

**THE RELATIONSHIP BETWEEN STRESS AND JOB PERFORMANCE FOR
PILOTS****Kaan BAKANÖĞLU**

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<https://orcid.org/0000-0002-5522-324X>**Abstract**

Stress has always been and continues to exist in the living world. It often causes negative effects in humans. Stress in aviation can make things worse than they should be. Studies have shown that, the human factor is around 70% is affected the accidents and incidents in aviation. For this reason, the human factor is important in aviation, and everything from the working hours of the employees, the time to spend on the way to and from work, and even the rest time, has become a rule by international aviation organizations. Looking at the word that "rules in aviation are written in blood", it can be understood that these rules are the results of bad experiences in the past. Therefore, the purpose of this research is to show that how much the stress levels of pilots, who are one of the most important parts of the aviation industry, affects their job satisfaction and performance.

Keywords: Stress, Aviation, Pilot, Job Satisfaction, Job Performance**Özet**

Stres, canlı dünyasında her zaman var var olmuştur ve var olmaya da devam etmektedir. İnsanlarda çoğu zaman olumsuz etkilere sebep olmaktadır. Havacılıkta stres durumu işleri olması gerektiğinden daha kötü duruma getirebilmektedir. Yapılan araştırmalar, hava araçlarının yaşamış olduğu kaza-kırımlarda insan faktörünün %70 seviyelerinde olduğunu göstermiştir. Bu sebepten dolayı havacılıkta insan faktörü önem arz etmekte ve çalışanların çalışma saatleri, işe gidip gelirken yolda geçirilmesi gereken zaman ve hatta dinlenme saatine kadar tüm her şey uluslararası havacılık örgütleri tarafından kural haline getirilmiştir. "Havacılıkta kurallar kanla yazılmıştır" sözüne de bakıldığında, bu kuralların geçmişte yaşanmış kötü tecrübeler sonucu çıktığı anlaşılabilir. Bu yüzden bu araştırmanın amacı, havacılık sektörünün en önemli parçalarından biri olan pilotların stres seviyelerinin iş tatminlerini ve performanslarını ne kadar etkilediğini göstermektir.

Anahtar Kelimeler: Stres, Havacılık, Pilot, İş Tatmini, İş Performansı.**INTRODUCTION**

In today's world, contemporary community people have brought an undeniable amount of movement and speed to their work and social lives. Stress, which is the reality of our century, has been inevitable in their lives that continue in this way. (Güney, 2017: 405)

Among the problems caused by modern working life, stress has been an issue that attracted all the attention. Because, stress affects everyone in business life. (Güney, 2017: 405)

Many studies have been conducted on the subject of stress, and several definitions have been made so far. Ivancevich and Matteson explained stress as "a random influence from the outside, an adaptation reaction that arises and is manifested by personal traits or spiritual processes, that has bodily or spiritual consequences on the person" (Ivancevich – Matteson, 1980: 6-9) On the other hand, Cüceloğlu explained that "it is the effort of a person whose limits are pushed physically and spiritually due to adverse conditions around person". (Cüceloğlu, 1991: 321) In Yetes's research, stress was explained as "the vague response of a person's body

in pressures" (Yates, 1986: 29) In Halil Can's study, stress was explained as "the reaction of all physiological, mental and pathological factors on the living thing". (Can, 1992: 278) In Yücel Ertekin's work "stress is the price that paid to adapt to the environment". (Ertekin, 1993: 5)

RELATIONSHIP BETWEEN WORK-LIFE AND STRESS

Stress, which is an inevitable problem of modern societies, also stems from the working environments in which individuals spend almost all day, and it has been revealed as a result of the studies that work life is one of the main factors that makes stress people. (Güney, 2017: 407)

When we evaluate the stress in terms of individuals' success in their working life, it was seen that four functional factors stand out; (Ertekin, 1993: 25-26)

- Since work is a major source of stress, it has a negative impact on employees' abilities.
- Stress sources, caused by some factors outside of work, start to emerge in the business world in time.
- The employee starts to let himself out of the stressful environment while continuing his / her job.
- A decrease in success or success at work can be shown as a cause of stress. In other words, the employee can show his / her work as a direct cause of stress.

In a stressful work environment, it is observed that employees are mentally tense, not able to get along with their colleagues and display incompatible personality traits. For this reason, people with high levels of stress have characteristics such as "worry, unhappiness, being in between in making decisions, being impatient, being touchy, always being critical, not being able to offer constructive suggestions, not being able to prioritize, not working deeply, not showing empathy, forgetfulness". (Güney, 2017: 408)

RELATIONSHIP BETWEEN STRESS AND JOB SATISFACTION

Stress has a negative effect on employees that making them less productive at work. The level of stress felt in the work environment has a negative effect on the life of both the employee and his / her environment, and as a result, a decrease in work efficiency is observed in people. The decrease in work efficiency also causes a decrease in the level of job satisfaction in individuals. (Aktaş A, Aktaş R., 1992: 156)

The work environment with a high level of stress can cause the employees to be mentally tense, to not get along with those around them, and to show an incompatible personality. As a result, job dissatisfaction arises. (Güney, 2017: 408)

In researches, it has been observed that the level of job satisfaction decreases with the increase of the stress level within the organization. (Özdayı, 1990: 150) In the study of Zincirkıran et al., it was found that there are significant relationships between job stress and job satisfaction. (Zincirkıran vd., 2015: 59-71)

In addition, in the study conducted by Bayar and Öztürk, the relationship between stress and job satisfaction of research assistants was investigated, and as a result, it was seen that the stressful working environment negatively affected the job satisfaction. (Bayar - Öztürk, 2017: 525-546)

STRESS SITUATION IN AVIATION

In the study conducted by Gümüştekin and Öztemiz in 2004, the sources of stress affecting the flight crew were examined and how the stress affected the flight crew was investigated. As a result of the research, the characteristics of the work done, being appreciated or promoted, relationship with the manager, financial opportunities, relationship between teammates and family life were determined as sources of stress. Financial situation and lack of appreciation were among these stress sources as the highest stress sources. It has been shown

that the work performance of the personnel is negatively affected by this stress that the flight crew has experienced. (Gümüştekin – Öztemiz, 2004: 61-85)

As a result of the study carried out by Karal in 2012, it was shown that pilots could not use their knowledge and skills adequately while under stress and flight safety was compromised. They also showed that stress on pilots has a negative effect on Crew Resource Management (CRM). In addition, the deficiency of CRM was shown as the cause of the Tenerife accident, which was the biggest accident in the history of world civil aviation and resulted in the death of 583 people in 1997. (Karal, 2012)

In the study conducted by Güler in 2014, it was shown that the entire control of an airplane flying thousands of feet high, traveling at hundreds of knots and loaded with fuel was in the pilot, while at the same time, the monitoring of other systems, aircraft and air system, control of the team and ensuring the continuity of communication was shown to cause stress. It has been shown that the flight performance and decision-making powers of pilots are negatively affected as a result of the stress resulting from these reasons. (Gürel, 2014: 55)

In the research conducted by Hajiyousefi et al., it has been shown that stress is a reality of aviation and flight safety is compromised by the performance impairment caused by stress. In addition, aviation is a risky and stress-rich environment due to reasons such as speed, temperature change, pressure change, noise, vibration, hypoxia disease, exhaust smoke and lack of activity. It is also shown that flight safety is negatively affected by all these factors affecting stress. (Hajiyousefi vd, 2015: 1263-1274)

As a result of Akalın's study with 101 airline pilots in 2019, it has been shown that the stress levels of pilots who have 8 years and more experience are higher. In addition, pilots cited excessive workload and task conflict as causes of work stress. In addition, the study showed that the stress levels of pilots negatively affect their performance at work. (Akalın, 2019)

In Stokes and Kite's book named Flight Stress, it is said that pilots have high workloads and stress levels. For example, planning the flight by a pilot before a routine flight, performing external controls of the aircraft, obtaining up-to-date weather information and tracking instant changes, and tracking whether there is any malfunction in the aircraft or not, are shown as a source of stress. In addition, during the flight, in any emergency situation, pilots have to fly the airplane as Aviate, Navigate and Communicate principle which is be aware of where it is going and keep in touch with the controls of the aircraft and by applying the procedures previously trained, without panic. The necessity of ensuring flight safety and heavy workload are shown as a source of stress. (Stokes – Kirsten, 2017)

STRESS IN TRAINING PROCESS

As a result of the study conducted by Engin et al. in 2013, it was observed that there was a correlation between the stress level and the educational performance of the individual, and it was observed that the educational success of the students who were under stress during the education period decreased and their learning quality was negatively affected. (Kaya vd, 2013: 297)

As a result of the study conducted by the Savcı and Aysan with university students in 2014, they showed that the stress levels of the students increased as a result of the problems experienced by the students throughout their education life. (Savcı – Aysan, 2014: 54)

As a result of the study conducted by Aafreen and others among 80 students in 2018, it was revealed that approximately 50% of the students experienced stress due to studying. It also showed that students may adopt bad habits in the long term due to being under stress, have absenteeism, drop their grade point averages, and even drop out of school. (Aafreen vd, 2018: 1776-1780)

CONCLUSION

In this study, the effects of stress on job performance and job satisfaction were investigated and focused on pilots who are one of the most important parts of the aviation industry. As a result of the researches, it has been shown that stress negatively affects people's lives, makes their daily lives and activities difficult, and even negatively affects people's health.

Apart from the normal lives of people, it has been observed that stress negatively affects the jobs they have done to continue their lives comfortably. On the other hand, their job performance and job satisfaction decrease under stress conditions in their work environment. It has also been shown that people's work, on their own, is a source of stress.

Apart from working life, it has been observed that people are also stressed during their education process before entering the working life, and this stress can cause people to fail in their education by reducing their educational performance. It is not expected that people will be successful in their work if they fail in their education or if they complete their education without getting the right training.

When we look at the pilots, which are the main subject of the study, pilots work at an extremely intense pace from training periods to the end of their working life. After an intensive training period of 18-24 months, the pilots on the job continue their duties with a high sense of responsibility, prioritizing flight safety. Studies have shown that pilots work under heavy workload and their stress levels are high and their job performance decreases due to this.

Aviation will continue to develop and will grow in the future. In order to ensure this development and growth safely, the work performances of pilots should be carefully monitored and necessary measures should be taken. For this reason, competent authorities and companies should carefully examine all parameters such as planning the flight frequency, the length of the flight to be visited, the planning of monthly and annual training repetitions and the off days of the pilots in order to keep the pilots' performance at the best level and plan all their planning according to these results for flight safety.

The Germanwings accident, which took place on March 24, 2015 and killed 150 people, shows how important it is to monitor the health and stress levels of flight crews. According to the final accident report announced, the captain pilot of the plane, immediately after leaving the cockpit to relieve the need for toilet, the co-pilot locked the cockpit door and committed suicide by interfering with the course of the plane and directing the plane towards the mountains. As a result of the research, it was revealed that the co-pilot had psychological problems and used drugs but hid them from everyone. (BEA, 2016)

For these reasons, since it is known that 70% of plane accidents are based on human factors, the stress in the working environment should not be ignored and it has to monitor all the time.

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