relation of items on the scale vary between 0,504 and 0,808 ($p < 0.001$). All of these statistical values proved that the scale is credible and valid.

The Fear of COVID-19 Scale

The validity, credibility, and adaptation of the Fear of COVID-19 Scale developed by Ahorsu et al. (2020) into Turkish were made by Satıcı et al. (2020). The age range that can be subjected to the scale is wide, and it can be used on university students

and adults. All of the items on the 7-question scale are scored positively. A score between 7 and 35 can be gained on the scale. Getting a high score indicates that the level of fear from the COVID pandemic is 'high.' In the scale's Turkish validity and credibility study, the Cronbach alpha value was found as ($\alpha = 0.82$). In this study, the Cronbach alpha value of the scale was determined as ($\alpha = 0.89$).

Statistical Analysis

Data of the study were analyzed with AMOS 24 and SPSS 25.0 software. The sample size was determined as 405 with 0.05 error margin and 0.99 population representation power; however, 33 out of the collected data were removed since they were below the $p < 0.001$ value obtained with the Mahalanobis Distance. To determine whether there is multivariate normal distribution, it is necessary to check whether multivariate outliers exist with the Mahalanobis Distance (Batmaz et al., 2020). To validate multivariate normal distribution, the formula $p * (p + 2)$, where p is the observed number of variables, should produce a value greater than the Mardia Coefficient (Multivariate value in AMOS software) (Mardia, 1974). The analysis of the data skewness and kurtosis revealed that the variables met the ± 2 limit and the data were accepted to be distributed normally. Thus, it was determined that the data collected from 372 participants with the scales confirmed the multivariate normal distribution assumption.

Hypotheses of the study were analyzed with Structural Equation Model (SEM). Since multivariate normal distribution was confirmed for the data, the covariance matrix was calculated with the Maximum Likelihood method and the mediation was analyzed with the SEM. Models that test the mediation are used to test hypotheses associated with a link mechanism that mediates the impact of the independent variable on the dependent variable. The mediating variable helps to determine how and why the correlation between two variables exists (Gürbüz, 2019).

In order to test whether the religiousness variable plays a mediating role in the relationship between psychological resilience and fear of COVID-19, a path analysis was performed using the Bootstrap method. The Bootstrap method provides more reliable findings than the traditional methods developed by Baron and Kenny (Baron & Kenny, 1986; Hayes, 2018). In the research, the bootstrap coefficient was determined as 10,000. In the Bootstrap method, the analysis findings within the 95% confidence interval (CI) should not contain zero (0) to verify the research hypothesis (Gürbüz, 2019).

Results

In the first analysis, the first model where the psychological resilience was external, and fear of COVID-19 internal variable constructed for the hypothesis "H1 Psychological resilience has a significant direct effect on the fear of COVID-19"
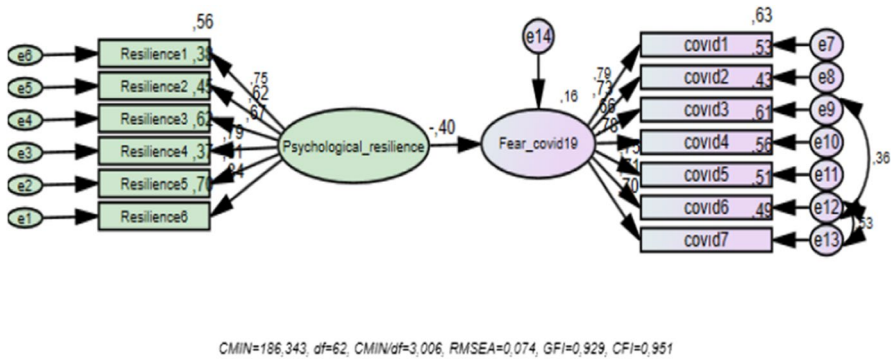
CMIN=186,343, df=62, CMIN/df=3,006, RMSEA=0,074, GFI=0,929, CFI=0,951

Fig. 1 SEM Diagram for the first model

and includes the measurement model, was tested. The diagram of the model is shown in Fig. 1.

Fit index values were determined as follows in the first model: $\chi2 = 357,191$, df 64, $\chi2$ /df 5,581, RMSEA 0,111, GFI 0,843 and CFI 0,884. Since the expected results were not obtained for the goodness-of-fit indices of the model in the analysis, the binary residual terms (e12-e13 and e9-e12) were determined based on the model modification indexes.

A second model was obtained by correlating the error covariances for the above items, and it was observed that psychological resilience predicted the fear of COVID-19 in this model ($\beta = -0.40$; $p < 0.001$). The psychological resilience variable explained 16% of the variance in fear of COVID-19. The goodness-of-fit index values obtained in the analysis were determined as follows: $\chi2 = 186,343$, df 62,
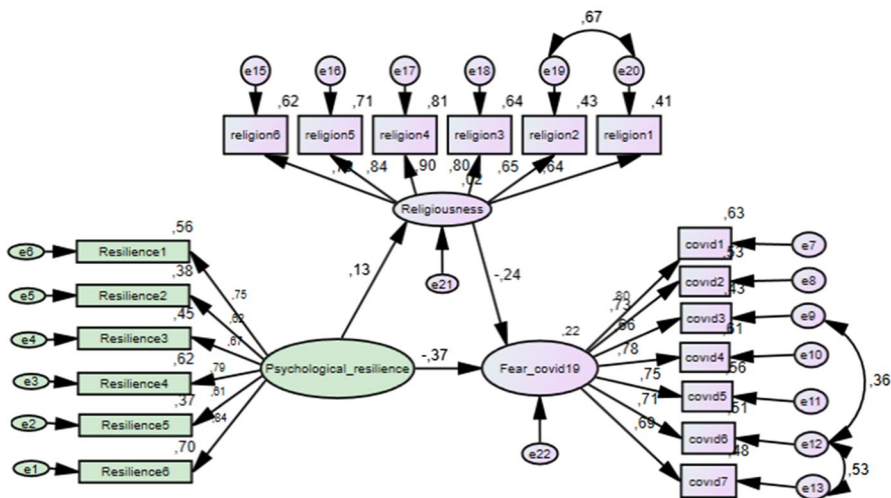

Fig. 2 SEM Diagram for the second model

$\chi 2$ / df 3,006 RMSEA 0,074, GFI 0,929 and CFI 0,951. Thus, the H1 hypothesis (Psychological resilience has a significant direct effect on the fear of COVID-19) was supported and the second model, in which religiousness is a mediate, was confirmed. The path diagram for the second model is presented in Fig. 2.

The standardized regression weights presented above in the path diagram were found to be statistically significant ($p < 0.005$). Analysis of the mediated structural model revealed that psychological resilience significantly predicted religiousness ($\beta = 0.13$; $p < 0.001$). Thus, the H2 Hypothesis (Psychological resilience has a significant direct effect on religiousness) was supported. Similarly, the mediator variable, religiousness, significantly predicted the fear of COVID-19 ($\beta = -0.24$; $p < 0.001$). Thus, the H3 hypothesis ("Religiousness has a significant direct effect on the fear of COVID-19") was supported. The mediator variablereligiousness showed that the path coefficient from the psychological resilience variable to the fear of COVID-19 variable was significant ($\beta = 0.40$; $p < 0.001$). Religiousness, psychological resilience, and fear of COVID-19 explained 17% of the variation (square of multiple correlation). Psychological resilience, fear of COVID-19 explained 22% of the variation. The total effect (standardized total effects) of psychological resilience on fear of COVID-19 was $\beta = -0.40$ ($p < 0.001$), which was the effect achieved without the mediating variable.

Fit index values obtained in the path analysis with the first model were as follows: $\chi 2 = 581,945$, df 147, $\chi 2$ /df 3,959, RMSEA 0,089, GFI 0,861 and CFI 0,896. Since the expected result was not obtained for the goodness-of-fit indexes obtained with the analysis of the model, the model was modified and covariance was plotted between e19 and e20. The goodness-of-fit indices obtained with the re-analysis were $\chi 2 = 385,007$ df 146, $\chi 2$ /df 2,637, RMSEA 0,066, GFI 0,903 and CFI 0,943 (Fig. 2). The model was compatible with the data and the goodness-of-fit indices were in the desired range.

A path analysis based on the bootstrap method was conducted to test whether the religiousness variable plays a mediating role in the relationship between psychological resilience and fear of COVID-19. The results of the mediation model regarding

Table 2 Bootstrapping process of partial model

Model pathways	Coefficient	95% CI	
		Lower	Upper
Direct effects			
a⟹b	− 0.37	− 0.47*	− 0.27*
a⟹c	0.13	0.020*	0.24*
c⟹b	− 0.24	− 0.35*	− 0.13*
Indirect effects			
a⟹c⟹b	− 0.032	− 0.065*	− 0.005*

a: Psychological resilience b: Fear of COVID-19 c: Religiousness
CI: confidence interval

*$p < 0.001$

direct and indirect effect of psychological resilience and religiousness on the fear of COVID-19 is shown in Table 2.

When Table 2 is examined, it is seen that all direct path coefficients statistically significant as a result of the bootstrapping process ($p < 0.001$). Similarly, the indirect path coefficients also seen to be significant, (bootstrapp coefficient $= -0.032$, 95% CI. $= -0.065, -0.005$, $p < 0.001$). Based on the Bootstrap results, it was determined that the indirect effect of psychological resilience on fear of COVID-19 via religiousness was significant ($\beta = -0.032$, CI [$-0.065, -0,005$]). Bootstrap lower (-0.065) and upper ($-0,005$) confidence intervals obtained with the percentage method did not include zero (0).

Based on the study findings, religiousness has a partial mediating effect between psychological resilience and fear of COVID-19. It was observed that the mediating variable did not fully explained the correlation between the two variables based on the partial mediation effect, and the full mediation effect demonstrated that the correlation between the two variables was explained by the indirect effect (Hayes, 2018). The fear of COVID-19 explained 40% of the variance in psychological resilience in the measurement model; however, this ratio decreased to 37% in the partial mediation model, which also included religiousness. In other words, the partial mediating effect of religiousness was statistically significant between psychological resilience and fear of COVID-19. Thus, H4 (Religiousness has an mediation effectbetween psychological resilience and fear of COVID-19) hypothesis was also supported.

In the SEM, which determines whether the model established with the factors obtained in the study was confirmed with more than one fit index, all indices are analyzed rather than a single fit index. The model was found to be statistically significant since the calculated $\chi 2$ / df value was below 3 and the NFI, CFI and GFI values indicated that the model was fit (NFI > 0.90, CFI > 0.90, GFI > 0.90). In other words, the sample could be represented with the data, and the RMESA demonstrated that the sample size was adequate (RMSEA < 0.05) (Cole, 1987, Jöreskog & Sörbom, 1993).

Discussion

In this study, which aimed to reveal the links between psychological resilience and the fear of COVID-19, religiousness was found to partially mediate between psychological resilience and fear of COVID-19. Additionally, as psychological resilience increased, individuals' religiousness levels also increased, and their fear of COVID-19 decreased. Thus, there is a statistically significant negative correlation between psychological resilience and the fear of COVID-19. Furthermore, the concept of fear is defined in this article as the fear of COVID-19 infection and the possible risk of death. Based on the first finding, it was revealed that individuals with high fear of COVID-19 had lower levels of psychological resilience. Thus, those with high levels of such resilience can cope with incidents that affect large populations, such as the COVID-19 pandemic. However, the latter situation is difficult to control, so it could eventually affect even individuals with high levels of psychological resilience. There

are several causes of the latter phenomenon, including situations that have nothing to do with resilience, such as possible unemployment or the fear of death. For example, many people have lost their jobs during the COVID-19 pandemic, increasing the public's general fear of unemployment. Individuals with high levels of psychological resilience may have expected to have better cope with mechanisms regarding the fear of death. However, death be closer because of COVID-19 can increase even the most resilience individuals' fears of mortality. That is, fear of COVID-19 infection may be correlates with the fear of dying. In this study, the results from the "I fear losing my life due to coronavirus" item on the "fear of COVID-19" scale confirmed this idea.

On this subject, a study by Tutal and Efe (2020) revealed that psychological resilience helped to predict the level of fear of COVID-19 in a significant, meaningful way. Additionally, these researchers concluded that people with lower levels of psychological resilience were negatively affected by the COVID-19 pandemic (Çelebi, 2020), although the quarantine periods spent at home had a protective effect on psychological resilience (Tönbül, 2020). In the same way, individuals with higher levels of psychological resilience could better cope with stress and more easily adapt to anxiety-producing situations (Bulut, 2016).

Researchers believe that individuals with low levels of psychological resilience have experienced more fear and anxiety in the face of the worldwide issue of COVID-19. The results of this study and other studies have proved the significance of high levels of psychological resilience in lowering the levels of COVID-19-related fear. Thus, psychological resilience has been determined to serve as a protective factor in individuals' mental health during the COVID-19 pandemic.

Furthermore, this study indicated that psychological resilience has a significant positive effect on religiousness. According to this research, individuals with high levels of psychological resilience identify as more religious than those with lower resilience levels. Again, psychological resilience is the ability to cope with negative events and feelings, such as anxiety, stress, and fear, and one study revealed that praying played a significant role in coping with problems (Arıcı, 2006). Beyond this, research has determined a significant positive relationship between the emotional aspect of religiousness and psychological resilience (Sezgin, 2016). Thus, having high levels of religious faith have been demonstrated to increase the individuals' levels of psychological resilience (Erdogan, 2015). Additionally, the following observations have been noted: (a) Those who frequently attended church have less anxiety than those with less frequent attendance (Koenig, 1997); (b) a negative correlation exists between religiousness and anxiety (Abdel-Khalek & Singh, 2014; Gürsu, 2011; Sengül, 2007); and (c) as religiousness levels have increased, the fear of death has decreased (Kandemir, 2020).

Moreover, according to this study's findings, religiousness has a significant negative effect on the fear of COVID-19. In the same vein, Kowalczyk et al. (2020) found that spirituality had a positive effect on one's mental state during the COVID-19 pandemic. The fact that religious individuals have lower levels of anxiety (Abdel-Khalek & Singh, 2014; Gürsu, 2011; Sengül, 2007), depression, and unhappiness (Yapıcı, 2007) supports the findings of this study. Similarly, Gashi (2020) revealed a significant negative relationship between individual religiousness and fear of

COVID-19. Because the COVID-19 pandemic has caused the loss of many lives, researchers have speculated that individuals' concerns about death have increased during this time. However, one study revealed that as levels of religiousness increased among a certain population, concerns about death decreased (Kandemir, 2020). Based on these results, individuals with high levels of religiousness may possess a stronger ability to cope with the fear caused by the pandemic.

According to this finding, religiousness plays a mediating role between psychological resilience and the fear of COVID-19. The existence of a significant relationship between psychological resilience and fear of COVID-19 (Çelebi, 2020; Tutal & Efe, 2020) has allowed the mediating effect of religiousness to be considered as another variable affecting this relationship. Thus, the relationship between psychological resilience from religiousness (Arıcı, 2006; Erdogan, 2015) and fear of COVID-19 (Gashi, 2020) strengthens the mediating effect of religiousness.

The sample in this study comprised university students who identify as Muslim, which may have had a direct effect on the results of the study. For instance, the concepts of "profit and loss" are frequently used in Islam. Furthermore, individuals who claim to be religious and who have this mindset can experience relief or sadness through their faith when they experience psychological stressors such as a pandemic, war, or death. Based on the results of this study, religiousness, which illustrates the significant relationship between psychological resilience and COVID-19 fear, can be evaluated through a Muslim perspective, an effect demonstrated by the research sample. In the same vein, various studies supporting this idea have proved the positive psychological, physical, and social effects of religiousness on mental and physical health (Koenig, 2012; Levin et al., 2011).

Therefore, Muslims may often take the following verse into account when evaluating the COVID-19 pandemic process through the idea of "profit and loss":

> If Allah afflicts you with a misfortune none can remove it but He, and if He desires any good for you none keep back His favor. He favours whom He will. He is the forgiving, the Merciful (The Holy Quran, 10/107).

However, the potential harm that the pandemic can inflict on a Muslim individual cannot be overlooked. Judging by the verse above, Muslims choosing to "trust in God" (submission) when they are desperate or after they have done everything in their power can positively impact their levels of psychological resilience. Thus, individuals considering this verse can experience less anxiety when faced with situations beyond their control, such as death.

To increase the efficiency of the results, certain recommendations are necessary for researchers and people working in other fields. To obtain more valid and credible results, studies that use longitudinally collected data could be conducted. Additionally, using qualitative research methods to obtain in-depth information could improve the efficiency of findings. Beyond this, detailed data on fear of COVID-19, fear of death, psychological resilience, and religious coping should be collected and analyzed through quantitative research and qualitative research methods to increase the validity and credibility of the data. Finally, the COVID-19 pandemic must be examined in terms of individual finances; jobs lost; and concerns about the future, especially concerning vaccines.

Study Limitations

There were a number of limitations to this research. First, conducting online surveys might have affected respondents' answers. Second, certain variables, such as receiving a positive COVID-19 test result or the illness's severity, could affect one's relationship between psychological resilience and fear of COVID-19. Another limitation of the study was the nature of the cross-sectionally collected data.

The information was analyzed using certain scales, but the lack of qualitative data containing specific information on the subject can improve the scope of the research. In addition to the significant negative relationship between psychological resilience and fear of COVID-19, the levels of psychological resilience were expected to be negatively affected by the survey item "fear of death." In the same way, high psychological resilience of certain individuals affected by COVID-19 was associated with the item "fear of COVID-19." Therefore, COVID-19 is expected to affect individuals both socially and economically. However, although fear of COVID-19 has less of an effect on individuals with high psychological resilience, situations such as impaired finances or job loss still impact those with high psychological resilience.

Besides these limitations, the data obtained from the structural model are valuable. Individuals' psychological resilience ability plays a larger role in circumstances of anxiety, fear, and illness, and should not be overlooked. In addition, an individual's psychological resilience ability is significantly affected by higher levels of religiousness, which lessens their anxiety in the circumstances comprising fear and illness. Lastly, when practicing therapy with individuals during the pandemic (10% of the participants in this study stated that they have considered getting psychological support during the COVID-19 pandemic), the fact that religiousness has a mediating effect in the relationship between psychological resilience and the fear of COVID-19 is considered to be a significant result.

Conclusions

According to the results of this research, individuals with strong psychological resilience have been less affected by the pandemic than those with weaker resilience. Thus, the negative effects of COVID-19 could be reduced by activities that increase one's level of psychological resilience. Similarly, a significant negative relationship was found between religiousness and fear of COVID-19. For this reason, individuals who fulfill religious requirements and establish spiritual closeness with God can experience less fear and anxiety in the face of trauma than nonreligious people. However, when religiousness is factored into the relationship between resilience and fear of COVID-19, the effect of resilience on fear of COVID-19 decreases. This result shows that religiousness has a partial mediating role between psychological resilience and fear of COVID-19. On the other hand, a significant positive correlation was found between the level of psychological resilience and religiousness.

Declarations

Confict of interest The author declare that they have no conficts of interest.

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