

# How does fear of COVID-19 affect the mental well-being of waiters in Turkey

Engin Üngüren<sup>a,1</sup>, Sefa Ceyhan<sup>b,\*</sup> and Nazlı Türker<sup>c,2</sup>

<sup>a</sup>*Department of Business Administration, Faculty of Economics, Administrative and Social Sciences, Alanya Alaaddin Keykubat University, Alanya, Turkey*

<sup>b</sup>*Department of Business, Faculty of Economics and Administrative Sciences, Burdur Mehmet Akif Ersoy University, Burdur, Turkey*

<sup>c</sup>*Department of Business Administration, Institute of Graduate Studies, Alanya Alaaddin Keykubat University, Alanya, Turkey*

Received 11 July 2021

Accepted 7 October 2021

## Abstract.

**BACKGROUND:** Empirical findings are needed to determine how the fear of COVID-19 might change in the context of different individuals.

**OBJECTIVE:** This study aims to determine the moderating role of fatalism and psychological resilience on the effect of fear of COVID-19 on general mental health.

**METHODS:** This study makes use of qualitative research methods that involved collecting data from 355 full-time waiters via questionnaires on online platforms.

**RESULT:** The collected data suggests that the fear of COVID-19 has a significant negative impact on mental well-being. Moreover, the data gathered for this study also indicates that the fear of COVID-19 infection differs significantly according to the fatalistic belief and psychological resilience levels of the waiters.

**CONCLUSIONS:** Findings of this study indicate that the psychological effects of infectious diseases on individuals are not universal, but rather depend on the personal characteristics of individuals. It is hoped that the results of this study will contribute to the reduction of negative effects associated with the general anxiety of pandemic that individuals experience.

Keywords: Fear of COVID-19, mental well-being, fatalism, psychological resilience.

## 1. Introduction

The potential spread of COVID-19 virus system undoubtedly generated individual concerns and worries [1]. Beyond all other fears associated with the pandemic, it appeared that people had the most worry at the spread of the infection itself, proliferating

through droplets from a person's cough or sneeze [2]. From this perspective, studies have shown that individuals are worried about contracting COVID-19 due to its high risk of infection and mortality rates [3]. As frontline employees of the tourism and hotel industry, waiters were in direct contact with different customers from various nations. Due to working in areas with such direct contact, waiters are often at a high risk of infecting COVID-19 [4]. A noteworthy example, at this point, would be a single asymptomatic COVID-19 case, infecting eight people, who were sitting two tables away in a restaurant [5]. A study conducted in Ethiopia, on the other hand, determined that more than half of the waiters had high levels of perceived risk with respect to contracting

---

<sup>1</sup>ORCID ID: 0000-0002-7223-2543.

<sup>2</sup>ORCID ID: 0000-0003-0318-1700.

\*Address for correspondence: Sefa Ceyhan, Department of Business, Faculty of Economics and Administrative Sciences, Burdur Mehmet Akif Ersoy University, Burdur, Turkey. E-mail: sefaceyhan@ogr.mehmetakif.edu.tr.; ORCID ID: 0000-0002-3788-0756.

the disease [6]. Because the risk of contracting an infectious disease increases in such working conditions, the mental well-being of employees is naturally impacted negatively. All in all, it is undeniable that the fear of contracting COVID-19 has had a negative effect on the mental health of waiters and beyond.

Mental well-being is of critical importance in terms of relieving the negative effects on mental health overall. Likewise, mental well-being is a means to improve the working conditions of waiters in their professional lives [2]. Considering that it would be impossible for a hotel to provide services to its customers without mentally, as well as physically, healthy employees, frontline workers have become even more essential during times of outbreaks [4]. While a number of researchers have found that the fear of contracting COVID-19 causes psychological distress, depression, anxiety and general low quality of life, [3], other studies have reached the conclusion that there are substantial differences between individuals' reactions towards the pandemic, despite the accounts they give concerning their anxiety at being infected with COVID-19 [7, 8]. In order to understand the impact on the COVID-19 outbreak on people overall, individuals' personal characteristics and the role they play in having anxiety must be investigated. To that end, this study approaches the effect of COVID-19 fear on mental well-being by utilizing the moderating variables of fatalism and psychological resilience within the scope of personal characteristics.

According to the conservation of resources theory (COR) [9], psychological resilience is an important resource for individuals in managing stressful, risky and challenging situations. Such resilience varies from person to person. Factors such as anxiety of becoming infected, social distance rules and isolation measures during COVID-19, represent a threat for personal mental health resources. While individuals with high levels of psychological resilience can adapt to such circumstances, those with low levels of psychological resilience may exhaust their resources under this kind of strain [10]. Studies conducted in this context have revealed that the fear of being infected by COVID-19 decreases as the level of individuals' psychological resilience increases [7, 10, 11]. Fatalism, on the other hand, refers to a person's belief that they do not have the power to intervene with what will come to pass in both the short and long term. Fatalism has a major impact on human behavior in the professional world and within society at large [12]. When faced with a significant negative event,

Individuals with high levels of fatalistic belief tend to search for the underlying reason of the event outside of their control. From this perspective, fatalism heavily influences the severity of psychological distress and reduces the individual's ability to participate in those behaviors that can have a positive impact on one's mental well-being. Individuals with high levels of fatalism tend to have weaker probabilities of dealing with stress and are at higher risks of contracting the disease due to their lack of adopting protective measures. Research studies reveal that COVID-19 is not only a risk for physical health, but also a heavy burden to bear for individuals' mental health [13]. However, very little is currently known concerning the ways in which fear of contracting COVID-19 might have a negative impact on the psychological health and mental well-being of waiters. From this point of view, it is critical to determine the possible consequences of the fear of contracting COVID-19 on the mental health of individuals and to determine the role by waiters. Furthermore, the results of the research reveal that although people express a certain level of fear and anxiety about COVID-19, their responses to the pandemic differ among individuals [8, 14]. Individual differences play important roles in this situation. With this in mind, research questions were formed as follows: (1) Does the fear of contracting COVID-19 impact the mental well-being of waiters? (2) Do the effects of the fear of infection of COVID-19 on mental well-being change in response to fatalism and the psychological resilience levels of individuals? This study seeks to contribute to the ways in which we understand the role that individual characteristics play in handling the stress of a pandemic. Moreover, this study aims to add to our theoretical understanding of the ways in which a fear of COVID-19 can impact mental well-being by waiters. By focusing on the significance of individual characteristics, we can help supervisors to find ways to protect the psychological well-being of their employees in similar crises.

### *1.1. Literature review and hypothesis development*

#### *1.1.1. The effect of COVID-19 fear on mental well-being*

Service quality is among the critical success factors of accommodation businesses and is closely related to the job performance of its employees. In other words, the job performance of its employees determines the quality of service quality. Naturally, employees play

a critical role in the success and competitive advantage of tourism establishments. Job performance and positive contribution of employees is closely linked with the mental well-being of employees.

Mental well-being is defined by the World Health Organization [15] as being aware of one's own abilities, overcoming the stress in life, being productive and beneficial in business life, and contributing to society in line with their abilities. As stated by the World Health Organization, the high degree of mental well-being of the employees has positive results for the business in many ways. Individuals with higher levels of mental well-being have stronger immune systems, establish positive interpersonal relationships and work productively. Beyond this, psychological well-being encompasses individuals' pursuit of meaning and purpose in their lives, accepting themselves as they are. By and large, studies assert that individuals with high levels of mental well-being maintain both their mental and physical health at high levels, improving success, productivity and service quality. In the context of these explanations, the high degree of mental well-being of the employees of tourism enterprises will directly contribute to the success of the business. Therefore, investigating the factors affecting the mental well-being of employees is important both in terms of business efficiency and occupational health. The hospitality industry is listed among the most vulnerable sectors in the face of crises such as outbreaks or natural disasters. Such crises lower the level of well-being of employees, negatively affecting employees' performance and mental health [16]. Despite the fact that mortality rates in COVID-19 have not been as drastic as that of the Ebola virus, the present outbreak has damaged the tourism and hotel sector in a more destructive way than any other disasters or outbreaks on account of its global scale. COVID-19 is a very contagious disease that is contracted with droplets when individuals are in close contact [2]. At the same time, the COVID-19 virus can be contracted via contact with an infected surface. Surfaces with the infection such as tables or chairs specifically increase the risk of exposure to the virus for employees. This phenomenon renders the restaurant industry one of the most heavily impacted sectors by the COVID-19 pandemic [16]. That is because waiters are often in close contact with infected persons or with infected surfaces. The increase in perceived risk causes servers to experience psychosocial disorders such as agitation, anxiety disorders, depression disorders, insomnia or anger. These disorders often

result in the disruption of the mental well-being of waiters [11, 17]. Moving on from these theoretical and empirical conclusions, we predict that the fear of infection of COVID-19 has a negative impact on mental well-being. The first hypothesis of this study is that:

**Hypothesis H<sub>1</sub>:** The fear of contamination by COVID-19 has a negative effect on mental well-being.

### *1.1.2. Psychological resilience and fatalism as a moderator between the fear of COVID-19 and mental well-being*

Human life never continues positively in a linear way. Everyone encounters traumatic events in life such as difficulties, obstacles, losses, accidents and illnesses. While some people cannot get rid of the effects of negative events for a long time, others overcome these difficulties easily and quickly and learn to adapt to the events that affect their lives. This adaptation process is closely related to psychological resilience. Psychological resilience is defined as a person's recovery after a traumatic experience. It can take the form of worry, fear or anxiety, and the ability to return to life before the experience. In other words, psychological resilience is defined as the ability to protect, maintain, manage and adapt to psychological and physiological health in the face of negative, life-threatening and destructive situations [19]. Masten et al. [19]. link psychological resilience with three basic notions: acting competently when facing a threat, recovering from traumas, and acquiring positive results despite high-risk situations. Accordingly, risk and fear can be expressed as prerequisites for the formation of psychological resilience. One of the most important precursors of events to which there is a response of fear and anxiety is contagious disease [1]. As a matter of fact, facing the threat of contracting an infectious disease and not knowing how to protect oneself may cause individuals to experience intense stress and anxiety. This is especially true in the case of restaurants, which have continued to be open during the pandemic. Frequenting restaurants during the pandemic has caused myriad uncertainties in the lives of individuals such as ambiguous situations, when perceived to be threatening, may cause individuals to experience anxiety, the results of which are negative reactions. In fact, many studies posited that many people have responded to the COVID-19 pandemic with increased anxiety, agitation, stress, depression and trauma [20]. It is likely that the COVID-19 pandemic has had

a negative influence on the psychological states of waiters. Studies have also shown that psychological resilience negatively influences exhaustion, and the fear of COVID-19 decreases as the levels of psychological resilience increase [10, 11]. In line with these statements, the second hypothesis of the study is posited as follows:

**Hypothesis H<sub>2</sub>:** Psychological resilience has a moderating effect between the fear of COVID-19 and mental well-being.

Another factor having an impact on the mental well-being of individuals is the perception of fatalism. Fatalism is the belief that an individual's health is predetermined by fate. A person has no power whatsoever to alter their predetermined fate. Individuals with high levels of perceived fatalism believe that accidents are inevitable. By and large, this belief makes individuals less willing to adopt protective behavior [21]. Studies have shown that individuals with perceived fatalism do not take into consideration safety measures and are more prone to take risks that have an impact on their health [22]. Waiters with high levels of fatalism can be assumed to be less willing to adopt measures to protect themselves from the outbreak. The output of such behavior, on the other hand, may lead them to be exposed to the virus. In this case, the type and level of perceived fatalism can be deemed important between the psychological processes, occurring within the scope of being infected, and mental well-being. High levels of perceived fatalism have significant links to depression and hopelessness. Another factor that is influential in the mentality of fatalism, on the other hand, is locus of control. Locus of control has to do with the individuals' experienced reinforcers. In other words: that to which their recurring behaviors are attributed [23]. If the individual established a link between their behavior and acquired reinforcers, then they might have internal locus of control. Individuals who think reinforcers that are acquired as a result of their behaviors are controlled by an external power have an external locus of control [23]. Rotter [23] accepts that individuals with an internal locus of control can significantly control their destinies. Those with an external locus of control, on the other hand, believe that their destinies are predetermined by pure luck or some kind of external power. Therefore, the concept of an external locus of control is a useful theoretical tool by which we can understand the perception of fatalism and the fear of contracting COVID-19. The investigation of fatalism within the effect of the fear of infection by COVID-19 on mental well-being is thought to be important.

On the basis of this, we propose the third hypothesis of the research study below:

**Hypothesis H<sub>3</sub>.** Fatalism has a moderating effect between the fear of COVID-19 and mental well-being.

## 2. Research methodology

### 2.1. Sample and procedure

This research study was conducted within five-star hotels in the city of Antalya, one of the most popular tourist destinations in Turkey. Having been conducted with quantitative research methods, this study collected data from online platforms via questionnaires. Following the social distancing mandates within Turkey, research data was collected with convenience and "snowball sampling" methods to avoid close contact with third parties. Researchers also conducted preliminary interviews with human resources and F&B managers of the hotels in the area, and provided information about the nature of the research. Hotel managers deemed it suitable for data to be collected online, in order to reduce the risk of infection, since the outbreak was ongoing during the time of the research. The questionnaire, prepared on Google Forms, was sent via e-mail and the communication application WhatsApp to F&B and human resources managers. The data collection process started in February 2021 and ended in the last week of June 2021. In a period of two months, 372 questionnaire forms were returned. 17 questionnaire forms were excluded from the data set because they were ineligible. Data was collected from full-time service staff at various five-star hotels. No incentives were offered to respondents. In order to avoid method bias, the recommendations of Podsakoff et al. [24] were followed. Scale items were rearranged randomly without an order and attention checks questions were added to ensure data quality. The research model created in line with the purpose and hypotheses of the study is presented in Fig. 1.

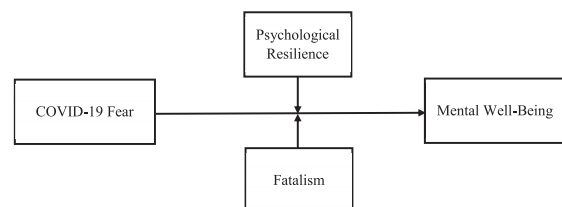


Fig. 1. Research model.

## 2.2. Measurements

This study is designed to investigate the moderating role of fatalism and psychological resilience on the relationship between the fear of infection by COVID-19 and mental well-being of waiters. The levels of fear of contraction of COVID-19 of service staff were measured with the scale developed by Aharsu et al. [3]. This scale consists of seven propositions. The validity and reliability of the scale was carried out in Turkey by Satici et al. [25]. The scale has a single factor structure and the questions are asked with 5-point Likert statements (1 = I strongly disagree; 5 = I strongly agree). High scores from the scale indicate that the fear of infection of COVID-19 is high. To measure the mental well-being level of the participants, Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) was used. This scale was developed by Tennant et al. [26]. to measure the mental well-being levels of individuals living in the United Kingdom. WEMWBS consists of 14 items and deals with individuals' positive mental health by including psychological well-being and subjective well-being. All of the questionnaires were applied in a 5-point Likert system as in their original forms. In order to measure the psychological resilience of individuals, we used the Brief Psychological Resilience Scale (BPRS) developed by Smith et al. [27]. Doğan tested the validity and reliability of this scale in Turkey [28]. BPRS is a self-check measurement scale with six 5-point Likert items. After the items in the scale were translated and were coded in reverse [unsure of what "reverse coding" means here], high scores indicate high levels of psychological resilience. The fatalistic tendencies of the respondents, on the other hand, were measured with a 6 item fatalism scale, developed by Esperza et al. [29]. It is the homonymous scale of the more comprehensive 'Multidimensional Fatalism Measure' (also including scales e.g. on divine control, luck, internality), developed by these authors. The scale is single factor with 5-point Likert questions. The Fatalism scale was translated into Turkish via the back-translation translation method [30]. The questionnaire was translated into Turkish by two independent researchers and these translations were later evaluated to yield one common Turkish version. Later, the questionnaire was translated from Turkish into English by a different academic with near-native level fluency in English. A pilot study was conducted to control the understandability of the scale and all questions were observed to be understandable. A high

score from the scale indicates high levels of fatalistic belief.

## 2.3. Data analysis

This study is designed to test the additive multiple moderation research model. As a result of the preliminary data assessment, two surveys were detected and excluded from the analysis due to inconsistencies in attention checks questions. Later, Mahalanobis distance was examined and data exclusion was not deemed necessary, since the acquired Mahalanobis values did not find any outlier values. Later, kurtosis-skewness coefficients were investigated to check whether or not normal distribution hypothesis is provided. The measurement model was then tested with confirmatory factor analysis (CFA) and findings were acquired regarding the validity of the measurement. Additive multiple moderation analysis was tested with SPSS macro PROCESS, developed by Hayes [31].

## 3. Findings

### 3.1. Demographic findings

Information considering the demographics of the respondents within the scope of the research study can be found in Table 1. The majority of the respondents (85%) are men, while 54% are married and 46% are single. A large portion of the respondents are between the ages 18 and 29, comprising of young employees and high school graduates. One fourth of the respondents were newly employed at the time, whereas overall, 80% have been working at the same establishment for over a decade. Despite the fact that the respondents have a younger profile, 15% reported chronic diseases.

### 3.2. Measurement model

The application of the structural model employs the two step approach, proposed by Anderson and Gerbing [32]. The measurement model was tested via confirmatory factor analysis (CFA) in the first step and findings regarding the validity of the measurements regarding the structures in the model were acquired. Then, analysis of the research model was carried out in step two. Table 1 illustrates the results of CFA, acquired via maximum likelihood method. According to the CFA results in Table 2,

Table 1  
Participants' profile ( $n = 355$ ).

	<i>n</i>	%
Gender		
Male	52	14.6
Female	303	85.4
Marital Status		
Married	193	54.4
Single	162	45.6
Age		
18–23	98	27.6
24–29	123	36.4
30–35	76	21.4
36–41	36	10.1
42 and over	22	6.2
Education Level		
Primary	90	25.4
Secondary	187	52.7
Associate degree	51	14.4
Under graduate	27	7.6
Organizational tenure		
Less than 1	88	24.8
1–3 year(s)	137	38.6
4–6 years	60	16.9
7–9 years	39	11.0
10 years and over	31	8.7
Chronic disease		
Yes	54	15.2
No	301	84.8

all standardized factor load values for scale items are over 0.70. All scale items have high *t*-values and are loaded to the corresponding latent variable in a statistically significant way ( $p < 0.05$ ). Overall, the goodness-of-fit indices for the model ( $\chi^2 [487, n = 355] = 821,82; p < 0.05; \chi^2/df = 1,68; RMSEA = 0,044; SRMR = 0,033; CFI = 0,97; NFI = 0,93$ ) indicate that the measurement model is an acceptable one. At the same time, the forecasted structures of the scales were tested with alternating models strategy to determine whether or not they support the collected data. According to the values, illustrated in Table 3, the best fit for the data ( $\chi^2 [487, n = 355] = 821,82; p < 0.05; \chi^2/df = 1,68; RMSEA = 0,044; SRMR = 0,033; CFI = 0,97; NFI = 0,93$ ) is four-factor research model.

Convergent validity and discriminant validity were also analyzed to test the structural validity and reliability of the scales, in addition to the goodness-of-fit indices. As can be observed in Table 4, AVE values are greater than 0.50 and CR values are greater than 0.70, while AVE values are smaller than CR values, which shows that factors have convergent validity. AVE values of factors being greater than MSV and ASV values and AVE square root values of factors being greater than the correlation between

factors indicate the existence of discriminant validity. Results of the correlations between the variables within the scope of the research study can be seen in Table 4. A negative and significant relation was found between mental well-being and COVID-19 fear ( $r^2 = -0.44, p < .001$ ) and fatalism ( $r^2 = -0.34, p < .001$ ), while a positive relation was found with psychological resilience ( $r^2 = 0.55, p < .001$ ). A positive and low relation between COVID-19 fear and psychological resilience ( $r^2 = -0.34, p < .001$ ), while there is no significant relation with fatalism ( $r^2 = -0.06, p > .005$ ).

Certain measures were taken before the research portion of the study in order to prevent the issue of common method variance (CMV) [24]. Spaces for names were not included on the questionnaire form to prevent social likeability, questionnaire forms were delivered with sealed envelopes and were taken back from the respondents with a second sealed envelope with the questionnaire form inside. Respondents were informed about the scientific purposes of the study and explicated that there were no right or wrong answers for the questions, the responses were to be kept confidential and under no circumstances to be shared with any persons or institutions. Furthermore, scale items were randomized and distributed with mixed orders to prevent any order effects. In order to check whether or not CMV existed, Harman's one single factor was applied to the collected data along with the procedures [33]. According to the main assumption of Harman's one single factor test, the appearance of a single factor or a factor's total variance explained rate appearing to be 50% or more, the existence of a CMV issue is assumed. As per the results of the factor analysis, four factors, the eigenvalue of which are greater than 1, were found, while the total of factor load square roots calculated from the first factor was found to be 42%. Results show that CMV is not a significant issue.

### 3.3. Hypothesis testing

A moderating variable is mainly expressed as the variable, affecting the strength or direction of the relation between a dependent and an independent variable. A regression analysis, taking bootstrap method as its basis, was conducted in this study to test the moderating roles of fatalism beliefs and psychological resilience of waiters, who work in hospitality establishments, on the effect of COVID-19 fear on their mental well-being. An additive multiple moderation model 2 of Hayes' PROCESS macro [31]

Table 2  
Results of the measurement model

Dimention	Items	Std. fac. load.	t values	Skew	Kurtosis
COVID-19 fear	My heart races or palpitates when I think about contracting COVID-19	0.908	Fixed	0.145	-1.12
	I cannot sleep because I'm worrying about contracting COVID-19	0.899	27.09	0.115	-1.18
	When watching news and stories about COVID-19 on social media, I become nervous or anxious	0.855	23.94	0.226	-1.09
	I am afraid of losing my life because of COVID-19	0.837	23.00	0.145	-1.22
	My hands become clammy when I think about COVID-19	0.877	25.51	0.223	-1.20
	It makes me uncomfortable to think about COVID-19	0.826	22.30	0.353	-1.38
Fatalism	I am most afraid of COVID-19	0.900	27.21	0.092	-1.14
	People die when it is their time to die and there is not much that can be done about it	0.898	Fixed	0.056	-0.927
	Life is very unpredictable, and there is nothing one can do to change the future	0.909	27.14	-0.037	-1.15
	There is no sense in planning a lot; if something good is going to happen, it will	0.869	24.34	0.114	-0.889
	If bad things happen, it is because they were meant to happen	0.917	27.71	-0.029	-0.865
	If something bad is going to happen to me, it will happen no matter what I do	0.875	24.91	0.009	-0.975
Psychological resilliance	I have learned that what is going to happen will happen	0.889	25.43	0.119	-0.912
	I tend to take a long time to get over set-backs in my life (-)	0.919	Fixed	0.060	-0.908
	I usually come through difficult times with little trouble	0.880	26.37	-0.010	-0.878
	It is hard for me to snap back when something bad happens (-)	0.887	26.83	-0.105	-0.823
	It does not take me long to recover from a stressful event	0.835	23.24	-0.084	-0.708
	I have a hard time making it through stressful events (-)	0.847	23.75	-0.137	-0.807
Mental well-being	I tend to bounce back quickly after hard times	0.835	22.94	-0.189	-0.717
	I've been feeling optimistic about the future	0.779	Fixed	-0.186	-0.645
	I've been feeling useful	0.801	16.85	-0.140	-0.658
	I've been feeling relaxed	0.819	17.41	-0.184	-0.703
	I've been feeling interested in other people	0.793	16.68	-0.091	-0.654
	I've had energy to spare	0.816	17.37	-0.331	-0.498
	I've been dealing with problems well	0.862	18.65	-0.179	-0.534
	I've been thinking clearly	0.834	17.83	-0.343	-0.661
	I've been feeling good about myself	0.864	18.67	-0.320	-0.537
	I've been feeling close to other people	0.824	17.54	0.198	-1.23
	I've been feeling confident	0.877	19.05	0.115	-1.25
	I've been able to make up my own mind about things	0.871	18.89	0.281	-1.08
	I've been feeling loved	0.909	20.02	0.253	-1.06
	I've been interested in new things	0.913	20.16	0.276	-1.03
I've been feeling cheerful	0.931	20.73	0.351	-0.986	

Table 3  
Goodness of fit values with models (n = 355)

Models	X <sup>2</sup>	df	X <sup>2</sup> /df	CFI	NFI	SRMR	RMSEA	Model comparison			
								ΔX <sup>2</sup>	Δdf	p (ΔX <sup>2</sup> )	
Four factors model <sup>a</sup>	821.82	487	1.68	0.97	0.93	0.033	0.044	–	–	–	
Three factors model <sup>b</sup>	3064.44	490	6.25	0.79	0.77	0.207	0.122	2 vs. 1	2242.62	3	0.000
Two factors model <sup>c</sup>	5184.24	492	10.53	0.63	0.61	0.241	0.164	3 vs. 1	4362.42	5	0.000
One factor model <sup>d</sup>	6740.08	494	13.64	0.51	0.49	0.210	0.189	4 vs. 1	5918.26	7	0.000

a = Fatalism; Psychological Resilience; COVID-19 Fear; Mental Well-being, b = (Fatalism + Psychological Resilience); (COVID-19 Fear); (Mental Well-being), c = (Fatalism; Psychological Resilience) + (COVID-19 Fear; Well-being), d = Fatalism + Psychological Resilience + COVID-19 Fear + Well-being.

Table 4  
Results of the convergent validity and discriminant validity

	(1)	(2)	(3)	(4)	α	AVE	CR	MSV	ASV
(1) COVFER	0.87 <sup>a</sup>				0.95	0.76	0.95	0.19	0.07
(2) WLbing	-0.44**	0.85 <sup>a</sup>			0.97	0.72	0.97	0.30	0.20
(3) FTLSM	-0.06	-0.34**	0.89 <sup>a</sup>		0.96	0.79	0.95	0.12	0.04
(4) PYSRES	0.12*	0.55**	-0.01	0.87 <sup>a</sup>	0.94	0.75	0.94	0.30	0.11

\*p < 0.05, \*\* p < 0.01, COVFER = COVID-19 Fear, WLbing = Mental Well Being, FTLSM = Fatalism, PYSRES = Psychological Resilience, α = Cronbach, a = The square root of the AVE = Average Variance Extracted, MSV = Maximum Shared Variance, ASV = Average Shared Squared Variance.

Table 5  
Collinearity assessment

Coefficient <sup>a</sup>	Tolerance	VIF
COVFER	0.982	1.019
FTLSM	0.996	1.004
PYSRES	0.986	1.014

a = Dependent variable: Mental Well-being, VIF = the variance inflation factor, COVFER = COVID-19 Fear, FTLSM = Fatalism, PYSRES = Psychological Resilience.

was used to investigate whether or not the relationship between COVID-19 fear and mental well-being was moderated by fatalism and psychological resilience. An analysis using 5000 bootstrap samples with 95% confidence levels of the confidence interval (CIs) was performed. According to the results of the regression analysis in Table 6, all variables that are included in the regression analysis are observed to generate significant effects on psychological well-being ( $R^2 = 0.80, p < 0.01$ ). COVID-19 fear ( $\beta = -0.47, t(349) = -21.86, \%95 \text{ CI } [-0.50; -0.42], p < 0.001$ ) and fatalism beliefs ( $\beta = -0.30, t(349) = -16.05, \%95 \text{ CI } [-0.33; -0.26], p < 0.001$ ) have a negative effect on the mental well-being of waiters, while psychological resilience ( $\beta = 0.51, t(349) = 25.91, \%95 \text{ CI } [0.46; 0.54], p < 0.01$ ) has a positive effect. At the same time, the interaction effects of fatalism ( $X \times W$ ) ( $\beta = 0.21, t(349) = 12.57, \%95 \text{ CI } [0.17; 0.24], p < 0.01$ ) and psychological resilience ( $X \times Z$ ) ( $\beta = 0.06, t(349) = 3.40, \%95 \text{ CI } [0.02; 0.10], p < 0.001$ ) were found to be significant. Both are statistically different from

zero, meaning both fatalism beliefs and psychological resilience moderate the effect of COVID-19 fear on mental well-being. The moderation of the effect of COVID-19 fear by fatalism (W) uniquely accounts for 8.88% of the variance [ $F(1; 349) = 158.17, p < .001$ ], whereas the moderation by psychological resilience (Z) uniquely accounts for 0.64 % of the variance,  $F(1; 349) = 11.56; p < 0.01$ . These

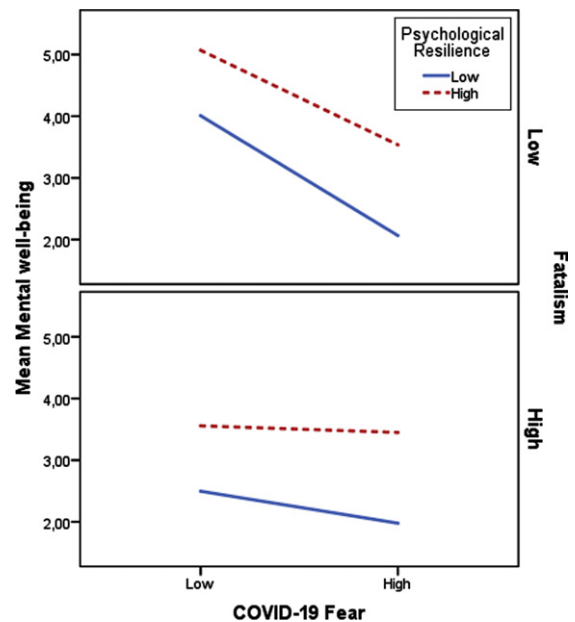


Fig. 2. The effects of moderating variables.



Table 6  
Results of the multiple additive moderation model

Model 1	$\beta$	SE	t	p	LLCI	ULCI
Constant	3.24	0.038	84.71	0.000	3.16	3.31
COVID-19 fear (X)	-0.41	0.036	-11.32	0.000	-0.48	-0.33
Fatalism (W)	-0.31	0.032	-9.46	0.000	-0.36	-0.24
COVID-19 fear $\times$ fatalism (X $\times$ W)	0.21	0.028	7.43	0.000	0.15	0.26
Dependent variable: Mental well-being	$R^2 = 0.43$ , $F(3;351) = 86,728$ , $p < 0.01$					
Model 2	$\beta$	SE	T	p	LLCI	ULCI
Constant	3.21	0.032	97.85	0.000	3.14	3.27
COVID-19 fear	-0.45	0.031	14.47	0.000	-0.51	-0.39
Psychological resiliance	0.51	0.028	17.79	0.000	0.45	0.56
COVID-19 fear $\times$ psychological Resiliance	0.07	0.027	2.66	0.000	0.01	0.12
Dependent variable: Mental well-being	$R^2 = 0.58$ , $F(3;351) = 162,548$ , $p < 0.01$					
Model 3	$\beta$	SE	t	p	LLCI	ULCI
Constant	3.23	0.022	143,75	0.000	3,18	3.27
COVID-19 fear (X)	-0.47	0.021	-21.86	0.000	-0,50	-0.42
Fatalism (W)	-0.30	0.018	-16.05	0.000	-0,33	-0.26
COVID-19 fear $\times$ fatalism (X $\times$ W)	0.21	0.016	12.57	0.000	0,17	0.24
Psychological resiliance (Z)	0.51	0.019	25.91	0.000	0.46	0.54
COVID-19 fear $\times$ psychological Resiliance (X $\times$ Z)	0.06	0.018	3.40	0.000	0.02	0.10
Dependent variable: Mental well-being	$R^2 = 0.80$ , $F(5;349) = 289,563$ , $p < 0.01$					

results show that fatalistic beliefs have a greater conditional effect on the effect of COVID-19 fear on mental well-being. The effects of moderating variables were shown in a diagram via the conducted slope analysis, which can be observed in Fig. 2. As can be seen in Fig. 2, the effect of COVID-19 fear on mental well-being differs in statistically significant ways according to the waiters' levels of fatalistic belief and psychological resilience. As the conditional effects are examined in detail, it was observed that the effect of COVID-19 fear on mental well-being ( $\beta = -0.75$ ,  $t(349) = -23,76$ , %95 CI [-0.81; -0.69],  $p < 0.01$ ) reaches maximum levels in waiters, who have low levels of fatalistic beliefs and psychological resilience. For waiters with higher levels of fatalistic beliefs and psychological resilience, COVID-19 fear does not represent a statistically significant effect on mental well-being ( $\beta = -0.04$ ,  $t(349) = -0,92$ , %95 CI [-0.13; 0.04],  $p = 0.354$ ). In respondents with low levels of fatalistic belief and high levels of psychological resilience, on the other hand, the effect of COVID-19 fear on mental well-being is greater ( $\beta = -0.59$ ,  $t(349) = -14,50$ , %95 CI [-0.67; -0.51],  $p < 0.01$ ) than that in those with high levels of fatalistic beliefs and low levels of psychological resilience ( $\beta = -0.20$ ,  $t(349) = -5,23$ , %95 CI [-0.27; -0.12],  $p < 0.01$ ).

#### 4. Discussion

This research study selected as its sample waiters with high risks of being infected due to working in areas with higher chances of direct contact. Consequent to the research study, it was found that COVID-19 fear has a negative and significant effect on mental well-being. This finding indicates that the increasing fear of COVID-19 among individuals results in a decrease in mental well-being, which eventually leads to psychosocial disorders in waiters. Moreover, this finding is supported with previous studies as well [11, 17]. On the other hand, information concerning the negative effect of COVID-19 fear on mental well-being with respect to individual precursors and consequences is scarce [34]. From this perspective, this study uses two moderators; psychological resilience and perceived fatalism. The reason as to why fatalism is chosen as a moderator is due to the decrease in anxiety and fear with the idea that even in highly threatening situations, struggling against them is idle. Evaluated as a personality trait, on the other hand, psychological resilience minimizes COVID-19 fear individuals experience, as they struggle to protect themselves from infectious diseases. It is assumed that in both cases, the type and level of decline in mental well-being are to change. In this

sense, findings acquired within the scope of this study can be expressed to carry noteworthy qualities.

The study concludes that the effect of COVID-19 fear on mental well-being significantly differs according to waiters' levels of fatalistic belief and psychological resilience. This result reveals that the psychological effects of infectious diseases on people also depend on the individual's characteristics. It was found in the study that the effect of COVID-19 fear on mental well-being for waiters with high levels of psychological resilience and low levels of fatalistic belief is higher than those with high levels of fatalistic belief and low levels of psychological resilience. The finding that the negative effect of COVID-19 fear on mental well-being is lower in waiters with high levels of fatalistic belief can be explained with self-control. Fatalistic individuals believe that they have no control over the things that happen to them and argue that personal measures or precautions cannot change the potential outcome of events. Fatalistic people, when faced with a negative event, tend to search for the reasons of said event outside of their controls. Naturally, highly fatalistic individuals predominantly believe that individuals also have no control over health and diseases. Research studies, conducted in the field of health, report that those with highly fatalistic belief, do not follow health promoting behaviors for they do not believe that they will help prevent diseases. Therefore, the effect of COVID-19 fear on mental well-being may have been lower due to the lack of willingness of highly fatalistic waiters in terms of following the protective measures to protect them from the pandemic and their belief that taking measures will not change the outcome of the events. The finding that negative attitudes of highly fatalistic individuals towards the acceptance of safe working practices against the pandemic represent a barrier before healthy and safe work environments [12], carries importance in terms of ensuring a safe working space under such conditions. That is because highly fatalistic employees may infect others, since their behavior to abide by the measures against the outbreak will be at a minimum. Employees with lower levels of fatalistic belief, on the other hand, tend to believe that they do, in fact, have control over their own lives and they can protect themselves from outbreaks via the measures they adopt. That being the case, mental well-being of employees with low levels of fatalistic belief are affected even more negatively. Another finding, acquired within the scope of this research study, is the moderating role of psychological resilience on shaping the effect of COVID-19 fear

on mental well-being. While the strongest effect of COVID-19 fear on mental well-being was observed in waiters with low levels of both fatalistic belief and psychological resilience, COVID-19 fear did not generate any statistically significant effects on mental well-being in waiters with high levels of fatalistic belief and psychological resilience.

#### 4.1. Contribution

The findings of this study provide valuable theoretical and practical implications. The results with respect to psychological resilience contribute to the COR theory [9]. Psychological resilience is an important personal resource in diminishing the effects of stressful and troubling events on individuals. According to COR theory, psychological resilience is one of the personal resources and individuals in possession of more resources are more resilient against the loss of a resource, whereas those with less resources are less resilient [9]. From this perspective, findings relating to fatalism contribute to the theory of locus of control. Another contribution of the study is its help in understand individual beliefs and characteristics with respect to the psychological impact of infectious diseases. Studies have shown that participation in trainings regarding COVID-19 significantly reduces COVID-19 fear [35]. At this point, it can be assumed that organizing regular trainings for employees may improve compliance to both the pandemic rules and the job itself.

Perceived as a troubling sensation that is triggered with perceived threats in the face of uncertainty, fear is a subject that is widely discussed in many fields. Fear that emerges from infectious diseases has been covered in many disciplines, yet very little of these studies have focused on the aspect of the change in fear with respect to mental health. This situation points to the theoretical gap in the individual processes between fear of COVID-19 and mental well-being. Furthermore, studies have shown that while many people report fears concerning COVID-19 on various levels, their reactions towards the pandemic alter [7, 8]. Some individuals develop psychopathologies with COVID-19 fear, whereas some manage to preserve their psychological balance and adapt to the situation at hand [8]. Thus, this study was designed with the aim of identifying the potential consequences of COVID-19 fear on mental well-being and the moderating role of individual variables. The acquired results will contribute to the reduction of

negative effects the fear of pandemic creates in individuals.

## 5. Conclusion

In this study, the moderator role of fatalism and psychological resilience in the effect of fear of COVID-19 on mental well-being was tested. The research was conducted on a sample of waiters who were at risk for COVID-19 infection because of their work in a high-contact environment. The data were obtained from waiters working in five-star hotels through online questionnaires. As a result of the research, it was found that the fear of COVID-19 has a negative effect on mental well-being. An important finding in the study was that the effect of COVID-19 fear on mental well-being was significantly differentiated according to the fatalistic belief and psychological resilience levels of the participants. The negative impact of fear of COVID-19 on mental well-being is much stronger in participants with low fatalistic beliefs. Therewithal, as the psychological resilience of individuals decreased, the negative effect of fear of COVID-19 on mental well-being increased. In the study, it was concluded that the strongest effect of fear of COVID-19 on mental well-being occurred on participants with low fatalistic beliefs and low psychological resilience. The results of the research contribute to the understanding of the role of individual beliefs and characteristics in the protection of mental health in times of crisis such as epidemics.

### 5.1. Limitations and future directions for research

This study has certain limitations. First of all, it employs a cross-sectional research design. Thus, longitudinal studies are recommended to fully assess the relations between variables. Another limitation for the study is that the data was conducted during the pandemic; therefore, only the waiters, who work full time, were included. Since the research was carried out in the pandemic process and conditions, convenience and snowball sampling methods were preferred as a sampling method. Therefore, it must be cautious in generalizing these results. Two out of every three restaurant employee has lost their jobs because of COVID-19 pandemic [36]. According to the Sector Job Quality Index, it is predicted that approximately 10.8 million employees will lose their

jobs [37]. The National Restaurant Association of America, on the other hand, reported that the cost for the restaurant industry to survive is almost 242 billion dollars. Considering the wearing effects of the fear of unemployment on individuals [38]. Future studies, aimed at the evaluation of mental well-being of waiters, whose workplaces are closed due to the pandemic, who cannot find employment despite seeking, will potentially contribute to the better understanding of the consequences of COVID-19. This research study focuses on the waiters, who only work in the frontlines of hospitality establishments. Approaching the effects of the pandemic in a way that includes employees in other departments may be of use for managers to develop employee policies. Culture is one of the most important factors, influencing individuals' approach towards fatalism [8]. Internal locus of control is more common in individualistic western societies, whereas external locus of control is common in highly collective, eastern societies [39]. From this perspective, the effects of COVID-19 pandemic and sensitivity in following recommended measures are recommended to be studied in cultural contexts.

## Author contributions

All authors have contributed significantly to the work, have read the manuscript, attest to the validity and legitimacy of the data and its interpretation, and agreed to its submission to WORK.

## Conflict of interest

The authors declare no conflicts of interest.

## References

- [1] Yang Q, Huo J, Xi Y. Research on the influence of the COVID-19 pandemic on work stress of returning workers in china: A study based on empirical analysis of industrial enterprises. *Work*. 2021;68(2):269-281.
- [2] World Health Organization (WHO) DirectorGeneral's opening remarks at the media briefing on COVID-19-11 March 2020. Available from: <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—11-march-2020>
- [3] Ahorsu DK, Lin C-Y, Imani V, Saffari M, Griffiths MD, Pakpour AH. The fear of COVID-19 scale: development and initial validation. *Int J Ment Health Addict*. 2020;1-9.
- [4] Vo-Thanh T, Vu T-V, Nguyen NP, Nguyen DV, Zaman M, Chi H. COVID-19, frontline hotel employees' perceived job insecurity and emotional exhaustion: Does trade union support matter? *J Sustain Tour*. 2021;1-18.

- [5] Liu H, He S, Shen L, Hong J. Simulation-based study of COVID-19 outbreak associated with air-conditioning in a restaurant. *Phys Fluids*. 2021;33(2):023301.
- [6] Asefa A, Qanche Q, Hailemariam S, Dhuguma T, Nigusie T. Risk perception towards COVID-19 and its associated factors among waiters in selected towns of Southwest Ethiopia. *Risk Manag Healthc Policy*. 2020;13:2601.
- [7] Killgore WD, Taylor EC, Cloonan SA, Dailey NS. Psychological resilience during the COVID-19 lockdown. *Psychiatry Res*. 2020;291:113216.
- [8] Bachem R, Tsur N, Levin Y, Abu-Raiya H, Maercker A. Negative affect, fatalism, and perceived institutional betrayal in times of the Coronavirus pandemic: A cross-cultural investigation of control beliefs. *Front Psychiatry*. 2020;11.
- [9] Hobfoll SE. The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *App Psychol*. 2001;50(3):337-421.
- [10] Mosheva M, Hertz-Palmor N, Dorman Ilan S, Matalon N, Pessach IM, Afeq A, et al. Anxiety, pandemic-related stress and resilience among physicians during the COVID-19 pandemic. *Depress Anxiety*. 2020;37(10):965-71.
- [11] Lee M, You M. Psychological and Behavioral Responses in South Korea During the Early Stages of Coronavirus Disease 2019 (COVID-19). *Int J Environ Res Public Health*. 2020;17(9):2977.
- [12] Üngüren E. Investigation of fatalistic beliefs and experiences regarding occupational accidents among five stars accommodation companies employees. *Tur Akad Derg*. 2018;5(2):1-15.
- [13] Hamouche S. COVID-19 and employees' mental health: stressors, moderators and agenda for organizational actions. *Emerald Open Res*. 2020;2:15.
- [14] Üngüren E, Tekin ÖA, Avsallı H, Kaçmaz YY. The Moderator Role of Financial Well-Being on the Effect of Job Insecurity and the COVID-19 Anxiety on Burnout: A Research on Hotel-Sector Employees in Crisis. *Sustainability*. 2021;13(16):9031.
- [15] World Health Organization (WHO). Promoting Mental Health. [Internet]. Geneva: World Health Organization; 2004 [cited 2021 Aug 6]. Available from: <https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4978588>
- [16] Gössling S, Scott D, Hall CM. Pandemics, tourism and global change: a rapid assessment of COVID-19. *J Sustain Tour*. 2020;29(1):1-20.
- [17] O'Neill JW, Davis K. Work Stress and Well-being in the Hotel Industry. *Int J Hosp Manag*. 2011;30(2):385-90.
- [18] Bonanno GA, Rennie C, Dekel S. Self-enhancement among high-exposure survivors of the September 11th terrorist attack: resilience or social maladjustment? *J Pers Soc Psychol*. 2005;88(6):984-98.
- [19] Masten AS, Best KM, Garmezy N. Resilience and development: Contributions from the study of children who overcome adversity. *Dev Psychopathol*. 1990;2(4):425-44.
- [20] Shevlin M, McBride O, Murphy J, Miller JG, Hartman TK, Levita L, et al. Anxiety, depression, traumatic stress and COVID-19-related anxiety in the UK general population during the COVID-19 pandemic. *BJ Psych Open*. 2020;6(6):e125.
- [21] Ngien A, Jiang S. The effect of social media on stress among young adults during COVID-19 pandemic: Taking into account fatalism and social media exhaustion. *Health Commun*. 2021;1-8.
- [22] Kayani A, King M, Fleiter J. Fatalism and road safety in developing countries, with a focus on Pakistan. *J Australas Coll Road Saf*. 2011;22:41-7.
- [23] Rotter JB. Social learning and clinical psychology. Englewood Cliffs: Prentice-Hall, Inc; 1954.
- [24] Podsakoff PM, MacKenzie SB, Lee J-Y, Podsakoff NP. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J Appl Psychol*. 2003;88(5):879-903.
- [25] Satici B, Gocet-Tekin E, Deniz ME, Satici SA. Adaptation of the fear of COVID-19 scale: Its association with psychological distress and life satisfaction in Turkey. *Int J Ment Health Addict*. 2020;1-9.
- [26] Tennant R, Hiller L, Fishwick R, Platt S, Joseph S, Weich S, et al. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health Qual Life Outcomes*. 2007;5(1):1-13.
- [27] Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. *Int J Behav Med*. 2008;15(3):194-200.
- [28] Doğan T. Kısa psikolojik sağlamlık ölçeği'nin türkçe uyarlaması: Geçerlik ve güvenilirlik çalışması. *J Happiness Well-Being*. 2015;3(1):90-102.
- [29] Esparza OA, Wiebe JS, Quiñones J. Simultaneous development of a multidimensional fatalism measure in English and Spanish. *Curr Psychol N B NJ*. 2015;34:597-612.
- [30] Brislin RW. Comparative research methodology: Cross-cultural studies. *Int J Psychol*. 1976;11(3):215-229.
- [31] Hayes AF. Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Commun Monogr*. 2018;85(1):4-40.
- [32] Anderson JC, Gerbing DW. Structural equation modeling in practice: A Review and recommended two-step approach. *Psychol Bull*. 1988;103(3):13.
- [33] Podsakoff PM, Organ DW. Self-reports in organizational research: Problems and prospects. *J Manag*. 1986;12(4):531-44.
- [34] Bogolyubova O, Fernandez AS-M, Lopez BT, Portelli P. Traumatic impact of the COVID-19 pandemic in an international sample: Contribution of fatalism to psychological distress and behavior change. *Eur J Trauma Dissociation*. 2021;5(2):100219.
- [35] Wu Y, Wang J, Luo C, Hu S, Lin X, Anderson AE, et al. A Comparison of burnout frequency among oncology physicians and nurses working on the frontline and usual wards during the COVID-19 Epidemic in Wuhan, China. *J Pain Symptom Manage*. 2020;60(1):e60-65.
- [36] National Restaurant Association. Restaurant industry facts at a glance [Internet]. National Restaurant Association. 2020 [cited 2021 Aug 6]. Available from: <https://restaurant.org/research/restaurant-statistics/restaurant-industry-facts-at-a-glance>
- [37] U.S. Private Sector Job Quality Index [Internet]. 2020 [cited 2021 Aug 6]. Available from: <https://www.jobqualityindex.com/#flashsection>
- [38] Khan A, Bibi S, Lyu J, Latif A, Lorenzo A. COVID-19 and sectoral employment trends: assessing resilience in the US leisure and hospitality industry. *Curr Issues Tour*. 2021;24(7):952-69.
- [39] Mueller SL, Thomas AS. Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *J Bus Ventur*. 2001;16(1):51-75.