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Psychological Processes of Cabin Crews and the Effect of Burnout on Aviation

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Abstract: In recent years, burnout situations have been observed in the aviation sector, which has become a very popular field, as in all professions. It is known that these burnout situations reduce and negatively affect the performance of cabin crew. These negativities can cause some accidents during the flight. In order to prevent this situation, regular psychological examinations are carried out for cabin and cockpit personnel. According to the results, the psychological and burnout status of the personnel is determined. These results show the airline company where the health status of the personnel is heading. In line with this study, the psychological status of the airline personnel was examined and presented to you with surveys conducted on the personnel. The general screening model was used in the research. According to the research results, a 100-unit increase in the emotional exhaustion dimension of cabin crew members reduces psychological well-being behavior by 33%. In addition, a 100-unit increase in the personal accomplishment dimension increases psychological well-being behavior by 68.1%. On the other hand, desensitization has an effect on psychological well-being in cabin crew members.

Keywords: Cabin Crew, Aviation Psychology, Burnout Syndrome

JEL Classification: I10

1. Introduction

Aviation is one of the most crucial industries in terms of economic growth, influencing everything from global culture to logistics. After all, aviation provides the only fast and safe means of transporting people and goods to various parts of the world. However, the aviation industry faces numerous challenges concerning in-flight security. Crew members must handle a wide range of situations, including minor incidents involving passengers, bomb threats, and medical emergencies. Therefore, the training of crew members is of utmost importance to ensure the safety of both passengers and the crew.

Aviation companies like Turkish Airlines and Pegasus implement rigorous health examinations during their recruitment processes. Through these assessments, the suitability of a candidate for the company is determined. If a cabin crew candidate is found lacking in the required qualifications, they are not permitted to start the job. Any oversight in crew resource management that may arise in the future could lead to errors during flights, potentially resulting in accidents or incidents. For this reason, companies conduct very thorough screenings when selecting personnel. However, despite all the checks performed upon hiring, flight personnel can still experience burnout over time due to fatigue and stress. This can lead to disengagement and a loss of sense of belonging among employees. Cabin and cockpit crews who are sent for psychological evaluations may sometimes be unable to return to their duties. Conducting efforts to minimize such situations could provide significant support for the future of the aviation industry.

Quality cabin crew members who ensure flight safety are physically and mentally affected while maintaining this continuity (Tuna, 2019). When evaluated in the context of aviation safety, traveling long distances for extended periods and making this a regular part of life creates a jetlag effect on flight personnel. Cabin crew members may experience confusion in terms of time and space. As this becomes a daily routine, it can lead to what we might refer to as an occupational illness, causing burnout syndrome and negatively affecting the motivation of the cabin crew.

During burnout, an individual's physical and psychological energy can significantly decrease. If this energy deficiency persists for a long period, individuals who initially felt energized and positive when they started working may eventually develop serious physical issues. These individuals are generally those who strive to perform their work in the best or most perfect way, have a strong desire to succeed, seek recognition from their superiors, excel in their professional life, set high goals, and are always in pursuit of happiness. Individuals who work late into the night and are exposed to the draining atmosphere of work life may start to show physical signs of burnout after a certain period (Günay, 2016).

2. Conceptual Framework

Aviation psychology is a branch of industrial and organizational psychology that studies the behavior of individuals in the aviation industry. It involves the application of the principles, theories, methods, and facts of I-O psychology in aviation work. It primarily focuses on human factors and their impact on the aviation sector. Aviation psychology

includes the application of human psychology principles and structures to the aviation field (Balog, 2015). The goal of aviation psychology is to provide safe, effective, and efficient aviation services. To promote aviation psychology globally, the Aviation Psychology Association (AAP) was established in 1964. The EAAP, founded in 1956, provides a forum for aviation psychology professionals. It supports and guides aviation authorities. Global aviation activities are regulated by the ICAO, which was established in 1944 under the provisions of the Chicago Convention. It sets international standards and recommended practices for civil aviation. The civil aviation industry plays a vital role in global economic activities, tourism, and development.

2.1. Concept of Aviation Psychology

Aviation psychology is a field that examines the psychological state of personnel working in the aviation environment. This process encompasses all aviation personnel, including pilots, cabin crew, and air traffic control staff. The aviation environment is influenced by a range of factors such as high stress, constantly changing working hours, and physical and mental challenges. These factors can affect the psychological state of the personnel. Aviation psychology is a crucial component of flight safety. The mental health and stress management of pilots and cabin crew can impact flight safety.

Aviation psychology is a subfield of psychology that deals with the application of psychological principles and techniques to specific situations and problems within the aviation industry. It focuses on how various psychological skills and perspectives can be used to make air travel more comfortable, fast, and safe. Previously associated with clinical and organizational psychology, aviation psychology has since expanded to include the psychological processes of passengers, aviation personnel, and crew in general (Nazım, 2018).

For many years, aviation doctors conducted studies in this field, but over time, psychologists who received training to become aviation psychologists began working in this sector. In civil aviation, the impact of work-life balance on occupational burnout in flight attendants is related to work conditions, job expectations, psychological factors, and personal life balance. Flight attendants face challenges such as exhausting working hours, jet lag, constant travel, and fluctuating work schedules (Öztırak, 2023).

Even the slightest imbalance between work and personal life can result in cabin crew members projecting this psychological trauma onto passengers. This negative service behavior, which affects customer satisfaction, can lead to the loss of customers or bad reviews for the company due to the actions of its employees. In today's world, these

negative comments, when shared on social media, can quickly reach a wide audience. As a result of this unfavorable situation, both the employee and the company can face serious consequences, including the employee being dismissed from their position or subjected to compensation claims. Cabin crew members who experience this may face the risk of losing their job.

A discipline known as aviation psychology is based on the fact that human factors play a significant role in aviation accidents. Aviation psychology is a field of science aimed at understanding and predicting the behavior of employees in aviation. In the early 1900s, aviation psychology was particularly prominent in pilot selection, with personality criteria being a key focus. Today, it addresses many topics, including aviation accidents, stress, human-machine interactions, flight phobia, gender-based approaches, communication, and pilot peer support programs (Ünsal & Çeken, 2022).

As can be understood from these definitions, an accident occurs under conditions that are preventable, involving circumstances that the individuals involved cannot see at the moment but can result in significant or, in some cases, minor damage (Türk, 2021). An airline company expects its cabin crew to take precautions in advance for potential accidents and to implement the necessary evacuation protocols within the scope of potential risks. However, even the slightest mistake in applying a checklist can lead to major accidents that could be etched into aviation history with blood. As seen, the same attention to safety and passenger security that is expected from the cabin crew also affects the safety of the cabin crew themselves. The selfless approach of the cabin crew here means ensuring the safety of passengers as well as the safety of their colleagues.

2.2. Burnout Syndrome in Cabin Crew

Cabin crew members work under constant high stress during flights. Factors such as flight delays, emergencies, weather conditions, and passenger issues can increase stress levels. Cabin crew members have constantly changing and irregular working hours. Long flights, night shifts, and working across different time zones can affect their biological clocks and disrupt their sleep patterns.

Cabin crew members often interact with numerous passengers during flights and carry out a variety of tasks. This can create a work environment filled with a heavy workload and responsibilities. Since cabin crew members are required to travel frequently, they may struggle to maintain a balance between their personal and professional lives. Being away from their families for long periods can make it difficult for them to maintain social relationships and hobbies. These factors can contribute to cabin crew members

experiencing burnout syndrome. Over time, this condition can lead to psychological and physical health issues and negatively affect job performance.

3. Methodology And Data

This section provides information about the model of the research, population, sample, data collection tool, data collection process, and the analysis of the data.

A descriptive research used the general survey model to examine how cabin crew members perceive their burnout status. The descriptive survey model is a research approach aimed at demonstrating a situation or event as it is, either in the past or present (Karasar, 2020). In the study, differences are first identified, followed by the examination of dependencies or relationships. A key feature of the survey research model is its generalizability (Şimşek & Yıldırım, 2011).

The population of this research consists of cabin crew members residing in Istanbul and working in the aviation industry. The sample of the study was determined using the simple random sampling method and consists of 69 cabin crew members who were selected and volunteered to participate in the study. The research was conducted on a voluntary basis. The participants were asked questions related to variables such as age, gender, marital status, educational level, and years of service.

The Burnout Inventory, developed by İnce and Şahin (2015), consists of 22 items and has a three-factor structure. The subdimensions are emotional exhaustion, depersonalization, and personal accomplishment.

The Psychological Well-Being Scale, developed by Telef (2013), consists of 8 items.

3.1. Findings of Data Analysis

After the questionnaires were collected, the data were analyzed using the SPSS program. The Cronbach Alpha test was used to assess the reliability of the survey for the scales and subscales. To determine the suitability of the normal distribution of the scales and subdimensions, skewness and kurtosis values were examined.

Within the scope of the study, the KMO and Bartlett's Test were applied to the data of the participants' emotional exhaustion, psychological well-being, personal accomplishment, and depersonalization scales and subdimensions.

Table 1. Subdimensions of the Psychological Well-Being Scale

KMO Sample Adequacy		,849
Bartlett's Test of Sphericity	Approx. Chi-Square	1101,199
	df	253
	Sig.	,000

To determine the suitability of the research data for Exploratory Factor Analysis (EFA), the KMO coefficient and Bartlett's Sphericity test were first calculated using the data obtained from the pre-test. The KMO value was found to be .849. Additionally, Bartlett's Sphericity test was found to be significant ($X^2 = 1101.199$, $p < .05$). Based on this, it is concluded that the scale data is suitable for EFA. Principal Component Analysis and the Varimax method were used for the Exploratory Factor Analysis. To determine the number of factors, the scree plot, factor eigenvalues, and the total explained variance were considered.

Table 2. Characteristics and Reliability of the Scales

	Component					
	1	2	3	4	Scale Names	Reliability
DUT0505	,863				DUT Emotional Exhaustion	0,926
DUT0101	,823					
DUT0606	,819					
DUT0404	,773					
DUT0202	,767					
DUT0303	,758					
DUT0808	,642					
PIO05		,841			PIO Psychological Well-Being	0,904
PIO06		,789				
PIO08		,762				
PIO04		,738				
PIO01		,718				
PIO02		,699				
PIO03		,671				
KBA0211			,885		KBA Personal Accomplishment	0,856
KBA0110			,800			
KBA0514			,766			
KBA0312			,644			
KBA0817			,528			
DSZ0118				,841	DSZ Depersonalization	0,821
DSZ0421				,808		
DSZ0219				,751		
DSZ0320				,558		

An exploratory factor analysis was conducted for the construct validity of the scale. In the reliability study, the Cronbach Alpha coefficient was examined. The Cronbach Alpha internal consistency coefficient was calculated for the scale and its subdimensions.

3.1.1. The Impact of Emotional Exhaustion on Psychological Well-Being

A multiple linear regression analysis was conducted to examine the effects of emotional exhaustion on psychological well-being based on the participants' perceptions.

Table 3. Impact Analysis of Emotional Exhaustion on Psychological Well-Being Among Cabin Crew

Variable	B	Beta	t	Sig.	R	R^2	Adjusted R^2	F
Constant	4,753		21,569	,000	,442[a]	,196	,184	.000[b]
DUT	-,330	-,442	-4,038	,000				

Participants' perceptions of emotional exhaustion significantly predict their psychological well-being [($R = .442$; $R^2 = .196$; Adjusted $R^2 = .184$) $F(1,67) = 16.306$; $p < 0.01$]. In the regression analysis, where emotional exhaustion is the independent variable and psychological well-being perceptions are the dependent variable, it explains 19.6% of the change in participants' psychological well-being perceptions ($R^2 = .196$). In other words, changes in participants' perceptions of emotional exhaustion affect their psychological well-being behavior.

It can be said that 80.4% of the changes in participants' perceptions of psychological well-being are related to other factors.

Looking at the t-values from the regression analysis, it is understood that the emotional exhaustion dimension [$t = -4.038$; $p = .000$ ($p < 0.01$)] significantly negatively predicts psychological well-being perceptions. In other words, a 100-unit increase in the emotional exhaustion dimension decreases psychological well-being behavior by 33%.

3.1.2. The Effect of Personal Achievement on Psychological Well-Being

To examine the effects of personal achievement on psychological well-being perceptions, a multiple linear regression analysis was conducted based on the participants' perceptions.

Table 1. Analysis of the Impact of Personal Achievement on Psychological Well-Being in Cabin Crew

Variable	B	Beta	t	Sig.	R	R^2	Adjusted R^2	F
Constant	1,179		2,749	,008	,621[a]	,386	,377	.000[b]
KBA	,681	,621	6,487	,000				

Participants' perceptions of personal achievement significantly predict their perceptions of psychological well-being [($R = .621$; $R^2 = .386$; Adjusted $R^2 = .377$) $F(1,67) = 42.085$; $p < 0.01$]. The regression analysis, with personal achievement as the independent variable and psychological well-being perceptions as the dependent variable, shows that personal achievement accounts for 38.6% of the variation in participants' perceptions of psychological well-being ($R^2 = .386$). In other words, changes in participants' perceptions of personal achievement influence their psychological well-being behaviors. It can be stated that 61.4% of the variation in participants' perceptions of psychological well-being is related to other factors.

Looking at the t-values of the regression analysis, it is evident that the personal achievement dimension [$t = 6.487$; $p = .000$ ($p < 0.01$)] significantly and positively predicts the perceptions of psychological well-being. In other words, a 100-unit increase in the personal achievement dimension leads to a 68.1% increase in psychological well-being behaviors.

3.1.3. The Effect of Depersonalization on Psychological Well-Being

To examine the effects of depersonalization on psychological well-being according to participants' perceptions, multiple linear regression analysis was conducted.

Table 5. Analysis of the Effect of Depersonalization on Psychological Well-Being in Cabin Crew Members

Variable	B	Beta	t	Sig.	R	R^2	Adjusted R^2	F
Constant	4,245		20,871	,000	,209[a]	,044	,030	.084[b]
DSZ	-,166	-,209	-1,752	,084				

The participants' depersonalization does not significantly predict their perceptions of psychological well-being [($R = .209$; $R^2 = .044$; Adjusted $R^2 = .030$) $F(1,67) = 3.068$; $p < 0.01$]. In other words, depersonalization does not have an effect on the psychological well-being of cabin crew members.

4. Conclusion and Recommendations

Aviation companies conduct rigorous health screenings during the recruitment process to determine the suitability of candidates, and those who do not meet the required standards are not hired. While cabin crew ensure the continuity of quality and flight safety, they are physically and mentally affected in the process. Constant stress, a high-paced work environment, long working hours, and complex workflows can lead to burnout among cabin crew. From an aviation safety perspective, covering long distances frequently and making it a part of their routine life can cause jetlag effects, leading to temporal disorientation in terms of time and space. When this becomes a daily routine, it can develop into an occupational illness, resulting in burnout syndrome and negatively affecting the motivation of the cabin crew.

Burnout has negative personal, mental, and behavioral effects on flight attendants, while also leading to decreases in productivity and performance among commercial airline employees from an organizational perspective. Psychological issues faced by long-serving flight attendants are a significant concern for the airlines they work for (Tuna, 2019). Additionally, the adverse experiences of cabin crew can directly impact the airline's services, negatively affecting the passenger-airline relationship and potentially causing significant PR damage. A lapse overlooked within aviation psychology can harm the outcomes of long-term PR efforts, leading to substantial economic losses for the company.

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