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Does COVID-19 pandemic trigger career anxiety in tourism students? Exploring the role of psychological resilience

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ABSTRACT

This study aims to determine how the COVID-19 pandemic affects career anxiety of tourism students, who are the potential future employees of tourism and hospitality industry. Data was collected using an online survey with 1097 undergraduate students in the field of tourism in Turkey. The results of the study revealed that perceived risk of infection and fear of COVID-19 significantly impact students’ career anxiety, and fear of COVID-19 mediate the relationship between perceived infection risk and career anxiety. In addition, the results indicated that psychological resilience, which is an individual resource against difficulties, represents a factor that reduces career anxieties of students in the face of pandemic-related negative impacts. The findings contribute to the understanding of how pandemic diseases affect career anxiety in students, who are the future workforce of the tourism sector, and to determine the role of individual resources such as psychological resilience in this process.

1. Introduction

COVID-19 pandemic has brought tourism and hospitality sectors to a standstill all over the world (Aguiar-Quintana et al., 2021; Teng et al., 2020). Governments have temporarily stopped domestic and international flights; imposed restrictions on interprovincial travel; closed cafes, restaurants, and entertainment venues; and canceled festivals, congresses, and sports events to stop COVID-19 from spreading (Khan et al., 2021). COVID-19 pandemic has caused most employees within the tourism sector to face employment precarity and a sharp decline in their incomes (Aguiar-Quintana et al., 2021; Khan et al., 2021; Mao et al., 2020). Besides, tourism and hospitality sector requires physical contact with customers (Barbieri et al., 2020, p. 569); therefore, employees have a high risk of being exposed to respiratory droplets, which are the main cause of COVID-19 infection (Asefa et al., 2020; Rosemberg, 2020; Teng et al., 2020). The perceived risk of infection increases fear of the disease, making it harder for employees to concentrate on work, and causing severe psychological damage (Khan et al., 2021; Khattak et al., 2020; Mahmud et al., 2021; Puci et al., 2020; Tan et al., 2020; Taylor, 2019). Naturally, employees within the tourism sector most likely have serious concerns, because the risks of losing their jobs and being infected, are more likely for them (Akkermans et al., 2020).

Studies conducted on tourism and hotel management have indicated that many students do not want to seek a career in the tourism sector, because of the low salaries, irregular working hours, bad working conditions, seasonal work, and employment precarity (Chang & Tse, 2015; Jiang & Tribe, 2009; Richardson, 2009; Roney & Öztin, 2007; Wu et al., 2014). Students, who predict an ambiguous

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future after graduation have career-related concerns, even during normal times, which increases during times of economic crises (Boo & Kim, 2020; Unguren & Huseyinli, 2020). Thus, students who seek a career in tourism may be negatively impacted by the COVID-19. This situation may give way to problems in finding qualified personnel (Dai et al., 2019; Jiang & Tribe, 2009; Wen et al., 2019) in tourism sector.

It is important to examine the factors, impacting the development of university students’ careers (Richardson, 2009), and empirical studies on COVID-19’s impact on potential careers of students in this industry are necessary (Tiwari et al., 2020). Because career uncertainty and anxiety can negatively affect life satisfaction as well as cause loss of individual resources (Benaraba et al., 2022). Furthermore, well-educated and qualified employees play a key role in the service quality, customer satisfaction, and loyalty of tourism enterprises. Within this context, the quality of service at the tourism enterprises may be augmented to a large extent by training the persons that will be involved in this industry and employing the educated workforce. Studies reveal that the COVID-19 outbreak has increased university students’ concerns about their careers (Aristovnik et al., 2020; Mahmud et al., 2020; Wathelet et al., 2020). In this respect, our aim was to determine how tourism students perceive career anxiety during a pandemic. This study was designed to test the moderated mediation research model. In this study, moderated mediation analysis gives us the ability to examine whether the predictive effect of perceived risk of infection on career anxiety through fear of COVID-19 differs depending on the value of psychological resilience. Proposed in Fig. 1, the conceptual model posits that the indirect impact of perceived risk of infection (X) on career anxiety (Y) mediated by fear of COVID-19 (M) relies on psychological resilience (W). The model predicts that perceived risk of infection would increase fear of COVID-19 (X → M) and fear of COVID-19 would increase career anxiety (X → M → Y). It simultaneously suggests that in students with low levels of psychological resilience, the impact of perceived risk of infection (X) on career anxiety (Y) as mediated by fear of COVID-19 (M) would be stronger than those with higher psychological resilience. The study hence aims to detect how fear of contracting a disease during the pandemic impacts students’ career anxiety and what kind of a role psychological resilience plays during this process, via empirical insights. Our findings contribute to event system theory (EST) and the conservation of resources (COR). EST significantly contributes to the understanding of the effect of events on people and enterprises (Morgeson et al., 2015). COR theory suggests that psychological resilience is a significant protector under conditions that cause anxiety, depression, and stress (Connor & Davidson, 2003). The results of this study will contribute to the understanding of the effects of individual characteristics and negative environmental events on students’ career anxiety in the context of COR and EST theories.

Within this framework, this paper is structured as follows: (1) literature review and hypotheses development; (2) methods, sampling, measures and data analyses; (3) results; (4) discussion (5) conclusion and implications, limitations, and future research directions.

2. Literature review and hypotheses development

2.1. The relationship between the risk of becoming infected, and career anxiety

Anxiety is a state of mental tension and worries about the future that arises in relation to the negative emotions, worries or fears of individuals (Banerjee, 2020). Career anxiety is defined as the emotional state that arises due to the uncertainties or indecisions experienced by the individual in career choice (Vignoli, 2015). Individuals with career anxiety have low job satisfaction and organizational commitment (Daniels et al., 2011). In a study conducted on tourism students in India, it was determined that career anxiety and irrational beliefs about employment and employment environment were negatively related to commitment (Kautish et al., 2021). Social and economic difficulties and uncertainty about the future increase career anxiety. A situation such as the fear of COVID-19 poses the greatest threat to minds planning their future careers. The uncertain situation caused by the COVID-19 epidemic has directed the fears of the potential workforce to career anxiety and made it difficult to make a decision about the future (Mahmud et al., 2021).

Risk perception is a judgment people use to characterize and evaluate dangerous activities (Slovic, 1987). In other words, it is the individual perception, evaluation, and understanding of various objective dangers in external environment (Ding et al., 2020; Qian & Li, 2020; Teasdale et al., 2014). Risk perception is a significant factor that affects behaviors (Ding et al., 2020). Pandemics make people feel vulnerable and in danger (Reznik et al., 2020), and this indicates risk perception, which may cause behavioral changes. Individuals who either behave or do not behave in a precautionary way, do so based on the risks they perceive during a pandemic (Kwok et al., 2020).
2020). Research reveals that COVID-19 has caused changes in risk perception, which is predicted to impact individuals’ behaviors (Abdelrahman, 2020; He et al., 2020; Parady et al., 2020; Yıldırım & Güler, 2020).

Perceived risk of infection in those working in different sectors during the pandemic may differ, based on the jobs. Activities including tourism and hospitality sectors require face-to-face communication and close physical contact with customers, which increases the risk of becoming infected during the pandemic (Barbieri et al., 2020, p. 569). In other words, employees within this field are in direct contact with customers and at risk of exposure to droplets – the main mode of COVID-19 transmission (Rosemberg, 2020; Teng et al., 2020). A study, conducted on waiters during COVID-19 pandemic, found that over 50% of waiters have a higher perception of becoming infected (Asefa et al., 2020). The COVID-19 outbreak has significantly increased the workload and stress of hospitality industry employees, while exposing them to a high risk of infection (Teng et al., 2021). Another study, conducted with hotel employees in quarantine in China, found that 43.5% of hotel employees were severely, and 68.2% were moderately depressed (Teng et al., 2020). In light of these studies, we propose the following hypothesis:

H1. The perceived risk of infection within tourism sector impacts students’ career anxiety.

2.2. Relationships among the perceived risk of infection, COVID-19 fear and, career anxiety

COVID-19 pandemic has caused great fear among people worldwide (Soraci et al., 2020; Torales et al., 2020), which is a common outcome in such widespread diseases (Ahorsu et al., 2020). Individuals, who perceive the risk of contracting any infectious diseases, commonly experience fear of becoming infected (Bitan et al., 2020; Brooks et al., 2020). Fear of COVID-19 is especially perceived as a threatening stimulant, because it can be fatal (Kobayashi et al., 2020). Epidemics in the past have shown that fear has a negative impact on people’s quality of life (Colizizi et al., 2020; Soraci et al., 2020). Fear may also affect people’s senses of agency, relationships, and behaviors (Pakpour et al., 2020; Schimmenti et al., 2020; Wakashima et al., 2020). As the level of fear increases, people begin to experience angst regarding their economic status and overall wellbeing (Mahmud et al., 2020). This also impacts professional relationships and careers. Besides careers, COVID-19 pandemic has caused changes in many areas of life across the world. Millions of employees have faced the sudden and unexpected loss of their jobs, while many attempted to become accustomed to the “new normal” order within their working lives (Astin et al., 2020; Mahmud et al., 2021). This situation has resulted in both economic and social fear, while this effect is predicted to continue for a long time ahead (Spurk & Straub, 2020; Yetgin & Benlighray, 2019), for it will affect candidates seeking jobs or employees to maintain their current jobs, in addition to causing concerns about the existing and future workforce (Mahmud et al., 2020).

Baert et al. (2020) have conducted the first empirical study on employees’ careers during the pandemic with the help of 3821 employees in Flanders, Belgium. Their study found that respondents are afraid that the crisis will negatively impact their careers, with over 25% afraid of losing their jobs, and over 14% believing that they will lose their jobs by the end of the year. In another study, it was revealed that nurses with perceived fear of COVID-19 had lower job satisfaction and considered resigning from their jobs (Labrague, Santos, & de los, 2021). Mahmud et al. (2021) conducted a study with graduates, who are seeking work, as well as graduates, working in a specific job sector in Bangladesh, and concluded that fear of COVID-19 directly and significantly affects career anxiety. Another study conducted with 69,054 university students in France during COVID-19 pandemic, found that students had suicidal tendencies, higher perceived stress, severe depression, and highly prevalent anxiety (Wathelet et al., 2020). A study conducted with university students in India, during the second period of the pandemic, has found that university students have higher levels of anxiety and stress, compared to the general population (Kaurani et al., 2020). Another study conducted with university students in Switzerland has found that more than 25% of the students had a significantly higher level of depression, compared to the general population (Volken et al., 2021). Aristovnik et al. (2020) examined university students worldwide and found that approximately 50% of respondents have concerns regarding their careers. Similarly, Mahmud et al. (2020) have determined that students in Bangladesh have concerns regarding their future careers, resulting from fear of COVID-19. Even though numbers of studies are not relatively high, existing studies (Aristovnik et al., 2020; Kaurani et al., 2020; Mahmud et al., 2020; Reznik et al., 2020; Wathelet et al., 2020) on students’ fear of COVID-19 and its impact on their future careers can be found. Based on the discussions above, we propose the following hypotheses:

H2. The perceived risk of infection in the tourism sector impacts fear of COVID-19.

H3. Fear of COVID-19 impacts students’ career anxiety.

H4. COVID-19 fear plays a mediating role in the relationship between perceived risk of infection and career anxiety.

2.3. Moderating effect of psychological resilience

Young people may worry about their careers during economic recessions and times of crises (Kanfer et al., 2001). Career anxiety due to COVID-19 pandemic is rapidly increasing among graduating university students, who plan to get a job soon, as well (Mahmud et al., 2021). As a result, global pandemics, such as COVID-19, are the biggest sources of stress for those planning their future careers (Akkermans et al., 2020; Mahmud et al., 2020). This process may be extremely challenging (Guan et al., 2020), but its devastating effects may be weakened by strengthening individuals’ psychological resources. According to the conservation of resources theory (COR), psychological resilience is a significant personal resource in coping with stressful and compelling situations (Avey et al., 2010). Psychological resilience makes adapting to and managing stressful situations possible (Aguiar-Quintana et al., 2021). In other words, psychological resilience is the ability to be successful in coping with stress, drastic changes, risk, and distress, varying from person to person (Lee & Cranford, 2008). In addition, psychological resilience is the ability to consistently maintain and manage an individual’s
psychological and physiological health against negative, severe, threatening, devastating situations and to adapt to these situations (Bonanno, 2004; Windle, 2011). Studies on this subject have indicated that people with strong psychological resilience are more successful in coping with situations that may pressure them, and continue to develop themselves (Bonanno et al., 2005; Luthans et al., 2006).

Those with higher levels psychological resilience can face and overcome difficulties and misfortunes. Resilience is an important personal quality, helping people face difficulties, obstacles, and continuously changing, unpredictable situations (Mao et al., 2020). Both institutional and individualistic resilience provide the ability to manage challenging and stressful situations. The McKinsey Institution, which follows global economic tendencies, suggests that COVID-19 has highlighted the future of jobs, as well as the requirement for new strategies to be implemented for the sake of providing resilience against future crises (Hite & McDonald, 2020). Similar studies have indicated that psychological resilience positively affects the attitude and performance of employees (Avey et al., 2010; Newman et al., 2014) and decreases job stress (Liu et al., 2012). Ngo et al. (2013) have conducted a study with those, working in various professions and found that resilience moderated the relationships between perceived job insecurity and attitudinal outcomes (organizational commitment and job satisfaction). People with high psychological resilience minimize the effect of stressful events on themselves by being active against stressful events (Fredrickson et al., 2008). In this context, Shoss et al. (2018) have conducted a study with university students in the United States and found that a high level of resilience weakens the relationships between job insecurity and emotional exhaustion, cynicism, and psychological breach of contract. Psychological resilience helps to improve job commitments. Dai et al. (2019) have conducted a study using travel agency employees and found that employees with a high level of resilience are less likely to resign and more likely exhibit a high level of job commitment. Aguilar-Quintana et al. (2021) have conducted a study with hotel employees in Canary Islands (Spain) and tested the impact of job insecurity on anxiety, depression, and task performance. They found that job insecurity has significant impacts on the levels of anxiety and depression. In addition, they found that the level of individual resilience has a positive impact on job performance and moderated the negative relationship between job insecurity and depression. In this regard, we propose the following hypotheses:

H5. Psychological resilience plays a moderating role in the relationship between COVID-19 fear and career anxiety.

H6. Psychological resilience plays a moderating role in the indirect effect of perceived risk of infection on career anxiety through the fear of COVID-19.

3. Methodology

3.1. Sample

Studies that address the relationship between fear of COVID-19 and the perception of becoming infected and career anxiety, are quite limited. Studies similar to this one were mostly conducted with medical students as respondents. Studies on tourism and hospitality were conducted with mostly tourists and hotel employees. It is important to examine the factors, affecting the development of university students’ careers (Richardson, 2009), and empirical studies on COVID-19’s effect on potential careers of students in this industry are necessary (Tiwari et al., 2020). In this study, we focused on how students’ fear of COVID-19 and perceived risk of infection impact their career anxiety in the context of psychological resilience. The present study was conducted in Turkey with undergraduate students within tourism, as their field of study. This cross-sectional study comprises of 1097 students from 12 different universities, and the data was collected via an online questionnaire from Google Forms. The questionnaire was filled in January through February 2021, with convenience sampling method. As shown in Table 1, 62% of respondents were male, 73% had experience working in the industry, and 66% chose their departments based on the scores they achieved on the university entrance exam. The study includes students from four different departments—tourism management (45%), tourist guiding (23%), gastronomy and culinary arts (19%), and recreation (9%). Except for the first-year students, the participants showed similar distribution among departments.

| Variable | Attribute | n  | %  |
|----------|-----------|----|----|
| Sex      | Female    | 416| 38 |
|          | Male      | 681| 62 |
| Department | Tourism management | 521| 48 |
|          | Recreation| 106| 10 |
|          | Tourist guiding | 259| 23 |
|          | Gastronomy and culinary arts | 211| 19 |
| Academic Year | Freshmen | 155| 14 |
|            | Sophomore | 310| 28 |
|            | Junior    | 314| 29 |
|            | Senior    | 318| 29 |
|            | No        | 295| 27 |
|            | Yes       | 802| 73 |
| Reason for Choosing the Department | Willingly | 379| 34 |
|            | According to score | 718| 66 |
mediating variable, is contingent on the value of the moderator (Ribeiro et al., 2018). The bootstrap CI was used to test whether or not (CIs) to estimate the moderated mediation in which the indirect effect of the independent variable on dependent variable, through the shared variance (MSV) values were calculated to confirm convergent and discriminant validity. Harman of the study variables were tested using SPSS macro PROCESS developed by Hayes (2018), which uses bootstrap confidence intervals conducted to determine whether or not there was a common method bias issue. The mediation effect and moderated mediation effect were obtained. The average variance extracted (AVE), composite reliability (CR), average shared variance (ASV), and maximum measurement model was tested using confirmatory factor analysis (CFA), and the findings on the validity and reliability of the scale normal distribution. Analyses related to the study model were conducted based on the proposal of Anderson and Gerbing (1988). The value substitution method. Then, extreme values analysis was conducted, and extreme values boxplots and Mahalanobis were used; no extreme values were found. In addition, skewness and kurtosis values were outlined to test the suitability of data for measurements with

### Table 2

Result of measurement model.

| Constructs                  | Mean   | Standardized Regression | t values | Skewness | Kurtosis |
|-----------------------------|--------|-------------------------|----------|----------|----------|
| Fear of COVID-19            |        |                         |          |          |          |
| FRCVD1                      | 2.70   | 0.026                   | Fixed    | 0.017    | −0.663   |
| FRCVD2                      | 2.80   | 0.029                   | 78.644*** | 0.188    | −0.497   |
| FRCVD3                      | 2.85   | 0.015                   | 75.236*** | 0.057    | −0.561   |
| FRCVD4                      | 2.88   | 0.014                   | 69.001*** | 0.146    | −0.513   |
| FRCVD5                      | 2.75   | 0.008                   | 70.845*** | 0.039    | −0.568   |
| FRCVD6                      | 2.74   | 0.007                   | 63.932*** | 0.104    | −0.518   |
| FRCVD7                      | 2.73   | 0.090                   | 73.372*** | 0.088    | −0.475   |
| Physiological resilience    |        |                         |          |          |          |
| PSYRSL1                     | 3.02   | 0.899                   | Fixed    | 0.452    | −0.547   |
| PSYRSL2                     | 3.10   | 0.849                   | 42.381*** | 0.334    | −0.546   |
| PSYRSL3                     | 3.14   | 0.904                   | 46.782*** | 0.166    | −0.435   |
| PSYRSL4                     | 3.18   | 0.874                   | 45.162*** | 0.188    | −0.564   |
| PSYRSL5                     | 3.12   | 0.932                   | 50.713*** | 0.067    | −0.560   |
| PSYRSL6                     | 3.14   | 0.938                   | 52.158*** | 0.108    | −0.315   |
| Career Anxiety              |        |                         |          |          |          |
| CARANX1                     | 3.09   | 0.931                   | Fixed    | 0.167    | −0.657   |
| CARANX2                     | 3.25   | 0.878                   | 50.176*** | 0.094    | −0.690   |
| CARANX3                     | 3.16   | 0.936                   | 57.371*** | 0.070    | −0.743   |
| CARANX4                     | 3.10   | 0.910                   | 55.451*** | 0.080    | −0.772   |
| CARANX5                     | 3.13   | 0.953                   | 62.173*** | −0.002   | −0.672   |
| Risk perception of becoming infected | | | | | |
| RISKPER1                    | 3.09   | 0.936                   | Fixed    | −0.131   | −0.602   |
| RISKPER2                    | 3.16   | 0.862                   | 43.354*** | −0.032   | −0.500   |
| RISKPER3                    | 3.13   | 0.885                   | 46.107*** | 0.179    | −0.482   |

### 3.2. Instrument

This study used surveys as its data collection tool. The constructs in this study were measured using a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree) and multiple items. Before proceeding to the questions on the questionnaire form, respondents were informed about the study, such as their voluntary participation and option to withdraw from the study without disclosing a reason. In addition, respondents were given the choice of remaining anonymous and were told that the data would be kept confidential. Fear of COVID-19 was measured with the fear of COVID-19 scale developed by Ahorsu et al. (2020). The Turkish adaptation, validity, and reliability of the scale were conducted by Satıcı et al. (2020). A high score on the scale with one dimension and seven items indicated high level of COVID-19 fear. The perceived risk of infection within the tourism sector was measured with a three-item scale. The perceived risk of infection within the tourism sector was measured with a three-item scale. The perceived risk of infection within the tourism sector was evaluated using the following statements: “Those working in tourism and hospitality sector have a higher risk of being infected”, “COVID-19 easily spreads in tourism and hospitality sector” and “Those working in tourism and hospitality sector have a higher risk of being infected, regardless of the precautions”. Psychological resilience, which is the moderator variable of the research, was measured by the short version of the Psychological Resiliency Scale containing six items for which Doğan (2015) had conducted necessary validity and reliability studies. High scores indicated a high level of psychological resilience. Career anxiety was measured by the career anxiety scale developed by Tsai et al. (2017) and later adapted to COVID-19 pandemic by Mahmud et al. (2020). This scale comprises of five statements, reflecting career anxiety and the higher the score, the higher the level of career anxiety is. Questions regarding gender, academic year and the reason for choosing the department were asked in the last section of the questionnaire.

### 3.3. Data analyses

The present cross-sectional study was designed to test the moderated mediation hypotheses. Study data were tested to determine whether or not they were suitable for the multivariate statistical analyses. Loss values were determined by first using data input. Four measurements with >5% data loss were excluded from the analysis; seven measurements with <5% loss were assigned using the mean value substitution method. Then, extreme values analysis was conducted, and extreme values boxplots and Mahalanobis’ distance were used; no extreme values were found. In addition, skewness and kurtosis values were outlined to test the suitability of data for normal distribution. Analyses related to the study model were conducted based on the proposal of Anderson and Gerbing (1988). The measurement model was tested using confirmatory factor analysis (CFA), and the findings on the validity and reliability of the scale were obtained. The average variance extracted (AVE), composite reliability (CR), average shared variance (ASV), and maximum shared variance (MSV) values were calculated to confirm convergent and discriminant validity. Harman’s single factor test was conducted to determine whether or not there was a common method bias issue. The mediation effect and moderated mediation effect of the study variables were tested using SPSS macro PROCESS developed by Hayes (2018), which uses bootstrap confidence intervals (CIs) to estimate the moderated mediation in which the indirect effect of the independent variable on dependent variable, through the mediating variable, is contingent on the value of the moderator (Ribeiro et al., 2018). The bootstrap CI was used to test whether or not
the indirect effect, direct effect, and total effect values were statistically significant.

4. Results

4.1. The results of the measurement model

Confirmatory factor analysis (CFA) was conducted to examine the structure of collected data and the distinctive validity of our structures. Results of CFA conducted to test the measurement model are presented in Table 2. The maximum likelihood prediction was used in CFA. All factor loads belonging to the scale items in Table 2 were >0.50, had high t values, and were loaded the related implicit value in a statistically significant way (p < 0.01). These results indicated that the variables proposed had convergent validities (Bagoszi & Yi, 1988). Goodness-of-fit indices of the conceptual model (χ² = 439,226, df = 178, χ²/df = 2.46, RMSEA = 0.037, GFI = 0.963, AGFI = 0.952, NFI = 0.986, RFI = 0.984, IFI = 0.992, CFI = 0.992) indicated that this study model was acceptable. The normal distribution assumption was calculated based on skewness and kurtosis values between +1 and −1; therefore, the multivariate normality prediction from the data was confirmed (Kline, 2016). These results revealed that the measurement model and scale model were deemed acceptable. In addition to the goodness-of-fit indices for internal consistency of the scale, the convergent and discriminant validity were tested (Table 3). The internal consistency of factors was evaluated using Cronbach’s alpha, and all met the cutoff value of 0.70. Cronbach’s alpha values for all factors were considered to be internally consistent. Convergent validity and discriminant validity are two significant indicators of structure validity. AVE and CR values of the structures in the measurement tool were calculated to evaluate the convergent validity. AVE values of the scale model should be > 0.50 and CR values of the scale model should be > 0.70 to ensure convergent validity (Fornell & Larcker, 1981). If AVE values are >0.80 and CR values are >0.90, as in Table 3, the scales provide strong convergent validity. MSV and ASV values of the scale to test discriminant validity are shown in Table 3. Discriminant validity shows the degree that factors in a model separate from each other and can be determined if MSV and ASV values are lower than the AVE values (Hair et al., 2010). Discriminant validity was determined because AVE values were higher than those of MSV and ASV. Correlation analysis results indicated a positive relationship among received risk of contracting COVID-19 and career anxiety (r = 0.55, p < 0.01) and fear of COVID-19 (r = 0.62, p < 0.01), and a minimal and negative relationship with psychological resilience (r = −0.15, p < 0.01), which are shown in Table 2. Career anxiety was negatively correlated to physiological resilience (r = −0.57, p < 0.01) and positively correlated to fear of COVID-19 (r = 0.54, p < 0.01). The results of the correlation analysis indicated a statistically significant relationship among measurement variables.

4.2. Common method bias evaluation

Data collected at one time and from the same source or the same reviewer may cause common method bias issues (Malhotra et al., 2006). Using the same scale type in the statements may also cause a common method bias issue. Common method variance bias in the collected data may cause errors in findings regarding the model to establish among theoretical structures (Podsakoff et al., 2003). In order to avoid common method bias, the questionnaire of dependent and independent variables was mixed in the questionnaire form. Harman’s single-factor test is one of the most common methods by which to determine whether or not common method bias is questioned, and we used this test to determine the presence of a common method bias. If so, a significant part of the first-factor bias should be explained or there should be one factor as a result of the analysis (Podsakoff et al., 2003). Twenty-one statements with four variables used in the study were subjected to loopless factor analyses. Four dimensions with an eigenvalue value > 1 were detected. The first explained the 38.7% of the variance, which was <50% and is the limit value (Podsakoff et al., 2012). No common method bias issue was identified in this study.

4.3. Hypothesis test

This study was designed to test a moderated mediation hypothesis. Moderated mediation combines the effects of moderation and mediation. Mediation models examine the relationship between the dependent and independent variables through the mediating variable. In other words, the mediation analysis examines the indirect effect of the independent variable (X) on the dependent variable (Y) through the mediating variable (M). Moderation analysis is used to determine in which situations the relationship between the dependent and independent variable changes. To put it another way, a moderating variable (W) affects the direction and strength of the relationship between dependent (X) and independent variables (Y). The mediation moderation is used to determine in what

Table 3
Correlation matrix, convergent and discriminant validity values.

|            | Mean | 1   | 2   | 3   | 4   | α     | CR   | AVE  | MSV   | ASV   |
|------------|------|-----|-----|-----|-----|-------|------|------|-------|-------|
| RISKPER (1)| 3.17 | 1   |     |     |     | 0.920 | 0.923| 0.801| 0.387 | 0.238 |
| CARANX (2) | 3.13 | 0.55**|1   |     |     | 0.937 | 0.966| 0.850| 0.333 | 0.312 |
| PSYRSL (3) | 3.11 | −0.15**| 0.54*|1   |     | 0.923 | 0.962| 0.810| 0.333 | 0.136 |
| FRCVD (4)  | 2.75 | 0.62**| 0.54**|1   |     | 0.918 | 0.973| 0.835| 0.387 | 0.245 |

RISKPER = Perceived risk, CARANX = Career Anxiety, PSYRSL = Physiological Resilience, FRCVD = Fear of COVID-19, α = Cronbach Alpha, CR = Composite Reliability, AVE = Average Variance Extracted, ASV = Average Shared Variance, MSV = Maximum Shared Variance, **p < 0.001.
conditions the indirect effects between two variables change. Using a single model to test mediator and moderator variables could provide more information than using two separate models. In this study, moderated mediation analysis gives us the ability to examine whether the predictive effect of the perceived risk of infection on career anxiety through fear of COVID-19 differs depending on the value of psychological resilience.

We used integration approach suggested by Muller et al. (2005) to evaluate moderated mediation hypotheses. In this approach, three regression models are used, namely moderation, mediation, and moderate mediation. Moderated mediation analysis was conducted by Hayes (2018) using Process Macro. In the analysis, 5000 resampling options were selected with bootstrap technique. The 95% bootstrap confidence intervals were obtained in the mediation and the moderator effect analysis conducted using the bootstrap technique should not cover zero (0) value (MacKinnon et al., 2004). First, the direct impact of perceived risk of infection on career anxiety (β = 0.05, 95%CI [0.52; 0.62], t = 21.92, p < 0.001) and fear of COVID-19 (β = 0.60, 95%CI [0.56; 0.65], t = 26.30, p < 0.001). In the next step, the mediation effect was tested without the moderator. CIs obtained using the bootstrap technique indicated that the indirect effect of perceived risk of infection on career anxiety was significant; therefore, it was determined that fear of COVID-19 mediates the relationship between perceived risk of infection and career anxiety (β = 0.211%95 BCA CI [0.17; 0.25]). Completely standardized indirect effect(s) of X on Y: β = 0.20%95 BCA CI [0.17; 0.24].

### Table 4
Results for testing hypotheses (n = 1097).

| Model | Mediation analysis | Outcome variable: CARANX | B     | SE    | t     | p     | LLCI  | ULCI  | Hypothesis | Result |
|-------|--------------------|--------------------------|-------|-------|-------|-------|-------|-------|------------|--------|
|       |                    | Constant                 | 1.34  | 0.09  | 15.66 | 0.00  | 1.17  | 1.51  |            |        |
|       |                    | RISKPER (X)              | 0.55  | 0.03  | 21.92 | 0.00  | 0.52  | 0.62  |            | H1     | Supported |
|       |                    |                          | R²    | 0.30  | 0.00  |       | 0.389 | < 0.001|            |        |
|       |                    | Outcome variable: FRCVD-19|       |       |       |       |       |       |            |        |
|       |                    | Constant                 | 0.86  | 0.08  | 11.45 | 0.00  | 0.71  | 1.01  |            |        |
|       |                    | RISKPER (X)              | 0.60  | 0.02  | 26.30 | 0.00  | 0.56  | 0.65  |            | H2     | Supported |
|       |                    |                          | R²    | 0.39  | 0.00  |       | 0.691 | 0.00  |            |        |
|       |                    | Outcome variable: CARANX |       |       |       |       |       |       |            |        |
|       |                    | Constant                 | 1.04  | 0.09  | 12.04 | 0.00  | 0.87  | 1.21  |            |        |
|       |                    | RISKPER (X)              | 0.36  | 0.03  | 11.34 | 0.00  | 0.30  | 0.42  |            | H3-H4  | Supported |
|       |                    | FRCVD-19 (M)             | 0.35  | 0.03  | 10.76 | 0.00  | 0.29  | 0.42  |            |        |
|       | Moderation analysis| Outcome variable: CARANX |       |       |       |       |       |       |            |        |
|       |                    | Constant                 | 3.11  | 0.02  | 139.20| 0.00  | 3.06  | 3.15  |            |        |
|       |                    | FRCVD-19 (M)             | 0.45  | 0.02  | 19.63 | 0.00  | 0.41  | 0.50  |            |        |
|       |                    | PSYRSL (W)               | −0.51 | 0.02  | −21.94| 0.00  | −0.56 | −0.47 |            | H5     | Supported |
|       |                    | M × W                    | −0.11 | 0.02  | −4.21 | 0.00  | −0.15 | −0.05 |            |        |
|       |                    |                          | R²    | 0.52  | 0.00  |       | 0.398 | 0.00  |            |        |
|       |                    | Low PSYRSL               | 0.31  | 0.03  | 18.19 | 0.00  | 0.49  | 0.61  |            |        |
|       |                    | High PSYRSL              | 0.18  | 0.03  | 10.25 | 0.00  | 0.29  | 0.43  |            |        |
|       | Moderated mediation analysis | Outcome variable: CARANX |       |       |       |       |       |       |            |        |
|       |                    | Constant                 | 2.05  | 0.08  | 24.72 | 0.00  | 1.89  | 2.21  |            |        |
|       |                    | RISKPER (X)              | 0.34  | 0.03  | 13.16 | 0.00  | 0.29  | 0.39  |            |        |
|       |                    | FRCVD-19 (M)             | 0.24  | 0.03  | 8.96  | 0.00  | 0.19  | 0.29  |            | H6     | Supported |
|       |                    | PSYRSL (W)               | −0.51 | 0.02  | −23.48| 0.00  | −0.55 | −0.47 |            |        |
|       |                    | M × W                    | −0.07 | 0.02  | −3.07 | 0.00  | −0.11 | −0.03 |            |        |
|       |                    |                          | R²    | 0.59  | 0.00  |       | 0.389 | 0.00  |            |        |

### Table 5
Conditional indirect effects of X on Y (X → M → Y): β = 0.211%95 BCA CI [0.17; 0.25].

| Model | Moderated mediation analysis | Outcome variable: CARANX | β     | SE    | t     | p     | LLCI  | ULCI  | Hypothesis | Result |
|-------|-------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|------------|--------|
|       | Conditional indirect effects of X on Y (X → M → Y) | Low PSYRSL | 0.19  | 0.02  | 0.15  | 0.23  |        |        |            |        |
|       |                                | High PSYRSL              | 0.11  | 0.02  | 0.07  | 0.15  |        |        |            |        |
|       | Index of moderated mediation  | −0.04                     | 0.01  | 0.07  | −0.02 |        |        |        |            |        |
These results indicated that this indirect effect increased as psychological resilience decreased. Thus, the effect of the risk perception of being infected on career anxiety through fear of COVID-19 varied depending on the level of psychological resilience. These results supported the H6 hypothesis.

5. Discussion

Tourism students, representing the potential tourism and hospitality industry employees of the future, are witnessing the devastating impact of the COVID-19 pandemic on the tourism industry. Tourism students, who experience career anxiety after graduation even in ordinary times (Boo & Kim, 2020; Unguren & Huseyinli, 2020) may experience more anxiety in such challenging and problematic times, and even lose their trust to the sector. From this perspective, it is important to examine tourism and hospitality students’ attitudes towards their careers (Zhong et al., 2021). In this context, we examined how COVID-19 pandemic impacts tourism students’ career anxieties and the role psychological resilience plays in this process as an individual characteristic. The results of the research contribute to understanding how students’ concerns about their health during the pandemic impact their concerns about their careers, as well as how psychological characteristics play a role in this process.

First, we focused on how the students’ perceived risk of infection and fear of COVID-19 affected career anxiety, while working in tourism sector. Research reveals that employees in tourism and hospitality industry, which require face-to-face and close physical contact with customers, have a high risk of being infected (Asefa et al., 2020; Teng et al., 2021). In this study, we found that tourism students’ perceived risk of infection significantly increases both their fear of COVID-19 and career anxiety. In addition, we concluded that fear of COVID-19 has a partial mediating role in the relationship between perceived risk of infection and career anxiety. In other words, perceived risk of infection in tourism sector triggers fear of COVID-19, and fear of COVID-19 increases career anxiety. Studies conducted with tourism students before the pandemic have revealed that graduates do not want to build a career in tourism, despite the increasing number of tourism programs, which constitutes a problem in finding qualified human resources (Chang & Tse, 2015; Dai et al., 2019; Jiang & Tribe, 2009; Wen et al., 2019). The negative impact of economic crises, employment precarity, and the risk of becoming infected with COVID-19 in tourism sector, in particular, resulted in severe anxiety for tourism students; therefore, COVID-19 pandemic has increased students’ reluctance to build a career within the tourism sector, and the need for well-educated employees within this sector will increase. It is clear that COVID-19 pandemic has been a devastating and extraordinary career shock with a direct impact on individual career plans. Especially in times of crises such as a pandemic, close attention to students from university and faculty administrations may yield positive outcomes with respect to students’ psychological states and their career plans. In fact, a study conducted with tourism students, concluded that effective teaching practices, campus-supporting environments and quality information with students had positive contributions for students (Zhong et al., 2021).

This study also found empirical evidence that psychological resilience, which is an individual resource against difficulties, represents a factor that reduces career anxieties of students in the face of pandemic-related negative impacts. In other words, as psychological resilience increases, the indirect impact of perceived risk of infection on career anxiety via fear of COVID-19 decreases.
Studies have shown that despite individuals’ reporting of their fear of COVID-19 on certain levels, there are great differences in how they react to the pandemic (Bachem et al., 2020). This study, similarly, underlines individual characteristics, since the pandemic’s impacts on students’ career anxiety differs as per their levels of psychological resilience. Conservation of resources theory (COR) suggests that people stress more when they do not have support from current individual and social resources or lose them (Hagger, 2015; Hobfoll, 2001; Siu et al., 2015). One of the most significant individual resources for people is their psychological resilience (Aguiar-Quintana et al., 2021). Those with high psychological resilience can quickly decrease the effects of negative emotions and adapt to changing environmental conditions (Dai et al., 2019). Our findings have revealed that perceived risk of infection in students with high psychological resilience had less effect on career anxiety that in those with lower psychological resilience. The study found that psychological resilience significantly decreases students’ anxieties about external factors, such as pandemics, causing career shock.

6. Theoretical and practical implications

Findings of this study has some implications for academicians in hotel management and tourism, as well as executives in these fields. A well-educated and qualified workforce is crucial for tourism and hospitality industry (Kahraman & Alrawadieh, 2021). In order to educate human resources that the sector needs and determine precautionary targets for students, crises that deeply affect tourism sector, such as a pandemic, must be understood with respect to how it impacts students’ thoughts on their future careers. Such research studies may provide some guidance in employing our students at suitable positions after they graduate. Affecting public health on global scales, infectious diseases (SARS, Ebola, and H1N1) are observed from time to time. Such pandemics are expected to become more common along with climate change and environmental disasters, as well as representing threats for all countries across the world (Üngüren & Güçlü, 2021). Thus, we have to be prepared for similar crisis to COVID-19 in near future. Preparing for potential crises in future is more efficient as a proactive response, rather than a reactive one that is displayed, when the crisis hits (Baker, 2021). At the same time, students’ perceived quality of education is shown to have an important impact on their intentions to join the industry (Kahraman & Alrawadieh, 2021). In this context, it would be of benefit for both students and the sector to investigate the ways, in which more effective education under crisis circumstances is provided, to carry out technological preparations as required and to train educators in terms of technologies and techniques concerning remote learning.

Our findings also have certain theoretical implications. This study contributes to the COR theory because it revealed that psychological resilience—a significant individual resource—reduced the negative effects of career anxiety on students in the tourism field. The COR theory suggests that various resources of people may prevent them from experiencing the negative effects of negative events (Hobfoll, 2001). COVID-19 pandemic has caused a decline in many economic and social resources and prevented new ones from surfacing, which negatively affected the lives of many people. This study suggests that psychological resilience is a significant resource for reducing a student’s career anxieties, even during a pandemic. In addition, the results of this study contribute to Event System Theory (EST). EST contributes significantly to our understanding of how events affect individual and businesses. EST, also focuses on the dynamic impacts of events on organizations and individuals. Events are powerful factors, causing changes in behaviors and decisions and can create subsequent events (Morisson et al., 2015). In this context, the results of this study may help to understand the effects of a devastating external factor, such as COVID-19, on a career and contributes to EST.

7. Conclusion

Among the first ones to shoulder the negative burdens of outbreaks is tourism and hospitality industry employees (Tiwari et al., 2020). Specifically working in close and physical contact with customers, employees in this sector and how their attitudes towards their profession and careers change, are subjects of ongoing research. Fear of COVID-19 might create a career shock by negatively affecting the commitment of employees, who have to work by establishing physical and close contact with customers due to their jobs and businesses (Akkermans et al., 2020). There is very little information on how this fear and anxiety of infection affects people’s perception of their careers (Trougakos et al., 2020); therefore, further studies on how COVID-19 pandemic affects career expectations of current and future employees, are necessary (Robert & Vandenbergh, 2021). This research revealed that fear of COVID-19 plays a partially mediating role in the relationship between perceived risk of infection in the tourism sector and career anxiety. On the other hand, findings revealed empirical evidence that psychological resilience, which is an individual resource against difficulties, is a factor that reduces students’ career anxiety in the face of the negative effects of the pandemic.

8. Limitations

The study was conducted, as the pandemic was still ongoing and remote learning practices were adopted by educational institutions. Many schools had to switch to this system without appropriate preparation or infrastructures. Issues experienced in remote learning, quality of education and educational satisfaction were not included in this research study. That being the case, problems and quality of education during remote learning may affect students’ career ideas. Therefore, it is important that this point is taken into consideration, when results of the study are interpreted. At the same time, conditions surrounding students were not included in the study either (means of access for remote learning, economic issues, and health problems and so on). This study focuses on the factors, affecting students’ career anxiety within the context of health risks and individual characteristics.
Zhong, Y. S., Busser, J., Shapoval, V., & Murphy, K. (2021). Hospitality and tourism student engagement and hope during the COVID-19 pandemic. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 30(3), 194–206. https://doi.org/10.1016/j.jhlste.2020.100369