

## THE MEDIATING ROLE OF EMPLOYEE PERFORMANCE IN THE RELATIONSHIP BETWEEN MOBBING PERCEPTION AND FLIGHT SAFETY CULTURE

Bekir DEMİRÖREN<sup>1</sup>, Halil ŞİMŞEK<sup>2</sup>

### Abstract

Today, employees can be exposed to psychological violence for different reasons. This can cause damage to concept such as organizational culture and performance. In this context, the results of mobbing applied in the air transport industry were focused on. Within the framework of the research model, the relationship between mobbing perception and flight safety culture was examined, and the mediating role of employee performance in this assumed relationship was investigated. The hypotheses of the research in which the causal research design was used were tested by correlation, regression and structural equation modeling within the framework of the model established regarding the theoretical structure. In this context, the research data collected using the convenience sampling method with the participation of a total of 378 flight personnel working in the airline companies operating in Turkey were analyzed with SPSS and AMOS programs. As a result of the research, it has been determined that the perception of mobbing negatively affects the flight safety culture and that employee performance has a partial mediating role in this interaction.

**Keywords:** Mobbing, Organizational Culture, Flight Safety Culture, Employee Performance.

**JEL Classification:** M0, M1, M12, M14.

## MOBBİNG ALGISI İLE UÇUŞ EMNİYET KÜLTÜRÜ ARASINDAKİ İLİŞKİDE ÇALIŞAN PERFORMANSININ ARACILIK ROLÜ

### Öz

Günümüzde çalışanlar farklı nedenlerden ötürü psikolojik şiddete maruz kalabilmektedirler. Bu ise örgütsel kültür ve performans gibi kavramların zedelenmesinde neden olabilmektedir. Bu kapsamda çalışmada havayolu taşımacılığı sektöründe uygulanan mobbingin sonuçları üzerinde durulmuştur. Araştırma modeli çerçevesinde mobbing algısının uçuş emniyet kültürü ile olan ilişkisi incelenmiş, varsayılan bu ilişkide çalışan performansının aracılık rolü araştırılmıştır. Nedensel araştırma deseninin kullanıldığı araştırmanın hipotezleri, teorik yapıya ilişkin kurulan model çerçevesinde korelasyon, regresyon ve yapısal eşitlik modellemesiyle sınanmıştır. Bu kapsamda Türkiye’de faaliyet gösteren havayolu işletmelerinde görev yapan toplam 378 uçucu personelin katılımıyla kolayda örneklem yöntemi kullanılarak toplanan araştırma verileri SPSS ve AMOS programlarıyla analiz edilmiştir. Araştırma neticesinde mobbing algısının uçuş emniyet kültürünü negatif yönde etkilediği ve bu etkileşimde çalışan performansının kısmi aracılık rolünün olduğu tespit edilmiştir.

**Anahtar Kelimeler:** Mobbing, Örgütsel Kültür, Uçuş Emniyet Kültürü, Çalışan Performansı.

**JEL Sınıflandırması:** M0, M1, M12, M14

<sup>1</sup> [bfbademiroren@gmail.com](mailto:bfbademiroren@gmail.com), ORCID: 0000-0001-6533-0076

<sup>2</sup> Dr. Öğr. Üyesi, Süleyman Demirel Üniversitesi Havacılık Yüksekokulu, [halilsimsek@sdu.edu.tr](mailto:halilsimsek@sdu.edu.tr), ORCID: 0000-0002-8775-1688

## 1. Introduction

Today, aviation industry is the locomotive of the country's economies. The aviation industry, which has its own dynamics although similar to other industries, is extremely fragile, but it is also governed by strict rules. Because it is known that even the smallest mistake will result in irreparable damages, especially human life. In Turkey, depending on technology and subsequent global integration, the number of aviation companies, which gradually increased in 2003, has carried international trade to a different dimension. The industry, which stands out with its need for qualified human resources, has attracted attention with a new development day by day, and this acceleration has brought social handicaps with it. The pressure exerted on the employees as a result of commercial concerns reached high levels from time to time, reaching the points that came to the fore in collective bargaining with the termination of unilateral contracts. The necessity to prioritize safety in flight operations, regardless of the level of commercial concern, has focused attention on employees (Küçükönel and Korul, 2002: 77). The difficulty of high-level qualifications peculiar to volatiles in personnel substitution has made employees stronger against the management. Because they are employed by being tested in more than one subject, from psychomotor abilities to science (Carretta and Ree, 1994). However, despite all these advantages, the scarcity of sectoral alternatives indicates the existence of an environment in favor of managers. Job loss, even for a temporary period, gives employees a disadvantage in the face of the pressure they are exposed to. With such a balance, the aviation industry has always been the shining star of the countries.

Aviation, which gives a feeling of freedom at first sight, has mechanisms in which the discipline is operated at an extremely advanced level. The aviation industry, which is the industry with the most variability with its structure that can be affected by all kinds of positive or negative developments in a very short time, can put stress on its employees as well as the feeling of pleasure. However, both the training provided and the quality of the personnel are the most fundamental factors in overcoming this difficulty. On the other hand, it is observed that the psychological violence that employees are subjected to increases especially in times of crisis. The fact that the need of workforce under normal conditions decreases in times of crisis can be seen as the main reason for this. The historical process shows that the level of institutionalization has an impact on company policies, even though the conditions are challenging. Businesses that have not yet fully completed their institutionalization see mobbing as an element of pressure. This behavior can result in long-term cultural destruction. It is important for the development of the industry to investigate the negative effects of mobbing in a scientific framework and to reveal its antecedents and outcomes. The flight safety culture, which will be provided especially in the aviation industry, where a critical job such as flight is performed, will allow more profitable jobs to be done with the performance that improves with positive psychology.

As a result of the literature review, it has been seen that no study has been done on the relationship between these concepts. Considering the importance of the variables within the scope of the research in the aviation industry, the results of the mobbing perception felt by the flight personnel draw attention.

Determining the effect of mobbing perception on flight safety culture and the role of employee performance in the relationship between these two variables will contribute to the literature in the aviation industry sample. Compared to others, it is known how important psychological factors are in the aviation industry. Because even the slightest mistake to be made in this area can have irreparable results.

## 2. Mobbing

The word Mobbing, which comes from the English word "mob", means that it is illegally associated with crowd and excessive violence (Öztürk et al., 2015: 28). The concept of mobbing was first used by the Australian scientist Lorenz (1991) in the 19th century to describe the behavior of birds flying around the attacker with the motive to protect their nests. While using this word, Lorenz aimed to describe the behaviors of animals to kidnap a foreign animal or an enemy being hunted (Leymann, 1996: 167). The first remarkable research on the concept of mobbing was done by Peter Paul Heinmann. Working on bullying and harassment by students against each other in school life, Heinmann revealed that the concept of "mobbing" is an obstacle to healthy communication (Çetin and Kurt, 2008: 112). With regard to the concept of mobbing in today's sense, the generally accepted definition belongs to Leymann. According to Leymann, mobbing is a kind of psychological terror applied by one or more people to another person by using a systematic hostile and immoral communication (Leymann, 1990: 120). Mobbing in the workplace is a destructive social process in which individuals, groups or organizations aim to mock, humiliate and remove a person from the workplace (Duffy and Sperry, 2014: 1). Similar to this definition, "mobbing" is defined as the behavior of forcing employees to leave their jobs by systematically pressuring employees by employers to avoid paying compensation (Erdem & Parlak, 2010: 262). Mobbing harms the exposed employee or the employees' personality values, social relations, professional status or health; it can also be expressed as the totality of malicious, deliberate, hostile, negative attitudes and behaviors (Şimşek, 2013: 37).

According to Duffy and Sperry, as mobbing is not a common phenomenon, victims and their family members and friends cannot make sense of this situation and are generally unable to help. Mobbing can destroy the belief that the world is a fair place, as well as damaging the sense of identity and belonging with a sense of safety and security. Physical and mental health deterioration are possible consequences of mobbing (Duffy and Sperry, 2014: 1). As a result of interviews conducted by BjoÈrkqvist et al. in 1994 with 17 psychological abuse victims working at the University of Finland, it was found that all subjects experienced problems such as insomnia, various nervous symptoms, melancholy, apathy, lack of concentration and socio-phobia (Einarsen, 1999: 17). Mobbing can be associated with a variety of factors, including discrimination and socio-economic reasons based on gender, religion, ethnicity, age, nationality, disability, background, sexual orientation and other diversity. (Cassitto et al., 2013: 11). Self-confidence problems occur in victims who are exposed to mobbing. There will not be a productive working environment in institutions where mobbing is dominant. In such a working environment, it is not possible for employees to perform the jobs specified in their job descriptions with the desired performance in a positive organizational culture (Yiğit, 2018: 35). However, it cannot be said that every negative behavior is a source of mobbing.

There are a number of conditions required for the emergence of mobbing, which is also called psychological harassment in the literature, in the work environment. Some of these conditions are that it is done systematically and deliberately, with the aim of intimidation and results in both physical and mental exhaustion. In addition, it is not true that mobbing is done only by superiors. There may also be mobbing pressures against employees of the same level or from bottom to top.

The prejudices created by mobbing against the victim with the effect of the problems in the balance of power can cause the organization to see the victim as a problem (Einarsen, 1999: 19). Mobbing is different from occasional negative or even abusive experiences in the workplace.

Because most adult employees are conscious enough to understand that occasional intense and difficult interactions with colleagues and supervisors are possible, and mature enough to tolerate and deal with these situations. However, mobbing is different from daily conflicts of this kind. Repetitive and negative actions carried out both openly and secretly over time, reducing the self-confidence of employees and their ability to fight (Duffy and Sperry, 2014: 2). The concept of mobbing mentioned within the scope of the research is evaluated only within the framework of the workplace environment, situations outside the workplace are ignored. Therefore, it is recommended to consider psychological violence in social settings in a different category.

Although research shows that each employee may be exposed to mobbing, it has been revealed that people who are distinguished by their honesty, intelligence and creativity in their working lives are more likely to be exposed to mobbing. Mobbing practitioners, on the other hand, were found to be jealous, inadequate managers or individuals who fear losing their status, who do not have emotional intelligence (Duman and Akdemir, 2016: 32). The mobbing practices of these people can be explained as an effort to cover up their inadequacies regarding both work and social relations.

### **3. Flight Safety Culture**

Flight safety culture is a unified term in which safety and culture components can be defined independently from various perspectives. Culture has been studied by anthropologists, social scientists and organizational scientists. Generally, anthropologists examine culture to describe a particular group of people in terms of their habitats, languages, traditions, legends, heroes, food, clothing, interactions within the community, and interdependence with other communities (Bernard and Spencer, 2010: 168-173). Social and organizational science, on the other hand, examined culture from the perspectives that emphasize the quality of life, organizational effectiveness and safety performance (Patankar and Sabin, 2010: 98). When these two different perspectives are examined together, the definition of "organizational culture" emerges, which includes the values that explain how things are done in the organization, the beliefs, behaviors, symbols and rituals shared among employees (Jahanian and Salehi, 2013: 89). Organizational culture is an integrative element that strengthens communication by improving interpersonal interaction and also helps to understand the symbolic values of the organization.

However, it is possible to say that it is not easy to establish a shared organizational culture as well as to destroy it.

According to the Safety Management Manual (SMM) Doc 9859 published by ICAO, safety in the aviation context is defined as the situation in which the risks related to the operation of aircraft are reduced and controlled at an acceptable level (ICAO, 2018: 2-1). Safety culture, which is a combination of both concepts, can be defined as the values, beliefs and norms that govern people's safety behavior (Stolzer et al., 2011: xlvi). Safety culture is the sum of individual and group values, attitudes, competencies and behavior patterns that reflect an organization's commitment to safety programs, style and competence (Tullo, 2019: 68). Safety culture in aviation stands out as the sum of different cultures, each of which has important roles, based on understandable and rigorous principles and doctrines, given the complexity and outputs of the field (Iordache and Balan, 2016: 137). A strong safety culture is one of the most effective and systemic ways to reduce accident and incident levels within an organization. However, to make a safety culture truly effective, safety promotion activities must be carried out in a way that promotes and reinforces this culture throughout the organization.

Although it cannot be shown to senior managers how many accidents are prevented by a strong safety culture, when an accident occurs, flaws in the safety culture of the organization emerge (McCune et al., 2011: 135). The remarkable aspects of the top management in the organization where a successful flight safety culture has been created are listed below (McCune et al., 2011: 137);

Priority given to safety,

- High sensitivity to dangers that may occur in the workplace and flight operations,
- The level of behavior at which criticism is accepted and open to opposing views,
- Encouraging feedback and reporting,
- To prioritize communication in matters concerning safety,
- Promoting realistic and applicable safety rules,
- Trainings to understand the consequences of unsafe actions.

A successful and effective safety culture has been examined in four sections by Dr. James Reason (Ustaömer and Şengür, 2020: 99). These;

- Information culture, which is the acquisition of the correct information from the right sources, which is necessary for the organization to have and maintain a healthy safety culture.
- Trust-based “reporting culture” where employees are encouraged to report safety issues.
- An acceptable humanitarian situation where employees know that they will be treated fairly when they express their opinion.
- Taking the precautions against the repetition of the mistakes by taking advantage of the past experiences, it is a "learning culture" (Iordache and Balan, 2016: 137). Learning culture can also be considered as a part of the reporting culture. Because while similar measures are put forward in both concepts, the results are also similar.

#### **4. Employee Performance**

Employee performance, which plays a central role in determining organizational performance, is the point reached as a result of the work done with the simplest definition (Jagannathan, 2014: 309). Almost every organization needs high-performing employees to gain competitive advantage (Anna, 2020: 33). Individual performance is the achievement of individual results at the desired quality and level by combining the knowledge, skills and abilities of a person with his personal effort and behavior (Pekdemir et al., 2014: 336). Employee performance includes the quality and quantity of the output obtained as a result of the work done, the presence of the employee in the workplace, the compromising, helpful and positive behaviors displayed in the work environment and the elements of completing the work on time (Shahzadi et al., 2014: 161). It is known that performance, both in individual and organizational terms, is an indicator of all business processes rather than results. The degree to which outputs meet pre-determined criteria explains only part of the performance. Because the real evaluation is possible with a holistic point of view to the subject.

Almost every organization needs high-performing employees to gain competitive advantage. The main reason for this is that individuals with high business performance are more effective in achieving the strategic goals of the organization and creating sustainable competitive advantage (Anna, 2020: 34).

The main success in the aviation industry is explained by the ability to gain a competitive advantage in the long term by achieving strategic superiority. Therefore, management approaches focused on employee performance will be effective in the establishment of organizational culture and long-term strategies can be adopted instead of short-term practices.

#### **5. The Relationship of Mobbing, Flight Safety Culture and Employee Performance**

In the aviation industry, flight safety is considered a prerequisite for every activity. When it comes to safety, the first thing that comes to mind is the set of rules applied to prevent possible accidents. At this point, it is necessary to evaluate the aviation industry differently from all other fields in terms of organizational culture. Because the result of any unsafe situation can lead to consequences such as human life, which cannot be recovered. Establishing a flight safety culture is critical in the aviation industry, where the human factor is so important. Studies on this relatively new subject in aviation literature are not yet at a sufficient level. The use of the Commercial Aviation Safety Survey, developed by Wiegman et al., stands out as the measurement criteria (Wiegmann et al., 2003). Because with CASS, flight safety culture is evaluated in a broad framework with 5 components: organizational commitment, management support, empowerment of employees, rewarding and reporting system. Research results for pilots reveal the importance of flight safety culture (Thaden et al., 2006: 30). However, it is seen that there is not enough research on the premises of flight safety culture.

From an individual and organizational perspective, it is considered that psychological violence in the workplace is one of the factors affecting flight safety culture.

However, studies conducted directly associate flight safety culture with performance and safety climate issues (O'Connor et al., 2010). Mobbing, which occurs on an individual basis but turns into organizational behavior in terms of its results, can have devastating consequences on employees. The impact of individual performance on the flight safety culture, which decreases with the loss of self-confidence, also has a negative effect. The research model, in which the perception of mobbing is constructed as the cause, the flight safety culture as the result, and the performance as the intermediary variable, aims to determine the direct and indirect effects by examining the relations of all three variables with each other.

## **6. Methodology**

The main assumption of the study in the context of the variables considered as a result of the literature review is that there is a relationship between the perception of mobbing and flight safety culture, and that employee performance plays a mediating role in this assumed relationship. In this context, firstly, the purpose of the research was mentioned, and then models and hypotheses, population and sample, data collection tools and analysis and findings were included.

### **6.1. Purpose and Model of the Study**

The "Flight Safety Culture", which has existed since the first flight in the field of Civil Aviation, is the most critical element for aviation companies to reach their vision. Unlike other industries, the fact that even the smallest mistake can cause irreparable results requires that all activities be carried out with safety awareness.

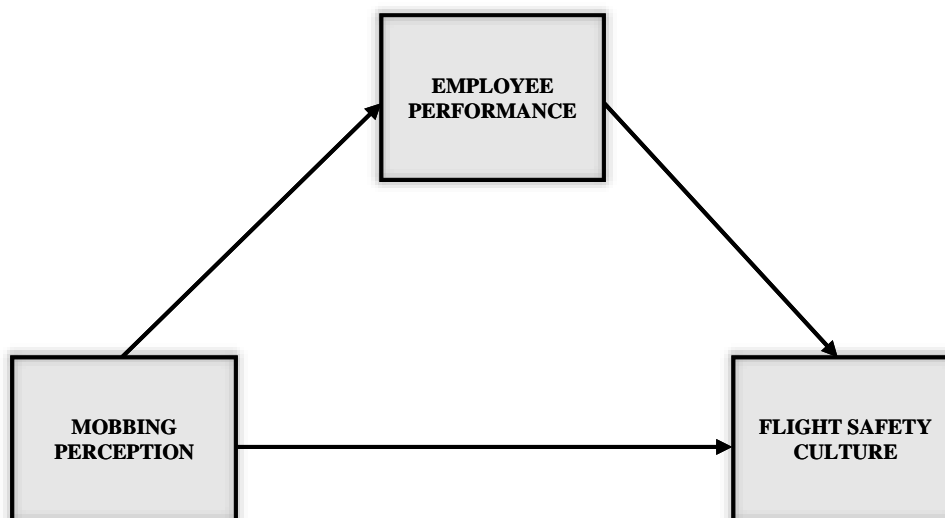
However, studies show that the perception of mobbing that develops within the organization due to commercial concerns negatively affects both employee performance and corporate culture (Duman and Akdemir, 2016; Gürbüz and Gürdal, 2019; Divincova and Sivakova, 2014). In the study, it is aimed to determine the flight safety culture and its antecedents, which are thought to be in need of improvement in the aviation field that has a global structure, and to present suggestions that can benefit the industry by revealing the relations between the concepts.

In this context, the relationship between perception of mobbing and flight safety culture and the role of employee performance in this relationship has been investigated. The established model and the related hypotheses are presented below.

**Figure 1.** Research Model

The hypotheses determined to be tested within the framework of the research model are as follows;

**H<sub>1</sub>:** Mobbing perception negatively affects flight safety culture.



**H<sub>2</sub>:** Mobbing perception negatively affects employee performance.

**H<sub>3</sub>:** Employee performance positively affects flight safety culture.

**H<sub>4</sub>:** Employee performance has a mediating role in the relationship between mobbing perception and flight safety culture.

## 6.2. Population and Sample

The research population is composed of personnel working in the different airline companies as pilot and flight attendant. Since it is not possible to reach the entire population, the sampling method, which is systematically selected from among the units in the population and accepted to represent the population, was used. In this context, the convenience sampling technique was used to obtain the maximum number of data, taking into account time and cost savings, and data were collected using a questionnaire method by mail from employees who agreed to express their opinion on mobbing and flight safety culture and individual performances, which they consider to be applied in the aviation industry.

The sufficient amount of data for factor analyses performed to ensure data model fit for the scales used is 5 to 10 times the number of items in the scale (Alpar, 2011). The research was carried out with 378 data collected between 01 February and 31 March 2021.



### **6.3. Data Collection Tools**

The questionnaire form used to collect research data consists of 4 parts. In the first part, there are questions about the participants' gender, age, educational status, marital status, position and industry experience. In the second part, there is the mobbing perception inventory. The scale developed by Leymann (1993) as "Leymann Inventory of Psychological Terrorization (LIPT)" was adapted into Turkish by Fettahlioğlu (2008) and took its final form by Korkmaz (2012). Following the removal of 15 questions that were deemed unsuitable within the scope of the sample, the scale included in the study with 4 sub-dimensions and 22 questions in total was used with a 5-point Likert-type rating scale measuring between "1=Strongly Disagree" and "5=Strongly Agree".

In the second part, the flight safety culture scale is used. The scale, consisting of 5 dimensions and a total of 46 questions, was developed by Terzioğlu (2018) using the CASS (Commercial Aviation Safety Survey) scale used by Wiegmann et al. (2003) in their studies. The scale was used with a 5-point Likert-type rating scale measuring between "1=Strongly Disagree" and "5=Strongly Agree".

Employee performance scale was used in the third and last part of the questionnaire form. Developed by Kirkman and Rosen (1999) and adapted to Turkish by Gürbüz and his friends (2010: 72), the scale consists of a single dimension and a total of 4 questions. The scale was used with a 5-point Likert-type rating scale measuring between "1=Strongly Disagree" and "5=Strongly Agree".

The application of the questionnaire created within the scope of our study was approved by the decision of Süleyman Demirel University Social and Human Sciences Ethics Committee, dated 11.01.2021 and numbered 101/5.

### **6.4. Data Analysis and Findings**

Analyses regarding the research methodology were made using Microsoft Excel, Statistical Package for the Social Sciences-SPSS 23.0 and Analysis of Moment Structures-AMOS 26.0 statistical package programs. In this context, firstly, demographic variables were subjected to frequency analysis, then descriptive statistics of the scales were evaluated. The scales whose factorial structures were tested in previous studies were subjected to confirmatory factor analysis (CFA) for measurement validity. Reliability levels of the scales whose measurement validity was provided as a result of CFA were determined with the Cronbach Alpha ( $\alpha$ ) coefficient.

Following the validity and reliability analysis, the hypotheses established within the framework of the research model were tested with correlation and regression models. In order to determine the mediator variable effect, the four-step regression model proposed by Baron and Kenny (1986) was used. In addition, the mediation effect was confirmed by the structural equation modeling.

## 6.5. Findings Regarding Demographic Variables

The demographic distributions of the research sample group are presented in Table 1.

**Table 1.** Findings Regarding Demographic Variables

Gender	Freq.	Percent	Marital Status	Freq.	Percent
Female	105	27.8	Married	231	61.1
Male	273	72.2	Single	147	38.9
Total	378	100.0	Total	378	100.0
Age	Freq.	Percent	Position	Freq.	Percent
18-25	7	1.9	Captain pilot	119	31.5
26-35	189	50.0	Second pilot	154	40.7
36-45	119	31.5	Cabin crew	105	27.8
46 and over	63	16.7	Total	378	100.0
Total	378	100.0	Sectoral Experience	Freq.	Percent
Education	Freq.	Percent	5 years or less	175	46.3
Bachelor's Degree	322	85.2	6-10 years	140	37.0
Graduate Study	56	14.8	11 years or more	63	16.7
Total	378	100.0	Total	378	100.0

Participants;

- 27.8% (N: 105) female, 72.2% (N: 273) male.
- 1.9% (N: 7) 18-25, 50% (N: 189) 26-35, 31.5% (N: 119) 36-45, 16.7% (N: 63) age range of 46 and over.
- 85.2% (N: 322) bachelor's degree, 14.8% (N: 56) graduate level.
- 61.1% (N: 231) married, 38.9% (N: 147) single.
- 31.5% (N: 119) captain, 40.7% (N: 154) second pilot, 27.8% (N: 105) cabin crew.
- 46.3% (N: 175) 5 years or less, 37% (N: 140) 6-10 years, 16.7% (N: 63) 11 years or more.

The fact that 72.2 percent of the participants are men, shows that the human resources working in the aviation industry, especially in the volatile position, are not yet in balance in terms of gender. Efforts to increase women's employment in aviation are important. In terms of age, it is striking that the weight is in the middle age group. Spread of flight personnel training, which is quite difficult, over long periods and the time-consuming accumulation of experience required for safe flight operations reduce the weight of young people in the industry. Similarly, the reason for the low intensity in the older age group is that the loss of performance as a result of occupational fatigue triggers the transition to passive tasks. The intensity of undergraduate education can be explained by the employment criteria of the companies. Job and professional experience percentages reflect the industry employment averages.

## 6.6. Validity and Reliability Analysis

In this section, validity and reliability analyses of the factorial structures of the scales used in the study are carried out. In this context, first of all, a total of 401 data were checked for missing values and outliers. 23 data were excluded from the research sample due to incomplete and incorrect coding. As a result, research analyzes were made with 378 data. Then descriptive statistics belonging to the mobbing perception inventory consisting of 4 dimensions: mobbing

towards self-expression and preventing communication, mobbing towards social relations, mobbing towards work and duty, and mobbing for personality and reputation are examined.

The analysis results show that the mobbing perception of the air transport industry employees is below the average with a score of 2.61. In the context of the scale and its sub-dimensions, skewness and kurtosis statistics ( $< \pm 2$ ) calculated between 571 and -,828 indicate that normal distribution conditions are provided for the mobbing perception scale (George and Mallery, 2010). As a result of DFA; the measurement validity of the 4-factor mobbing perception scale with  $\chi^2/sd=3,94$ , RMSEA=0,062, CFI=0,92, AGFI=0,90, SRMR=0,05 (Meydan and Şeşen, 2015: 37) The reliability coefficient is calculated as 955.

In the continuation of the study, descriptive statistics belonging to the flight safety culture scale from 5 dimensions: the commitment of the organization, the participation of the management, the reward system, the participation of the employees and the reporting system are checked. Analysis results show that the flight safety culture level established in the airline transport industry is above the average with a score of 3.81. The skewness and kurtosis statistics calculated between -1.052 and 799 in the context of scale and its sub-dimensions indicate that normal distribution conditions are provided for the flight safety culture scale. As a result of DFA; questions 2 and 21 with low factor loadings (Pilots are expected not to push the weather limits- Being involved in an accident or incident adversely affects the careers of aviation workers) is removed from the scale and the analysis was repeated. The reliability coefficient of the 5-factor flight safety culture scale, whose measurement validity is provided with goodness of fit values such as  $\chi^2/df=2.94$ , RMSEA=0.054, CFI=0.97, AGFI=0.91, SRMR=0.06. The reliability coefficient is calculated as 976.

Finally, descriptive statistics of employee performance scale consisting of one dimension is examined. The results of the analysis show that the performance level of the air transport industry employees is above average with a score of 4.30. Skewness and kurtosis statistics calculated with 328 and -,911 values indicate that normal distribution conditions are met for the employee performance scale. As a result of DFA; the reliability coefficient of the single factor employee performance scale, whose measurement validity is provided with goodness of fit values such as  $\chi^2/df=4.32$  RMSEA=0.078, CFI=0.98, AGFI=0.93, SRMR=0.03. The reliability coefficient is calculated as 903.

In order to confirm the measurement validity of the scales with structural changes, combined reliability levels and convergent validity are measured. Accordingly, in order to determine the convergence validity of the scales, the convergent validity values (AVE: Average Variance Extracted) expressing the average explained variances of the scales are expected to be 0.40 and above (Hair et al., 2017) and the combined reliability values (CR: Composite Reliability) to be 0.70 and above. (Fornell and Larcker, 1981). The relevant statistical results calculated within the limits are presented in Table 2.

**Table 2.** AVE and CR Values of the Scales

MOBBING PERCEPTION			
Factors	Number of Items	AVE	CR
F1	5	0,45	0,80
F2	4	0,50	0,80
F3	3	0,73	0,88
F4	11	0,52	0,92
FLIGHT SAFETY CULTURE			
Factors	Number of Items	AVE	CR
F1	9	0,57	0,92
F2	10	0,70	0,96
F3	5	0,49	0,82
F4	10	0,44	0,88
F5	10	0,65	0,95
EMPLOYEE PERFORMANCE			
Factors	Number of Items	AVE	CR
F	4	0,71	0,91

Regarding the scale and its sub-dimensions; Average, standard deviation, skewness, kurtosis and reliability (Cronbach alpha) statistics are presented in Table 3.

**Table 3.** Analysis Results of Research Scales

SCALE	Mean	Standard Deviation	Skewness	Kurtosis	Cronbach Alpha
F1	2,7519	,71268	,409	-,269	,792
F2	2,3472	,91080	,505	-,276	,803
F3	2,4533	,99558	,561	-,828	,858
F4	2,6919	,75644	,420	,122	,922
<b>MOBBING PERCEPTION</b>	2,6139	,73702	,469	-,229	,955
F1	3,8601	,83098	-,725	-,274	,892
F2	3,8130	,88666	-1,052	,629	,958
F3	3,7741	,73738	-,614	,799	,727
F4	3,9000	,63388	-,518	,429	,878
F5	3,7205	,88687	-,918	,521	,941
<b>FLIGHT SAFETY CULTURE</b>	3,8144	,74526	-,788	,341	,976
<b>EMPLOYEE PERFORMANCE</b>	4,2963	,45723	,328	-,911	,903

## 6.7. Hypothesis Tests

As a result of the verification of the scale structures as measurement models together with the confirmatory factor analyzes, hypothesis tests are started. In this context, Pearson correlation analysis is applied primarily for scales with normal distribution. Analysis results are presented in Table 4 below.

**Table 4.** Correlation Table

	Mean	S.D.	F1	F2	F3	F4	MA	F1	F2	F3	F4	F5	FSC
F1	2,75	,712											
F2	2,34	,910	,747**										
F3	2,45	,995	,654**	,700**									
F4	2,69	,756	,835**	,799**	,738**								
<b>MP</b>	2,61	,737	,896**	,888**	,826**	,968**							
F1	3,86	,830	-,491**	-,559**	-,450**	-,534**	-,565**						
F2	3,81	,886	-,463**	-,690**	-,607**	-,601**	-,648**	,859**					
F3	3,77	,737	-,435**	-,573**	-,508**	-,524**	-,561**	,722**	,789**				
F4	3,90	,633	-,490**	-,549**	-,487**	-,553**	-,578**	,784**	,798**	,864**			
F5	3,72	,886	-,490**	-,673**	-,651**	-,635**	-,674**	,823**	,936**	,804**	,853**		
<b>FSC</b>	3,81	,745	-,511**	-,663**	-,593**	-,620**	-,659**	,913**	,959**	,871**	,914**	,964**	
<b>EP</b>	4,29	,457	-,292**	-,295**	-,185**	-,352**	-,330**	,424**	,334**	,461**	,448**	,333**	,416**

When the correlation table between variables is examined;

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Between perception of mobbing and flight safety culture  $-.659$  ( $p<0,01$ ); between perception of mobbing and employee performance  $-.330$  ( $p<0,01$ ); there is a  $.416$  ( $p<0,01$ ) relationship between employee performance and flight safety culture.

In addition, the relationships of all scale sub-dimensions with each other are parallel to the main scales. The negative relationship between the perception of mobbing with both the flight safety culture within the framework of the first hypothesis of the research and the employee performance confirms the expectations regarding the model.

After the correlations the hypotheses of the research are tested with four-stage regression models established to determine the mediation effect. In this context, the first regression test explains both the first hypothesis result and the first stage of the mediation effect process. The conditions to be met in order to test the mediation effect are as follows (Baron and Kenny: 1986);

- There should be a statistically significant relationship between independent and dependent variables.
- There should be a statistically significant relationship between the independent and mediator variables.
- When used together with the independent variable in the model, there should be a statistically significant relationship between the mediator and dependent variables.
- When all variables are included in the regression analysis, the loss of significance of the relationship between the independent variable and the dependent variable indicates the existence of full mediation effect, while the decrease in the level of the relationship indicates the presence of partial mediation effect.

When the analysis results are evaluated, it is seen that the regression models established are statistically significant ( $P<0,01$ ) at all stages. The regression analysis performed at the first stage shows that the perception of mobbing predicts the flight safety culture at level  $\beta=-.659$  level ( $P<0,01$ ) and 43% of the change in flight safety culture is explained by the perception of mobbing. Accordingly, the hypothesis of the study "**H<sub>1</sub>**: Mobbing perception negatively affects flight safety culture" is supported.

This result also indicates that the first assumption about the mediation effect has been met. As the 2nd and 3rd phases met the assumptions regarding the testing of the mediating effect. As seen in the table below second and third hypotheses of the study "**H<sub>2</sub>**: Mobbing perception negatively affects employee performance" and "**H<sub>3</sub>**: Employee performance positively affects flight safety culture" are supported. The final step was carried out in which the performance of the employee with the perception of mobbing was included in the analysis as an independent variable and the flight safety culture as the dependent variable. The significant relationship between dependent and independent variables decreased as a result of the multiple regression analysis performed at the last stage ( $P<0,01$ ;  $\beta=-.585$ ) indicates the presence of a partial mediating effect in the model. Therefore, it is possible to say that the perception of mobbing affects flight safety culture both directly and indirectly through employee performance.

Accordingly, the hypothesis of the study, "H<sub>4</sub>: Employee performance has a mediating role in the relationship between perception of mobbing and flight safety culture" is partially accepted.

**Table 5.** Regression Analysis Results on Hypothesis Tests

Stages	Regression Coefficient			Model Statistics
	B	Std. Err.	Beta	
<b>1st Stage</b> Independent Variable: Mobbing Perception Dependent Variable: Flight Safety Culture	-,666	,039	<b>-,659**</b>	R <sup>2</sup> = ,434 F=288,694 t=-16,991 **P<0,001
<b>2nd Stage</b> Independent Variable: Mobbing Perception Dependent Variable: Employee Performance	-,205	,030	<b>-,330**</b>	R <sup>2</sup> = ,109 F=45,958 t=-6,779 **P<0,001
<b>3rd Stage</b> Independent Variable: Employee Performance Dependent Variable: Flight Safety Culture	,679	,076	<b>,416**</b>	R <sup>2</sup> = ,173 F=78,828 t=8,879 **P<0,001
<b>4th Stage</b> Independent Variable 1: Mobbing Perception Independent Variable 2: Employee Performance Dependent Variable: Flight Safety Culture	-,592 -,364	,040 ,064	<b>-,585**</b> <b>,223**</b>	Adjusted R <sup>2</sup> = ,476 F=172,167 t=-14,821/5,649 **P<0,001

The significance of the model established for the mediation effect was evaluated with the Sobel test. In this context, the test performed by entering non-standardized regression coefficients and standard error values into the relevant calculation program (Baron and Kenny, 1986: 1177) shows that the decrease in Beta values is significant and within limits.

Mediation test performed with multiple regression analysis is verified with the help of structural equation modeling in order to provide stronger statistical results to crosscheck. In the structural equation model, interactions between variables are measured with path coefficients, and standardized regression coefficients for direct and indirect effects are interpreted. The table containing the results of the relevant structural equation model analysis is presented below.

**Table 6.** Mediation Model Coefficients and Goodness of Fit Values

Mediation Effect	Regression Weights		Bootstrap Estimates		Two Tailed Sig.
	Std. Direct Effect	Std. Indirect Effect	Lower Band	Upper Band	
<b>Performance &lt;--- Mobbing</b>	-,345	-,058	-,404	-,263	,016
<b>Model Fit</b>					
$\chi^2/sd=3,93$	RMSEA=0,060	CFI=0,95	AGFI=0,89	SRMR=0,04	

The coefficients emerging with the presence of partial mediation effect are shown in Table 6. Accordingly, it is evaluated that the perception of mobbing affects flight safety culture both directly and indirectly through employee performance, and this effect may occur within the boundaries of -,404 and -,263.

## 7. Results

In this study, aviation industry employees who are the locomotive of the country's economies today were investigated. The stress factors in the industry, which continues its activities in an extremely fragile structure, are also reflected on the employees. This reflection is like a snowball effect. The impact of each development, both positive and negative, on employees is felt exponentially.

The most obvious example of this is changing employment policies in the slightest crisis. The industry, which maintains its existence with almost all of its qualified human resources, is faced with difficulties from time to time in terms of supply and sometimes demand.

The internal dynamics of the aviation industry, which often goes through turbulent times, is more subject to academic research than in the past. In this context, the concept of mobbing, one of the most problematic issues of today, was investigated in aviation. The global crises that take place put the aviation companies in a difficult position in commercial terms, and the financial chaos experienced in the following reflects on the human factor and causes negative results in sociological terms (Oprea, 2010: 52). It is observed that psychological violence, which is defined as systematic mobbing behaviors applied in the workplace by its nature, is getting worse every day in the industry. Flight safety culture, another variable of the study, is measured in the context of the sample and it is revealed that it is related to mobbing perception. Flight safety culture, which was not known enough in the past, but came to the forefront in the new world order, where social relations gained importance even in technical affairs, has become another element that scientists emphasize. This emphasis is so much that aviation companies attach special importance to this issue. Performance, which is the last variable of the research, is evaluated in the intermediary role in the model. It is known that employee performance is the most critical element not only in aviation but also in all industries in the business world. Because employee performance means organizational performance and subsequently sectoral performance.

In this context, a three-variable mediation model is presented in the study. In the model, the perception of mobbing is defined as independent, flight safety culture dependent, and employee performance as mediator variable. The research has been carried out in the airline transportation industry, where mobbing practices, which are the subject of complaints, have increased recently due to the impact of regional and global crises. During these periods when flight operations are a source of great stress on both management levels and flight personnel, an intense pressure is observed on employees. It has been determined that the perception of mobbing measured in the context of the research universe is felt below the average. It has been determined that employee performance with the flight safety culture is also relatively high, with values above average. Before the research hypotheses established regarding the model, the validity and reliability analyses of the research scales are performed. Together with the scales whose validity and reliability are confirmed, the hypotheses are tested with correlation and regression models.

It was assumed that mobbing, the premises of which should be investigated in different studies, is related to the business culture, and the hypotheses established confirmed this assumption in the context of the research sample. For those working in the aviation industry, where business alternatives are limited, exposure to mobbing is more likely than other industries.

However, considering that each employee has a certain qualification, it is possible to say that personal interests can be protected to a certain extent. Because despite the difficult conditions we are in, the low perception of mobbing is a positive situation for the industry. Although there are both working conditions and technical difficulties, the positive picture in terms of mobbing perception, flight safety culture and employee performance is promising for the future of the industry.

When the relationships between variables were examined, it was seen that the perception of mobbing negatively affected the flight safety culture in parallel with the expectations.

Therefore, the most fundamental duty of aviation industry managers at this point is to implement practices that can reduce the pressure on employees to the lowest levels as soon as possible. Similarly, considering that employee performance changes depending on the perception of mobbing, the negative effects of mobbing become clear. Research results show that employee performance plays a partial mediator role in the relationship between mobbing perception and flight safety culture. In other words, it can be said that mobbing has both direct and indirect effects on flight safety culture.

The fact that the research data were collected instantly within a certain period and with a limited sample size presents a disadvantage in terms of generalizability of the results. The coherence of the research model established in the conceptual framework with the theoretical model has facilitated the researchers in the interpretation of the hypothesis results. It is considered that testing the relevant model in different industries or universes and developing it together with the inclusion of different variables such as leadership, motivation, organisational stress and conflict management into the model will contribute to the literature.

## References

- Alpar, R. (2011). *Çok değişkenli istatistiksel yöntemler*. Ankara: Detay Yayıncılık.
- Anna, K. (2020). The influence of staff turnover on work motivation and job performance of employees in IT sector. *Forum Scientiae Oeconomia*, 8(1), 29-48.
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bernard, A. & Spencer, J. (2010). *The routledge encyclopedia of social and cultural anthropology*. (2nd ed.). Routledge.
- Carretta, T. R. and Ree, M. J. (1994). Pilot-Candidate selection method: Sources of validity. *The International Journal of Aviation Psychology*, 4(2), 103-117.
- Cassitto, M. G., Fattorini, E., Gilioli, R., Rengo, H. & Gonik, V. (2013). *Raising awareness of psychological harassment at work*. R. Gilioli, M. A. Fingerhut, & E. Kortum-Margot (Eds.). 4th ed. World Health Organization.
- Çetin, C. & Kurt, N. B. (2008). Mobbing ve çalışan sağlığı. *Toplum ve Sosyal Hizmet*, 25(2), 111-126.
- Divincova, A. & Sivakova, B. (2014). Mobbing at workplace and its impact on employee performance. *Human Resources Management & Ergonomics*, 8(2), 20-34.



- Duffy, M. & Sperry, L. (2014). *Overcoming mobbing: A recovery guide for workplace aggression and bullying*. Oxford University Press.
- Duman, M. Ç. & Akdemir, B. (2016). Mobbing ve çalışan performansı arasındaki ilişkiyi belirlemeye yönelik bir araştırma. *Akademik Yaklaşımlar Dergisi*, 7(2), 29-52.
- Einarsen, S. (1999). The nature and causes of bullying at work. *International Journal of Manpower*, 20(1/2), 16-27.
- Erdem, M. R. & Parlak, B. (2010). Ceza hukuku boyutuyla mobbing. *TBB Dergisi*, 88, 261-286.
- Fettahlıoğlu, Ö. O. (2008). *Örgütlerde psikolojik şiddet (Mobbing): Üniversitelerde bir uygulama*. Dokuz Eylül University Institute of Social Sciences, İzmir, (Unpublished Phd Thesis).
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- George D. & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference*. 11.0 Update (4th ed.). Boston: Allyn and Bacon.
- Gürbüz, H. & Gürdal, H. A. (2019). *Çalışanlarda mobbinge maruz kalma*. Ankara: İksad Yayınevi.
- Gürbüz, S., Erkuş, A. & Sığı, Ü. (2010). İş tatmini ve iş performansının yeni öncülü: Temel benlik değerlendirmesi. *Sosyal ve Beşeri Bilimler Dergisi*, 2(1), 69-76.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. (2nd ed.) Thousand Oaks: Sage.
- ICAO. (2018). Doc 9859, *Safety management manual (SMM)*. In Doc 9859 AN/474 (4th ed.). ICAO.
- Iordache, V. M. & Balan, C. V. (2016). Safety culture in modern aviation systems – Civil and military. *Incas Bulletin*, 8(2), 135-142.
- Jagannathan, A. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*, 63(3), 308-323.
- Jahanian, R. & Salehi, R. (2013). Organizational culture. *International Journal of Academic Research in Progressive Education and Development*, 2(3), 84-96.
- Kirkman, B. L. & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *The Academy of Management Journal*, 42 (1), 58-74.
- Korkmaz, H. (2012). Kamu kurumlarında yıldırma (Mobbing) etkisi: Kahramanmaraş il merkezinde bir inceleme. Unpublished Master Theses, Kahramanmaraş Sütçü İmam University Institute of Social Sciences.
- Küçükönel, H. & Korul, V. (2002). Havayolu işletmelerinde insan kaynakları yönetimi. *Sosyal Bilimler Dergisi*, 4(2), 67-90.
- Leymann, H. (1990). Mobbing and psychological terror at workplaces. *Violence and Victims*, 5(2), 119-126.
- Leymann, H. (1993). *Mobbing-physicterror at work and how one can defend oneself*. Hamburg: Rowohlt Taschenbuch Verlag.
- Leymann, H. (1996). The content and development of mobbing at work. *European Journal of Work and Organizational Psychology*, 5(2), 165-184.
- Lorenz, K. (1991). *Hier bin ich-Wo bist du? Ethologie der grauganz (Here I am-Where are you? The behaviour of geese)*. (New ed.). München: Piper.
- McCune, D., Lewis, C. & Arendt, D. (2011). *Safety culture in your safety management system, Chapter of implementing safety management system in aviation (135-160)*. ASHGATE.

- Meydan, C. H. & Şeşen, H. (2015). *Yapısal eşitlik modellemesi AMOS uygulamaları*. (2. Basım) Ankara: Detay Yayıncılık.
- Oprea, M. G. (2010). The effects of global economic crisis on the air transport of passengers in Europe and in Romania. *GeoJournal of Tourism and Geosites*, 1(5), 52-61.
- O'Connor, P., O'Dea, A., Kennedy, Q. & Buttrey, S. E. (2010). Measuring safety climate in aviation: A review and recommendations for the future. *Safety Science*, 49, 128-138.
- Öztürk, H., Eke, E. D., İpek, N., Müdüroğlu, A. & Faikoğlu, R. (2015). Mobbing (psikolojik yıldırma), örgüt üzerindeki etkileri ve çözüm önerileri. *Sağlık Akademisyenleri Dergisi*, 2(1), 27-33.
- Patankar, M. S. & Sabin, E. J. (2010). The safety culture perspective. In E. Salas & D. Maurino (Eds.), *Human Factors in Aviation*, 2nd ed. (95-122). Elsevier Academic Press.
- Pekdemir, I., Koçoğlu, M. & Gürkan, G. Ç. (2014). Özerklik ve ödüllendirme algılarının çalışan performansı üzerindeki etkisinde çalışanın inovasyona yönelik davranışının aracılık rolüne yönelik bir araştırma. *İstanbul Üniversitesi İşletme Fakültesi Dergisi*, 43(2), 332-350.
- Shahzadi, I., Javed, A., Pirzada, S. S., Nasreen, S. & Khanam, F. (2014). Impact of employee motivation on employee performance. *European Journal of Business and Management*, 6(23), 159-166.
- Stolzer, A., Halford, C. & Goglia, J. (2011). *Implementing safety management system in aviation*. ASHGATE.
- Şimşek, A. S. (2013). Mobbing kaderimiz midir? *Barış Araştırmaları ve Çatışma Çözümleri Dergisi*, 1(2), 36-45.
- Terzioğlu, M. (2018). *Ekip kaynak yönetiminin uçuş emniyet kültürüne etkileri: Pilotların tutumları üzerine bir alan araştırması*. İstanbul University Institute of Social Sciences (Unpublished Phd Theses).
- Thaden, T.L. von, Li, Y., Feng, L., Li, J. & Lei, D. (2006). *Validating the commercial aviation safety survey in the chinese context*, "Technical report HFD-06-09. Human Factors Division Institute of Aviation, Federal Aviation Administration Atlantic City International Airport, NJ Contract DTFA 01-G-015.
- Tullo, F. J. (2019). *Team work and organizational factors*. In B. G. Kanki, José Anca & Thomas R. Chidester (Eds.), *Crew Resource Management*, 3rd ed. (111-133). Elsevier Academic Press.
- Ustaömer, T. C. & Şengür, F. (2020). Havacılıkta emniyet kültürü: Reason'ın emniyet kültürü modelinin incelenmesi. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi*, 8(1), 95-104.
- Yiğit, B. (2018). Mobbing kavramı: Kavramsal bir çerçeve. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi (ASEAD)*, 5(1), 32-42.
- Wiegmann, D. A., von Thaden, T. L., Mitchell, A. A., Sharma, G. & Zhang, H. (2003). *Development and initial validation of a safety culture survey for commercial aviation (Tech. Rep. AHFD-03-3/FAA-03-1)*. Washington, DC: Federal Aviation Administration.