

Covid-19 Impact on Aviation Industry Employees: An Industrial/Organizational Perspective

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Abstract

The present literature review aims to analyze the impact of COVID-19 on job performance and mental health in employees in the aviation industry, especially pilots from an organizational industrial perspective. In a study aimed at identifying the implications of COVID-19 on pilots' mental health, Flynn et al. found that, by January 2021, airlines eliminated thousands of jobs while 24 airlines ended operations. In surveys of the general population of pilots, it was identified that 13% of people had "severe distress" due to the pandemic. Whereas, in two aviation-focused surveys, between 40% and 66% of pilots agreed or strongly agreed that their mental health had worsened since the COVID-19 pandemic. Compared to previous patients with severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), more patients with COVID-19 presented mental health symptoms in the acute phase of the disease. In contrast, about 10% of COVID-19 patients appeared to have chronic or "long-lasting" symptoms (Flynn et al., 2022, p.1). The findings and information reviewed allow us to establish that no organizational development in many aviation industries in the world promotes their employees' mental health, psychological well-being, and crisis management. Industrial/organizational psychologists promote prevention for optimal employee performance in any organization, so the intervention of such health professionals is recommended to create an optimal work environment in the aviation industry.

Keywords: COVID-19, aeronautical industry, industrial-organizational psychology

Introduction

The impact of the COVID-19 pandemic led to great economic losses in various industries, with aviation being one of the most affected. The pandemic crisis

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not only affected one of the largest pillars of the global economy, the aviation industry, but also the psychological well-being, emotional health, and job security of employees in this sector. The purpose of this literature review is to illustrate the impact of COVID-19 on employees in the aviation industry. The literature search was carried out using various databases such as Database of Dissertations from the Albizu University Puerto Rico Campus & Miami Campus, ScienceDirect, Google Academic, Sage Journals and Taylor Francis Online among others, and included approximately 4 years, the time in which COVID-19 emerged and spread, worldwide. The following descriptors were used in the search, pilots, aviation industry, psychological well-being of pilots, mental health of pilots, among others analogous. Finally, it is concluded that airlines should incorporate prevention strategies, particularly in pilots, that promote the mental health, psychological well-being and crisis management of their employees with a preventive approach to situations such as COVID-19, considering the professional intervention of the organizational industrial psychologist for such purposes.

Impact of COVID-19 on the aviation industry

Coronavirus disease (COVID-19) is described by authors such as Medeiro & Figueredo (2022) explaining that "it was first identified in China in December 2019 and in just over 3 months it spread to more than a hundred countries, caused by SARS-CoV-2". According to Chauhan (2020, p.335; World Health Organization, WHO, 2019) "the World Health Organization (WHO) declared the outbreak of a public health emergency of international concern on January 30, 2020 and subsequently recognized COVID-19 as a pandemic on March 11, 2020." On the implications of COVID-19, Medeiros de Figueiredo et al. (2022, p. 355), "establish that it is a disease without specific pharmacological treatment and with poorly understood mechanisms of transmissibility and lethality".

It should be noted that the rapid spread of COVID-19 has had an impact on airlines taking immediate measures not previously foreseen. The measures implemented significantly impacted all operations of the aviation industry, especially passenger transport, with the World Health Organization (WHO) being the main entity that declared the COVID-19 virus a global pandemic. In this regard, authors such as Arrellana et al. (2020, p.2; Chinazzi et al. 2020) postulate that, "one of the first measures adopted by most governments after the World Health Organization (WHO) declaration was associated with international travel bans and border control

actions." According to Arellana et al. (2020; p.2; Musselwhite, 2020) "the main cause of the unstoppable spread of COVID-19 is our hypermobile society". Arellana et al. (2020; p.2; Ruiz & Khan, 2020) state that "globalization and systems of mass transportation, especially transoceanic planes and cruise ships, easily expose people to human-to-human transmission of viruses."

Evidently, the COVID-19 pandemic had a serious economic impact on the global aviation industry, which consequently revealed that airlines lacked strategies to deal with the pandemic. At the beginning of 2020, airlines had constant air traffic, especially in the tourism sector, which was considerably affected by COVID-19. About this matter Garaus & Hudáková, (2022; p.1; Madden, 2021) argue that "the COVID-19 pandemic generated a global loss in the tourism industry, which amounted to 935 billion dollars in the first 10 months of 2020". According to Garaus & Hudáková, (2022; p.1; International Civil Aviation Organization, 2021) "the international civic airport aviation organization reported a decline of 2.699 million passengers, resulting in a total airline revenue loss of \$371 billion."

Regarding the millionaire losses caused by COVID-19 in the tourism travel industry, Dube, Skare, Soriano & Porada Rochon argue that,

COVID-19 has had a devastating impact on the travel and tourism industry worldwide. The various destinations, sectors, and subsectors of the travel and tourism industry were negatively affected by the pandemic with varying magnitude (Dube, 2023, p.2; Skare, Soriano & Porada-Rochoń, 2021).

The impact of COVID-19 on the aviation industry significantly outpaced the 2008 financial crisis in the United States and Europe. This is how Dray & Schafer put it when they mention that,

According to an estimate by the Air Transport Association (IATA), the global aviation industry lost more than \$100 billion in 2020 alone, more than triple the losses caused by the 2008 financial crisis (Dray & Schafer, 2021; p.204,2020).

With the emergence of COVID-19 in the aviation industry, forecasts were made about the economic future of airlines. For example, Dray & Schafer (2020, p.1) explain that "global revenue per passenger-kilometer (RPK) will be lower than pre-pandemic projected levels by more than 60% in 2020 and between 50% and 65% in 2021. Another forecast on economic revenues in the aviation industry as a result of COVID-19 is the one stated by the International Air Transport Association (IATA, 2021, p.1), according to the association it is "estimated that the industry's net losses will reach 47,700 million USD (net profit margin of -10.4%), an improvement compared to the 126,400 million USD of net losses estimated for 2020 (net profit margin of -33.9%)". COVID-19 paralyzed the aviation industry compared to other previous crises that this sector had faced. Dube, Abu-Rayash & Dincer believe that, The impact of COVID-19 far exceeded previous experiences with other aviation crises, such as SARS 19. The pandemic led to a decrease in air mobility in many parts of the world, for both civilian and military flights (Dube, 2023; Abu-Rayash & Dincer, 2020).

From the perspective of Dray & Schafer (2021, p.204) "the impacts on aviation-dependent industries, such as tourism, are equally large, the International Civil Aviation Organization (ICAO) estimated that the global number of scheduled passengers in 2020 was reduced by 60%". It is important to mention that with this scenario, the federal government of the United States intervened with airlines by adjusting slow the spread of COVID-19 by restricting international travel flights. The spread of COVID-19 was so rapid that airline restrictions on passenger travel were not long in coming. In this regard, Elias adds that, "In the face of the rapid spread of COVID-19, in late January 2020, the U.S. federal government's initial response focused on restrictions on international travel, to and from countries that experienced outbreaks that began. Restrictions were imposed on travelers from China. Restrictions were later expanded to include travelers from Iran, Europe and then Brazil. In addition, the State Department issued a global health advisory, urging U.S. citizens to avoid all international travel. The European Union also imposed restrictions on travelers from the United States, which remain despite having eased restrictions on travel to Europe from other countries (Elias, 2020, p.1)".

Following COVID-19 Travel Restrictions in Global Aviation, Quach et al. Khanh et al. emphasize that, in March 2020, when the world began to experience the global spread of COVID-19, a large cluster of cases was detected arising from a flight that arrived from London, UK to Hanoi, Vietnam at 5.20 am on March 2 (flight VN54).

A 27-year-old business class passenger who developed symptoms on board and tested positive for SARS-CoV-2 four days after his arrival in Vietnam on March 6 was identified as an index case. In-depth epidemiological investigations revealed that in-flight transmission during the 10-hour duration of the flight was the most likely route of transmission (Quach et al., 2021, p.2; Khanh et al., 2020).

According to Bielecki et al. (2020), the transmission of COVID-19 is possible on flights. However, the risk of transmission is estimated at one case for every 27 million passengers, which is considered very low. According to these authors, there are some models that predict minimal risk, without considering human behavior and variations in airline procedures.

Employee well-being in the aviation industry during COVID-19.

The impact of COVID-19 on the global aviation industry was a momentous one in its history that significantly affected not only its economy but also influenced the personal and professional lives of many employees. The uncertainty of the workers of this sector on the loss of their jobs among other marginal benefits unexpectedly due to the emergence of the new pandemic left unsuspected results. However, one of the worst effects of COVID 19 on employees in the aviation industry was the psychological impact it caused. According to Vouro & Bor (2021, p.1) "the COVID-19 pandemic had a significant impact on the aviation industry causing the loss of jobs, licenses, interruption of careers and training trajectories, and uncertainties among airline employees." Therefore, it is of great importance for airlines to identify the consequences that COVID-19 represents on their operations and mainly on the losses of marginal employee benefits in the aviation industry.

Regarding the aftermath of COVID-19 on airline operations, the Civil Aviation Authority says that, due to the nature of the crisis and the failure to identify potential hazards, the aviation industry will face challenges never experienced before. The operating environment designed to prevent operators from becoming infected with COVID-19 had numerous effects such as: reduced staffing, increased working hours for those who remained on duty, extended periods between competency checks, limited training opportunities, or training delivery changes due to travel restrictions, reduced levels of recent experience, operation under multiple exemption, and new and unknown procedures (Civil Aviation Authority, 2021 pp.1-

2). According to Sobieralski (2020, p.2), "the survival of an airline during and after these recessions is usually related to the airline's business model".

Work stress in the face of COVID-19

Another impact of COVID 19 on the mental health of employees in the aviation industry was the work stress they were subjected to during the pandemic crisis. Work stress is one of the worst enemies for physical and mental health and not all people have effective coping strategies to prevent its consequences.

Regarding the work stress caused by COVID-19 in employees in the aviation industry, there are studies that show how it influenced their work performance. To investigate how work stress affected employee performance in the aviation industry, Wicaksono et al. conducted a study with the purpose of observing the work stress generated by the impact of the COVID-19 pandemic on the productivity of aeronautical engineering employees. 65 questionnaires were distributed to collect the data sample in the study. They found that work stress and COVID-19 stress parameters had a simultaneous effect on employee productivity. The COVID-19 parameter was more significant than work stress in affecting productivity. The linear regression model showed $R^2 = 68.1\%$, which meant that the model reasonably fit the data. The analysis also showed that the model met the requirements of regression, normality, and randomness. With the aim of maximizing research, they created mitigation activities to minimize any risk of work stress and COVID-19 contagion that significantly affected employee productivity (Wicaksono et al., 2020).

On the other hand, to identify work-related stress in employees of military units of the air force, Kotoulas et al. conducted a study to assess the responsiveness and validity of depression, anxiety, and stress in a representative cohort group of Hellenic military personnel using the short version of the Greek military version of the Depression-Anxiety-Stress Scales-21 (DASS-21). To this end, they identified a total of 158 participants who were surveyed using an electronic version of the selected structured questionnaire. The anonymous electronic questionnaire included a sociodemographic section and the DASS-21 scale section. In September 2020, the questionnaire was distributed via an intranet network to military personnel of the Hellenic Tactical Air Force Units.

During this period, according to the researchers, the government had restrictive measures related to COVID-19 in place. At the psychometric level in the military population, the DASS-21 survey showed a positive result. Age, sex, and medications achieved statistically significant correlations with anxiety ($p < .05$). Intercorrelations between the DASS-21 statements showed that people with low-level depression also experienced some degree of stress. Factor analysis confirmed the reliability and validity of the questionnaire. They concluded that the low levels of depression and stress in the military population demonstrated the importance of periodic monitoring of the psychometric items of the DASS-21 subscales and in the design and implementation of psychological prevention strategies, especially during current and future health crises (Kotoulas et al., 2023)

COVID-19 also affected the work motivation of crew members due to the high levels of anxiety and stress it produced in employees in the aviation industry. For example, Jayawardana and Abdul-Cader explain that the Covid-19 pandemic increased the health risk and negatively affected the occupational safety of cabin crew. This caused anxiety and stress, affecting employee motivation. "It is vital to ensure that cabin crew are motivated for their mental and physical well-being. This is important to maintain the smooth running of the airline's operations" (Jayawardana & Abdul-Cader, p.197, 2023).

Regarding the high-stress levels employees in the aviation industry faced because of COVID-19. Regarding the high levels of stress faced by employees in the aviation industry as a result of COVID-19.

The COVID-19 crisis exposed all flight crews, their family members, and passengers to particularly high psychological stressors, such as: increased workload due to intensive operations, emergency operations, flight operations, or situations; change in cooperation and team climate due to preventive measures; increased risk of infection due to contact with potentially infected passengers on the flight or with cockpit/cabin surfaces at the airport; additional workflows and work processes by handling infected passengers or crew; long and irregular work schedules, reduced rest opportunities, and potential fatigue, combined with a difficult situation caring for children at home; home quarantine for those infected or under strong suspicion; job insecurity, loss of income, and possible loss of employment (Reuter et al., 2020, p.1).

Undoubtedly, employees in the aviation industry suffered high levels of stress during the COVID 19 emergency due to the fear of being infected, and present and future job instability. However, one of the greatest fears to which these employees were exposed was the fear of losing their lives. This is stated by the Aviation Security Advisory Committee when it states that, as essential workers, the aviation workforce has been subject to extreme stress during the COVID-19 pandemic. Workers in the aviation ecosystem have been exposed, infected with the coronavirus, and a significant number have lost their lives. Three (3) important considerations influenced by COVID-19 weigh on the aviation workforce: their jobs, their health, and their future. (Aviation Security Advisory Committee, 2020, p.1).

The communication factor in the face of COVID-19 in the aviation industry

The aspect of communication in the face of the COVID-19 crisis in the airline industry was addressed through the study developed by Charoensukmongkol & Suthatorn. These researchers developed a study, with the aim of verifying the quality of vertical communication implemented by the industrial management of airlines and identifying if it reduces the perceived job insecurity of flight attendants during the COVID-19 pandemic, developed a partial least squares structural equation model and an online questionnaire to collect data. The sample consisted of 322 flight attendants of five (5) domestic airlines based in Thailand. The results supported the negative association between the quality of vertical communication and perceived job insecurity. This association was partially mediated by the perceived ambiguity of the role when considering the moderating effect of perceived organizational support on the direct link between the quality of vertical communication and perceived job insecurity. The quality of vertical communication only had a negative association with perceived job insecurity among employees who exhibited high levels of organizational support. For those who exhibited low levels of perceived organizational support, the quality of vertical communication did not have a negative association with perceived job insecurity (Charoensukmongkol & Suthatorn, 2022).

Prevention Strategies in the Aviation Industry to Face the COVID-19 Crisis

In the past, the global aviation industry faced crises, although not with the same precedents and consequences of COVID-19. The COVID-19 pandemic crisis leads us to reflect on the need to establish strategies to avoid the collapse of this industry and prevent the suffering of the employees who work in it. Both physical and mental health are essential for the emotional and psychological well-being of employees in the airline sector. Therefore, it is necessary to implement prevention strategies to face any other crisis in the future in an assertive and safe way for employees.

As revealed by Paraschi, Panagopoulos & Fragkogianni, (2024, p.1; Sun et al. 2022) "the COVID-19 pandemic may have had the most devastating effects yet; however, crises are not uncommon for the airline industry." It is therefore pertinent that the senior management of airlines implement preventive strategies in the face of crises such as COVID-19, such as the development of an empathetic work culture where employee job security is strengthened. Considering the importance of work culture and safety climate in personnel, Byrnes et al. conducted a study with the aim of identifying the impact of the COVID-19 pandemic on the culture and safety climate of the flight training organization at Embry-Riddle Aeronautical University (ERAU). Through a longitudinal study between 2018 and 2021, it was found that the variables of culture and safety climate were affected during the pandemic. The results of the research showed that the leadership of the flight instruction program was able to mitigate and adjust safety policies and procedures to improve culture, safety climate, and ensure continuous accident-free performance (Byrnes et al., 2021).

The importance of establishing a plan of prevention strategies in the face of crises such as COVID-19 is described by Paraschi et al. when they announce that infectious diseases such as SARS 2003; H1N1, 2009; MERS, 2015; Ebola, 2014 and Zika, 2014, 2016), terrorist attacks, especially the September 11 attack on the World Trade Center, the 2008 economic and financial crisis, the 2011 Fukushima nuclear meltdown, the 2015 migration crisis, and the growing climate crisis highlight the need to develop crisis management strategies capable of safeguarding the survival and sustainability of airlines (Paraschi et al., 2024, p.1).

In countries such as Spain, the impact of COVID-19 on employees in the aviation industry made it clear that organizational strategies must be identified by senior

airline management to prevent psychological distress in the face of unexpected crises such as the COVID-19 pandemic. On this subject, Alaminos Torres et al. carried out a study with the aim of evaluating the psychological distress of Spanish airline pilots, a group of professionals who, as a result of the Covid-19 pandemic, went through an unprecedented employment situation. To collect the data, they administered the General Health Questionnaire-12 (GHQ-12). A total of 342 questionnaires were obtained. The age group with the highest number of respondents was 41 to 50 years old. They evaluated the psychometric properties of the instrument with an exploratory factor analysis that revealed a one-dimensional structure that explained 59.23% of the variance. The total score of the GHQ-12 standard was 4.54 ± 3.31 , very close to the cut-off point established to determine psychological distress. The score increased among the unemployed and among surplus pilots compared to those whose employment status was relatively normal. Reliability, measured by total Cronbach's alpha, was greater than 0.80 of each in all the work states considered, which is considered adequate according to Kline (2016). The results showed the convenience of carrying out periodic evaluations of the psychological distress of the pilots in order to implement effective measures to ensure their psychological and socio-emotional well-being (Alaminos Torres et al., 2021).

One of the most dramatic impacts of COVID-19 on employees in the aviation industry was the factor of job insecurity, which affects the lifestyle, family stability, and mental health of these employees. This is how Laovoravit et al. explain it when they investigated the impact of job insecurity on the mental health of Thai Airways flight attendants during the COVID-19 disruption. They investigated how this population struggled day by day to regain satisfaction with life during the indefinite suspension of all scheduled flights. In addition, a year after the airline's announcement to suspend all air services, they measured the development of psychological distress. They used the GHQ-12 (General Health Questionnaire-12), a self-administered instrument, which was adopted to assess the psychological well-being of flight attendants.

According to the researchers, the sample in the study was composed of five (5) male and seven (7) female flight attendants who obtained the highest scores, indicating worse conditions between 9 and 11 of the total scores of 12, who were selected for in-depth online interviews in February 2020 and a year later in January 2021. The results showed psychological problems, tensions caused by prolonged stress that could lead

to a decrease in safety-related performance when flight attendants must perform safety-critical functions in emergencies. The study concluded that flight attendants should undergo examinations by mental health specialists before resuming regular operations on commercial flights (Laovoravit et al., 2021).

The impact of COVID-19 on employees in the aviation industry in terms of their psychological and socio-emotional well-being should not surprise us in terms of a pandemic crisis that was not thought of in the labor scenario in this industry. However, there are several prevention strategies that can help improve mental health in times of crisis in employees in this sector and that airline management should implement as part of their organizational development.

Cahill et al. (2020) highlight that 'Flight Safety Foundation, following a preventive and self-management approach, developed a guide to support the management of the wellbeing and resilience of aviation professionals during and after the COVID-19 crisis. The guide invites aviation professionals to consider four (4) key questions about well-being: how do I feel? how do I cope? what am I going to do? what am I doing? Based on the biopsychosocial model of health and well-being, the guide proposes the use of specific self-management strategies. These refer to six (6) basic behaviors belonging to the three (3) pillars of well-being. The selection of these behaviors follows previous research related to pilot stress management.

Regarding the mental health of pilots who, consistently due to the nature of their job, are subjected to different types of tests, it is essential to understand how the COVID-19 crisis affected their physical and mental health. The importance of mental health is the first requirement that a pilot must have in order to fly. On this matter, Carroll (2021) states that airlines, in their fight to get planes flying again, are overlooking the mental health and well-being of pilots and other aviation workers. Many aviation workers suffered from anxiety, stress, and depression during COVID-19 lockdowns. These workers expressed that they feel discouraged from acknowledging problems or seeking help, which creates potential safety risks and health issues.

Regarding the anxiety caused by COVID-19, experts such as Shin et al. investigated how psychological anxiety caused by COVID-19 influenced self-esteem and job satisfaction in 201 airline cabin crew. The questionnaire developed by these researchers identifies psychological anxiety factors among cabin crew as a result of

COVID-19. In the research carried out from February 15 to April 15, 2021, it was found that salary reduction, career stagnation, social perception, and job insecurity had a significant effect on self-esteem and job satisfaction (Shin et al., 2022).

As a strategic recommendation to strengthen the mental health of pilots in times of crisis, Kwon says that, in order to manage better care in a pilot's mental health, it is important to raise awareness about it and respond continuously. To do this, it is necessary to foster a safe and trusting culture in which mental health problems are discussed freely and resolved together without hiding them. It is important to encourage the establishment of a peer support program that is easily accessible and allows pilots to discuss their problems in full confidence (Kwon, 2021, p.64).

For the National Business Aviation Association (2022), mental health has always been a sensitive issue in aviation, because it generates fears that may reveal a possible condition that could lead to the suspension or revocation of a pilot's medical certificate. However, aviation professionals need to be open and honest about their mental well-being, especially in the COVID-19 environment, and to remember that there are science-based solutions for pilots and others to continue their careers after receiving treatment.

Relevance of Industrial Organizational Psychology in the Era of COVID-19

The impact of COVID-19 on employees in the aviation industry demonstrated the need to incorporate, in addition to aviation psychologists, organizational industrial psychologists as experts in organizational development to train human resources on what strategies to implement in unexpected situations, considering the labor diversity that works in the aviation industry. According to the American Psychological Association (APA, 2024), organizational industrial psychology specializes in deriving principles from individual, group, and organizational behavior and applying this knowledge to problem solving at work.

According to Caki (2023, p.148 and Hoyland & Aase, 2009) the aviation sector includes many groups of professionals, as well as little or no tolerance for errors due to the fact that even the smallest of errors could endanger the lives of staff and passengers. The aviation system is complex and is made up of human, technological, organizational and social dimensions. According to Caki (2023, p.148; and Jonge & Kompier, 1997) "pilots flying large aircraft carrying hundreds of people and cabin

crew should be assessed in detail for both physical and psychological problems". As far as COVID-19 is concerned, Yilmaz explains that the COVID-19 epidemic causes a professional shock in the professional development of people who want to direct their careers. In this regard, occupational shock can be defined as destructive and extraordinary events caused by factors beyond the individual's control and that trigger a deliberate thought process about one's own career (Yilmaz, 2020).

From his point of view, Caki (2023, p.148; Jonge & Kompier, 1997) states that "instead of physical demands, mental and emotional demands have come to occupy a prominent place in the working lives of many employees". While Moralo & Graupner (2022, p.2; Volini et al. 2021) add that "COVID-19 also brought with it the adoption of new knowledge and skills, thus completely rethinking the future world of work". Hence the relevance of organizational industrial psychology emphasized by Moralo & Graupner; p.2, 2022; Health Professions Council of South Africa, HPCSA, 2019) by stressing that, "the responsibility for addressing psychological problems within South African organizations lies with industrial psychology professionals". Along the same lines, Chinyamurindi et al. (2021, p.2; South African Department of Health, 2012) indicate that A psychologist I/O is seen through the South African Health Professions Act as a person who helps adults adapt to work-related problems by applying the principles of psychology.

Considering the importance of the scientific knowledge of aviation psychologists and the scientific knowledge of organizational industrial psychologists in the world of work, efforts can be joined between both branches of psychology to reduce the risks that employees in the aviation industry may suffer in the face of crises such as COVID-19.

In this regard, the usefulness of aviation psychology and organizational industrial psychology to use prevention strategies against COVID-19 is highlighted by Mishra; Balog explained that aviation psychology is the branch of industrial and organizational psychology that studies the behavior of people in the aviation industry. It involves the application of principles, theories, methods, and facts of industrial and organizational psychology in aviation work. It focuses on human factors and their impact on the aviation sector (Mishra, 2022, Balog, 2015).

It is important to underline that as a branch of psychology applied to the world of work, organizational industrial psychology would bring great benefits to the

aviation sector through scientific practices in times of crisis such as COVID-19. According to APA (2024), organizational industrial psychologists are practical scientists who are experts in the design, execution, and interpretation of psychology research who apply their findings to help address human and organizational problems in the context of organized work. In the era of COVID-19, organizational industrial psychologists can contribute to improving the quality of work life through preventive plans that reduce occupational risks in the physical and mental health of employees in the aviation industry. According to the APA (2024), psychologists can design and optimize work and quality of work life, guide employees, and identify training and development needs.

Significant Findings on the Psychological Well-Being of Employees in the Aviation Industry

The studies identified on the impact of COVID 19 on the psychological well-being of employees in the aviation industry confirm the need to develop strategies that promote mental health and crisis management (programs for the management and prevention of mental health problems) in situations such as the COVID -19 pandemic. Airlines should contact organizational industrial psychologists who can be involved in training programs for human resources. These professionals can offer quality of work life strategies to their employees in the face of the uncertainty and crisis that may arise from the COVID-19 pandemic onwards in the workplace of the aviation ecosystem. Chinyamurindi et al. (2021, p.1) point out that, "the coronavirus disease (COVID-19) pandemic affected the world of work. It is necessary to understand this impact on the positioning of the roles of professional psychologists in response to the adaptation to the new normal." Regarding the relevance of the discipline of organizational industrial psychology to promote occupational health in crisis situations in the face of the impact of COVID-19 on the aviation industry, researchers such as Chinyamurindi et al. express that,

In the wake of the COVID-19 pandemic, there are calls within the literature for nuanced disciplinary studies that explore the impact of the pandemic. One of these disciplines is Industrial Organizational Psychology, a discipline considered not only important for the development of people but also of organizations' (Chinyamurindi et al., 2021, p.1).

It has been demonstrated that employees in the aviation industry are one of the most vulnerable populations in the face of crises such as COVID-19. Hence the relevance of identifying the multiple interventions of the organizational industrial psychologist in the aviation industry.

Extended summary

Problem: We present a literature review that analyzes the impact of COVID-19 pandemic on aviation industry employees (i.e., pilots) and the importance of Industrial Organization (I/O) Psychology within this industry.

Method: A literature review was performed using various databases such as, Dissertations Data Bank from Albizu University, San Juan and Miami campuses, Science Direct, Google Academic, Sage Journals and Taylor Francis Online, among others, and included approximately 4 years (2019-2022), time in which COVID-19 arises and spreads worldwide. The following descriptors were used in the search, pilots, aviation industry, psychological well-being of pilots and mental health of pilots.

Results: COVID-19 had an extreme impact on the global aviation industry across as demonstrated in multiples research articles. As essential workers, the aviation workforce, especially pilots, has been subject to extreme stress during the COVID-19 pandemic. Workers in the aviation ecosystem have been exposed, infected with the coronavirus, and a substantial number have lost their lives. Three (3) important considerations influenced by COVID-19 weigh on the aviation workforce: their jobs, their health, and their future (Aviation Security Advisory Committee, 2020). Brynes et al. (2021) conducted a study that investigated the impact of the COVID-19 pandemic on the culture and safety climate of the flight training organization at Embry-Riddle Aeronautical University. It was a longitudinal study between the years 2018 to 2021. They found that culture and safety work climate variables were affected during the pandemic. The research results showed that flight instruction program leadership was able to mitigate and adjust safety policies and procedures to improve culture, safety climate, and ensure continued accident-free performance.

As essential workers, the aviation workforce, particularly pilots, has been subject to extreme stress during the COVID-19 pandemic. Workers in the aviation ecosystem

have been exposed, infected with the coronavirus, and a considerable number have lost their lives. The COVID-19 crisis exposed all flight crews, their family members and passengers to particularly high psychological stressors, such as: increased workload due to intensive operations, emergency operations, operations or extreme flight situations; change in cooperation and team climate due to preventive measures; increased risk of infection due to contact with potentially infected passengers on the flight or with surfaces in the cockpit at the airport; additional workflows and work processes by handling infected passengers or crew; long and irregular working hours, reduced rest opportunities and potential fatigue, combined with a difficult situation to care for children at home; home quarantine for those infected or under strong suspicion; job insecurity, loss of income and possible loss of employment. These stressors generated psychological stresses, such as anxiety or existential fears, which in turn could negatively affect the crew's ability to safely exercise their license privileges (Reuter et al., 2020).

Moreover, according to an estimate by the International Air Transport Association (IATA), "the global aviation industry lost more than \$100 billion in 2020 alone", more than triple the losses caused by the 2008 fiscal crisis. Global revenue per passenger-kilometer (RPK) was lower than project levels before the pandemic by more than 60% in 2020 and between 50% and 65% in 2021 (Draw and Schafer, 2021). The COVID-19 outbreak was the first pandemic to have a widespread impact on air travel on passenger aircraft. Despite considerable efforts to study risks and develop airport-specific response plans, the federal government lacked a comprehensive plan to respond to outbreaks of communicable diseases across the aviation sector. Without doubt, COVID-19 influences the, the goal of I/O psychology is to increase employee productivity and well-being. To achieve this there are two (2) approaches: industrial and organizational. The industrial approach (the "I" in I/O psychology) is aimed at determining the competencies needed to perform a job, equipping the organization with employees who have such competencies, and augmenting them with training. The organizational approach (the "O" of I/O psychology) creates an organizational structure and culture that will motivate employees to perform well, give them the information they need to do their jobs, and provide conditions that are safe and result in a pleasant and satisfying work environment (Aamodt, 2010). It is demonstrated that employees in the aviation industry are one of the most vulnerable populations in the face of pandemic crises such as COVID-19. Hence the relevance of identifying and provided interventions by the organizational industrial

psychologist in the aviation industry is truly relevant. According to Hwan (2021) psychological stress reduces work performance and threatens aviation safety.

The pilot needs mental health management during the COVID-19 pandemic, but psychological support is weak. To better manage a pilot's mental health care, it is important to raise awareness about it and respond continuously. To do this, it is necessary to foster a safe and trusting culture in which mental health issues are freely discussed and resolved together without concealing them. It is important to encourage the establishment of a peer support program that is easily accessible and allows pilots to discuss their problems in full confidence (Hwan, 2021). Mental health has always been a sensitive issue in aviation because it raises fears that revealing a possible condition in the pilot could lead to the suspension or revocation of a pilot's medical certificate.

However, it is extremely important for aviation professionals to be open and honest about their mental well-being, especially in the COVID-19 environment, and to remember that there are science-based solutions for pilots and others to continue their careers after receiving treatment (National Business Aviation Association, 2022).

Discussion

Multiple studies show in this literature review, the impact of COVID 19 on the psychological well-being of employees in the aviation industry, and confirm the need to implement strategies, which promote mental health and crisis management in situations such as the COVID-19 pandemic (such as, employee programs to diminish mental health problems).

Airlines should identify organizational industrial psychologists who can intervene in human resources training programs. These professionals can offer quality of working life strategies to their employees in the face of the uncertainty and crisis that may arise from the COVID-19 pandemic onwards in the workplace of the aviation ecosystem.

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