

Why Are Flight Psychologists Important to Flight Safety?

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Abstract

The developments in aircraft technologies both in our country and around the world cause a serious increase in both the aircraft fleets and ticket sales, as well as the number of airline companies, their employees and passengers. These developments in the aviation industry necessitate flight safety and highlight the importance of the human factor (flight crew) by reducing the causality of technical factors in ensuring safety. Studies within this scope show that the main causal factor (65-70%) in aircraft crashes is the flight crew. There are many factors such as physiological, psychological, personal and psychosocial at the basis of the unsuccessful performance of the flight crew. However, the number of studies in the literature that draw attention to the psychological elements of the flight crew is very few. In fact, it is known that the psychological well-being of the flight crew is important for the success of the flight operations, but the airline companies do not have any evaluation obligation regarding this. On the contrary, some negative consequences may be encountered due to the freedom in this matter. In particular, the fact that human factor causation is at a much higher level than previously thought in plane crashes increases the importance of flight psychologists for airline companies today. Therefore, in this study, it is aimed to reveal the importance of flight psychologists on flight safety in civil aviation. In this context, interviews were held with the flight crews of two airlines (private-public). The findings show that flight psychologists are important and necessary in airline companies in order to be able to perform safe flights with healthier flight crews.

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1. Introduction

Today, developments in aircraft technologies both in our country and around the world cause a serious increase in the number of aircraft fleets and ticket sales, as well as in the number of airline companies, therefore their employees and passengers (Lasi et al., 2014). However, these developments in the aviation industry also necessitate flight safety. For this reason, it is striking that the primary purpose of the enterprises operating in the sector is to ensure flight safety (Jausan et al., 2017). As a matter of fact, technological developments reduce the causality of technical factors (such as engine, navigation, approach and landing systems) in ensuring flight safety, and highlight the importance of the human factor in the aviation industry to a greater extent (Foushee, 1984; CAP 720, 2002).

Of course, captain pilots may be the first to come to mind when the word "human factor" is mentioned but considering the importance and inevitable necessity of teamwork in the aviation industry, it is understood that both the cockpit and the entire cabin crew are meant (Jensen ve Benel, 1997; CAP 737, 2006). In other words, it is thought that not a single person - the pilot - is responsible for ensuring flight safety, but all flight assistants before, during and after the flight. Therefore, a safe, successful and trouble-free flight requires a rich perspective on the subject. In addition, even team members who are complex by human nature and serve the same purpose may have

different wishes, needs and expectations. The individual competencies and competences, weaknesses, information asymmetries, attention, understanding and perception levels, intelligence and reasoning powers, personalities, emotions, stress and fatigue, experiences and health conditions of each of them can be different from each other, all of which are of great importance in terms of the success or failure of a flight is important (Wilhem & Roth, 1997; Sias, 2005; Clark & Rock, 2016).

When the studies focusing on the human factor in the aviation sector are examined, it is thought that it is necessary to focus on accidents that occur due to failure rather than successful flight operations in terms of flight safety. Because it is stated that there are mostly errors caused by the flight crew in aircraft accidents that occur. Researchers examined civil aircraft crashes up to the 1980s and found that more than 70% of them were caused by flight crew errors. In addition, in the studies covering a period of 16 years after 1980, the British Civil Aviation Organization analyzed 75% of fatal plane crashes and revealed that the flight crew was the main causal factor in 67% of them. From a more comprehensive point of view, it is pointed out that the main causal factor in plane crashes both in our country and around the world is 65% to 70% of the flight crew (Helmreich & Foushee 1993).

There are many reasons (physiological, psychological, personal, psychosocial) based on the unsuccessful

performance of the flight crew, which makes the flight operations unsuccessful and even causes various accidents-destructions. However, in the literature, psychological (situational awareness, family conflict, addiction, somatization, mental confusion, inattention, depression, anxiety, panic disorder, phobic reaction, motivation, exhaustion, fatigue, stress, perception, cognitive processes, decision making, etc.) The number of studies that draw attention to these factors is relatively few compared to the others (Jensen, 1997). In fact, it is known that the psychological well-being of the flight crew is important for the success of the flight operations, but the airline companies are not obliged to make any assessments about it, on the contrary, some negative results may be encountered due to the freedom in this matter.

Flight 9525 of Germanwings airlines in 2015 is the best example and explanatory of this situation. In this flight, which is one of the scheduled flights of the airline between Germany and Barcelona, co-pilot Andreas Lubitz deliberately crashed the plane into the Alps (France), causing a very important accident in the history of aviation and in the recent past. As a result of the accident, no passengers or flight crew survived, and it was stated that the reason was psychological problems of the pilot. Many data were obtained about the pilot's psychological health (such as depression diagnosis, hospitalizations, ongoing psychotherapy process, drugs used) and these were included in the accident report. Ultimately, this accident had great repercussions in terms of flight safety in the aviation industry and once again revealed the importance and follow-up of psychological health (BEA, 2016).

At this point, the place and importance of aviation psychology and flight psychologists in the air transport sector is understood. The focus of psychology is on the human factor and its behaviors. When it comes to aviation psychology, the first thing that comes to mind is a branch of science that examines the behavior of company employees (individuals or crews providing flight services) operating in the air transport sector. Aviation psychology is the application of psychological principles and techniques to aviation-related problems or situations (Martinussen & Hunter, 2010). According to Jensen (1997), aviation psychology is a multidisciplinary field (such as ergonomics, engineering, psychology, organizational psychology, human resources, organizational behavior), and it helps to reveal the behaviors of employees in the aviation field and the root causes of these behaviors. In particular, the fact that human factor causation is at a much higher level than previously thought in plane crashes increases the importance of aviation psychology and flight psychologists for airline companies today. In 1919, British Air Force Dr. According to Oliver Gotch, the psychology of flight is very important in aviation, so the situation should be given more importance than studies in other fields.

Flight psychologists are essentially experts or clinical psychologists who work in areas such as individuals' stress and fears, team resource management, psychomotor assessments, peer support programs and post-accident psychological support processes. These individuals have graduated from a course approved by the General Directorate of Civil Aviation (SHGM, 2020). However, the first studies on aviation psychiatry and psychology were made by neuropsychiatrists. In the following years, experts who took a course in aviation psychology, namely flight psychologists, started to support the studies carried out only by flight doctors for many years. In this context, aerospace medicine specialists and flight physicians are involved in the psychiatric evaluation for the selection of flight personnel and their subsequent health examinations. However, the physiological and psychological effects of flight on the human organism and the health

problems that may arise in flight or prevent flight, flight personnel morale, motivation, mission performance and flight safety, etc. flight psychologists are involved in keeping it at the highest level or in supporting actions for it (Çetingüç, 2018).

Success in the aviation industry today; It requires addressing both physiological and psychological problems of the cockpit crew, cabin crew and even passengers. Businesses operating in the field of air transport should pay attention to the importance and necessity of a detailed examination of the origins of psychology and psychological problems in this field, especially considering the pilot's suicide dive into the Alps in 2015 due to psychological problems. As a matter of fact, the importance of this issue in military aviation has been known since ancient times and has been meticulously emphasized. It is thought that flight psychologists, who are permanent employees of the air force, may also be important elements of flight safety in civil aviation (ATA, 2021). In the light of this information, while carrying out civil aviation activities, especially flight safety is emphasized, but the role of flight psychologists in ensuring flight safety and the issues that necessitate their existence are not mentioned. For this reason, it is believed that this research, which was carried out to reveal the importance of flight psychologists on flight safety in civil aviation, will fill an important gap in the literature.

Qualitative research method was used in the research. Qualitative research method was preferred in the research because it covers the processes for revealing perceptions and events in a holistic way (Cropley, 2021). In the research, two different study groups were studied in order to reveal holistic and different attitudes. The first working group consists of the flight crew (captain pilot and cabin crew) of a private airline company. The second working group is the flight crew of a public airline company. The main reason why the research was conducted with the employees of both public and private airline companies is to determine whether the perspectives of the two groups on the subject differ.

Within the scope of the research, face-to-face interviews were conducted with the participants (flight crews). Research data were obtained through semi-structured questionnaires asked to participants in these interviews. Semi-structured questionnaires allow the participants to ask the planned questions, as well as different questions that are not planned according to the course of the interview but related to the subject at the time of the interview. Thus, in-depth and versatile data on the subject can be obtained. Within the scope of the research, interviews were held with a total of 13 participants, including 5 cabin crew, 4 cabin supervisor and 4 captain pilot, between September and November 2022.

In the first stage of the data collection process, a preliminary interview was held with 3 cabin crew and 2 captain pilots, who were easy to access, and an appointment was requested by giving information about the research topic. The interviewed participants responded positively to this request and made an appointment to meet. Interviews with the participants were held in the offices of the institutions they work for. Face-to-face interviews were recorded with the consent of the participants, both in audio and in writing. The interview with a participant took 45 minutes on average. The recordings made later were transcribed in writing. In the research, face-to-face interviews were conducted with 13 participants through semi-structured questionnaires. The data were obtained as a result of face-to-face interviews through semi-structured questionnaires in accordance with the purpose of the research. Before the interview, the participants were informed about the research topic.

This research is within the scope of exploratory research type. The research was carried out using the case study

approach, one of the exploratory research qualitative research designs. Identifying and discovering what happens in the real environment in case studies is possible by systematically collecting and analyzing data. In this framework, easily accessible case sampling method was used. The interviews conducted in the research were recorded in written and audio form. At the same time, after each interview, the participants were presented with the spoken and transferred information, and feedback was received on whether the transferred information was understood correctly. Thus, subjective inferences are avoided. By receiving feedback from the participants about the interviews, the principle of confirmability, which is one of the credibility indicators of qualitative research, was met.

In order for the research results to reveal the truth in a holistic way, interviews were conducted with both public and private sector employees (comprising cabin crew, cabin chief and captain pilot). Thus, the reliability of the internal validity of the research was increased by triangulating the data sources. At the same time, in order to increase the reliability of the research, more than one researcher took part in the analysis of the data, and an independent expert who is an expert in qualitative research and has publications on this subject analyzed the same data. Discussions continued until consistency was achieved on the themes. What is the importance of flight psychologists in terms of flight safety?

The participants' views on the question were carried out with descriptive and content analyzes.

2. Result and Discussion

The first group of the research consists of the employees (participants) of the private airline company. Within the scope of the first group, 6 participants were interviewed. The second group of the research consists of the employees (participants) of the public airline company. The number of participants interviewed within the scope of the second group is 7. Of the 13 participants interviewed, 8 (62%) were male and 5 (38%) were female. While 8 of the participants (62%) were undergraduates, 5 (38%) were graduates. The average age is 38. Participants, who have an average of 16 years of experience in the sector, have been working in their current businesses for an average of 12 years.

Content analysis was applied to the discourses obtained as a result of the interviews with the participants, and as a result of the analysis, it was determined that they were gathered under three different themes showing that flight safety requires a flight psychologist. The first theme was named as "Flight Safety-Flight Psychologist Requirement in Airlines". The second theme was named "Flight Safety in Airline Companies - The Role of Flight Crew" and the third theme was named "Flight Crew Attitude towards the Requirement of a Flight Psychologist".

Table 1: Professional Characteristics of the Interviewed Participants

Participant Number/No	Gender	Education	Age	Sector	Working Time In The Industry (Year)	Working Time In Business (Year)	Position
Participant 1	Female	Master Degree	35	Public	15	15	Cabin Crew
Participant 2	Female	Degree	31	Private	9	7	Cabin Crew
Participant 3	Male	Degree	42	Private	21	20	Cabin Supervisor
Participant 4	Erkek	Master Degree	27	Public	6	6	Cabin Crew
Participant 5	Female	Master Degree	38	Private	16	13	Cabin Crew
Participant 6	Female	Degree	50	Public	28	23	Cabin Supervisor
Participant 7	Male	Master Degree	32	Public	8	7	Captain Pilot
Participant 8	Male	Degree	45	Private	25	17	Cabin Supervisor
Participant 9	Female	Degree	46	Private	27	19	Cabin Supervisor
Participant 10	Male	Degree	50	Public	29	8	Captain Pilot
Participant 11	Male	Master Degree	31	Private	6	4	Co-Pilot
Participant 12	Male	Degree	34	Private	11	11	Cabin Crew
Participant 13	Male	Degree	36	Public	5	5	Co-Pilot

The discourses of the participants on "Flight Safety-Flight Psychologist Requirement in Airline Companies" were analyzed by subjecting them to content analysis, and as a result of the analysis, it was determined that the opinion of the flight psychologist as a requirement for flight safety was clearly stated. Supporting citations on the subject are given below.

"...Until recently I didn't have a retirement plan...I need peace of mind now...I am a passionate person, I love my job, but how have I neglected myself until now...that big man who used to fly planes when I was little, now has big dreams and can't go back to his childhood... exhaustion and stress are killing me ...don't get up now and call it a doctor or something.. I haven't even seen my children for two weeks.. the doctor comes to me, it's even late..."(Participant No:10, Male, Captain Pilot)

"...if there was a flight psychologist in the company, maybe the results of things could have been much different... It reflects too much on the decisions I will make.. you don't hear

them calling during the flight... I am in a very depressed state of absent-mindedness and carelessness... I am just where I need to be physically at that moment..." (Participant No:8, Male, Cabin Supervisor)

"...One of our teammates resigned recently... Apart from all that, the psychological disorders he experienced over time and some behavior had gotten him to this stage.. then I sat and thought about it for a long time. I know a lot of people like you and even witness it closely... Occupational deformation... It would be great to create time and opportunity not to experience this, but how?" (Participant No:2, Female, Cabin Attendant)

"...I didn't know that what I was experiencing was panic disorder until a while ago... It was affecting me negatively in every way on the flight, at home. The situation... the company brought us together with the flight psychologist service, albeit from outside... Awareness is very important... Being hugged by the door with an emergency warning every time I go to sleep

or being suffocated by being out of breath... It was very painful to experience the pain in my mind that I did not feel physically.” (Participant No:5, Female, Cabin Attendant)

The discourses of the participants on "Flight Safety in Airline Companies - The Role of the Flight Crew" were analyzed by subjecting them to content analysis, and as a result of the analysis, it was determined that the flight crew played an important role in ensuring flight safety. Supporting citations on the subject are given below.

“...one day, a passenger was taken to the plane with a drink and alcohol in his hand, other passengers complained a lot about this situation (insulting, swearing). Our supervisor came and said to him, sit calmly now, please, soon we will hand you over to the airport police and you will be billed for the ticket price of all the passengers on the plane. I said it saves lives...”(Participant No:12, Male, Cabin Attendant)

“...everyone working in the service industry knows that there is an effort to please others... which means increased responsibilities and workload. You need to concentrate on your work well and avoid behaviors that will put both yourself and others at risk. Therefore, whatever needs to be done in this process is carried out on time and completely. The flight crew is the heart of this work.” (Participant No:9, Female, Cabin Supervisor)

“...the flight crew takes part in all phases of the flight, fully and fully staff... Therefore, ensuring the operation depends on the coordination and success of the crew... In one case, the timely awareness of a friend from the cabin crew and reporting the situation prevented a major problem. we all (passenger and crew) could be adversely affected.” (Participant No:13, Male, Co-Pilot)

The statements of the participants about the "Attitude of the Flight Crew Towards the Necessity of a Flight Psychologist" were analyzed by subjecting them to content analysis, and as a result of the analysis, it was determined that the flight crew had a positive attitude towards the necessity of flight psychologists in ensuring flight safety. Supporting citations on the subject are given below.

“...After stressful, tired and tense years in the air force, it seems much more comfortable to do this job today, but the truth of the matter is not.. people are people everywhere, but sometimes they think that the only problem is lack of sleep or tiredness... being able to take healthy flights. It is also necessary for a person to feel healthy and supported in every sense in order to...”(Participant No:11, Male, Co-Pilot)

“...The primary goal and great responsibility for all of us is to make safe and successful flights... a problem experienced by one of our crew can reflect on all of us from time to time and cause negativities... which you cannot say is his personal problem because teamwork is inevitable for us, it is best for us to eliminate the problem and let the company do this. making an effort on the subject...”(Participant No:3, Male, Cabin Supervisor)

“...A safe flight requires a healthy body and a healthy mind...the company recently offered us a psychological support service, but to what extent we have benefited...no one has time and energy for this, in fact, a vicious circle...however, success is in our hands in safety and satisfaction...what is it? If you sow it, you will reap it... then it's a simple distraction, lack of communication, panic, carelessness... is it your fault... Nothing is done so that these things don't happen or anyone causes them, which I would love to do. (Participant No:6, Female, Cabin Supervisor)

3. Conclusion

Research findings: It shows that flight safety requires the presence of flight psychologists in airline companies, flight (cockpit-cabin) crew plays an important role in ensuring flight safety and they have a positive attitude towards the necessity of flight psychologists in airlines. In this context, in similar studies, it is seen that only the cockpit crew, not the cabin crew, are included in the research in ensuring flight safety, but this situation reveals a distinctive feature of this research as it is necessary to include them in the research in which both play an important role in ensuring flight safety.

Particularly, it is understood that the participants expect from the airline companies and desire their support in terms of eliminating the psychological problems, discomforts or professional deformation and realizing safe flights. As it can be understood from the statements, it is clear that the employees need psychological support, but although there is a flight psychologist service provided to them, the external support is not at a satisfactory and sufficient level. Their expectation is that the company tells them unconditionally and that you are important to me, and that it provides or incorporates this service for the success and well-being of the company.

In addition, the high level of responsibility of the employees increases this need because they give themselves a great and important role in ensuring flight safety. In this context, the findings are in line with studies that emphasize that the flight crew plays a major role in ensuring flight safety in airline companies (Hochschild, 1983; Chute and Wiener, 1996; Murphy, 2001). In addition, the positive changes and results in the lives of employees who benefit from flight psychologist service can give us hope and be convincing about the necessity of airline companies to have a flight psychologist.

As a result, healthy and safe flights are important for both airline companies and the aviation community. For this reason, in order to avoid all kinds of negativity, it is necessary to listen to people, their psychological health as well as their physical health, their needs, problems, demands and expectations. As they say, the flight crew is the heart of the flight. It gives life to flight, adds vitality, catches the flow and dynamism, beats under all conditions, does not give up-resistance, and contains sensitivities...

Ethical approval

Not applicable.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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