Assessing the impact of the COVID-19 pandemic on tourism workers' health and well-being in Jordan

Avaliação do impacto da pandemia de COVID-19 na saúde e bem-estar dos trabalhadores do turismo na Jordânia

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Abstract

The current study assesses the impact of the coronavirus (COVID-19) pandemic on tourism workers' health and well-being in Jordan by investigating coronavirus threats, financial impacts, resources impacts, social isolation, depression and personal control experienced by tourism workers during the COVID-19 pandemic, and how the threats and impacts of the coronavirus pandemic affect workers' health and well-being. A quantitative survey method was applied using a questionnaire. Data were collected from a sample of 400 tourism workers in Jordan. The study's findings revealed that tourism workers are financially strained, socially isolated, psychologically depressed, experiencing a lack of personal control, and have limited resources due to their dread of the pandemic and its negative impacts. It was also found that a significant negative direct effect of perceived coronavirus threats and their impacts on workers' depression and personal control had a significant influence on workers' health and well-being. The current study proposed a model of the influence of coronavirus on tourism workers' health and well-being through their personal control and depression.

Keywords: Coronavirus (COVID-19) threats, depression, personal control, personal health, well-being, tourism workers.

Resumo

O presente estudo avalia o impacto da pandemia de COVID-19 na saúde e no bem-estar dos trabalhadores do turismo na Jordânia, investigando ameaças do coronavírus, impactos financeiros, impactos nos recursos, isolamento social, depressão e controle pessoal experimentados pelos trabalhadores do turismo durante a pandemia, e como as ameaças e impactos do coronavírus afetam a saúde e o bem-estar dos trabalhadores. Um método de pesquisa quantitativa foi aplicado através de questionário. Os dados foram recolhidos de uma amostra de 400 trabalhadores do turismo na Jordânia. Os resultados demonstram que os trabalhadores do turismo estão financeiramente tensos, socialmente isolados, psicologicamente deprimidos, experimentando uma falta de controle pessoal, e têm recursos limitados devido ao temor da pandemia e dos seus impactos negativos. Verificou-se também que um efeito direto negativo significativo das ameaças percecionadas do vírus e impactos na depressão e controle pessoal dos trabalhadores teve uma influência significativa na saúde dos trabalhadores. O presente estudo propôs um modelo da influência do coronavírus na saúde e bem-estar dos trabalhadores do turismo através do seu controle pessoal e depressão.

Palavras-chave: Ameaças do coronavírus, depressão, controle pessoal, saúde pessoal, bem-estar, trabalhadores do turismo.

1. Introduction

At the end of 2019, coronavirus (COVID-19) spread from Wuhan City, Hubei Province, China, to other parts of the world. COVID-19 is a contagious disease caused by a virus named "Severe Acute Respiratory Syndrome Coronavirus 2" (SAR-CoV-2) (Lipsitch, Swerdlow & Finelli, 2020). It has been declared one of the deadliest respiratory diseases caused by a novel coronavirus, and it is rapidly transmitted from one person to another through the sneezing or coughing of an infected person. According to the World Health Organization (WHO), coronavirus was first recognised in an outbreak case in Wuhan City. It was initially reported to the WHO on 31st December 2019, after which it prompted the formal declaration of the pandemic as a global health emergency on 30th January 2020. COVID-19 is by far the most significant challenge humanity has faced since World War II (WHO, 2020).

COVID-19 is a major healthcare challenge, adversely affecting every field of life. The wave of the novel coronavirus disease (COVID-19), classified by the WHO as a global pandemic, has unleashed a variety of effects on health, economic and social systems within a short time period. In this sense, the COVID-19 pandemic has emerged as the current decade's biggest challenge. It has disrupted people's lifestyles and had negative impacts on their health, financial and social situations (Wang et al., 2020). The global COVID-19 pandemic and resulting international and local restrictions on travel, gatherings and economic activity had immediate and severe effects on Jordan's tourism sector. In mid-March 2020, the Jordanian government announced that, as a result of the rapid spread of the coronavirus throughout the world, Jordan's international borders and airports would be closed to all but essential travel indefinitely. The tourism sector

was one industry that saw a near-complete cessation of activities, as travel between governorates was restricted for several weeks, and tourism sites and businesses were closed for public safety.

The COVID-19 epidemic has pushed the world into psychological distress and a severe socioeconomic crisis. It has had a significant impact on the economy, but the service sector has been particularly badly affected, notably the tourism industry. It increases workers' feelings of insecurity and their fear of being unemployed, which has a negative impact on their mental health (Khan et al., 2021). The lockdown restrictions of the COVID-19 pandemic led to social isolation that has the potential to result in lasting health problems (Usher, Bhullar & Jackson, 2020). Acute stressors (i.e., crisis threats, financial impacts, resources impacts and social isolation) can lead to immediate adverse outcomes such as depression and reduced personal control, and subsequently, overall impaired general health and well-being (Pearlin et al., 1981). Furthermore, financial difficulties caused significant health and psychological problems for laid-off workers or those on long-term leave (Wanberg, 2012). Several studies have examined the impacts of various economic or health crises, such as Severe Acute Respiratory Syndrome (SARS) in 2003 or the recession in 2007–2008. Most of these studies focused on the financial or operational impacts of the crises (e.g., Chen, Jang & Kim, 2007; Zheng, 2014; Singh & Dev, 2015).

The current study identifies coronavirus threats and impacts, including financial impacts, resources impacts and social isolation, as the main stressors experienced by tourism workers during the COVID-19 pandemic in Jordan between mid-March 2020 and June 2021. It also examines the impacts of the COVID-19 pandemic on tourism workers by revealing how these stressors can lead to reduced personal control and depression and, subsequently, overall impaired personal health and well-being. Although many studies were conducted to analyse the effect of the COVID-19 pandemic from the workers' perspective, this study is considered the first one to explore the impact of the COVID-19 pandemic on workers' health and well-being. The contribution of this study is to fill the gap in the literature by uncovering the impacts of the COVID-19 pandemic on tourism workers' health and well-being through depression and personal control by offering a comprehensive evaluation of the individual experiences of those in the tourism workforce who were unemployed or furloughed during the COVID-19 pandemic.

2. Literature Review

2.1 The COVID-19 pandemic and the tourism industry

The COVID-19 pandemic has had severe negative impacts on the global economy. It cost the world economy $2.96 trillion, and hence global GDP dropped by 3.4% in 2020 (Bloomberg, 2020; Statista, 2021). Tourism is the industry most affected by the pandemic. It accounts for 10% of global GDP and hence has a significant influence on the global economy. According to the Mobility Market Outlook (MMO) on COVID-19, global revenue for the travel and tourism industry in 2020 dropped by 17% from the previous year, estimated at 568.6 billion US dollars for full 2020

operations, with a loss of more than one billion international tourist arrivals, which might amount to 58–78% of the total arrivals (Bloomberg, 2020; UNWTO, 2020). According to the World Travel and Tourism Council (WTTC), tourism organisations faced a difficult period as a result of the pandemic in 2020, and it will take up to ten months for the industry to recover to normal levels. The COVID-19 pandemic has the potential to cut 50 million jobs in the travel and tourism industry globally (Jumadi, 2021). Around 30 million of the 50 million jobs that might be lost will be in Asia, seven million in Europe, five million in America, and the rest on other continents.

Governments reacted to the extensive and rapid spread of coronavirus by restricting travel and community interaction. Businesses, factories, schools and universities were closed, and restaurants did not offer food and drink on-site. All activities that bring people together were forbidden, including tourist attractions, and this social isolation has saved lives. Still, the economy has been put on hold as a result of this. As a result of the worldwide stoppage of movement in an effort to combat the coronavirus, most destinations have lost millions of potential visitors, and millions of people have lost their employment and become victims of layoffs. The closure of all tourism activities has led to a significant drop in tourists. Workers and labour are also suffering, resulting in an increase in the global unemployment rate since most businesses are downsizing, terminating workers or putting them on unpaid leave for an unknown period. Many workers in the tourism industry are being laid off, and not just those employed directly in tourism are affected, but millions of jobs in all related industries are also affected (Fajar, 2020).

The COVID-19 pandemic is impacting the development of tourist activities globally (Gössling, Scott & Hall, 2020). Despite the fact that many travel and tourism organisations are used to including a risk management and assessment model in their business planning (Ural, 2015; Ritchie & Jiang, 2019), these models are coming under intense scrutiny because of the nature of this pandemic and its effects on a global scale. Measures to limit people's mobility have resulted in a dramatic decrease in tourism demand, particularly for international travel, with large flight cancellations by the world's biggest airlines. COVID-19 has had a significant influence on international tourism, leading to huge economic and social consequences such as closed businesses and major financial crashes in commercial aviation. These have led to significant losses and widespread unemployment (ILO, 2020). The challenges that companies in the tourism industry confront are complicated, and thus governments have a critical role to play in discovering new ways to legislate and financially assist companies. One of the most well-known and influential measures in this industry is the simple lay-off, in which employees receive two-thirds of their gross salary, 70% of which is paid for by social security and 30% by the company, up to a maximum period of three months. However, this approach may be problematic for companies lacking adequate money to provide this support (Almeida & Silva, 2020).

Prior research identified fear of job loss and financial insecurity as the most significant impacts of government actions such as lockdowns (Zhang et al., 2020). During the COVID-19 epidemic,

employees' fear of being laid off was greater than their fear of becoming infected. According to studies, people panicked due to fear of losing their income and job (Mazza et al., 2020). Fear of COVID-19 has become a global phenomenon. Many enterprises were unable to withstand the economic challenges posed by COVID-19, resulting in downsizing and other cost-cutting measures. The threat of unemployment and job insecurity has been directly linked to an unexpectedly poor performance level at work. A previous study on pandemics indicates that such infections have a major impact on employee performance and mental health (De Witte, Pienaar & De Cuyper, 2016). Employees have increased anxiety, fear, depression and work burnout as a result of the uncertainty and threat (Ivanov, 2020). As a result, during the epidemic, management had to prioritise the mental wellness of employees because employees' poor mental health impacts their attitude and the level of service they deliver (He & Harris, 2020). According to Ramelli and Wagner (2020), the world has never seen an economic catastrophe as severe as the COVID-19 pandemic. Almost all business sectors were negatively impacted, with the tourism industry being the first to be hit. Tourism companies were closed, workers were laid off, and the remaining employees faced non-employability. This pandemic presented a challenge for the tourism industry to thrive by using novel techniques and improving clients' perceptions of safety (Vasiljeva et al., 2020). According to Shin and Kang (2020), the pandemic caused a wave of employment uncertainty, contributing to employees' mental health difficulties. Kang et al. (2020) stated that mental health is of vital importance for employees' ability to function properly in the workplace. They also further stated that families and friends are also affected by employees who face mental health issues due to the uncertainty of COVID-19. The effects of the COVID-19 pandemic on labour reduction measures in tourism, including layoffs and furloughs, still remain largely unknown. As a result of the COVID-19 epidemic decimating the tourism labour market, it is critical to investigate the health and psychological distress faced by tourism employees.

The current study tested several hypotheses related to the impacts of the COVID-19 pandemic as perceived by tourism workers. It investigates the effects of major stressors on the health and well-being of laid off and furloughed tourism workers, particularly pandemic-induced fear, financial pressures, resources pressures, and social isolation, on workers' health and well-being via personal control and depression. The study's conceptual framework was based on Kahn's (1981) model, examining how stresses can lead to negative health and well-being consequences. The workers in Jordan's tourism sector were the study's target population. Since this topic is under-researched, the study attempts to fill the gap and provide new perspectives for the tourism sector. The main objective of the study was to contribute to the literature on Jordan's tourism industry since it is an industry that has received little attention from scholars and is being severely influenced by this pandemic. This study also comprehensively discusses how personal control and depression mediate the association between independent variables (pandemic-induced fear, financial pressures, resources pressures, and social isolation) and dependent variables (workers' health and well-being). It aims to contribute to the

literature by testing these relationships and introducing a better understanding of the variables causing problems for workers' health and well-being during this pandemic.

2.2 Impacts of the COVID-19 pandemic on tourism workers in Jordan

Jordanian tourism is a significant and vital sector of the country's economy, accounting for around 14.6% of the national GDP in 2019. It is the largest export sector and the second-largest private sector for employment and is an important source of hard currency. Because it is one of Jordan's most significant economic drivers, Jordan's economy was also ill-prepared to close the country's borders. In 2019, Jordan's tourism sector witnessed one of its best years yet. Petra alone reached 1 million visitors in November, and Jordan overall received more than 5.3 million same-day and overnight visitors. While Jordan's economy is growing slowly overall, tourism is a critical and burgeoning sector. According to data from the Jordan Ministry of Tourism and Antiquities, in 2019, the tourism industry employed 53,488 people, which is equivalent to 6% of total employment, 85% of whom were Jordanians. This is especially important in a country such as Jordan, where the estimated unemployment rate is 19%. The contribution of the thriving tourism industry is key to the growth of the country's economy overall and to an increase in workforce participation, especially in rural areas where many tourism destinations are located (Jordan Ministry of Tourism and Antiquities, 2021).

Due to the COVID-19 pandemic, lockdown restrictions were implemented across the globe. Jordan was not isolated from COVID-19, where it recorded the first positive COVID-19 case early in March 2020. The effect of the COVID-19 pandemic may be greater in small countries like Jordan, which has a small internal market and rely heavily on external sources. With the declaration of an emergency in Jordan on 12 March 2020, in response to the rapid and widespread dissemination of COVID-19 around the world, restrictions on economic activities and the movement of people were enforced, and therefore all non-essential services were halted. This resulted in the closure of restaurants and hotels, as well as leisure and recreation activities in the tourism industry. In Jordan, the only exceptions were the ongoing operation of selected hotels to receive coronavirus-infected people for isolation as enforced by the government and the operation of some takeaway restaurants. This situation resulted in some significant paradigm shifts. There has been a rise in sanitary procedures in hotels and, additionally, the formation of cooperation protocols with the health ministry, while partnerships between restaurants and home delivery services have increased exponentially.

Jordan, like other countries, started its lockdown restrictions from March 2020 to June 2021 for specific activities that included the tourism industry. It is clear that the impacts of the COVID-19 pandemic on the tourism labour market in Jordan were both sudden and dramatic. The threat of coronavirus was already lurking in January 2020, and that threat quickly led to a national emergency in March 2020. The outbreak of the COVID-19 pandemic in 2020 has devastated the tourism sector in Jordan. Since March 2020,

tourism revenues in Jordan have plummeted from $5.8 billion in 2019 to $1.4 billion in 2020, which equates to a decrease of -75.7% due to a decrease in the number of tourists from 4.5 million in 2019 to 917,000 in 2020 which is a decrease of -79.2%, producing major layoffs and employees on unpaid leave or partially paid leave (Jordan Ministry of Tourism and Antiquities, 2021). Consequently, the number of employees in the tourism industry has decreased from 53,488 in 2019 to 41,108 in 2020, with a decrease of -23.1%. This means that 12,300 employees lost their jobs during the pandemic, and the unemployment rate in the tourism industry reached 54% of employees in 2020 (Jordan Ministry of Tourism and Antiquities, 2021). In early 2020, many tourists cancelled their travel plans resulting in the lay off nearly 90% of the employees in tourism. This has a significant influence on tourism since it is intertwined with other industries such as travel agents, hospitality, restaurants, tour guides, transportation, and other enterprises. Unemployment in this sector reached 35,000 lost jobs following the closure of tourism offices, hotels, transport and travel agents and given the longer-term prospects for recovery – not until the first quarter of 2021 (ILO Report, 2020). However, many tourism organisations have decided to avoid layoffs by forcing thousands of employees into unpaid leave or partial leave with continuing employment benefits. Of more than 53,000 tourism jobs in Jordan, how many have been lost or how many employees have been furloughed without pay is unknown. Many daily labourers, who work in and around Jordan's archaeological sites but are not included in official employment numbers for the tourism sector, have also been affected. The impacts of the COVID-19 pandemic on tourism workers in Jordan were highly negative in 2020, as shown in Table 1. A large majority (94%) of businesses in Jordan's tourism sector reported a high level of threat resulting from the COVID-19 crisis, compared to 85% of all enterprises polled. Many tourism businesses share a negative outlook about their companies' future, as 68% are not confident in their ability to survive the current crisis (ILO Report, 2020).

Table 1 - Number of employees in different tourism activities, 2019 -2020

Item	2019	2020	% Relative Change
Hotels	20,918	16,944	-19.0%
Travel Agencies	4,793	4,098	-14.5%
Tourism Restaurants	20,701	13,057	-36.9%
Offices for Renting a Car	1,902	1,902	0.0%
Tourist Shops	862	741	-14.0%
Tourist Guides	1,229	1,283	4.4%
Horses Guides	528	528	0.0%
Tourist Transportation Companies	2,050	2,050	0.0%
Diving Centres	150	150	0.0%
Water Sports	255	255	0.0%
Glass boats	100	100	0.0%
Total	**53,488**	**41,108**	**-23.1%**

Source: Ministry of Tourism & Antiquities, Jordan (2021).

2.3 The impacts of the COVID-19 pandemic on depression and personal control

Regardless of the human tragedy of lost lives, scarred communities and shattered families, the economic and social changes brought about by a pandemic-driven lockdown will leave a cultural legacy that will live on in our memories and the memories of future generations (He & Harris, 2020). According to the transactional theory of stress, such differences in the cognitive evaluation of COVID-19 situations would result in different stress reactions and may influence individuals' risks of developing depression. It implies that workers with a high level of COVID-19 risk perception may be predisposed to depression if they are unable to properly cope with the stressor (Yan et al., 2021). Depression is a feeling of unhappiness, exhaustion or difficulty, and lack of motivation (Mathur & Chauhan, 2018). There is abundant scientific evidence to support the notion that bad life experiences can contribute to depression symptoms and lower well-being (Garnefski, Kraaij & Spinhoven, 2001; Kraaij, Arensman & Spinhoven, 2002). The COVID-19 pandemic has dramatically affected the worldwide hospitality industry, affecting millions of people. It has resulted in high morbidity and mortality rates, resources instability, fear of stigma and discrimination, and encounters with infected people, all of which are risk factors for depression and anxiety (Brooks et al., 2020). During the COVID-19 pandemic, hospitality employees were dealing with mental health issues such as anxiety, depression, loneliness and compulsive behaviour (Murray, 2020; Zhang, Huang & Wei, 2020).

During COVID-19, imposed isolation was an unpleasant experience that can immediately lead to health problems during a pandemic. These negative consequences can persist long after lockdowns are lifted (Usher et al., 2020). According to a recent study, when employees are socially disconnected because they are staying at home instead of coming into work, they feel isolated, which worsens their depression (Li & Huynh, 2020). Workers experienced fear, extreme tension and anxiety as a result of COVID-19 because of the fear of economic crisis, job insecurity, financial hardships and

governmental health care policies, and thus workers felt vulnerable and struggled with psychological disorders (French, Mortensen & Timming, 2020; Khan et al., 2021). Radic et al. (2020) found that COVID-19 increased feelings of fear, stress, and anxiety disorders in tourism workers, who faced significant levels of stress during the COVID-19 pandemic, which can further lead to anxiety and depression because workers who suffer from sleeplessness and anxiety disorders frequently suffer from depression as a result of social isolation. Another study was conducted by Yan et al. (2021), and they revealed that hospitality workers' perceptions of COVID-19 risk weigh strongly on depression symptoms and influence their risk of experiencing depressive symptoms.

Furthermore, the financial strain was a major cause of perceived isolation and depression among employees. COVID-19 may cause financial strain on employees, leading to depression. For example, Viseu et al. (2018) found a link between financial strain and depression. Kim et al. (2020) revealed that when people do not have enough money to satisfy their basic necessities, they become depressed. Therefore people experiencing financial strain are more likely to suffer from depression. Mamun et al. (2020) found that jobless people were depressed as a result of ongoing financial strain. Previous research conducted by Nisar et al. (2021) has demonstrated that social disconnectedness and the perceived risk of unemployment contribute to perceived isolation, which leads to depression among front-line hotel employees. Because of the risk of losing jobs among workers and the drastic changes in their daily routines at work during the COVID-19 pandemic, hotel workers may experience stress, anxiety and depression (Teng et al., 2020). Ozdemir (2020) revealed the psychological effects of the pandemic on tourism workers, including fear, stress, depression, anxiety, panic, melancholia, unhappiness, hopelessness and obsession. Aguiar-Quintana et al. (2021) investigated the significant effects of job insecurity caused by the COVID-19 pandemic on anxiety and depression levels among hotel employees in the Canary Islands (Spain). Similarly, Chen and Chen (2021) found that the COVID-19 stressors (pandemic-induced panic, financial strain, social isolation) had significant and positive effects on depression in the hospitality industry. Therefore workers experienced varying levels of depression, from mild or moderate to moderately severe or severe symptoms during the pandemic.

The stress process model (Pearlin et al., 1981), like Kahn's (1981) work, postulates that both persistent stressors (such as poverty) and acute stresses (such as job loss) can have negative consequences. Price, Choi and Vinokur (2002) revealed that laid-off employees feel a sense of less personal control resulting from their financial hardships. Other studies have shown that financial strain and its repercussions, such as a lack of food or shelter and an inability to pay bills are critical mediators between unemployment and negative outcomes (Kessler, House & Turner, 1987; Price et al., 2002). Carriger (2018) argued that unemployment might dramatically impact one's life, frequently leading to unpleasant experiences such as a lack of meaning in one's life, the loss of relationships, or even one's status. While Lin, Chen and Weng (2019) investigated the influence of work–family conflict on the

psychological well-being of tourism operators, such as depressed mood and self-control, and discovered that work–family conflict has a negative impact. Chen and Chen (2021) discovered that COVID-19-induced social isolation among hospitality employees resulted in higher depressive symptoms and impaired personal control. However, recent research has indicated that the COVID-19 pandemic increased depression and anxiety in the general population. Further studies are needed to investigate the effects of the COVID-19 pandemic on tourism workers' depression and personal control.

2.4 The impacts of depression and personal control on workers' personal health and well-being

Social and environmental stresses are central to Kahn's (1981) model. This model has another heuristic value in that it recognises short-term responses to stress as a gateway to an overall deterioration in health and well-being (Sonnentag & Frese, 2003). Depression is a severe reaction to a variety of stressors. A plethora of scientific evidence supports the view that depressive symptoms are predictors of health problems and poor well-being (Wells et al., 1989; Price et al., 2002). Job loss has been highlighted as a major stressor that contributes to workers' poor physical and mental health (Price et al., 2002). Employee well-being is defined as an employee feeling well and happy in the workplace involving various health and safety aspects. It is more than just physical or mental health, but it extends beyond health and into happiness and job satisfaction (Gharia, Narang & Karnik, 2020). According to a study conducted by Ghubach et al. (2010), if an individual's perception of mental health (e.g., depression, stress) is low, life satisfaction (e.g., well-being perception, self-rated mental health) will decrease. Depression and anxiety can significantly impact mental health during the COVID-19 time (Brooks et al., 2020). Hotel workers' mental health might be impacted in addition to their well-being, as they suffer stress, anxiety and depression as a result of COVID-19 (Teng et al., 2020). Workers suffered psychological disorders (e.g., depression, stress) due to COVID-19, which had a detrimental influence on their mental health (French et al., 2020; Khan et al., 2021).

Negative life experiences can compromise personal control (Price et al., 2002), which frequently acts as a buffer against negative life events or stressors. Hence, previous studies revealed that people with higher degrees of personal control have fewer health issues and better levels of well-being (Greenway et al., 2015). According to a recent study, good personal control mitigates the negative impacts of the COVID-19 pandemic, such that the association between the pandemic's perceived severity and mental health problems dropped as the ability of people to control them increased (Li et al., 2020). Unguren, Ceyhan and Turker (2022) found that the fear of COVID-19 significantly negatively impacted waiters' mental well-being working in five-star hotels. They also found waiters with high degrees of fatalistic thought had a smaller negative effect of COVID-19 fear on mental well-being, which could be explained by self-control. In a research study by Chen and Chen (2021) to investigate the impacts of depression and personal control on hospitality workers' well-being due to COVID-19

stressors, they revealed that depression had a negative effect, but personal control had a positive effect.

2.5 The mediating role of depression and personal control between the COVID-19 pandemic impacts and workers' personal health and well-being

Based on Pearlin et al.'s (1981) stress process model, personal control was also identified as a mediator in this study. The model also assumes that the level of personal control mediates the effects of stressors (Pearlin et al., 1981), and this finding was supported by many related studies on job loss (Price et al., 2002; Paulsen et al., 2005). For example, Price et al. (2002) revealed that laid-off employees feel a sense of less personal control resulting from their financial hardships, which leads to a rise in health problems. The current study focused on the impacts of COVID-19 pandemic on tourism workers' personal health and well-being. COVID-19 has a traumatic effect on workers' mental health since it affects their well-being (Cucinotta & Vanelli, 2020). Depression symptoms are identified as key causes of poor performance and well-being (Wells et al., 1989; Price et al., 2002).

The mediating role of depression and personal control between the COVID-19 pandemic impacts and workers' personal health and well-being has not been tested in previous studies. Only one study conducted by Chen and Chen (2021) investigated the influence of depression and personal control as mediators between COVID-19 stresses and hospitality workers' well-being. According to the study, the indirect effect of social isolation on well-being was shown to be mediated by personal control and depression. These findings show that social isolation resulted in an increase in depressive symptoms and a loss of personal control, both of which are related to poor well-being. At the same time, only depression mediated the effects of pandemic-induced panic and financial strain on well-being.

3. Methodology

3.1 Research design

This study applied the positivism philosophy with a deductive quantitative approach in order to explore the impact of COVID-19 on tourism workers. It used exploratory research to better understand the impacts of COVID-19 and to investigate the causal relationships between the study's variables through testing the proposed hypotheses. Thus the study adopted a survey strategy using self-administrated questionnaires to collect quantitative data.

3.2 Study model

The researchers proposed the study's model based on the literature review, as illustrated in Figure 1. In the proposed model, this study suggests that depression and personal control serve as ideal mediators in the relationship between the impacts of the COVID-19 pandemic (corona threats, financial impacts, resources impacts, social isolation) and workers' perceived health and well-being. These hypotheses are based on the notion that the impacts of the COVID-19 pandemic lead to high depression and low personal control, and in turn, depression and personal control are significantly associated with employees' perceived health and well-being. As a consequence of this, the following hypotheses were formulated:

Figure 1 - Conceptual model
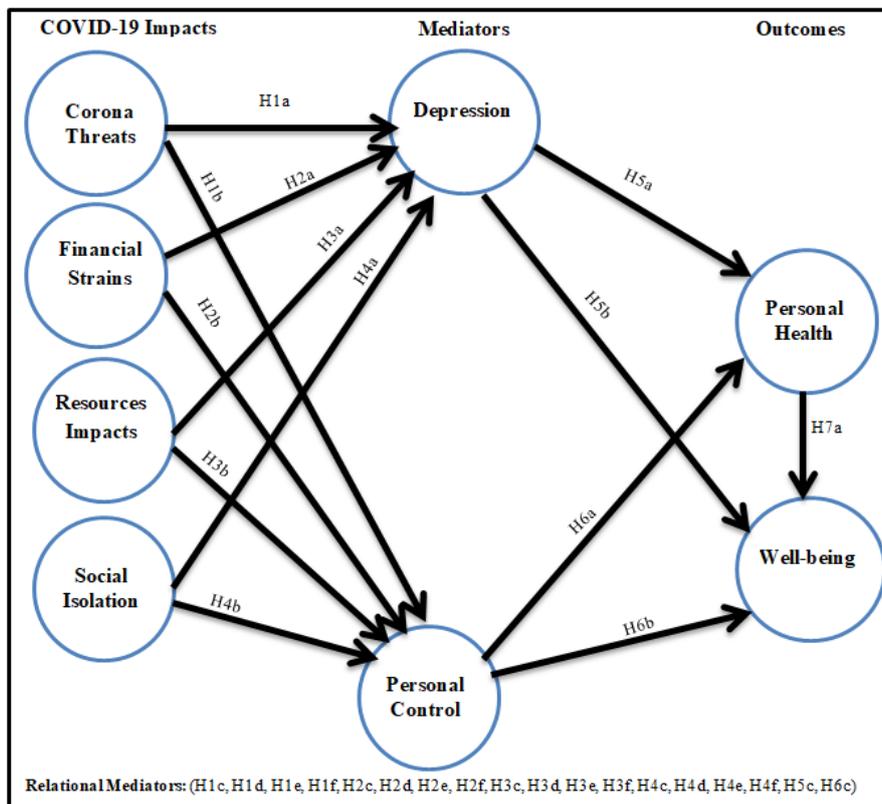
Hypothesis one (H1):

- H1a: Coronavirus threats have a positive effect on depression.
- H1b: Coronavirus threats have a negative effect on personal control.
- H1c: Depression mediates the relationship between coronavirus threats and workers' perceived health.
- H1d: Personal control mediates the relationship between coronavirus threats and workers' perceived health.
- H1e: Depression mediates the relationship between coronavirus threats and workers' well-being.
- H1f: Personal control mediates the relationship between coronavirus threats and workers' well-being.

Hypothesis two (H2):

- H2a: Financial impacts have a positive effect on depression.
- H2b: Financial impacts have a negative effect on personal control.
- H2c: Depression mediates the relationship between financial impacts and workers' perceived health.
- H2d: Personal control mediates the relationship between financial impacts and workers' perceived health.
- H2e: Depression mediates the relationship between financial impacts and workers' well-being.
- H2f: Personal control mediates the relationship between financial impacts and workers' well-being.

Hypothesis three (H3):

- H3a: Resources impacts have a positive effect on depression.
- H3b: Resources impacts have a negative effect on personal control.
- H3c: Depression mediates the relationship between resources impacts and workers' perceived health.
- H3d: Personal control mediates the relationship between resources impacts and workers' perceived health.
- H3e: Depression mediates the relationship between resources impacts and workers' well-being.
- H3f: Personal control mediates the relationship between resources impacts and workers' well-being.

Hypothesis four (H4):

- H4a: Social isolation has a positive effect on depression.
- H4b: Social isolation has a negative effect on personal control.
- H4c: Depression mediates the relationship between social isolation and workers' perceived health.
- H4d: Personal control mediates the relationship between social isolation and workers' perceived health.
- H4e: Depression mediates the relationship between social isolation and workers' well-being.
- H4f: Personal control mediates the relationship between social isolation and workers' well-being.

Hypothesis five (H5):

- H5a: Depression has a negative effect on workers' perceived health.

- H5b: Depression has a negative effect on workers' well-being.
- H5c: Personal health mediates the relationship between depression and well-being.

Hypothesis six (H6):

- H6a: Personal control has a positive effect on workers' perceived health.
- H6b: Personal control has a positive effect on workers' well-being.
- H6c: Personal health mediates the relationship between personal control and well-being.

Hypothesis seven (H7):

H7a: Workers' perceived health has a positive effect on their well-being.

3.3 Study population

The study population consisted of tourism workers who had been laid off or were entirely furloughed (unpaid leave) and who were working with full or partial pay due to the pandemic. Employees who had been fully furloughed were included in the study since they faced the same level of income loss. Data collection began in December 2020, when prospective respondents were contacted via social media and invited to conduct an online survey.

3.4 Measurement

Several multi-item scales were included in the survey questionnaire. These scales are all reliable measures (with Cronbach's alpha reliability values of over 0.70) and are widely used by scholars, as follows:

1. **Perceived Coronavirus Threats Scale:** The scale of perceived coronavirus threats was measured using six items adopted from Conway, Woodard and Zubrod (2020). It is presented with options from 1–4 anchored by 1 = "not true of me at all" and 4 = "very true of me".

2. **Financial Impacts Scale:** The scale of financial impacts was measured using three items adopted from Conway et al. (2020). It is presented with options from 1–4 anchored by 1 = "not true of me at all" and 4 = "very true of me".

3. **Resources Impacts Scale:** The scale of resources impacts was measured using three items adopted from Conway et al. (2020). It is presented with options from 1–4 anchored by 1 = "not true of me at all" and 4 = "very true of me".

4. **Social Isolation Scale:** The scale of social isolation was measured using three items adopted from Hughes et al. (2004). It is presented with options from 1–4 anchored by 1 = never, 2 = seldom, 3 = some of the time, and 4 = most of the time.

5. **Depression Scale:** The depression scale was measured using nine items from the Patient Health Questionnaire (PHQ-9) adopted from Kroenke, Spitzer and Williams (2001), with options ranging from 0 to 3 anchored by 0 = not at all, 1 = several days, 2 = more than half of the days, and 3 = nearly every day. Respondents

were asked how frequently they had been bothered by the problem in the last two weeks for each item.

6. **Personal Control Scale:** The personal control scale was measured using five items of the General Self-Efficacy Scale (GSE) that were adopted from Romppel et al. (2013). It is presented with options from 1–4 anchored by 1 = strongly disagree to 4 = strongly agree.

7. **Perceived Personal Health Scale:** The scale of perceived personal health was measured using three items adopted from Price et al. (2002). One question is associated with general health conditions and is presented with options from 1–4 anchored by 1 = poor, 2 = fair, 3 = good, 4 = excellent, whereas the other two questions are related to health complaints (1 = no extent to 4 = a very great extent).

8. **Perceived Well-Being Scale:** The perceived well-being scale was measured using five items adopted from the World Health Organization's Five Well-Being Index (WHO-5). It is presented with options from 0–3 anchored by 0 = at no time to 3 = all of the time) (Topp et al., 2015).

3.5 Data analysis

The data were analysed using Statistical Package for the Social Sciences (SPSS) version 23. A descriptive statistical analysis was performed to analyse the demographic characteristics of respondents and employment characteristics. The study hypotheses were then tested using Smart Partial Least Square (PLS) 3.3.3 Statistical Software. Finally, the mediation effects in the proposed model were examined by looking at the direct, indirect and total impacts.

4. Results

4.1 The respondent profiles

The study's sample size was calculated based on a rule of thumb. As suggested by Hair, Ringle and Sarstedt (2011), the required sample size for structural equation modelling (which was used to analyse the data in this study) is "n:p", where n is the number of measurement items and p is the number of cases per item. A sample size of 1:10 is ideal (1 item with 10 cases). The total number of measurement items in this study was 37, requiring at least 370 cases. The study's sample data contained 400 respondents, which exceeded the required number.

As shown in Table 2, of 400 respondents, 93% were male, which is consistent with the Jordanian Tourism Statistics (2020), as men make up the majority of the tourism workforce in Jordan (92%). Approximately 47% of the respondents' ages fell between 26 and 35, while 33% were between 36 and 45. Most of the respondents were married (72%), 26% were single, and 2% were divorced. More than half (56%) of the respondents had undergraduate or graduate education, 36% had high school, and only 8% had less than high school. Due to COVID-19, approximately 46% of respondents were laid off or unemployed, 28% were on unpaid leave(furlough), 24% were employed with partial pay (part of the bonuses and incentives were deducted), and only 2% were still employed with full pay. Most of the respondents worked in hotels (61%) and restaurants (11%). Other respondents worked in tourism offices (6%), tour guides (5%), travel agents (2%) and souvenir shops (1%), and nearly 14% of the respondents worked in other sectors.

Table 2 - Profile of tourism workers (N=400)

Variables	N	%
Gender:		
Male	372	93%
Female	28	7%
Age:		
25 or under	36	9%
26-35	188	47%
36-45	132	33%
46-55	40	10%
56 and more	4	1%
Marital Status:		
Single	104	26%
Married	288	72%
Divorced	8	2%
Education:		
Less than high school	32	8%
High school	144	36%
Undergraduate	172	43%
Postgraduate	52	13%
Work city:		
Amman	200	50%
Aqaba	48	12%
Dead Sea	48	12%
Petra	48	12%
Other	56	14%
Work Place:		
Hotel	244	61%
Restaurant	44	11%
Tourism office	24	6%
Tour guide	20	5%
Souvenir shop	4	1%
Travel Agent	8	2%
Other	56	14%

Variables	N	%
Job Level:		
Employee	148	37%
Supervisor	84	21%
Department Head	76	19%
Manager	92	23%
Work Experience:		
3 years or Less	44	11%
4-6 years	72	18%
7-9 years	32	8%
10 years or more	252	63%
Monthly Income:		
less than 400 JD	152	38%
401-600 JD	100	25%
601-800 JD	60	15%
801-1000 JD	48	12%
More than 1001 JD	40	10%
Salary during the COVID19 period:		
Full Pay	8	2%
Partial Pay (part of the bonuses and incentives were deducted)	96	24%
Unpaid leave	112	28%
Lost job completely	184	46%

4.2 Measurement model

The researchers investigated the validity and reliability of all constructs to determine the quality of the measurement of the main latent variables used in the study. As indicated in Table 3, the internal consistency of the instruments was evaluated by calculating Composite Reliability (CR), Cronbach's Alpha (α), and rho_A (value between Cronbach's Alpha and Composite Reliability), while the instruments' convergent validity was evaluated using Average Variance Extracted (AVE). In addition, the Variance Inflation Factors (VIFs) for all latent variables were estimated to check for collinearity concerns.

Table 3 - CR, Cronbach's Alpha, AVE and VIFs Coefficients

Constructs	Items	Loadings	CR	α	rho_A	AVE	VIFs
Coronavirus Threats (CT)	CT1	0.945	0.876	0.830	0.835	0.705	1.724
	CT2	0.836					
	CT3	0.723					
Depression (D)	D1	0.806	0.929	0.911	0.915	0.752	1.801
	D2	0.761					
	D3	0.763					
	D4	0.824					
	D5	0.765					
	D6	0.854					
	D7	0.872					
Financial Impacts (FI)	FI1	0.821	0.852	0.817	0.834	0.742	1.315
	FI2	0.899					
Personal Control (PC)	PC1	0.863	0.905	0.860	0.877	0.705	1.203
	PC2	0.849					
	PC3	0.891					
	PC4	0.748					
Personal Health (PH)	PH1	0.785	0.837	0.823	0.828	0.720	1.362
	PH2	0.908					
Resources Impacts (RI)	RI1	0.875	0.896	0.825	0.827	0.743	1.488
	RI2	0.896					
	RI3	0.813					
Social Isolation (SI)	SI1	0.791	0.902	0.838	0.855	0.756	1.677
	SI2	0.925					
	SI3	0.888					
Well-Being (WB)	WB1	0.845	0.929	0.905	0.921	0.725	1.488
	WB2	0.790					
	WB3	0.925					
	WB4	0.879					
	WB5	0.811					

Note: CR = Composite Reliability; α = Cronbach's Alpha Coefficient; AVE = Average Variance Extracted; VIFs = Variance Inflation Factors.

According to Ruiz et al. (2008), to test instrument reliability, Cronbach's Alpha (α), rho_A and CR should be greater than 0.70 for appropriate reliability, 0.80 for particularly good, and 0.90 for excellent. In this regard, Table 3 indicates that Cronbach's Alpha (α), rho_A and CR values for all latent variables are acceptable. Moreover, multicollinearity analyses verified that all variables had VIF values of less than 5, indicating that the model of measurement had no collinearity problems

(MacKenzie et al., 2011). The overall amount of variation in the items predicted by the latent variables surpassed the tolerated limit of 0.50, as measured by the AVE (range from 0.705 to 0.756). All indicator items' factor and cross-loadings to their respective latent constructs were extracted to ensure convergent validity. Table 4 demonstrates that all items loaded between 0.718 and 0.955 on their respective constructs and more highly on their respective constructs than any other, indicating the indicators' convergent validity as reflecting different latent constructs.

Table 4 - Factor loadings (bolded) and cross loadings

	CT	D	FI	PC	PH	RI	SI	WB
CT1	**0.955**	0.206	0.208	-0.150	-0.033	0.090	-0.039	-0.177
CT2	**0.808**	0.063	0.139	-0.064	-0.018	-0.028	-0.087	0.005
CT3	**0.718**	0.009	0.238	-0.110	-0.173	0.051	-0.090	0.040
D1	0.152	**0.801**	0.424	-0.276	-0.269	0.393	0.429	-0.390
D2	0.054	**0.749**	0.303	-0.074	-0.164	0.312	0.367	-0.233
D3	0.194	**0.759**	0.313	-0.123	-0.199	0.420	0.380	-0.237
D4	0.032	**0.818**	0.296	-0.247	-0.249	0.411	0.487	-0.262
D5	0.209	**0.757**	0.449	-0.308	-0.224	0.445	0.330	-0.368
D6	0.190	**0.851**	0.336	-0.293	-0.144	0.438	0.440	-0.404
D7	0.061	**0.872**	0.327	-0.249	-0.201	0.420	0.535	-0.256
FI1	0.165	0.320	**0.812**	-0.155	0.003	0.269	0.180	-0.128
FI2	0.223	0.425	**0.906**	-0.204	-0.106	0.342	0.429	-0.265
PC1	-0.117	-0.269	-0.167	**0.866**	0.384	-0.297	-0.202	0.346
PC2	-0.149	-0.249	-0.273	**0.850**	0.299	-0.383	-0.209	0.446
PC3	-0.100	-0.285	-0.155	**0.888**	0.241	-0.312	-0.214	0.433
PC4	-0.123	-0.155	-0.090	**0.768**	0.292	-0.217	-0.241	0.218
PH1	-0.012	-0.295	-0.096	0.254	**0.830**	-0.426	-0.349	0.208
PH2	-0.095	-0.149	-0.024	0.349	**0.859**	-0.249	-0.212	0.408
RI1	0.095	0.439	0.317	-0.322	-0.309	**0.876**	0.337	-0.338
RI2	0.083	0.503	0.391	-0.216	-0.382	**0.904**	0.323	-0.356
RI3	0.003	0.365	0.213	-0.412	-0.325	**0.795**	0.246	-0.307
SI1	-0.035	0.436	0.399	-0.077	-0.189	0.209	**0.779**	-0.240
SI2	-0.065	0.480	0.282	-0.241	-0.284	0.336	**0.928**	-0.372
SI3	-0.062	0.469	0.323	-0.304	-0.360	0.352	**0.894**	-0.356
WB1	-0.104	-0.276	-0.196	0.406	0.418	-0.349	-0.337	**0.848**
WB2	-0.066	-0.169	-0.063	0.254	0.240	-0.251	-0.152	**0.794**
WB3	-0.146	-0.369	-0.260	0.391	0.416	-0.408	-0.361	**0.925**
WB4	-0.079	-0.334	-0.187	0.409	0.189	-0.323	-0.284	**0.881**
WB5	-0.093	-0.454	-0.254	0.374	0.268	-0.295	-0.409	**0.808**

Note: CT = Coronavirus Threats; D = Depression; FI = Financial Impacts; PC = Personal Control; PH=Personal Health; RI = Resources Impacts; SI = Social Isolation; WB = Well-Being.

Two criteria were used to assess the discriminant validity of the constructs: the Fornell and Larcker Criterion (1981) and the Heterotrait-Monotrait Ratio of Correlations (HTMT) (Henseler, Ringle & Sarstedt, 2015). The findings of the discriminant validity assessment are shown in Tables 5 and 6. The diagonal elements in Table 5 that are marked in bold indicate the square root of AVE. The remaining items represent bivariate correlations between the constructs. The findings reveal that the square root of AVE (highlighted in bold) is greater than the bivariate correlations for each of the constructs. This demonstrates that the constructs are separate from one another. Discriminant validity is good if the HTMT value is less than 0.90 (Henseler et al., 2015). As shown in Table 6, all latent variables have values of less than 0.90, demonstrating that the constructs are noticeably different at the HTMT 0.90 threshold, indicating appropriate discriminant validity. Consequently, all previous findings suggest that all constructs have sufficient validity and reliability, and thus the measurement of the main latent variables used in the study is of high quality.

Table 5 - Fornell and Larcker Criterion

Constructs	1	2	3	4	5	6	7	8
1. CT	**0.833**							
2. D	0.163	**0.802**						
3. FI	0.229	0.439	**0.860**					
4. PC	-0.145	-0.289	-0.212	**0.844**				

5. PH	-0.066	-0.259	-0.070	0.360	**0.845**			
6. RI	0.071	0.509	0.359	-0.366	-0.395	**0.859**		
7. SI	-0.064	0.530	0.375	-0.253	-0.328	0.352	**0.869**	
8.WB	-0.119	-0.390	-0.239	0.439	0.370	-0.389	-0.378	**0.853**

Table 6 - The Heterotrait-Monotrait Ratio of Correlations (HTMT)

Constructs	1	2	3	4	5	6	7	8
1. CT								
2. D	0.176							
3. FI	0.303	0.555						
4. PC	0.147	0.310	0.264					
5. PH	0.167	0.356	0.150	0.496				
6. RI	0.087	0.585	0.480	0.428	0.569			
7. SI	0.098	0.608	0.490	0.283	0.457	0.414		
8.WB	0.119	0.408	0.277	0.472	0.480	0.442	0.407	

Note: CT = Coronavirus Threats; D = Depression; FI = Financial Impacts; PC = Personal Control; PH=Personal Health; RI = Resources Impacts; SI = Social Isolation; WB = Well-Being.

The study's measurement model was built with two 2-item factors (financial impacts and personal health), three 3-item factors (coronavirus threats, resources impacts, and social isolation), one 4-item factor (personal control), one 5-item factor (well-being), and one 7-item factor (depression). Confirmatory Factor Analysis (CFA) was used to assess the fit of the model. The factor loadings of 29 items were all significant ($p < 0.001$), as shown in Table 3.

The Standardised Root Mean Square Residual (SRMR) may be utilised for PLS-SEM as a goodness of fit measure to avoid model misspecification (Henseler, Hubona & Ray, 2016). Thus, the global model fit was measured using SRMR. The findings revealed that the model had satisfactory fit indices. The SRMR value was 0.068 below 0.08, and NFI was 0.903 greater than 0.90. Furthermore, for PLS path modelling, the Goodness of Fit (GoF) is used in this study as a global fit measure to check the overall quality of the study's proposed model (Tenenhaus et al., 2005). The geometric mean of the average communality and average R2 is denoted as GoF (0 < GoF < 1) (for endogenous constructs). Because in the PLS path modelling approach, communality equals AVE, the study proposed a communality cut-off value of 0.5, as proposed by Fornell and Larcker (1981). The structural model's predictive power was tested by assessing the coefficient of determination (R^2) values, which reflect the combined impacts of exogenous contracts on endogenous constructs. Furthermore, in accordance with Cohen's impact sizes for R^2 (small: 0.02; medium: 0.13; large: 0.26) (1988), the study derives the following GoF criteria (GoF small = 0.10, GoF medium = 0.25, and GoF large = 0.36) (Wetzels et al., 2009). Here, the communality of CI, FI, RI, SI, D, PC, PH and WB was denoted by 0.705, 0.742, 0.743, 0.756, 0.752, 0.705, 0.720 and 0.725, respectively (average communality = 0.7310). The values of R2 for D, PC, PH and WB were 0.425, 0.182, 0.150 and 0.30, respectively (average R^2 = 0.2642). Thus, the value of the GoF was computed as the following equation:

$$GOF = \sqrt{\overline{Communality} \ \text{X} \ \overline{R^2}}$$
$$= \sqrt{0.7310 \ \text{X} \ 0.2642}$$
$$= \sqrt{0.1931}$$
$$= \textbf{0.4395}$$

The study obtained a GoF value of 0.4395, which is more than the cut-off value of 0.36 for large effect sizes of R^2, indicating that the study's model performs well in comparison to the baseline values stated above.

4.3 Descriptive statistics
After the scales' reliability has been established, descriptive analysis is another statistical test that was conducted on the study's scales. The results of the descriptive statistical analysis of workers' perceptions in tourism are shown in Table 7.

Table 7 - Output of the descriptive analysis

Variable	No. of Items	Scale	Midpoint Scale	Mean	Std. Deviation
Coronavirus Threats (CT)	3	1-4	2.5	2.64	.759
Financial Impacts (FI)	2	1-4	2.5	3.70	.432
Resources Impacts (RI)	3	1-4	2.5	3.18	.691
Personal Control (PC)	4	1-4	2.5	2.59	.671
Social Isolation (SI)	3	1-4	2.5	2.87	.588
Personal Health (PH)	2	1-4	2.5	3.09	.673
Depression (D)	7	0-27	13.5	16.3	7.01
Well-Being (WB)	5	0-25	12.5	8.49	5.41

As shown in Table 7, the overall mean score for the perceived coronavirus threats scale is 2.64, the scale of the financial impact is 3.70, the resources impacts scale is 3.18, the personal control scale is 2.59, the social isolation scale is 2.87 and the personal health scale is 3.09. All of the mean scores exceeded the mid-point of the scales, which indicated high perceptions of tourism workers regarding the impacts of the coronavirus pandemic. This means workers perceived the highest financial impacts, resources impacts, personal health, social isolation, perceived coronavirus threats, and personal control. The greatest impact was financial impacts, suggesting that most of the respondents were experiencing financial difficulties as a result of job or pay loss. Then there were the resources impacts, which showed that the majority of respondents were having difficulty getting resources during the pandemic. It was also revealed that the majority of respondents assessed themselves to be in good health, with some health complaints. Regarding social isolation, respondents had experienced a substantial level of social isolation. Most of the respondents perceived coronavirus threats as true threats to their lives. Finally, it was also found that respondents had a modest level of personal control since the mean score was slightly higher than the mid-point of the scale.

In terms of depression, the scores ranged from 0 to 25, and the overall mean score for respondents was 16.3, which suggested moderately severe depression according to the level of depression severity on the OHQ-9 Score in the Kroenke et al.'s (2001) scale (minimal 0–4, mild 5–9, moderate 10–14, moderately severe 15–19, severe 20–27). This means that respondents had moderately severe depression due to the pandemic. While the score for well-being in the WHO-5 ranges from 0 (absence of well-being or the worst imaginable well-being) to 25 (maximal well-being or the best imaginable well-being) in the Topp et al.'s (2015) scale, it was found that the overall mean score for the well-being scale was 8.49, which was below the mid-point of 12.5, which suggested that respondents had poor and low levels of well-being.

4.4 Hypotheses testing

The following section provides the study model path coefficients (β), the p values, and the values of R^2, Q^2, and small effect size (f^2) (see Figure 2). The results reveal that the hypothesised path relationship between coronavirus threats and depression and personal control are statistically significant. Coronavirus threats had a positive influence on depression (β = 0.138, t = 2.033, p < 0.05, Q^2 = 0.013, f^2 = 0.031) and a negative influence on personal control (β = -0.120, t = 1.968, p < 0.05, Q^2 = 0.011, f^2 = 0.022). The hypothesised path relationship between financial impacts and depression is statistically significant. Financial impacts had a positive influence on depression (β = 0.145, t = 2.047, p < 0.05, Q^2 = 0.017, f^2 = 0.027), while the hypothesised path relationship between financial impacts and personal control is not statistically significant because its standardised path coefficient (β = 0.001, p > 0.05, f^2

= 0.000) is lower than 0.10. The hypothesised path relationship between resources impacts and depression and personal control is statistically significant, resources impacts had a positive influence on depression (β = 0.291, t = 3.460, p < 0.01, Q^2 = 0.068, f^2 = 0.122) and a negative influence on personal control (β = -0.337, t = 3.853, p < 0.001, Q^2 = 0.091, f^2 = 0.122). Social isolation had a positive influence on depression (β = 0.383, t = 4.320, p < 0.001, Q^2 = 0.108, f^2 = 0.201) but a negative influence on personal control (β = -0.139, t = 2.013, p < 0.05, Q^2 = 0.016, f^2 = 0.021). Hence, H1a, H1b, H2a, H3a, H3b, H4a and H4b are supported, while H2b is rejected.

The hypothesised path relationship between depression and personal health and well-being is statistically significant. Depression had a negative influence on personal health (β = -0.135, t=2.003, p < 0.05, Q^2 = 0.014, f^2 = 0.020), and well-being (β = -0.261, t = 2.541, p < 0.05, Q^2 = 0.054, f^2 = 0.088). Personal control had a positive influence on personal health (β = 0.329, t = 3.152, p< 0.01, Q^2 = 0.086, f^2 = 0.118) and well-being (β = 0.279, t = 2.971, p < 0.01, Q^2 = 0.062, f^2 = 0.092) and well-being (β = 0.279, t = 2.971, p < 0.01, Q^2 = 0.062, f^2 = 0.092). Personal health had a positive influence on well-being (β = 0.214, t = 2.539, p < 0.01, Q^2 = 0.037, f^2 = 0.056), indicating that the hypothesised path relationship between personal health and well-being is statistically significant. Thus, H5a, H5b, H6a, H6b and H7a are supported.

The values of R^2 = 0.25, 0.50 and 0.75 refer to weak, moderate and strong, respectively (Hair et al., 2017). The structured model explained 42.5% of the variance in depression, 18.20% of personal control, 15% in personal health and 30% in well-being. The values of R^2 were relatively weak and moderate (Hair, Ringle &Sarstedt, 2011). To test the model's predictive relevance and accuracy, the values of Q^2 were obtained as suggested by Hair et al. (2017). Using the blindfolding approach, the value of Q2 examines the predictive validity of a large and complex model in PLS (Chin, 1998). For endogenous constructs, the value of Q^2 was 0.267, 0.114, 0.077 and 0.201 for depression, personal control, personal health and well-being, respectively, demonstrating an acceptable level of predictive relevance. The value of Q^2 > 0 showed the model's predictive relevance (Cohen, 1988), along with presenting a moderate effect (Chin, 1998; Hair et al., 2017). Overall, the impacts of the COVID-19 pandemic moderately explained the variance of workers' depression (R^2 = 0.425 and Q^2 = 0.267) and weakly explained the variance of workers' personal control (R^2 = 0.182 and Q^2 = 0.114). Both depression and personal control weakly explained the variance of workers' personal health (R^2 = 0.15 and Q^2 = 0.077) and well-being (R^2 = 0.30 and Q^2 = 0.201).

Cohen's f^2 was calculated to investigate the extent to which an exogenous variable contributed to the endogenous variable's explanation in terms of R². The effect sizes of the constructs were referred to as weak, moderate and strong, respectively, when f^2 = 0.02, 0.15 and 0.35 (Cohen, 1988). Specifically, the f^2 values for (CT→D, CT→PC, FI→D, RI→D, RI→PC, SI→PC, D→PH, D→WB, PC→PH, PC→WB, PH→WB) were between 0.020 and

0.122 (over 0.02 and less than 0.15), which showed weak effects for those relationships, and there was only a modest relationship between social isolation and depression (SI → D, f^2 = 0.201, over 0.15). In the remaining relationships, the f^2 values met the base level criteria of 0.02. The study hypotheses were then tested by establishing a structural model with eight theoretical constructs. In an attempt to examine the mediation effects of depression and personal control, the direct effects of four stressors (coronavirus threats, financial impacts, resources impacts, and social isolation) on perceived health and well-being were added to the proposed model. As demonstrated in Figure 2, it was found that all four stressors had significant effects on depression. The greatest impact was social isolation (β = 0.383; p < 0.001), followed by resources impacts (β = 0.291; p < 0.001), financial impacts (β = 0.145; p < 0.001) and coronavirus threats (β = 0.138; p < 0.001). These findings

suggest that H1a, H2a, H3a and H4a are supported. As predicted, the effect of three stressors on personal control was found to be significant. Resources impacts had the greatest effect (β = -0.337; p < 0.001), followed by social isolation (β = -0.139; p < 0.001) and coronavirus threats (β = -0.120; p < 0.001), while the effect of financial impacts on personal control was not significant (p > 0.05) and was removed from the model, thereby indicating that H1b, H3b and H4b are supported, while H2b is not supported. The effects of depression on perceived health (β = -0.135; p < 0.001) and well-being (β = -0.261; p< 0.001) were both significant. Similarly, there were significant effects of personal control on perceived health (β = 0.329; p < 0.001) and well-being (β = 0.279; p < 0.001). The proposed relationship between perceived health and well-being was also significant (β = 0.214; p < 0.01). These findings suggest that H5a, H5b, H6a, H6b and H7a are all supported.

Figure 2 - The study structural model
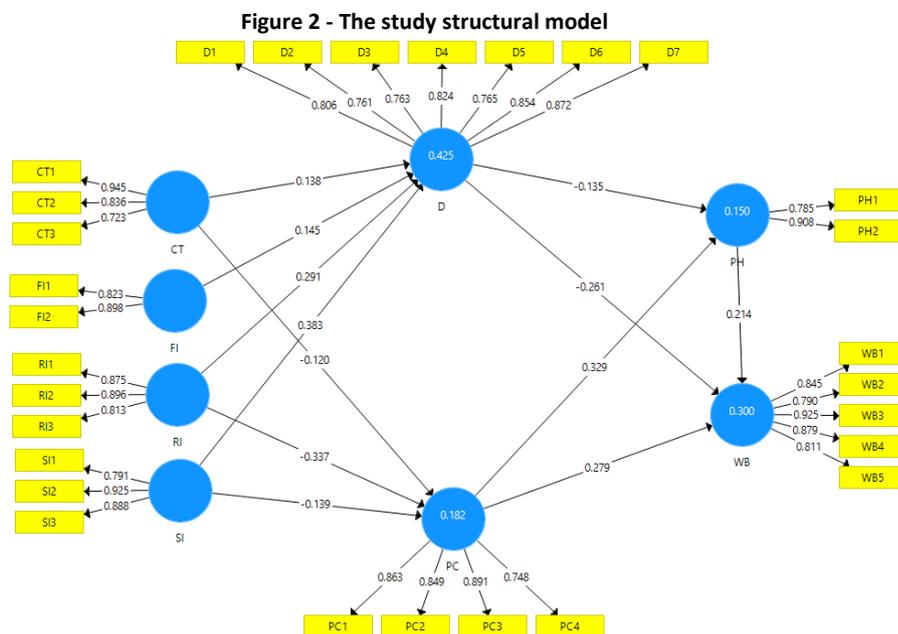
4.5 Direct, indirect and total effects in the structural modelling

To test the mediating role of depression and personal control between the impacts of COVID-19 and personal health and well-being (*H1c, H2c, H3c, H4c, H1d, H2d, H3d, H4d, H1e, H2e, H3e, H4e, H1f, H2f, H3f, H4f, H5c and H6c).* Table 8 displays the results of the indirect and total effects of exogenous variables (coronavirus threats, financial impacts, resources impacts, and social isolation) on endogenous variables (personal health and well-being) via mediators (personal control and depression). The specific indirect effects were tested using the bootstrapping technique with bias correction and percentiles. Table 8 also shows the findings of the multiple mediation paths and the computation of their strength of mediation effects.

The mediation effects in the proposed model were further assessed by examining the direct, indirect and total effects in the proposed model (see Table 8). Notably, the significance levels of the indirect and total effects were calculated using

bootstrapping. The results found that the total effects of resources impacts (β = -0.15; t = 2.359, p < 0.05) and social isolation (β = -0.097; t = 2.042, p < 0.05) on perceived personal health were significant. Regarding the effects on well-being, the total effects of resources impacts (β = -0.202; t = 3.581, p < 0.001) and social isolation (β = -0.16; t = 2.731, p < 0.01) were significant. The indirect effects fully explained all the total effects. It was thus concluded that the effect of resources impacts on perceived health was fully mediated by personal control (*H3d: RI -> PC -> PH*), while the effect of social isolation on perceived health was fully mediated by depression (*H4c: SI -> D -> PH*). Regarding the effect of resources impacts on well-being, it was fully mediated by depression and personal control (*H3e: RI -> D -> WB; H3f: RI -> PC -> WB*), while the effect of social isolation on well-being was fully mediated by depression (*H4e: SI -> D -> WB*). The effects of resources impacts and social isolation were fully explained by the indirect effects, which suggest a full mediation effect. These findings suggest that H3d,

H4c, H3e, H3f and H4e are supported. Furthermore, while the total effect of personal control on well-being was significant (β = 0.35; t = 3.652, p < 0.001), it was discovered to be only partially mediated by personal health (H6c: PC -> PH -> WB), as both direct and indirect effects contributed significantly to the total effects. Thus, H6c is supported.

The R^2 values of depression, personal control, personal health and well-being were 0.425, 0.182, 0.15 and 0.30, respectively.

To further compare the relative effects of resources impacts and social isolation, the 95% confidence intervals of total effects were calculated using bootstrapping. It was found that the total effect of resources impacts (95% interval: [-0.268, -0.065]) on perceived health was significantly greater than the total effect of social isolation (95% interval: [-0.192, -0.009]). Similarly, the total effect of resources impacts (95% interval: [-0.303, -0.118]) on well-being was significantly greater than the total effect of social isolation (95% interval: [-0.256, -0.069]).

Table 8 - Direct, Indirect, and Total Effects in the Structural Modeling

	D (t -Value, p)	**PC**(t -Value, p)	**PH**(t -Value, p)	**WB**(t- Value, p)
Total Direct Effects				
CT	0.138(2.033, 0.038)	-0.120(1.968, 0.050)		
FI	0.145(2.047, 0.036)			
RI	0.291(3.460, 0.001)	-0.338(3.853, 0.000)		
SI	0.383(4.320, 0.000)	-0.139(2.013, 0.046)		
D			-0.135(2.003, 0.046)	-0.261(2.541, 0.011)
PC			0.329(3.152, 0.002)	0.279(2.971, 0.003)
PH				0.214(2.539, 0.011)
Total Indirect Effects				
			PH(t- Value, p)	**WB**(t- Value, p)
RI			**-0.150(2.359, 0.018)**	**-0.202(3.581, 0.000)**
SI			**-0.097(2.042,0.040)**	**-0.160(2.731, 0.006)**
PC				**0.071(2.077, 0.038)**
D				**-0.029 (1.962, 0.050)**
Specific Indirect Effects				
	Path coefficient (t -Value, p)			
RI-> PC -> PH	**-0.111(2.017, 0.044)**			
SI-> D -> PH	**-0.052(2.003, 0.046)**			
RI-> D -> WB	**-0.076(1.962, 0.050)**			
RI-> PC -> WB	**-0.094(2.178, 0.029)**			
SI-> D -> WB	**-0.100(2.115, 0.034)**			
PC-> PH -> WB	**0.070(2.077, 0.038)**			
Total Effects				
	D (t -Value, p)	**PC**(t -Value, p)	**PH**(t -Value, p)	**WB**(t- Value, p)
CT	0.138(2.033, 0.038)	-0.120(1.968, 0.050)		
FI	0.145(2.047, 0.036)			
RI	0.291(3.460, 0.001)	-0.338(3.853, 0.000)	**-0.150(2.359, 0.018)**	**-0.202(3.581, 0.000)**
SI	0.383(4.320, 0.000)	-0.139(2.013, 0.046)	**-0.097(2.042,0.040)**	**-0.160 (2.731, 0.006)**
D			-0.135(2.003, 0.046)	**-0.290(2.816,0.005)**
PC			0.329(3.152, 0.002)	**0.350(3.652, 0.000)**
PH				0.214(2.539, 0.011)

Note: CT = Coronavirus Threats; D = Depression; FI = Financial Impacts; PC = Personal Control; PH=Personal Health; RI = Resources Impacts; SI = Social Isolation; WB = Well-Being

The current study hypothesises that the effects of the COVID-19 pandemic on workers' health and well-being are influenced by depression and personal control. In this regard, the current study findings indicate that personal control has a positive and substantial impact on workers' health and well-being, whereas depression has a negative and significant effect on workers' health and well-being. The findings show an indirect relationship (full mediation) between the effects of the COVID-19 pandemic (resources impacts and social isolation) and

workers' health and well-being via depression and personal control. As a result, this study showed that the effects of the COVID-19 pandemic on workers' health and well-being are fully mediated by depression and personal control (see Table 8).

Table 9 shows the final results of regression analysis and mediating analysis. These results supported some hypotheses and rejected the others in the study model.

Table 9-The Results of Hypotheses Testing

Hypothesis	Result
H1a: Coronavirus threats have a positive effect on depression.	Supported
H1b: Coronavirus threats have a negative effect on personal control.	Supported
H2a: Financial impacts have a positive effect on depression.	Supported
H3a: Resources impacts have a positive effect on depression.	Supported
H3b: Resources impacts have a negative effect on personal control.	Supported
H4a: Social isolation has a positive effect on depression.	Supported
H4b: Social isolation has a negative effect on personal control.	Supported
H5a: Depression has a negative effect on workers' perceived health.	Supported
H5b: Depression has a negative effect on workers' well-being.	Supported
H6a: Personal control has a positive effect on workers' perceived health.	Supported
H6b: Personal control has a positive effect on workers' well-being.	Supported
H7a: Workers' perceived health has a positive effect on their well-being.	Supported
H3d: Personal control mediates the relationship between resources impacts and workers' perceived health.	Supported
H3e: Depression mediates the relationship between resources impacts and workers' well-being.	Supported
H3f: Personal control mediates the relationship between resources impacts and workers' well-being.	Supported
H4c: Depression mediates the relationship between social isolation and workers' perceived health.	Supported
H4e: Depression mediates the relationship between social isolation and workers' well-being.	Supported
H1c: Depression mediates the relationship between coronavirus threats and workers' perceived health.	Rejected
H1d: Personal control mediates the relationship between coronavirus threats and workers' perceived health.	Rejected
H1e: Depression mediates the relationship between coronavirus threats and workers' well-being.	Rejected
H1f: Personal control mediates the relationship between coronavirus threats and workers' well-being.	Rejected
H2b: Financial impacts have a negative effect on personal control.	Rejected
H2c: Depression mediates the relationship between financial impacts and workers' perceived health.	Rejected
H2d: Personal control mediates the relationship between financial impacts and workers' perceived health.	Rejected
H2e: Depression mediates the relationship between financial impacts and workers' well-being.	Rejected
H2f: Personal control mediates the relationship between financial impacts and workers' well-being.	Rejected
H3c: Depression mediates the relationship between resources impacts and workers' perceived health.	Rejected
H4d: Personal control mediates the relationship between social isolation and workers' perceived health.	Rejected
H4f: Personal control mediates the relationship between social isolation and workers' well-being.	Rejected
H5c: Personal health mediates the relationship between depression and well-being.	Rejected
H6c: Personal health mediates the relationship between personal control and well-being.	Rejected

5. Discussion

The COVID-19 pandemic has decimated the global tourism industry and has had a significant detrimental impact on tourist workers worldwide. As a result, it is critical to investigate the consequences of this pandemic on tourism workers. This study aimed to analyse the effects of COVID-19 on Jordan's tourism workforce. The study's primary significance stems from its analytical insight into the perceived threats to workers as a result of the fear of the COVID-19 pandemic and how this affects their depression, personal control, personal health and well-being as a result of the fear of coronavirus threats, financial impacts, resources impacts, and social isolation. The researchers used a questionnaire survey to meet the study's objectives and suggested an integrated model (Figure 2) and multiple mediation relationships (Table 8), which included 18 supporting hypotheses. The first 12 projected hypotheses (H1a, H1b, H2a, H3a, H3b, H4a, H4b, H5a, H5b, H6a, H6b and H7a) represented direct effects, while the remaining six (H3d, H3e, H3f, H4c, H4e and H6c) indicated the mediating roles of depression and personal control in the relationship between the coronavirus impacts (resources impacts and social isolation) and outcomes (personal health and well-being).

As suggested by hypotheses related to the direct influence of coronavirus threats (i.e., H1a and H1b), the findings indicated that coronavirus threats were a significant and positive predictor of depression (H1a) and a significant and negative predictor of personal control (H1b), meaning that hypotheses H1a and H1b are supported. Financial impacts, as predicted by H2a, significantly and positively affected depression (H2a) but insignificantly affected personal control (H2b), which means that hypothesis H2a is also supported and H2b is not supported. Moreover, as predicted by the hypotheses related to the direct effect of resources impacts (i.e., H3a and H3b), it was found that resources impacts were a positive predictor of depression (H3a) and a negative predictor of personal control (H3b), which means that hypotheses H3a and H3b are proven. The results also showed that social isolation was a significant and positive predictor of depression (H4a) and a significant and negative predictor of personal control (H4b), as predicted by the hypotheses related to the direct effect of social isolation (i.e., H4a and H4b), implying that hypotheses H4a and H4b are supported. Consequently, these findings are consistent with earlier research (Lin et al., 2019; Brooks et al., 2020; French et al., 2020; He & Harris, 2020; Kim et al., 2020; Li &Huynh, 2020;

Mamun et al., 2020; Murray, 2020; Nisar et al.,2020; Ozdemir, 2020; Radic et al., 2020; Teng et al., 2020; Zhang et al., 2020; Usher et al., 2020; Aguiar-Quintana et al., 2021; Chen & Chen, 2021; Khan et al., 2021; Yan et al., 2021).

According to H5a prediction, depression has a negative impact on personal health. These findings confirm the current body of knowledge (Wells et al., 1989; Price et al., 2002; Ghubach et al., 2010; Brooks et al., 2020; French et al., 2020; Khan et al., 2021). In line with the hypothesis's predictions related to the direct effects of depression on well-being (H5b), the findings revealed that depression had a negative and substantial influence on well-being. The study's findings also bolstered the views of the previous studies (Wells et al., 1989; Price et al., 2002; Ghubach et al., 2010; Teng et al., 2020; Chen & Chen, 2021; Unguren et al., 2022).

Personal control positively affected personal health, as predicted by H6a. These findings lend support to the current body of literature (Price et al., 2002; Greenway et al., 2015; Li et al., 2020). In accordance with the prediction of the hypothesis associated with the direct effects of personal control on well-being (H6b), the results found that personal control had a positive and significant impact on well-being. These findings also supported earlier research (Price et al., 2002; Greenway et al., 2015; Cucinotta & Vanelli, 2020; Li et al., 2020; Chen & Chen, 2021). Personal health had an affirmative effect on well-being, as predicted by H7a. These findings are consistent with previous studies (Garnefski et al., 2001; Kraaij et al., 2002; Cucinotta & Vanelli, 2020). In light of the mediating roles of depression and of personal control in the relationship between coronavirus impacts (resources impacts and social isolation) and outcomes (personal health and well-being), because there have been relatively few studies that have used these two mediators, this study makes a significant contribution to the current literature. These findings were in line with earlier research conducted by Chen and Chen (2021), who confirmed that depression and personal control mediated the relationship between COVID-19 stressors and outcomes of hospitality workers' well-being.

The current study's findings, which included a sample of unemployed and furloughed tourism workers in Jordan, indicated that respondents had experienced significant financial and psychological suffering. This study also found that coronavirus threats, financial impacts, resources impacts and social isolation all contributed to depression and a lack of personal control, which were then associated with impaired health and well-being, with resources impacts having the strongest influence on negative outcomes. These results have significant theoretical and practical implications. The current study provides insight into how tourism workers felt during the COVID-19 related lockdown. As a consequence, according to the researchers, this is the first study to establish a measure of the effects of COVID-19 on personal health and well-being for tourism workers in Jordan and the mediating role of depression and personal control. The researchers used previous studies on

COVID-19 pandemic effects to develop a scale that has been shown to be accurate and comprehensive.

5.1 Theoretical implications

Layoffs and furloughs are common practices as workforce reduction strategies used by tourism firms during the crisis (Lee & Warner, 2005), despite the fact that the impacts of these methods on tourism workers are unknown. This study adds to the body of knowledge by elucidating the nature of the financial and psychological anguish experienced by laid-off and furloughed workers. The majority of respondents were found to be financially strained, socially isolated and severely depressed, resulting in poor well-being. Furthermore, both furloughed and unemployed workers were under financial stress, while unemployed workers were more depressed and socially isolated, leading to impaired health and well-being. These results were consistent with prior research that demonstrated that the effects of unemployment are not limited to financial troubles alone but also result in a loss of meaningful life and mental health issues for unemployed workers (Carriger, 2018; Brooks et al., 2020; French et al., 2020; Li et al., 2020; Murray, 2020; Teng et al., 2020; Zhang et al., 2020; Khan et al., 2021).

This study additionally addresses a gap in the literature by analysing the effects of COVID-19 from the perspective of workers. Previous tourism research has typically looked at the effects of a health or economic crisis, such as the 2003 SARS outbreak and the 2007–2008 recession. However, the majority of these studies have concentrated on the financial or operational consequences of the crisis at the business or market level (e.g., Chen et al., 2007; Zheng, 2014; Singh & Dev, 2015). Using stress process models as a foundation (Kahn, 1981; Pearlin et al., 1981), this study demonstrates a chain of adversity experienced by unemployed and furloughed tourism workers during the pandemic, demonstrating that coronavirus threats, financial impacts, resources impacts and social isolation have resulted in high depression, low personal control, and negative health and well-being outcomes for this group. Surprisingly, despite the study sample consisting of unemployed and furloughed tourism workers facing significant financial hardships, resources impacts were revealed to be the main stressor predicting these negative outcomes. On the contrary, the financial impacts were fairly minimal. These findings were unexpected and somewhat contrary to earlier research on job loss (Price et al., 2002; Wanberg, 2012; French et al., 2020; Kim et al., 2020; Mamun et al., 2020; Khan et al., 2021). The dominating impact of social isolation exhibited in this study clearly distinguishes the uniqueness of the COVID-19 pandemic and demonstrates the negative effects of lockdowns and their restrictions. Several psychologists and public health specialists have issued warnings about the dangers of social isolation (Li & Huynh, 2020; Radic et al., 2020; Usher et al., 2020; Chen & Chen, 2021; Nisar et al., 2021). This study provides significant empirical evidence that imposed isolation was a negative experience that resulted in immediate mental

and physical health problems. Nonetheless, Jordan's government assistance programmes, such as unemployment compensation and stimulus checks, may have helped respondents' financial hardships to some extent.

Another key result of this study was that having high levels of personal control can help buffer negative outcomes, which is consistent with current research on the value of worker psychological capital (Hwang & Han, 2019; Tsaur, Hsu & Lin, 2019; Darvishmotevali & Ali, 2020). It was expected that the effects of COVID-19 would result in a loss of personal control. This result was consistent with prior research that demonstrated that COVID-19 reduced personal control among employees (Lin et al., 2019; Chen & Chen, 2021; Unguren et al., 2022). Depression, on the other hand, was negatively impacted by coronavirus threats, resources effects, financial impacts and social isolation, indicating and explaining why social isolation was the most potent element in this specific chain of adversity. The findings of this study offer some insight into the impact of COVID-19 on tourism workers during the pandemic, which is connected with depression and personal control. Furthermore, this study contributes to the tourism industry literature by offering a conceptual model to investigate whether depression and personal control mediate important impacts in the relationship between the effects of the COVID-19 pandemic and workers' personal health and well-being.

5.2 Practical implications

The outcomes of this study show the psychological distress experienced by laid-off and furloughed tourism workers during the COVID-19 pandemic. Due to the effects of COVID-19, workers in the tourism industry reported poor health and well-being, high depression and limited personal control. Furthermore, nascent tourism professionals lacked strong self-efficacy, making them more vulnerable to the crisis. These results imply that the crucial sustainability of the tourism workforce may be jeopardised by a shortage of talent induced by the raised financial and psychological distress levels observed among tourism workers. Although both laid-off and furloughed workers were unpaid as a result of the pandemic, laid-off workers suffered greater negative consequences because they were more depressed and had poor levels of personal control and well-being, while furloughed workers are still employed, giving them more control and a better future outlook, and most of them continue to get medical benefits, which are extremely valuable during public health crises. Furloughs provide various advantages to workers, and can also help organisations cut recruiting costs during the recovery phase (Carriger, 2018). It is thus recommended that tourism enterprises adopt furloughs over layoffs when staff reduction measures are required to combat financial crisis in their firms.

The study's model might help tourism decision-makers evaluate the effect of the COVID-19 pandemic on workers. As a result, during a crisis, tourism organisations should give complete protection and attention to their workers. Moreover, the study's results show that to support tourism industry decisions, any factors that may result in the workers' exclusion due to the effects of the COVID-19 pandemic must be addressed quickly. Thus, the tourism industry's awareness must be raised in order to mitigate the detrimental impacts of the COVID-19 pandemic on workers. Furthermore, the results provide more information to remedy any flaws, generate more positive experiences, and take remedial efforts to mitigate the effects of COVID-19 on workers by revitalising the tourism industry's activities.

6. Conclusion

The study found that COVID-19 had a direct and substantial impact on depression, personal control, personal health and well-being. The results mostly show that the COVID-19 pandemic has had a major impact on depression and personal control. This might be attributed to a sense of fear and instability during the spread of the pandemic. This result is consistent with previous studies, which show that people during this pandemic are also seeing a significant decrease in income as unemployment rises. Furthermore, the results suggest that the COVID-19 pandemic has a major impact on workers' personal health and well-being. In this context, it is concluded that the effects of the pandemic have resulted in high depression and low levels of personal control, personal health and well-being. On the other hand, the findings show that depression and personal control significantly impact personal health and well-being. These findings are consistent with prior studies that found that growing degrees of depression and poor levels of personal control were strongly associated with a greater risk of impaired health and well-being during the COVID-19 pandemic. Furthermore, the study results confirmed that depression and personal control have a direct and significant influence on personal health and well-being, as well as an indirect link (partial mediation) between the effects of the COVID-19 pandemic and personal health and well-being.

7. Limitations and Future Research

The current study highlights a few research limitations and makes some suggestions for further research. There were a few limitations faced by the study, such as the non-probability sampling approach. The main reason for this is that it was impossible to reach workers due to shutdown limitations during the pandemic. Job loss is associated with many different meanings in life for different people, such as a loss of meaning in life or a loss of relationships or status, and so the consequences of job loss may differ among workers. The current results are heavily reliant on the unique conditions surrounding the tourism environment in regard to the influence of COVID-19, given the worldwide context at the time the data was gathered. However, the COVID-19 environment is always evolving and changing.

This study focused on the immediate effects of the pandemic on tourism workers. However, longitudinal research is still needed to uncover the long-term effects of the pandemic and to see how the results evolve and change as a result of the

pandemic, based on how the tourism sector succeeds or fails in handling the situation and how workers' behaviour evolves and changes in response to the crisis. The study investigated the impact of the COVID-19 pandemic on workers' personal health and well-being by examining the roles of depression and personal control as mediators. Future research may seek to broaden the suggested framework by incorporating other mediators and outcomes. While the study's unique results compared to earlier research are linked to some pandemic effects, further qualitative investigations may be undertaken to show other outcomes or provide more reasons for the overall impact of COVID-19 on tourism workers. However, this study only looked at the financial hardship caused by job loss. Future studies should include investigating the effects of job loss in a more comprehensive manner to better understand the total influence of all other factors. Further study could be conducted to monitor the quality of re-employment for laid-off tourism workers, as this is a critical issue. The study invites academics to investigate tourism organisations' perspectives on reducing the negative impact of the COVID-19 pandemic on workers. As a result, further studies are needed to confirm the current study's results. Finally, more research is also needed to determine the extent to which the results can be replicated in different contexts.

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