



## THE MEDIATING ROLE OF COGNITIVE EMOTION REGULATION IN THE EFFECT OF TOURISM INDUSTRY EMPLOYEES' FEAR OF COVID-19 AND DEATH PERCEPTIONS ON THEIR PSYCHOLOGICAL DISTRESS

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### Abstract

**Study objective:** This study aims to determine the mediator role of cognitive emotion regulation in the effect of the perception of death and fear of COVID-19 experienced by tourism sector employees on their psychological distress.

**Methodology/approach:** The research is a cross-sectional study of quantitative research methods. The research data were collected and analyzed with the help of scales from the tourism sector employees operating in Antalya and Muğla, Turkey's tourism regions.

**Originality/Value:** It shows that cognitive emotion regulation ability is important for tourism workers who work in close contact with tourists from different parts of the world and carry different variants of infectious diseases to cope with their psychological distress.

**Main results:** Research results show that cognitive emotion regulation predicts psychological distress. Another finding shows that cognitive emotion regulation reduces the perception of death and fear of COVID-19 and that one psychological state also affects the other.

**Theoretical/methodological contributions:** In the research, it can be argued that examining the four variables related to the psychological state of the tourism sector employees who come from various parts of the world and interact with people carrying different disease viruses (nowadays monkeypox) will make a significant contribution to the literature, practice and method.

**Keywords:** COVID-19 fear. Perception of death. Psychological distress. Cognitive emotion regulation. Tourism industry employees.

### Cite como

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## O PAPEL MEDIADOR DA REGULAÇÃO COGNITIVA DAS EMOÇÕES NO EFEITO DO MEDO DA COVID-19 E DA PERCEÇÃO DA MORTE DOS FUNCIONÁRIOS DA INDÚSTRIA DO TURISMO NO SEU SOFRIMENTO PSICOLÓGICO

### Resumo

**Objetivo do estudo:** Este estudo tem como objetivo determinar o papel mediador da regulação emocional cognitiva no efeito da percepção da morte e do medo da COVID-19 vivenciada por funcionários do setor de turismo em seu sofrimento psíquico.

**Metodologia/abordagem:** A pesquisa é um estudo transversal de métodos quantitativos de pesquisa. Os dados da pesquisa foram coletados e analisados com a ajuda de escalas dos funcionários do setor de turismo que operam em Antalya e Muğla, que são as regiões turísticas da Turquia.

**Originalidade/ Relevância:** Mostra que a capacidade de regulação cognitiva da emoção é importante para os trabalhadores do turismo que trabalham em contato próximo com turistas de diferentes partes do mundo e carregam diferentes variantes de doenças infecciosas para lidar com seu sofrimento psicológico.

**Principais resultados:** Os resultados da pesquisa mostram que a regulação cognitiva da emoção prediz sofrimento psicológico. Outra descoberta mostra que a regulação das emoções cognitivas reduz a percepção de morte e medo da COVID-19 e que um estado psicológico também afeta o outro.

**Contribuições teórico-metodológicas:** Na pesquisa, pode-se argumentar que examinar as quatro variáveis relacionadas ao estado psicológico dos funcionários do setor de turismo que vêm de várias partes do mundo e interagem com pessoas portadoras de diferentes vírus de doenças (hoje varíola dos macacos) fará com que uma contribuição significativa para a literatura, prática e método.

**Palavras-chave:** Medo da COVID-19. Percepção da morte. Sofrimento psíquico. Regulação cognitiva das emoções. Funcionários da indústria do turismo.

## EL PAPEL MEDIADOR DE LA REGULACION COGNITIVA DE LAS EMOCIONES EN EL EFECTO DEL MIEDO A LA COVID-19 Y LAS PERCEPCIONES DE MUERTE DE LOS EMPLEADOS DE LA INDUSTRIA TURISTICA SOBRE SU MALESTAR PSICOLOGICO

### Resumen

**Objetivo del estudio:** Este estudio pretende determinar el papel mediador de la regulación cognitiva emocional en el efecto de la percepción de muerte y miedo al COVID-19 que experimentan los empleados del sector turístico sobre su malestar psicológico.

**Metodología/ acercarse:** La investigación es un estudio transversal de métodos de investigación cuantitativos. Los datos de la investigación se recopilaron y analizaron con la ayuda de escalas de los empleados del sector turístico que operan en Antalya y Muğla, que son las regiones turísticas de Turquía.

**Originalidad/ Relevância:** Muestra que la capacidad de regulación cognitiva de las emociones es importante para los trabajadores del turismo que trabajan en estrecho contacto con turistas de diferentes partes del mundo y son portadores de diferentes variantes de enfermedades infecciosas para hacer frente a su angustia psicológica.

**Resultados principales:** Los resultados de la investigación muestran que la regulación emocional cognitiva predice el malestar psicológico. Otro hallazgo muestra que la regulación emocional cognitiva reduce la percepción de muerte y el miedo a la COVID-19 y que un estado psicológico también afecta al otro.

**Aportes teóricos/metodológicos:** En la investigación se puede argumentar que examinar las cuatro variables relacionadas con el estado psicológico de los empleados del sector turismo que provienen de diversas partes del mundo e interactúan con personas portadoras de diferentes virus de enfermedades (hoy viruela del simio) hará una contribución significativa a la literatura, la práctica y el método.

**Palabras clave:** Miedo al COVID-19. Percepción de la muerte. Malestar psicológico. Regulación emocional cognitiva. Empleados de la industria turística.



## Introduction

The COVID-19 pandemic continues to threaten people's physical and psychological health. This situation becomes more threatening for tourism industry employees and can cause fear of death and various psychological problems (Pal et al., 2020; Zimmerman and Bowman, 2021; Fox et al., 2020). On the other hand, the human survival effort continues and tries to overcome the troublesome process by regulating the cognitive mood against the threatening situation caused by the pandemic. This study aimed to determine the mediating role of cognitive emotion regulation in the effect of fear of COVID-19 and perception of death on psychological distress in tourism industry employees. The COVID-19 pandemic particularly threatens tourism industry employees because of their jobs (Kaushal & Srivastava, 2021; Bogale et al., 2020; Rogerson and Rogerson, 2020). Therefore, it is important to discuss whether cognitive emotion regulation has a role in dealing with the perception of death, fear of COVID-19, and psychological distress in dealing with the various psychological problems experienced by these important actors in the struggle to cope with the pandemic.

Despite the recent vaccine studies, the COVID-19 pandemic continues to threaten humanity. The most important task in the pandemic is employees of the tourism industries, which are the biggest risk group (Ozdemir, 2020; Barrios & Hochberg, 2020). While tourism industry employees are living in fear of death in front of their eyes, they are stuck between the need to regulate their emotions and do vitally important tasks in order to carry out their duties successfully (Heath et al., 2020; da Silva et al., 2020; Zhang et al. 1., 2020). Tourism industry employees face the heavy workload brought about by high patient numbers, the risk of infection and the fear of death due to the death of their colleagues before their eyes, and various psychological difficulties. Also, under the fear of infecting family members, they face tourism industry employees the fear COVID-19, the perception of death, and psychological distress (Urooj et al., 2020; Mokhtari et al., 2020; Menzies & Menzies, 2020).

In studies conducted on the subject, it is understood that fear of COVID-19 and the perception of death cause various psychological problems such as anxiety disorder, extreme depression, insomnia problems, and post-traumatic stress disorder, which is the main psychological distress caused by the tourism industry employees (Cawcutt et al., 2020; Shechter et al., 2020; Lai et al., 2020; Liu et al., 2020). Depending on this negative psychological situation, various psychological disorders such as extreme anger, cooling down towards work and occupation, and emotional exhaustion may occur in tourism industry employees (Hall,



2020; Hu et al., 2020; Rana et al., 2020). It is not easy for tourism industry employees to regulate their cognitive moods against these ailments, and this situation may wear them out psychologically.

It is not easy for tourism industry employees to regulate their cognitive mood in the individual plan against the severe psychological pressure of the combination of fear of COVID-19 and the perception of death with psychological distress (Simione & Gnagnarella, 2020; Hologue et al., 2020). In the face of anxiety, fear, and anxiety, tourism industry employees have no other alternative than to regulate their mood by showing psychological resilience in the individual plan (Garnefski et al., 2001; Garnefski & Kraaij, 2018). Cognitive emotion regulation is an effective way for individuals to manage their emotions and combat negative emotions (Wang et al., 2021). In studies conducted on the subject, it has been understood that cognitive emotion regulation strategies have a mediator function in combating psychological distress (Wang et al., 2021; Muñoz-Navarro et al., 2021). However, in these studies, fear of COVID-19 and perception of death in tourism industry employees. Whether the subject is not addressed and whether cognitive emotion regulation will play a mediating role against the psychological distress in this process has not been discussed. In this respect, it can be argued that the study will make a significant contribution to the literature.

## Conceptual framework

### *The fear of COVID-19*

Fear is an emotion developed to avoid certain stimuli depending on the perceived risk. The COVID-19 pandemic spread worldwide, creating great fears, especially among tourism industry employees, causing the biggest loss of life (Yost et al., 2021). Quarantine measures are implemented in many countries against the rapidly spreading COVID-19 epidemic. These measures keep many people isolated and negatively affect human life (Heath et al., 2020; Tekin et al., 2020; Qiu et al., 2020). Studies have shown that the COVID-19 pandemic poses vital risks to people's physical and psychological health (Liu, 2020; Qiu et al., 2020). The epidemic can cause functional disorders such as anxiety or stress, palpitations, chest tightness, and insomnia in humans. It is revealed by various studies that if anxiety and stress progress, it causes physical and mental illnesses such as depression, endocrine disorders, and hypertension (Dong & Zhang, 2020). Various studies have determined that the COVID-19 epidemic caused emotional reactions such as anger, grief, sadness, and fear. Some studies have found that the



risk of contact with people infected with the COVID-19 epidemic has undermined tourism industry employees psychologically (Kaya & Karatepe, 2020; Christou & Simillidou, 2020; Yost et al., 2021). The psychological distress levels of tourism industry employees with a high perception of fear can also be warier. Fear of COVID-19 and the fear of becoming infected or infecting loved ones have been demonstrated by various studies that make tourism industry employees extremely anxious (Colizzi et al., 2020; Xu et al., 2020; Liu, 2020).

Tourism industry employees who are in close contact with COVID-19 patients often face the challenges of contamination, high risk of infection, and working conditions. Working in businesses that accommodate people from different parts of the world can cause tourism business employees to experience common psychological disorders such as fear of death, extreme stress, anxiety, depression, and mental distraction. It may cause discomfort (Hu et al., 2020; Tekin et al., 2020). Findings from studies conducted during the previous Acute Respiratory Syndrome (SARS) epidemic determined that tourism industry employees working on the front line often experience cognitive depression, psychological shock, fear, and stress (Hu et al., 2020; Hall, 2020). Some studies show that tourism industry employees fear getting a virus, infecting their relatives, being carriers, and lacking diagnosis (Urooj et al., 2020). In particular, the anxiety about infecting family members is the most common form of anxiety, even fear, among tourism industry employees (Urooj et al., 2020; Hall, 2020). Excessive fear can deepen employees' psychological health problems (Labrague & De Los Santos, 2020; Hall, 2020).

### *Cognitive emotion regulation*

Emotion regulation is the external and internal processes responsible for monitoring, evaluating, and changing people's emotional responses. Emotion regulation is an effort to strengthen a person's positive emotions or eliminate their negative emotions (Garnefski et al., 2001; Gross, 2015; McRae, 2016; Gross, 2015). Emotion regulation includes sociological, behavioral, conscious, and unconscious processes (Garnefski et al., 2001; Ataman & Dağ, 2014). As part of emotion regulation, cognitive emotion regulation is the cognitive regulation of oneself, normalizing it and carrying it to a sustainable psychological level (Garnefski & Kraaij, 2018). Cognitive emotion regulation is an individual's cognitive effort to eliminate negative emotions (Wang et al., 2021). The regulation of emotions through cognition is directly

related to the psychological health of the human being. Cognitive emotion regulation can help control emotions in threatening or stressful events (Garnefski & Kraaij, 2018).

People try to cope with their psychological distress resulting from negative experiences with cognitive emotion regulation strategies. Tactics such as blaming oneself, blaming others, accepting, looking positively, re-planning, and making sense of what happened can be used (Li et al., 2021; Li & Chen, 2021). These strategies are the coping strategies people use against psychological distress. Studies have shown that people's cognitive emotion regulation strategies during unwanted stressful events are a defense mechanism to overcome their psychological distress with less damage (Wang et al., 2021; Sakakibara & Kitahara, 2016). A meta-analysis study shows that emotion regulation strategies are used to overcome psychological problems such as anxiety and depression. It shows that cognitive emotion regulation strategies may mediate psychological distress such as anxiety and depression (Sakakibara & Kitahara, 2016; Wang et al., 2021; Muñoz-Navarro et al., 2021). According to studies on COVID-19 anxiety, it has been understood that individuals try to reduce their anxiety levels with cognitive emotion regulation strategies (Muñoz-Navarro et al., 2021). The following hypothesis has been developed within the scope of the above theoretical framework.

*H1: Fear of COVID-19 negatively affects cognitive emotion regulation perception.*

### *Psychological distress*

Psychological distress is an incompatible and problematic psychological situation in the face of stressful life events. It includes a wide spectrum ranging from ordinary emotions such as psychological distress, grief, fear, vulnerability, and insecurity to chronic problems such as depression, anxiety, panic, and social isolation that can cause permanent damage (Zimmermann, 2015). Here, psychology reflects the person's general mood and is an emotional, relational, social, and existential mood state. Two types of psychological distress can be mentioned as depression and anxiety (Abeloff et al., 2004). Psychology manifests itself with distress, mostly depression, anxiety, and post-traumatic stress disorder (Hamer et al., 2009; Sterle, 2018).

Psychological distress can occur under the influence of a wide variety of factors. Infectious diseases such as COVID-19 cause psychological distress due to fear and anxiety-generating properties. Studies have shown a relationship between psychological distress and the risk of death from infectious diseases (Yu et al., 2021; Zhang et al., 2021). The harsh



working conditions of tourism industry employees, who are at the forefront of combating infectious diseases, cause them to experience chronic stress and psychological distress. During the SARS epidemic, it was determined that the tourism business employees working in accommodation businesses experienced intense psychological problems such as depression, anxiety, fear, and disappointment. In studies examining the negative psychological consequences of the SARS epidemic on tourism industry employees, it was determined that a significant number of tourism industry employees had negative moods and one-fourth of the doctors participating in the study showed psychiatric symptoms (Heath et al., 2020; Xiang, 2020; Hamer et al., 2019).

Studies show that during the COVID-19 outbreak, similarly, tourism industry employees experience psychological distress and physical difficulties (Lai et al., 2020; Liu et al., 2020). For example, in a study conducted in the USA during the COVID-19 process, 57% of tourism industry employees showed acute stress, 48% depressive, and 33% anxiety symptoms (Shechter et al., 2020). In similar studies conducted in China, it was observed that tourism industry employees struggling with COVID-19 experienced psychological problems, including anxiety and depressive symptoms (Lai et al., 2020; Liu et al., 2020). In similar studies, the psychological effects of the COVID-19 epidemic on tourism industry employees were examined, and it was found that tourism industry employees experienced psychological problems such as anxiety, depression, and insomnia during the epidemic process (da Silva et al., 2020; Pappa et al., 2020). The following hypotheses have been developed within the above theoretical frameworks.

*H2: Fear of COVID-19 positively affects the perception of psychological distress.*

*H3: Cognitive emotion regulation perception negatively affects the perception of psychological distress.*

### *Death perception*

One of the major impacts of the COVID-19 pandemic on humans is death anxiety. Studies have revealed that witnessing high fatalities increases death apocalypse (Saleh et al., 2016; Menzies & Menzies, 2020; Pradhan et al., 2020). The COVID-19 pandemic is contagious and causes many people worldwide can increase death anxiety. Death anxiety is one of the natural worries of people. However, encountering people likely to carry different variants of the Covid-19 virus in accommodation businesses naturally increases anxiety. Another issue is



that the risk of getting an epidemic is extremely high (Menzies & Menzies, 2020; Leung & Cai, 2021; Rastegar, 2021). Death anxiety causes unconscious anxiety, especially due to increasing death events during the epidemic process.

The number of cases reached 31,175,000 in the USA, 12,753,000 in Brazil, 12,299,000 in India, 4,644,000 in France, and the most over-aware people and those who lose are tourism industry employees. This situation naturally leaves them with the fear of death and the anxiety of catching the virus (Goyal & Verma, 2021; Leung & Cai, 2021). Being in contact with people from different countries due to their duties increases the survival anxiety of the employees of the tourism business and causes them to have psychological difficulties. Death anxiety is finally a prolonged version of the fear of death, and this anxiety has increased significantly in tourism industry employees during the pandemic process (Nia et al., 2016; Birgit, 2018). If the grove of death lies at the center of human anxiety, witnessing death events naturally increases their anxiety levels (Khademi et al., 2020; Menzies & Menzies, 2020). Social isolation and social distance rules and public health campaigns put people a vigilance about getting the virus (Pradhan, 2020; Menzies & Menzies, 2020). Various studies have led tourism industry employees to extreme death anxiety due to causes such as trauma, violence, and death (Nia et al., 2016; Rana et al., 2020; Mokhtari et al., 2020). The fear and death anxiety caused by the COVID-19 epidemic can harm the psychological state of tourism industry employees and cause them to experience various psychological problems. The following hypotheses have been developed within the above theoretical frameworks.

*H4: Perception of death positively affects the perception of psychological distress.*

*H5: Perception of death negatively affects cognitive emotion regulation.*

*H6: Cognitive emotion regulation has a mediating role in the effect of COVID-19 fear on psychological distress perception.*

*H7: Cognitive emotion regulation has a mediating role in the perception of death on the perception of psychological distress.*

## **Methodology and procedures**

### *Research design*

The research is research designed according to the quantitative research method. According to cross-sectional scanning, the research was conducted in one of the general survey models (Fraenkel & Wallen, 2008; Tutar & Erdem, 2020). The study examined the mediating





role of cognitive emotion patterns in the effect of fear of COVID-19 and perception of death on psychological distress.

### *Participants and sampling*

Data were collected from a sample of accommodation business employees operating in Antalya and Muğla (Turkey) to answer the research question. According to the random sampling technique, 448 accommodation enterprises were developed in the sample. The random sampling technique was chosen because every possible unit of the universe's elements will occur in the sample with equal probability.

### *Data collection instruments*

In order to collect research data; Ahorsu et al. (2020) 7-item "COVID-19 Fear Scale", "Death Perception Scale" consisting of 24 items developed by Topuz (2013), Feng et al. (2020) "Psychological Distress Scale" with 12 items and "Cognitive Emotion Regulation Scale" with 18 items developed by Cakmak and Cevik (2010) were used.

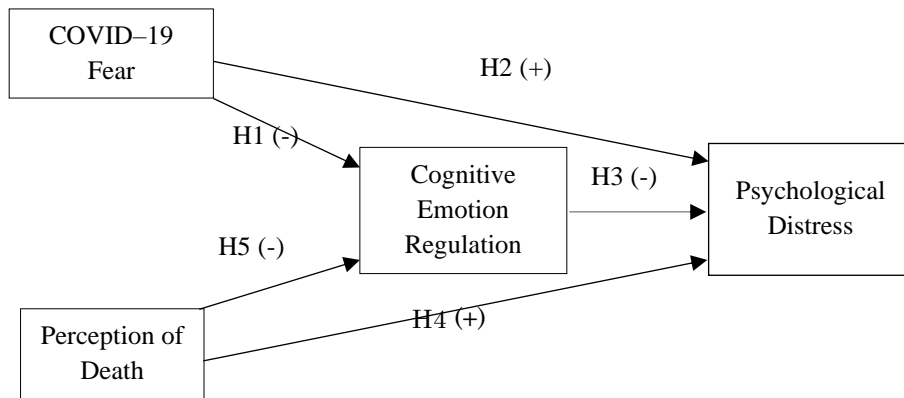
### *Measurement model and hypotheses*

In the study, the following hypothetical model and hypotheses have been developed to assume that the fear of COVID-19 and the fear of death will cause psychological distress and that there will be a positive relationship between these three variables. The model assumes that cognitive emotion regulation will mediate negative situations such as fear of COVID-19, perception of death, and psychological distress. In the model, "fear of COVID-19" and "perception of death" were considered independent variables, "psychological distress" as dependent variables, and "cognitive emotion regulation" as mediating variables.



**Figure 1.**

*Research Model*



*Validity and reliability of research*

Within the scope of the research, first of all, reliability analyzes of the scales were made. The values of  $\alpha = 0.934$  for the fear of COVID-19 scale,  $\alpha = 0.915$  for the psychological distress scale,  $\alpha = 0.919$  for the cognitive emotion regulation scale, and  $\alpha = 0.955$  for the depth perception scale were obtained. These values show that the scales are reliable. Confirmatory factor analysis (CFA) was applied to the measurement model to determine the scales' validity for fear of COVID-19, perception of psychological distress, cognitive emotion regulation, and depth perception in the research model. According to the CFA result, the fit indices  $\chi^2 / DF$ , GFI, NFI, CFI, TLI, RMSEA values, good fit indices, and validity values are shown in Table 1.

**Table 1.**

*Model-Data Fit Values*

Data-Model Fit Indices	Acceptable Indices	Single Factor Model Indices
Chi-Square ( $\chi^2$ )= 1597,94		Chi-Square ( $\chi^2$ )= 7985,01
DF= 968, $p < 0.01$		DF= 1595
GFI= 0.902	GFI > 0.90	GFI= 0.448
CFI= 0.934	NFI > 0.90	CFI= 0.451
IFI= 0.935	CFI > 0.90	IFI= 0.454
TLI= 0.930	TLI > 0.90	TLI= 0.431
RMSEA= 0.050	RMSEA < 0.08	RMSEA= 0.123
$\chi^2/DF = 1.651$	$\chi^2/DF < 5$	$\chi^2/DF = 5.006$

Source: (Schumacker and Lomax, 2010, Wang and Wang, 2019).

According to the 4-factor model specified in Table 2, the Value of  $\chi^2$  is significant ( $p < 0.01$ ). A  $\chi^2 / DF$  value (1.651) below 5 indicates that the model meets the fit criterion. It is seen that the data are consistent in terms of GFI = 0.902, CFI = 0.934, IFI = 0.935, TLI = 0.930 and RMSEA = 0.050 values. The comparative harmony table between the single-factor model and the multi-factor model is given in Table 1. As a result of CFA, the "Chi-Square Difference Test" was applied to determine the difference between the four-factor model (fear of COVID-19, perception of death, psychological distress, cognitive emotion regulation), the one-factor model, and the difference between  $\chi^2$  values was found to be significant. This result determined no common method deviation in the data (MacKenzie and Podsakoff, 2012). According to this finding, it was concluded that the 4-factor model data were compatible. It was observed that all variables of the validity-oriented structure of a researched model showed low correlation with other variables, providing convergent validity, which shows a high correlation with discriminant validity (Table 2).

**Table 2.**

*Average, Standard Deviation, Reliability and Correlation Values of the Variables*

Variables	Mean	SD	CR	AVE	1	2	3	4
1. COVID-19 Fear	2.44	.926	.933	.669	-			
2. Psychological Distress	2.85	.877	.916	.585	.205**	-		
3. Perception of Death	3.04	.902	.963	.636	.234**	.606**	-	
4. Cognitive Emotion Regulation	3.94	.859	.935	.540	-.191**	-.280**	-.277**	-

Note: SD, Standard Deviation; \*Significant at 0.05 level (bi-directional), \*\* Significant at 0.01 level (bi-directional).

In Table 2, the convergence validity of the data obtained in the research scales according to the AVE (Average explained variance) values is indicated. According to Kline (2015), the correlation level between scales must be found for a research model to provide convergent validity. The fact that the AVE values of the research model are higher than 0.5 indicates that the relevant items are valid in the implicit variable. As shown in Table 2, convergence validity is provided with AVE values higher than 0.5 (Abubakar, Ilkan, & Sahin, 2016, Fornell & Larcker, 1981). To determine discriminative validity, the correlation value between scales should be lower than 0.80 (Kline, 2015). The correlation values between the study variables are lower than 0.80, and the significant relationship shows that the divergence discriminant validity is ensured. However, Hair et al. (2006), for the research model to be compatible, the standardized factor loadings must be higher than 0.5. The standardized factor loadings of the



research scale expressions range from 0.509 to 0.903. Also, the parametric test  $t$  values of these factor values between 7.35 and 17.83 show that the research model adapts.

According to the Pearson Correlation analysis in Table 2, it is seen that there is a positive relationship between the fear of COVID-19 and the perception of psychological distress ( $r = .205$ ,  $p < .001$ ). There is a positive relationship between the fear of COVID-19 and the perception of death ( $r = .234$ ,  $p < .001$ ). A negative correlation was found between the fear of COVID-19 and cognitive emotion regulation ( $r = -.191$ ,  $p < .001$ ). There is a positive correlation between the perception of psychological distress and the perception of death ( $r = .606$ ,  $p < .001$ ) and a negative correlation between the perception of psychological distress and the perception of cognitive emotion regulation ( $r = -.280$ ,  $p < .001$ ). There is a significant negative correlation between death and cognitive emotion regulation perception ( $r = -.277$ ,  $p < .001$ ). When the correlation values are examined, it is seen that there are significant relationships between variables.

## Results

### *Demographic findings*

The stud participants' demographic information such as gender, education level, age, and seniority are explained in Table 3.

**Table 3.**

### *Demographic Findings*

Gender	Frequency (n)	Percent (%)	Marital Status	Frequency (n)	Percent (%)
Female	207	46,2	Single	191	42,6
Male	241	53,8	Married	257	57,4
<b>Total</b>	<b>448</b>	<b>100,00</b>	<b>Total</b>	<b>448</b>	<b>100,00</b>
Age	Frequency (n)	Percent (%)	Education Status	Frequency (n)	Percent (%)
18–25	111	24,7	License	358	79,9
26–35	119	26,6	Master	64	14,3
36–45	104	23,2	Doctorate	26	5,8



Gender	Frequency (n)	Percent (%)	Marital Status	Frequency (n)	Percent (%)
46-55	101	22,5			
56 – above	13	3,0			
<b>Total</b>	<b>448</b>	<b>100,00</b>	<b>Total</b>	<b>448</b>	<b>100,00</b>

COV-19 Fear	Frequency (n)	Percent (%)	COV-19 Distress	Frequency (n)	Percent (%)
Female	178	52,2	Female	208	76,5
Male	163	47,8	Male	64	23,5
<b>Total</b>	<b>341</b>	<b>100,00</b>	<b>Total</b>	<b>272</b>	<b>100,00</b>

46.2% of the participants are women, and 53.8% are men. 42% of the participants are single, and 57.4% are married. It is observed that the participants are mostly between the ages of 26-35. According to their education level, 79.9% of the participants are undergraduate, 14.3% are graduates, and 5.8% are doctoral graduates. They stated that 78.1% (341) of the participants experienced fear of COVID-19. 21.2% of the participants experiencing fear are women, and 47.8% are men. While approximately 80% of the participants afraid of COVID-19 experience psychological distress, this problem is more common in women (76.5%).

### Testing research hypotheses

In order to test the research hypotheses, the structural equation model was applied to the research data. Table 4 shows the direct impact results from the Structural Equation Model analysis.

**Table 4.**

#### Direct Impact

Variables	β	t	SE	P
COVID-19 Fear – Cognitive Emotion Regulation	-.580	-3.993	.042	***
COVID-19 Fear – Psychological Distress	.510	3.565	.034	***
Cognitive Emotion Regulation –Psychological Distress	-.640	-5.669	.050	***
Perception of Death –Psychological Distress	.762	20.673	.037	***
Perception of Death – Cognitive Emotion Regulation	-.289	-4.922	.043	***

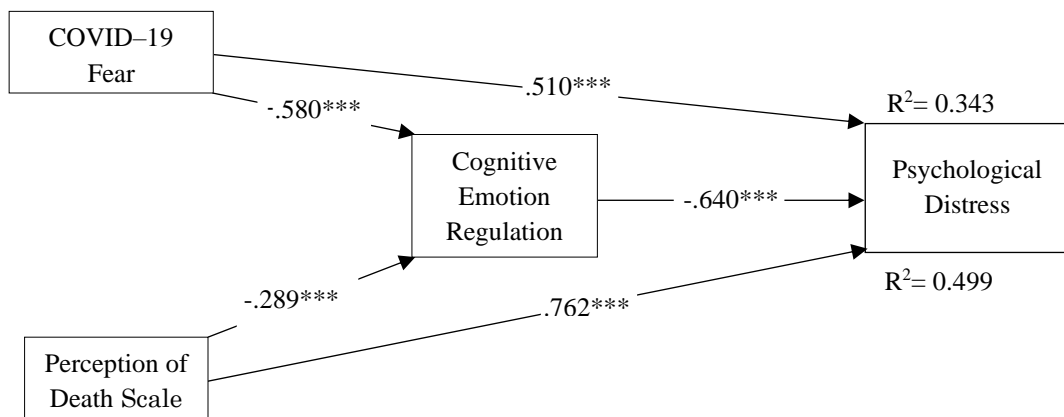
Note: SE, standard error; \* 0.05 \*\* 0.01 \*\*\* Significant at 0.001 level (bi-directional).



According to Table 4, it is seen that fear of COVID-19 has a significant negative effect on cognitive emotion regulation perception ( $\beta = -.580, t = -3.993, p < 0.001$ ). This result means that the research supports the H1 hypothesis that "fear of COVID-19 negatively affects cognitive emotion regulation". According to the H2 hypothesis of the study, it is seen that fear of COVID-19 has a significant positive effect on psychological distress perception ( $\beta = .510, t = 3.565, p < 0.001$ ). The H2 hypothesis that "fear of COVID-19 positively affects psychological distress" is supported. In the H3 hypothesis of the study, it is seen that cognitive emotion regulation has a significant negative effect on psychological distress ( $\beta = -.640, t = -5.669, p < 0.001$ ). This result means that the research supports the H3 hypothesis that "cognitive emotion regulation affects psychological distress negatively." Analysis findings show that perception of death has a significant positive effect on psychological distress perception ( $\beta = .762, t = 20.673, p < 0.001$ ). This result supports the H4 hypothesis that "the perception of death positively affects the perception of psychological distress." Analysis findings show that perception of death has a significant negative effect on cognitive emotion regulation perception ( $\beta = -.289, t = -4.922, p < 0.001$ ). Accordingly, it is understood that the study supports the H5 hypothesis that cognitive emotion regulation positively affects the perception of death (Figure 2).

**Figure 2.**

*Structural Equation Model Results*



In the study, the effect of fear of COVID -19 on the perception of psychological distress was examined without including the cognitive emotion regulation perception, which is the mediator variable in the model. According to the findings, it was observed that the fear of COVID-19 positively and significantly affected the perception of psychological distress ( $\beta =$



.510,  $p < 0.01$ ). When cognitive emotion regulation is included as a mediator variable in the research model, it is seen that fear of COVID-19 positively and significantly affects the perception of psychological distress ( $\beta = .349$ ,  $p < 0.05$ ). In other words, when the mediator variables are included in the model, it can be said that the independent variable has a partial mediator role since its effect on the dependent variable decreases ( $\acute{c} < c$ ) ( $R^2 = 0.34$ ).

In the research, the Bootstrap method was used to test the effect of mediator variables. The bootstrap method creates a resampling larger than the existing data set with the same feature (Sacchi, 1998). The Bootstrap method is recommended to be a reliable method for calculating indirect effects in mediation analysis (Hair et al., 2016). When Bootstrap predictions were examined at a 95% confidence interval regarding the mediating effect in the model, it was seen that cognitive emotion regulation caused a decrease in the effect of fear of COVID-19 on psychological distress perception ( $\beta = -.161$ ; 95% CI [-0.106 to -0.039]). Since this effect differs significantly, it plays a mediator role ( $p < 0.05$ ). According to this finding, it is understood that the H6 hypothesis that "Cognitive emotion regulation has a mediating role in the effect of COVID-19 fear on psychological distress" is accepted.

In the analysis performed for the H7 hypothesis of the study, the effect of the perception of death on the perception of psychological distress was examined without including the cognitive emotion regulation perception, which is the mediator variable in the model. According to the analysis findings, it was observed that the perception of death positively and significantly affected the perception of psychological distress ( $\beta = .762$ ,  $p < 0.01$ ). When the cognitive emotion regulation tool was included in the research model as a variable, it was determined that the fear of COVID-19 and the perception of death positively and significantly affected the psychological distress perception ( $\beta = .513$ ,  $p < 0.05$ ). According to this result, when the mediator variables are included in the model, it can be said that the independent variable has a mediating role since the effect of the independent variable on the dependent variable decreases ( $\acute{c} < c$ ) ( $R^2 = 0.49$ ). In the analysis of the mediating effect of cognitive emotion regulation, when Bootstrap predictions were examined at a 95% confidence interval, a decrease in the perception of death on psychological distress ( $\beta = -.249$ ; 95% CI [-0.152 to -0.07]). This effect's significance means that cognitive emotion regulation has a partial mediating role in the model established ( $p < 0.05$ ). According to this finding, the H7 hypothesis of the study that "cognitive emotion regulation has a mediating role in the effect of perception of death on psychological distress" was accepted.



## Discussion and conclusion

This study aims to determine what psychological problems are caused by the fear of COVID-19 and the perception of death in tourism industry employees and whether cognitive emotion regulation functions as an intermediary in overcoming these problems; it has been found to cause psychological problems. Simultaneously, it was determined in the study that cognitive emotion regulation functions as a mediating variable in coping with fear, anxiety, and psychological distress.

### *Evaluation of findings and theoretical implications*

Research results revealed that 78% of the participants feared COVID-19, and 80% showed psychological distress because the pandemic was fatal. This situation shows that people develop some natural defense mechanisms in emotional situations such as stress, anxiety, fear, and anxiety, as shown by many studies. The research results help people cope with all kinds of psychological problems, besides the fear and anxiety they develop unconsciously in coping with psychologically challenging situations. Therefore, any emotion regulation situation developed unconsciously or consciously is a defense strategy developed against psychological threat perception. However, since it is not easy for a person to live together with these negative psychological moods for a long time, they have to cope. In this study, it can be argued that emotion regulation plays an important role against the fear of COVID-19 and the perception of death. The theoretical framework of the research and the findings obtained from data analysis confirm this assumption.

Studies in the literature on COVID-19 fear and perception of death and psychological distress show a common consensus that these variables cause negative emotional states in people. A study determined that COVID-19 fears strengthen psychological distress perceptions (Satici et al., 2021). Another study on tourism industry employees determined that COVID-19 fear increased psychological distress and stress in employees (Labrague and de Los Santos, 2020). The study determined that participants' high cognitive emotion regulation perceptions decreased COVID-19 fears (Dubey, Podder, & Pandey, 2020). Another study determined that cognitive emotion regulation reduced negative psychological states caused by fear of COVID-19 (Riaz et al., 2021). Yıldırım and Güler (2021), by the participants in the survey conducted in Turkey, were determined that Covidien-19 perception positively affects the risk of death and anxiety. Robinson and Daly (2020), in a study conducted in the USA, determined that the





perception of COVID-19 increases stress and this stress increases the fear of infection and the perception of death in the participants. Simione and Gnagnarella (2020) found that COVID-19 fear and stress caused high fear and anxiety in a study conducted on Italy's tourism industry employees.

### *Practical implications*

The research results and the relevant literature, especially working closely with infected people because of their duties and contact with them, put tourism industry employees at great risk and stress. This situation inevitably causes fear of death on the one hand and various psychological problems on the other hand in tourism industry employees. In order to overcome all these problems and the cognitive emotion regulation that people consciously develop, accommodation business managers should also provide psychological support. It is necessary to work for a shorter period, increase protective measures against the epidemic, and improve working environments' hygiene conditions.

### *Limitations and avenues for future research*

The research is a relational study, and the mediator role of cognitive emotion regulation in the effect of COVID-19 fear and death perception on psychological distress of accommodation business employees in Antalya and Muğla (Turkey) was examined. The research can be advanced by including psychological resilience, future expectations, and other psychological state variables. According to the quantitative research method, the research was conducted and repeated in other samples with mixed-method and qualitative research methods, even meta-analysis, to advance the research.

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