

A QUALITATIVE RESEARCH ON FACTORS AFFECTING JUST CULTURE IN AIRLINES*

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Abstract

The aim of this research is to examine the factors affecting the concept of just culture in airline companies in the light of literature review. In the study, the phenomenological research method, one of the qualitative research designs, was preferred. The sample of the research consists of 17 experienced employees working in three big airline companies in Turkey. Interview method was used to collect data in the research. The data collected from the participants were subjected to content analysis and the themes of the research were reached. As a result of the content analysis, the factors affecting just culture in airline companies were gathered under five themes. These themes are; factors related to organizational structure and processes, factors related to managers, factors related to employees, factors related to error and violation distinction, and factors preventing just culture. These factors were classified as major, enhancer, and prospective factors by the researchers in terms of their effects on just culture. It is thought that the research will make an original contribution to just culture literature.

Keywords: Just Culture, Safety Culture, Air Transport, Airline Strategies

JEL Codes: M10, M12

HAVAYOLU İŞLETMELERİNDE ADİL KÜLTÜRÜ ETKİLEYEN FAKTÖRLER ÜZERİNE NİTEL BİR ARAŞTIRMA

Öz

Bu araştırmanın amacı, havayolu işletmelerinde adil kültür kavramını etkileyen faktörleri literatür taraması ışığında incelemektir. Çalışmada nitel araştırma desenlerinden biri olan fenomenolojik araştırma yöntemi tercih edilmiştir. Araştırmanın örneklemini Türkiye'deki üç büyük havayolu şirketinde görev yapan deneyimli 17 çalışan oluşturmaktadır. Araştırmada veri toplamak için görüşme yöntemi kullanılmıştır. Katılımcılardan toplanan veriler içerik analizine tabi tutularak araştırmanın temalarına ulaşılmıştır. Yapılan içerik analizi sonucunda havayolu işletmelerinde adil kültürü etkileyen faktörler beş tema altında toplanmıştır. Bu temalar; örgütsel yapı ve süreçlerle ilgili faktörler, yöneticilerle ilgili faktörler, çalışanlarla ilgili faktörler, hata ve ihlal ayrımı ile ilgili faktörler ve adil kültürü engelleyen faktörler. Bu faktörler, adil kültür üzerindeki etkileri açısından araştırmacılar tarafından temel, geliştirici ve ileriye dönük faktörler olarak sınıflandırılmıştır. Araştırmanın adil kültür ile ilgili literatüre özgün bir katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Adil Kültür, Emniyet Kültürü, Hava Taşımacılığı, Havayolu Stratejileri

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INTRODUCTION

The air transport industry has grown and become more dynamic as driven by the global economy and technological changes. Despite the political instability, slowdown in global trade and geopolitical conflicts experienced all over the world in recent years, the air transport sector grew by 7.3% in 2018 and 4.2% in 2019. Today, with the increase in demand after the Covid-19 pandemic, more and more people travel by plane, causing airports to be more crowded and air traffic to increase (Çoban, 2022). Managers have to act with the view that “*accidents are inevitable*” considering the high risks associated with airline operations (Perrow, 1984). This sensitivity puts aviation safety, which is a critical and fundamental building block within the framework of international rules and the basis of a smooth, orderly and comfortable flight, at the forefront of all operations (Siregar, 2019).

While defining the concept of safety, International Civil Aviation Organization (ICAO) emphasized the protection of people, property, and the environment by identifying and managing risks (Ustaömer, 2020). Accident investigation reports in the 1980s and 1990s accelerated the investigation of the relationships between airline safety management processes and accidents (Moshansky, 1992) and modern safety management approaches contributed to the improvement of safety practices in aviation activities increasingly especially after 2010s (Inan and Bükeç, 2021). These safety practices have made air travel “*the most reliable form of travel*” today (Savage, 2013). The Safety Management System (SMS) aims to develop and continuously improve measures by determining risks and disruptions with a systematic perspective before incidents and accidents occur (Maurino, 2017). The effectiveness and sustainability of SMS depends on establishing a positive safety culture within the organization and how well it permeates the organizational structure and the way activities are conducted (Gill and Shergill, 2004). The concept of safety culture has a key role in preventing occupational accidents and creating a safe working environment (Aytaç, 2011, p. 31). Safety culture refers to the attitudes, values, perceptions and beliefs employees share about safety. At the same time, the structures, practices, policies and controls that an organization uses to make it safer are also within the scope of safety culture (Cox and Cox, 1991; Reason and Hobbs, 2003).

Safety culture consists of five sub-dimensions: just culture, reporting culture, learning culture, informing culture and flexible culture (Reason, 1997). A just culture distinguishes between acceptable and unacceptable safety-related behaviors of employees. While willful violations are not acceptable in a just culture, honest mistakes are interested (Dekker, 2016). The reporting culture encompasses the beliefs and values that employees can report all safety risks without hesitation and voluntarily. Reporting culture aims to reach qualified data that will increase occupational safety. In a learning culture, organizational lessons and conclusions are drawn by transforming data on safety management into knowledge. These results are

used to take precautions against safety risks, achieve organizational learning, and create organizational change with behavioral change in employees (Bükeç and Gerece, 2017, p. 160). Informing culture means that managers have up-to-date knowledge of human, organizational and environmental factors that affect the safety of the entire system in an organization. In an informing culture, managers encourage behaviors and actions that help employees understand safety risks. (Ustaömer and Şengür, 2020, p. 102). Flexible culture refers to an organization's ability to adapt effectively to changing situations (Nemli, 1998, p. 79).

The concept of just culture has been a hot topic in aviation safety in recent years. Because in order to build a safety culture in an organization, a just culture must first be created. In an organization where there is a fear culture and punishment, no employee will voluntarily report a violation or mistake. It is essential for employees to have confidence in their managers so that they can report their unsafe behavior. (Reason and Hobbs, 2003, p. 148). For these reasons, in this research the factors affecting the concept of just culture in airline companies were tried to be examined in depth with qualitative research.

LITERATURE REVIEW

Just Culture in Aviation Industry

The concept of just culture, which is an important sub-dimension of safety culture in the aviation industry, was mentioned for the first time in the literature by James Reason. According to Reason (1997, p. 195) just culture is a work environment where employees are encouraged and even rewarded for providing basic safety information, but where the line between acceptable and unacceptable behavior should be drawn. It ensures all employees report any problem or risk that has a potential impact on aviation safety without hesitation. Just culture has become a part of European and ICAO legislation today as a popular topic discussed among aviation professionals, aviation safety experts and lawyers (Kovacova, Licu and Balint, 2019, p. 115). European Commission defines just culture as *“a culture in which aviation workers are not punished for acts, omissions or decisions commensurate with their experience and training, but tolerance is not shown for gross negligence and willful violations and destructive acts”* (EC No 691/2010, 2010).

Employees in a just culture environment feel safe voicing their safety concerns. Employees have the freedom to discuss their own and others' actions with others (Dekker, 2002) since just culture defines a work environment where employees believe they will receive fair treatment when faced with an adverse event. The key to ensuring a fair outcome for the employee is to respond to the adverse event with a comprehensive follow-up and evaluation process (Petschonek et al., 2013). According to the contemporary approach to the assessment of human error, human error is not viewed as the cause of an adverse event but as a symptom of

a deeper problem in a defective system. This constructive view does not blame people directly or immediately when things go wrong since it adopts constructive justice practices (Dekker, 2016).

In a just culture environment, managers do not rush to judge or punish unsafe behaviors. Instead, they take a holistic view of unsafe behavior to find organizational safety vulnerabilities that contribute to employee failure. Because organizational factors such as workload, lack of resources, stress and fatigue may contribute to the display of unsafe behavior (Reason, 2008). Just culture is particularly concerned with the sustainability of learning from failure through reporting errors, violations and adverse events occurring in aviation activities. Thus, it fulfils a broader function, such as regulating the distinction between normal and abnormal, order and disorder (Dekker, 2008).

A culture without blame is neither viable nor desirable. Most people want some degree of accountability when a mishap or mistake occurs. Because some unsafe acts have serious consequences and require sanctions. In a just culture, the guilt line is clearly drawn (Balk, Stroeve and Bossenbroek, 2011). Just culture fundamentally recognizes that a delicate balance between aviation safety and fair management will be beneficial by moving away from the blame culture. For this reason, while accepting that professional aviation workers can make mistakes, he advocates making a distinction between “honest mistake” and intentional or reckless behavior (Balcerzak, 2017, p. 14).

Factors Affecting Just Culture

Although there is no consensus on the sub-dimensions that constitute a just culture, Petschonek et al. (2013) studied in the healthcare industry and identified six dimensions that influence just culture. These dimensions are; balance, trust, openness to communication, quality of the incident reporting process, feedback and communication about incidents and continuous improvement are the overall goals. In addition, how managers evaluate unsafe employee behavior is important in creating a just culture. These faulty or defective behaviors in terms of safety can be classified under four headings: human error, negligent conduct, reckless conduct and intentional violations. To be just, managers must choose the appropriate course of action based on the intent and content of the behavior (Marx, 2001). People's behaviors and actions are systematically related to the work they do, the tools they use, and the environment they are in. Therefore, the first response of managers, employees or other stakeholders to unsafe behavior should be to ask what is responsible instead of who is responsible (Dekker, 2013).

Just culture and reporting culture are interrelated in the creation of a safety culture in the aviation industry. Employees should not be improperly punished for reporting or cooperating in incident investigations. The organizational internal reporting process should be in the form of a closed loop to ensure

that measures are taken against safety risks. Providing feedback to reporters is important for the continued support of employees in the reporting process (EASA, 2003). On the other hand, abandoning punishment to encourage reporting can create a perception of injustice among employees who commit mistakes and violations (Aral, 2010). For this reason, encouraging or discouraging reporting behavior and correctly distinguishing reported behavior emerge as important factors in establishing a just culture.

Persistent failure to correct behavior that is inappropriate for safety certainly breeds an untrustworthy organizational climate and motivates rule violations. For this reason, in order to establish a just culture, employees should be personally accountable in cases where the rules are violated (Dekker, 2017; Wiegmann and Shappel, 2003). Although disciplinary rules are used as a tool for maintaining the system and accountability in aviation safety, advanced disciplinary practices are only effective for a short time. In addition, the harsher the punishment practices, the lower the level of trust of the employees. Blaming is an appropriate remedy in some cases but prevents employees from reporting everyday events. Therefore, managers should direct employees to acceptable performance, simultaneously building trust and investigating the causes of unsafe situations and punishing employees when violations and certain risky behaviors are repeated (Ingalls, 2002).

According to Balk et al. (2011), the necessary elements for a just culture to exist in an organization are: *developing reporting policy and procedures; identifying roles, responsibilities and duties; reducing legal barriers to reporting; developing a reporting form, determining the feedback process for reporting users; planning and educating users to implement the reporting system and develop just culture*. Similarly trust, reporting, learning and accountability constitute the basic principles of just culture (Dekker, 2017). An effective just culture is not possible without trust between managers and employees (Vaisanen, 2020, p. 10). Since employees may need to hide their mistakes when they believe that they will be punished if they report their mistakes, both the justice of the managers and the honesty of the employees should be trusted (Byrne, 2012). Trust-based reporting is an important tool for uncovering problems in safety management and proactively sustaining safety. Reporting is an invaluable source of information for improving safety and improving operations (Hollnagel, 2014; Dekker, 2017).

According to the literature, there are some difficulties regarding the implementation of just culture in the aviation industry. Personal reasons, distrust of managers, fear of punishment, financial losses and dismissal anxiety can prevent employees' reporting behavior (Bükeç and Gerece, 2017; VonThaden and Hoppes, 2005). The legal aspect of incident reporting may differ from one State to another. This may prevent employees from reporting, as States' differing practices in reporting can cause complications. In many States, unsafe behavior in the aviation industry results in criminal sanctions (Önen, 2017). In a study



conducted by Clarke (1998), it was observed that employees sometimes report formally and sometimes informally in order to avoid problems with their colleagues. Insufficient time to report, the complexity of the reporting process and the long time it takes may prevent employees from reporting or cause the reporting to be incomplete and careless (Wright and Barnard, 1975). In addition, among the factors that prevent the implementation of just culture we can emphasize; the safety culture perceptions of different employee groups within the organization, the fact that managers accept safety reports as organizational failures, criticism of over-reporting, the macho attitudes of managers in operations, the instability of management to reporting and the lack of feedback to reports (Fleming, Filin, Mearns, and Gordon, 1998; Clarke, 1998; Önen, 2017).

METHODOLOGY

The aim of this research is to reveal the factors affecting just culture, which is the critical sub-dimension of safety culture in registered airline companies in Turkey. For this aim, the qualitative research approach was used to explore in detail the factors that positively or negatively affect just culture in airlines. The research was guided by using the phenomenology design, one of the qualitative research designs. The qualitative research design guides the researcher in determining the focus of the research and the way of data collection and analysis while providing a flexible approach to research without giving precise direction. Phenomenology design focuses on phenomena that we are aware of but not understood in depth and in detail (Yıldırım and Şimşek, 2018). In order to carry out the research, the approval of Nişantaşı University Ethics Committee dated 26 April 2022 and meeting number 2022/20 was received.

Sample

In order to determine the factors affecting the just culture, participants were selected according to purposive sampling method. This method allows the researcher to select the participants who provide the best understanding of the research problem (Creswell, 2017). In this context, experienced employees who actively work in airline operations such as flight crew, aircraft maintenance technician, safety/quality manager and operations specialist in the three largest airline companies registered in Turkey were determined as the sample of the research. In this context, 17 employees participated in the research. Depending on the issues mentioned above, it is thought that the sample size is sufficient for the research to reach its purpose and to reveal the factors affecting the culture of justice.



Data Collection Tools and Process

The interview method was used as a data collection tool. Having an interview is one of the most frequently used data collection tools in qualitative research on social sciences. Interviewing is a communication process based on mutual interaction based on questioning and answering, conducted for a predetermined and serious purpose (Stewart and Cash, 1985). An interview form was created by the researchers considering the purpose of the research, literature review and the topics to be explored. In the first part of the interview form, general information such as the purpose of the research, information about the researchers, and privacy principles; In the second part, there are semi-structured questions that guide the interview. The basic research questions asked to the participants are presented below.

- What are the main factors necessary for the formation of an effective just culture in airlines where a positive safety culture is dominant?
 - What are the duties and responsibilities of managers in order to create an effective just culture?
 - What are the duties and responsibilities of employees in order to create an effective just culture?
 - In order to create an effective just culture, how should an error and violation be differentiated in the behavior of employees that endanger their safety?
- What are the factors that prevent the formation, development, and sustainability of an effective just culture in an airline company?

The descriptive information about the participants is presented in Table 1.

Table 1: Descriptive information about the participants

Participant Code	Gender	Marital Status	Age	Education Level	Job Title	Total Work Experience (year)	Duration of Interview (minute)
P1	Male	Single	48	BSc	Dispatcher	16	53
P2	Female	Single	43	BSc	Quality Manager	12	57
P3	Male	Single	50	PhD	Captain Pilot	30	54
P4	Male	Single	50	MSc	Captain Pilot	28	61
P5	Female	Single	48	MSc	Cabin Supervisor	20	55
P6	Male	Married	46	MSc	Maintenance Manager	24	63
P7	Male	Single	43	BSc	Flight Operations Specialist	10	60
P8	Male	Single	40	MSc	Flight Operations Specialist	20	67
P9	Male	Married	41	MSc	Quality Manager	17	68
P10	Female	Single	55	BSc	Captain Pilot	28	47
P11	Female	Single	50	BSc	Captain Pilot	22	47
P12	Female	Married	53	BSc	Cabin Supervisor	22	64
P13	Male	Married	56	MSc	Safety Manager	33	62
P14	Female	Married	45	BSc	Captain Pilot	22	48
P15	Male	Married	35	MSc	Aircraft Maintenance Technician	15	56
P16	Male	Married	41	MSc	Aircraft Maintenance Technician	22	66
P17	Male	Single	35	PhD	Aircraft Maintenance Technician	16	68

Since there were time and space constraints due to the participants being in different cities, all interviews were conducted remotely. Prior to the data collection process, scientific ethics sensitivities were clearly stated to the participants. Interviews were held with each participant separately between 06.10.2022 and 14.11.2022 and all interviews were recorded. Researchers planned 50 minutes for each interview. However, flexibility was made according to the course of the interview, the new questions and answers that emerged. Accordingly, the shortest interview took 47 minutes and the longest interview lasted 68 minutes. The data collection process was finished according to the “*saturation point*” method. According to this method, data collection is finished when the themes emerging in qualitative research reach a certain saturation and when new perspectives on data collection do not emerge (Creswell, 2017).

Data Analysis

The data were analyzed according to the content analysis method. The purpose of content analysis; is to summarize the data in a descriptive and inductive way, to interpret them and to reach unnoticed codes, categories and themes by in-depth processing and to interpret them by arranging them in a way that readers can understand (Yıldırım and Şimşek, 2018). During the analysis process, the data were systematically examined by both researchers separately and later together, and the final version of the code, category and themes of the research was reached. The themes and categories that emerged were tried to be supported with quotations from the statements of the participants, and the findings were interpreted by the researchers, who were a natural part of the research process in each category and theme.

Validity and Reliability

One of the most vital criteria of scientific research is the credibility of the results obtained. Validity and reliability are two commonly used criteria for the credibility of research results. The approaches adopted in terms of validity and reliability in this study, which was conducted with the qualitative research method, are presented below (Creswell, 2017; Yıldırım and Şimşek, 2018; Sığırı, 2021):

- Studies on the method and process of the research and how the results were achieved are expressed clearly, in detail, and in a way that allows the evaluation of other researchers.
- The research sample was chosen according to purposive sampling and by diversifying it to allow generalization. For this reason, employees who perform different tasks in the aviation industry were interviewed.
- Provided long-term interaction with the recordings of interviews with the participants, which are the data source of the research. The data were analyzed diagonally by two researchers separately, and the raw data were stored for review by other researchers.
- Triangulation method was used in the research. Thus, different participants were included in the research, and the research topic was tried to be explained by supporting the data obtained through interviews with different data sources.
- The codes, categories, and themes that emerged by sticking to the raw data with content analysis were presented to the reader without being interpreted by the researchers.
- Practitioners, experts, and researchers working in the aviation industry were contacted about the research subject, method and process, and their opinions were received, and arrangements were made in the content of the research in line with the feedback.

FINDINGS AND ANALYSIS

The themes that emerged as a result of the content analysis are presented in Table 2 in detail. The factors affecting just culture in airline companies are explored in five themes. The themes are factors related to organizational structure and processes, factors related to managers, factors related to employees, factors related to distinction of errors and violations, and factors preventing just culture. According to data, while subcategories emerged in some themes, subcategories did not emerge in some themes. The findings of the researchers regarding each theme by considering the categories and the analysis of the findings in line with the quotations from the statements of the participants are presented below, respectively.

Table 2: Themes of study

S/N	Themes	Categories	Subcategories
1	Factors Related to Organizational Structure and Processes	Organizational Safety Policy	Responsibility of Senior Management
			Safety Accountability
		Cultural Factors	National Culture
			Organizational Culture
			Professional Culture
		Organizational Trust	Establishing Organizational Trust
			Employees' Perception of Organizational Trust
		Effective Management Practices	Quality Management
			Human Resources Management
			Safety Management
Knowledge Management			
2	Factors Related to Managers	Attitudes and Behaviors of Managers	Being Fair and Impartial
			Effective Communication
		Proficiency and Management Style of Managers	Making Decisions That are Right and Shared by Employees
			Sufficient Professional Knowledge and Expertise
		Different Management Levels	Exhibiting Leadership
			Senior Management



		Intermediate Management	
		Lower-Level Management	
3	Factors Related to Employees	Performing the Duties and Responsibilities Fully	
		Being Aware of Safety	
		Communicating Clearly on Safety	
		Exhibiting Reporting Behavior	
		Demographic Features	
4	Factors Related to the Distinction of Error and Violation	Compliance of Procedures	
		Evaluation Process	
		Consistent Practices of Managers	
		Feedback to Employees	
		Employee's Intention	
		Error Repetitions	
		Content of Unsafe Behavior	Employee's Past Job Performance
Employee's Education and Professional Knowledge Level			
5	Factors Preventing Just Culture	Inadequacy of Safety Culture Trainings	
		Presence of Fear Culture	Fear of Being Punished
		Problems in Decision-Making Mechanisms	Discouragement of Employees
		Employees' Lack of Organizational Trust	

Theme-1: Factors Related to Organizational Structure and Processes

Under Theme 1, factors related to the organizational structure and processes that contribute to the establishment and development of a just culture in an airline are defined. According to the findings, the organizational safety policy, cultural factors, organizational trust and effective management practices are the factors affecting just culture.

Organizational Safety Policy: In this category, the policy of safety management by the top management of the organization comes to the fore. Statements of some participants regarding this category are as follows: P2 stated that *“for a just culture, procedures must be complete and thorough”*. P3 emphasized the same point that *“the expressions in the procedures should be clear and understandable”* and added that *“this would not be enough, the procedures should also be operated fairly”*. P16 said that *“there is a relationship between the level of institutionalization and just culture”*. According to SMS Manual (ICAO, 2013) the safety policies in all aviation organizations are dependent on management commitment and responsibility, safety accountabilities, the appointment of key safety personnel, coordination of emergency response planning, and SMS documentation. When the statements of the participants are examined holistically; The majority of the participants seem to agree that the top management's perspective on safety management and organizational safety policy significantly determine the development of a just culture in an organization. It is seen that the findings gathered under this category are compatible with the SMS Manual.

Cultural Factors: In this category, it has been observed that the national, organizational and professional cultures of the employees affect the just culture. Statements of some participants regarding this category are as follows: P8 with experience in quality management linked national culture to rule-following behavior and also said that *“a fear culture was more prevalent in some nations”*. P14 stated that *“fear culture is more in organizations where Turkish employees are concentrated”*. The participant *“associated the fear culture with the concept of favoritism, which he thought was common in Turkish culture”*. P16, an aircraft maintenance technician, stated that *“the fatalistic approach prevailing in Turkish culture predominates the idea that “by Allah's leave, nothing will happen to me” in employees and encourages employees to unsafe behavior”*. The same participant said that *“in Turkish or Middle Eastern cultures, the fact that people are light-hearted and forgiving because of religious beliefs and national culture is a negative situation in terms of punishing employees who exhibit violating behavior”*.

P16, emphasized that *“strong organizational culture is more effective on just culture than national culture”* and stated that *“institutionalization is one of the important conditions for the development of a positive safety culture”*. P10, stated that *“employees from different organizations set a positive example in safety by bringing some habits from their own organizational culture”*. Similar views also was expressed by P4, P8, P11, P15. Within the framework of these data, it can be said that there is a consensus among employees that the level of institutionalization and strong organizational culture increase the just culture.

According to some participants, one of the factors influencing just culture is the professional culture of employees. P3 said that *“the impact of national culture is negligible because professional culture is so*

dominant in aviation.” P3, P7 and P8 said that “due to their professional culture, pilots have high self-confidence; because of this, pilots look down on other aviation employees, which creates fear culture in organization”. P10, P11 and P12 stated that “some professional groups tend to protect their teammates while reporting in an operational pressure environment”. According to P13, an experienced safety manager, “aircraft maintenance personnel are the group of employees who perform the least reporting behavior. Because of their professional culture, aircraft maintenance personnel try to solve unsafe situations within themselves.

Most of the participants emphasized that the organizational culture must be strong in order for a just culture to be formed and sustainable. It has been seen that there is almost complete agreement among the employees that the safety culture nurtured in the strong organizational culture will have an open communication environment and contribute to common values. The argument in question has often been associated with the idea of eliminating the fear culture.

Organizational Trust: The findings also reveal that organizational trust directly affects just culture. Statements of some participants regarding this category are as follows: P8 stated that *“there should be trust between the employee and the manager established a relationship between the concept of trust and the perception of just culture”*. In addition, he said that *“managerial attitudes are effective in the establishment of participatory organizational trust”* and emphasized that *“managers should avoid attitudes that undermine trust”*. P9, another senior executive who agrees with P8, stated that *“legal assurance is necessary to establish organizational trust, while the employee must trust the organizational structure, managers, confidential reporting system and employment contract”*. P2, P4, P13, and P16 stated that *“in order to develop the perception of just culture, the reporting system should be functional and credible, there should be no fear of punishment in employees and organizational trust should be high”*.

It is understood that in order to establish organizational trust, a good safety management system supported by all organizational mechanisms should be operated and employees should have a perception of organizational trust. In the perception of organizational trust, it was seen that it was important how employees observed the practices for just culture within the organization. However, the functioning of the safety management system is not limited to reporting and monitoring its results. At the same time, all functions of the safety management system should be in working order, and employees should be given full safety training. As a result, findings were obtained that overlapped with the literature (Byrne, 2012; Petschonek et al., 2013; Dekker, 2017; Vaisanen, 2020) explaining that an environment of trust should be established within the organization in order to form and develop a just culture in the research.



Effective Management Practices: Almost all of the participants stated that management practices should function well and be effective in order to develop a just culture. Statements of some participants regarding this category are as follows: P1, P2, P3, P9, P10, P11, P13 and P16 emphasized that *“quality management, human resources management, safety management and organizational information management are effective management practices for the development of just culture”*. Same participants stated that *“the good functioning of the organizational reward and punishment system and especially the recruitment of qualified personnel have a positive effect on human resources management and just culture*. P11 stated that *“online surveys conducted through safety bulletins were effective in combining the information collected about safety incidents in the safety system database and producing solutions”*. According to P13, *“all management practices that affect just culture should aim at removing barriers to reporting”*. As a result, the research revealed that each of the relevant management practices, primarily safety management, has an impact on just culture.

When the findings within the scope of Theme 1 are examined in general, it has been seen that a clear and understandable safety policy must first be in an organization in order to create a just culture. Supporting the organizational safety policy by the senior management contributes to the creation and development of a just culture. It has been determined that factors arising from national, organizational and professional culture are an area that affects just culture. Organizational trust, which emerges as a result of the trust of managers and employees to each other, is another positive organizational factor that affects just culture. In addition, the functioning of effective management practices such as quality management, human resources management and information management as a whole positively affects just culture.

Theme-2: Factors Related to Managers

Under Theme 2, effect of managerial factors to just culture in airlines is defined. According to the findings, the attitudes and behaviors of the managers, their proficiency and management style and different management levels are the factors those affect just culture.

Attitudes and Behaviors of Managers: All of the participants stated that the attitudes and behaviors exhibited by the managers in the airlines had an impact on the just culture. Statements of some participants regarding this category are as follows: P3, P14, P15 and P16 generally stated that *“the fair, impartial, democratic and transparent attitudes and behaviors of managers towards employees contribute to just culture”*. However, the P5, P6, P13, P14, and P16 stressed the need for a more autocratic attitude during the operation and supported an attitude similar to *“McGregor's hot stove approach”* in the case of violation of safety rules and agreed on the need for sanctions against intentional violations. The assumptions of the hot

stove approach are punishment is applied immediately, punishment is given to the behavior of the person and not to the person and punishment is consistent and reminiscent (Geylan, 2018).

It has emerged that managers have an active role in the open communication that should be established between employees and managers regarding issues that endanger safety. P3 stated that *“the open and sincere communication style of managers can enable real working conditions to be seen in formal communication. However, organizational learning can be increased with informal communication that develops through social activities and out-of-work sharing.”* P5 said that *“open communication will make a positive contribution to organizational information management and therefore facilitate and increase reporting behavior”*. Similarly, P9 stated that *“the communication responsibility assumed by managers in vertical communication was effective in transferring safety data to the right managers in a timely and complete manner. Therefore, he emphasized that the manager should be a good listener and accessible to an employee”*. P5 and P12, who are cabin crew, emphasize *“the informal communication established by the first managers and see the autocratic management style as an obstacle to communication”*. In addition, they also emphasize that *“the effect of lower-level managers is high in hiding unsafe behavior in real operating conditions”*.

In the statements of P1, P3, P5, P6, P10 and P16, it was seen that *“the organizational discipline system should be established in a way that does not cause injustice among the employees”* and that *“the equal treatment of employees by the managers is effective in organizational functioning”*. P2, P4, P5, P8, P11, and P14 stated that *“managers should evaluate errors and violations holistically and impartially”*. P1, P3 and P14 stated that *“the manager should be completely impartial and, depending on the situation, keep in touch with the civil aviation authority to ensure employee rights and involve employees in the decision processes”*. However, there is an agreement among the participants that *“the good functioning of the SMS is very important in identifying the root causes of errors and violation behaviors”*.

Proficiency and Management Style of Managers: The fact that the proficiency and management style of managers are effective in the development of just culture was emphasized by almost all of the participants in particular. Especially in the socio-technical complex working environment, it is understood that the knowledge level of the managers is important in making the distinction between errors and violations in different situations. Statements of some participants regarding this category are as follows: P1 stated that *“the manager's lack of knowledge caused employees to fear of dismissal or severe punishment.”* P3 stated that *“the manager's level of knowledge contributes to a better understanding of organizational mechanisms, which leads to a healthier execution of just culture processes”*. According to the participant, *“the manager's professional knowledge serves to define what employees do in business processes, under*



what conditions. Thus, the manager can empathize with the employees and carry out the distinction processes of error and violation in a healthy way.” P6, an experienced maintenance manager, defined “the manager's level of knowledge as a key concept in the environment of trust necessary for a just culture”. Similarly, P10, P11, and P14 emphasized that “the manager's professional knowledge and experience were instrumental in adopting a just culture within the organization”.

According to the statements of P1, P2, P3, P5, P6, P7, P8, P9, P11, P14, P15, P16, and P17, it was understood that the leadership characteristics of managers are effective in the development of just culture. Leadership qualities are especially evident in managers' decision-making processes and in the persuasive nature of employees when encouraging reporting behavior. The communication methods used by managers contribute to the more effective functioning of organizational processes and the establishment of trust in employees in the areas of initiative they grant to employees. Participants see providing an environment of open communication, fairness, attaching importance to the training of employees and analyzing the conditions well (according to what P8 said it is “reading the picture well”) as leadership skills that should be seen from managers.

Different Levels of Management: The findings show that different levels of management have different effects on just culture in airlines. Statements of some participants regarding this category are as follows: P9, an experienced quality manager stated that “senior management is responsible for creating the environment of trust necessary for a just culture, and that middle and lower-level management is effective in making employees felt”. P13, an experienced safety manager, pointed to this sensitivity and stated that “managers should be role models in terms of the trust, and in order to achieve this, it is necessary for managers at all levels to receive safety culture training”.

The participants agree that all management levels contribute to the formation of a just culture. Pointing to the upper management levels, P17, P1 and P10 stated that “just culture policies and organizational mechanisms that will foster just culture are determined by the senior management”. On the other hand, P1, P6 and P12, pointing to the lower management levels, stated that “lower-level managers affect the just culture more because they can easily observe special situations in terms of error and violation and know the working conditions well”. In the light of these evaluations, it is possible to say that lower-level managers are effective in making the right decision when distinguishing between mistakes and violations, while senior managers are effective in developing policies related to just culture and building organizational trust.



In this theme, it has been seen that the attitudes and behaviors of the managers directly affect the just culture. Being fair and impartial towards the employees, having effective communication skills and making the right organizational decisions with the participation of the employees are among the important managerial attitudes and behaviors that affect the just culture. Managers' professional knowledge, management styles, areas of initiative against employees, contribution levels to the applied reporting system and leadership characteristics affect just culture. In addition, researchers have undeniably observed that different management levels in an organization have different effects on just culture.

Theme-3: Factors Related to Employees

Under Theme 3, employees related factors that affect just culture in an airline are defined. It has been seen that performing the duties and responsibilities fully, being aware of safety, communicating clearly on safety, exhibiting reporting behavior and demographic features are affecting just culture.

Performing the Duties and Responsibilities Fully: Aviation employees naturally take safety rules into account when performing their jobs on the operation site. At the heart of this natural fiction is the *"belief that accidents are inevitable if written rules are not followed"*. The well-known saying in the literature *that "the rules in aviation are written in blood"* is fed by this belief. The vast majority of participants in the study linked rule-following behavior with just culture on this basis. Statements of some participants regarding this category are as follows: According to P1 and P3, *"in order to develop an effective just culture, employees should know and do their duties and responsibilities well"*. Besides, it was expressed by P5 and P6, that *"knowing the safety rules imposed by the task is a prerequisite for aviation discipline"*. P8, a flight operations specialist, stated that *"in order for employees to perform their duties fully, their sense of duty and working culture must be developed and emotions in the workplace must be controlled."* All the points pointed above were clearly defined by P9 as *"professionalism"*. P1, P2, P4, P6, and P11 drew attention to *"the importance of the level of professional knowledge of the employees in order to guarantee a just culture"*. In an overview, the participants associated the level of professional knowledge of employees with just culture, as well as level of readiness for duty, professionalism, fulfilment of responsibilities, aviation discipline, level of training of employees, the effectiveness of just cultural training provided in the organization and trust in both oneself and one's organization.

Being Aware of Safety: Employees' safety awareness is focused on the reporting behavior expected from them and the elimination of negative factors affecting reporting. It is seen there is a consensus in the literature that there is a need for high safety awareness. The research findings show that the civil aviation authority is effective in terms of both rule-making and enforcement of rules in this awareness. Statements



of some participants regarding this category are as follows: Based on their past observations, P1, P3, P4 and P8 stated that “*there have been significant changes in the safety culture of airline operations in Turkey in the post-2010 period. Annex 19, published by ICAO in (2013) on the SMS in the aviation industry, has made safety-related practices mandatory in aviation companies both around the world and in Turkey, and therefore has led to an increase in safety awareness in all aviation employees. In the light of these developments, organizational practices and researches on just culture in the aviation sector have started to gain importance in the post-2010 period (Inan and Bükeç, 2020).*”

P9 with senior management experience stated that “*in addition to employees, senior management also has important duties to increase safety awareness. According to the participant, “the unfair distribution of duties and responsibilities by managers adversely affects the safety performance of employees”*”. In addition, P6 with senior management experience stated that “*following the safety reports in the organization will increase the safety awareness of the employees*”. P10 associated awareness with “*the importance given to safety training received in the organization and self-confidence*”. He said “*this affected both safety communication and responsible reporting behavior*”.

Communicating Clearly on Safety: Statements of some participants regarding this category are as follows: Flight crew members P3, P4, P5, P10, P11, P12 and P14 stated that “*the respect among employees, the intensity of unsafe situations and organizational trust directly affect the safety communication and just culture*”. P5 summed up this effect as “*honesty and sincerity*” and stressed that “*it should be the individual responsibility of employees to establish clear communication about safety*”. However, P4 and P7 stated that “*fear of spying, avoiding selfishness, avoiding deceiving oneself or organizational management, and increasing cooperation in organizational improvements are effective in safety communication*”. In short, it was seen as a behavior expected from employees in terms of just culture for employees to communicate openly with managers and other colleagues about safety.

Exhibiting Reporting Behavior: Reporting unsafe situations is seen by participants as a basic behavior related to the duty of employees. Factors affecting reporting behavior are expressed as factors that strengthen or weaken just culture. Statements of some participants regarding this category are as follows: P16 stated that “*the basic behavior that demonstrates just culture in organizations is that employees can report mistakes and violations without fear and learn from these unsafe situations*”. P13 drew attention to the necessity of reporting by saying that “*not reporting the disruptions causes the disruptions to continue*”. Most of participants also stated that “*belief in the necessity of safety, sense of responsibility, aviation discipline, behavior of obeying rules, being prone to teamwork or selfishness, organizational trust, anxiety about harming others, level of knowledge about safety procedures, team spirit, organizational change and*”



belief in destiny" affect the reporting behavior of employees. On the other hand, some factors prevent employees from reporting. P1 stated that *"fear of being criticized by supervisors, the anxiety of being compensated by oneself for the financial damage incurred, and unawareness of the seriousness of the unsafe incident hinder reporting behavior in employees."* In addition, K14 stated that *"the desire not to waste time in operations performed under time pressure and laziness are among the reasons for avoiding reporting behavior"*. Almost all participants see the *"fear of punishment"* as the biggest barrier to employee reporting behavior.

Demographic Features: According to the statements of the participants, demographic features are among the factors affecting just culture. Statements of some participants regarding this category are as follows: P1, P4, P10, P11, and P14 said that *"gender had no effect on reporting behavior"* while P2 and P17 claimed that *"women were timider in reporting"*. However, P12, P15, and P16 stated that *"women are generally more assertive and courageous in reporting because they are more serious, careful, detail-oriented and sensitive than men in business life"*. Almost all of the participants say that the work experience of the employees is effective in reporting unsafe actions. P16 stated that *"inexperienced staff with low working time avoided reporting due to anxiety about not knowing organizational processes, appearing inadequate in performance appraisal, retaliation from others, learned helplessness, and anxiety about being fired"*. P14, who was a captain pilot, stated that *"inexperienced employees reported more when they first started their profession, but the number of reports decreased as they saw that no action was taken by managers against the reporting."* However, it is seen that inexperienced staff often consult others and especially experienced employees when reporting. According to P15 and P16, this is because *"the impact of reporting on just culture is better known to experienced employees"*. On the other hand, K13 stated that *"experienced employees tend to report less because of their high self-confidence"*. In general, it is possible to say that due to the increase in working time, experienced employees' professional knowledge, safety awareness and organizational processes have increased, which contributes positively to reporting behavior and just culture.

Some participants touched on the impact of personality traits when discussing reporting behavior in the context of just culture. P4 and P8 established a *"relationship between personality traits such as emotional intelligence level, acting professionally in different conditions and ego control, and reporting behavior"*. Participants expressed different opinions on the effect of education level on just culture. P8 who is a flight operations specialist said that *"even if the employee receives good training if he is not suitable for teamwork, he does not contribute to a just culture."* In contrast, P16, an aircraft maintenance technician,

said that *"as the level of training increases, fatalistic understanding decreases, reporting behavior may increase and just culture may develop."*

Theme-4: Factors Related to the Distinction of Error and Violation

Under Theme 4, the factors related to the distinction of errors and violations that are at the heart of the concept of just culture are defined. In the aviation sector, organizational procedures and practices of managers and the content of unsafe behavior have been seen to be effective factors in the distinction of errors and violations of employees.

Organizational Procedures and Practices of Managers: Statements of some participants regarding this category are as follows: According to P4 and P8, *"for a just culture to flourish, there must be clear procedures in that company primarily regarding how mistakes and violations are separated. The decisions made by managers while these procedures are in place should be transparent and consistent"*. According to K7, P8, P9, P11, P12 and P17, *the importance of voluntary and mandatory reporting should not be overlooked for the correct operation of procedures in separating unsafe employee behaviors. For this, all employees should know the reporting processes well and the information that will be the basis for the evaluation should be filled in accurately and completely. In addition, reporting processes and reporting employees need to be secured by organizational management"*.

According to K4 and K2, *"managers should act within the framework of organizational policies and benefiting from their experiences while establishing a just culture. Managers should not exhibit different practices on the same subject and should not separate employees from each other in terms of errors and violations"*. P9 stated that *"errors and violations should be well defined institutionally in a way that everyone can understand, and the results should be applied equally to everyone"*. P6, P8 and P9 stated that *"there should be fear of punishment up to a certain level in the actions and practices of employees and managers. In order for the punishment given to have a deterrent effect on other employees, the process of applying the punishment for violations and the punishment given must be transparent. At this point, quality managers have important duties in terms of the functioning and adequacy of the procedures"*.

Content of Unsafe Behavior: While managers distinguish unsafe behaviors as error and violation, it has been observed that the content of the behavior is effective in this distinction. Statements of some participants regarding this category are as follows: According to P8, a flight operations expert, *"the intention of employees, their sense of responsibility, their dedication to the task, the number of repetitions of errors must be effective in assessing the unsafe situation. The manager may see repetitive errors as negligence. An analysis program should be used to decide on errors and violations"*. P16, an experienced aircraft

maintenance technician said: *"In the distinction of errors and violations, the intention of the employee should be looked at first. Examining the employee's past performance on errors and violations, work discipline and repetitions of mistakes are important when making decisions. Repeated mistakes should be punished, even if they are unintentional. If the behavior is violation, it should be punished immediately. If the manager doesn't punish the violation, others may commit the same violation. In this case, management weakness may arise. If there is no harm at the end of the violating behavior, the violation can be responded to with a mild punishment in the form of a warning. But there must be a response to the violation."* According to K14, *"the mistake happens because of carelessness and unintentionally. But if there is damage as a result of the mistake and the same mistake is repeated, the person must pay the price of his mistake. There is consciousness in violation. Even if there is no harm as a result, sanctions should be applied against the violation in order to set an example for others."* According to K15, *"managers should check to see if employees' mistakes are continuous. If there is no harm as a result of the first violation, the manager can act more flexibly on the employee."*

In this theme, when the statements of the participants were examined, it was seen that whether there was an intention in unsafe behaviors, the sense of duty of the employees, the number of error repetitions, the past performance of the employee and the results of the behavior were important in the distinction of error and violation and the managerial reactions to these behaviors. In this context, a certain chain of logic can be followed while developing organizational policies related to the separation of error and violation.

Theme-5: Factors Preventing Just Culture

Under Theme 5, the factors that prevent just culture in an airline are described. In fact, participants who evaluated the phenomenon of just culture during the interviews expressed the factors that hinder just culture while expressing the issues mentioned in the previous themes. However, at the end of the interview, the participants were also asked to define the important factors affecting just culture. In this context, it was seen that the inadequacy of safety culture training, presence of fear culture, problems in decision-making mechanisms and lack of organizational trust of employees were the factors which directly prevented the formation or development of just culture in the airline operations.

Inadequacy of Safety Culture Trainings: Statements of some participants regarding this category are as follows: P6 and P8 stated that, *"as in other activities in the aviation sector, those who work on safety should have adequate training. Otherwise, it can not be possible to create a just culture and make it sustainable"*. According to P10, *"employees' ignorance about safety will always threaten the culture of*

justice”. On the other hand, P6 and P10 stated that *“if the safety meetings are not effective, organizational learning cannot be achieved and just culture cannot develop”*.

Presence of Fear Culture: It has been observed that fear culture is a significant obstacle to just culture. Statements of some participants regarding this category are as follows: According to P2, P5, P13, P14, and P15 *“fear of employees being oppressed and losing their jobs, egocentric, pedantic and despotic behavior of managers, mistakes made by managers when taking initiative, managers ignoring safety sensitivities due to commercial concerns and time pressure in difficult operational conditions cause the spread of fear culture within the organization. The fear culture feeds the discouragement of employees in reporting behavior and communication barriers”*. In addition, according to P2 and P3, *“another issue that feeds the fear culture is peer pressure. The anxiety of being labeled as a whistleblower by other employees as a result of reporting unsafe behavior is among the important negative factors that feed the fear culture”*. According to K15, *“managers' communication skills such as listening, empathy, effective speaking, solution-oriented thinking and openness to cooperation can eliminate the reasons that create a fear culture and lack of organizational communication”*.

Problems in Decision-Making Mechanisms: Statements of some participants regarding this category are as follows: P1, P6 and P9 said that *“it would be impossible to establish a just culture if organizational decision-making mechanisms are not supported by organizational policies during the distinction between error and violation”*. According to P11 and P12, *“tolerating and protecting team members who exhibit unsafe behavior may lead to favoritism within the organization and away from organizational policies. This situation causes problems in organizational decision-making mechanisms.”*. In general, the participants stated that the problems in the organizational decision-making mechanisms negatively affect the just culture.

Employees' Lack of Organizational Trust: Statements of some participants regarding this category are as follows: Comparing the current situation in the aviation sector in Turkey with the past, P1 and P6 stated that *“in the post-2010 period, with the implementation of international safety standards by the General Directorate of Civil Aviation more clearly, a just culture in airline companies found the opportunity to develop more easily”*. However, according to the research findings, if organizational trust cannot be established, it is understood that there is no opportunity for the development of a just culture regardless of the conditions. P5, P6, P8, P11 and P15 *“associated organizational trust in the context of just culture with organizational justice, knowledge level of managers, biased managerial attitudes, organizational commitment level and professional culture”*. In summary, it is a seemingly obvious fact that for the

formation and development of a just culture in an organization, managers must trust the honesty of employees and employees must trust the justice of managers.

DISCUSSION and CONCLUSION

In this study, the factors affecting the concept of just culture, which is an important component of safety culture and a hot topic in the aviation industry in recent years, were examined with qualitative research. The data obtained by interview method from 17 experienced participants working in three major airline companies in Turkey were subjected to content analysis. As a result of the content analysis, the factors affecting just culture in airline operations were grouped under five themes. These themes are factors related to organizational structure and processes, factors related to managers, factors related to employees, factors related to the distinction of errors and violations, and factors preventing just culture. The important factors that emerged with the evaluation of the literature review (Reason, 1997; Dekker, 2007; Balk et al., 2011; Dekker, 2017; Bükeç and Gerede, 2017), and research findings together and that have an impact on just culture in airline operations are listed below.

- Organizational processes and effective management practices in the context of institutionalization and organizational trust positively affect just culture.
- The flawless operation of the SMS is a prerequisite for the establishment of a just culture.
- How the management of the organization reacts to mistakes and violations is the most important factor affecting the just culture. Just culture perceptions and behaviors of managers at different levels are the main determinants that guide just culture in an organization.
- Performing the task fully and reporting unsafe situations are two important responsibilities expected from employees for the establishment and developing a just culture.
- Employees emphasize and observe the reactions of the organization's management to similar mistakes and violations made by different employees in the context of organizational trust.
- The existence of control mechanisms in the organization reduces the effect of the fear culture and supports the establishment of a just culture.
- In line with organizational policies, errors and violations should be differentiated impartially and fairly by managers. When evaluating unsafe behavior, all conditions within the behavior should be taken into account and evaluated systematically.
- Deficiencies in safety training, communication problems, fear culture, disruptions in decision-making processes, and insufficient organizational trust are main factors that hinder a just culture.

- The practices of the aviation authority in Turkey have positively affected the development of just culture in airline operations.

When an evaluation is made by taking into account the literature review, the emerging themes in research, the results listed above and the future predictions of the researchers, it is possible to divide the factors affecting just culture in airline operations into three main groups as *major, enhancer and prospective factors*. Major and enhancer factors were classified according to the literature review and research findings. Prospective factors were classified based on the researchers' predictions for the future. These factors are explained in order below.

Major factors are seen as the basic factors necessary for the formation of a just culture in an organization. *In order to a just culture to be established at a basic level, there must be a reporting system within the organization, employees must report unsafe behavior, and managers must evaluate these reports in a fair and impartial manner. Besides, the distinction of unsafe behavior as a mistake or violation should be done within the framework of organizational trust and procedures.* It is not possible to talk about the existence of a just culture in an organization without major factors. Organizations that lack major factors can be described as *weak organizations* in terms of just culture.

Weak organizations are either poorly or under-implementing the major factors to a just culture. In these organizations, it is seen that fear culture is dominant, the fear of punishment cannot be overcome, and the distinction between the responsibilities of different professional groups in the operational environment is unclear. Denial behavior is frequently observed in senior managers. Managers focus on questioning and punishing employees instead of looking at unsafe behavior from the perspective of the request. Trust in the managers and the organization by employees is weak. In some organizations, employees cannot even rely on the confidential reporting system. The feedback given by the managers to the reported events and the solutions they produce is not known or seen. Unsafe behaviors cannot be talked about and in such an environment, it is not possible for the administration to eliminate the problems or to introduce new measures. Since the records related to safety management are made as a show, SMS cannot be operated in a healthy way. Under such conditions, it is not possible to talk about effective communication. In weak organizations, *urgent measures* are seen as necessary to develop a just culture.

Enhancer factors are positive factors that contribute to the development of a just culture in an organization where major factors exist. While major factors reveal the existence of a just culture in an organization, the enhancer factors are aimed at the establishment of just culture in the organization. Major factors are a basis that lays out the minimum requirements of a just culture. Enhancer factors are necessary



for this foundation to be consolidated and sustainable. Major factors already exist in an organization where factors that promote a just culture are applied. *The existence of an organizational safety policy, the support of senior management to just culture, effective safety management practices, communication skills and professional knowledge levels of managers and employees, employee safety awareness, the systematic evaluation of unsafe behaviors and the feedback of the reporting results, considering cultural factors, and organizational learning can be seen within the scope of the enhancer factors.* Organizations, where the enhancer factors are applied, can be described as *acceptable organizations* in terms of just culture.

Acceptable organizations are those that have established and tried to develop a just culture in their organizational structure and processes. In these organizations, constructive practices are seen in order to maintain a just culture. These organizations, which act within the framework of international civil aviation laws, have a organizational safety policy first. Within the framework of this policy, senior managers support the development of a just culture. Just culture practices are supported by effective management practices, such as human resources management, quality management, and information management. The communication skills of managers and employees, their level of professional knowledge, sense of duty, and sense of responsibility are in the direction of ensuring that just culture is sustainable. Employees are expected to be aware not only of reporting behaviour but also of safety. Employees can report their mistakes and violations without hesitation and clearly. In these organizations, which do not have fear culture and blame, unsafe behaviors are evaluated by managers from a holistic and mutually trusting perspective and within the framework of institutional procedures. The results of reporting are clearly reported back to the employees. In addition, organizational learning is encouraged by learning from unsafe situations in these organizations. *Continuous improvements* must be made in acceptable organizations so that a just culture can be sustainable.

Prospective factors are those should be applied in order to ensure that a just culture created and developed in line with major and enhancer factors exists in an organization in the future. In an organization where major and enhancer factors are not present or implemented, it is not possible to see the prospective factors that contribute to a just culture. Therefore, in the hierarchy of factors affecting just culture, prospective factors are at the top. *Prospective factors include continuous organizational change and innovation in just culture, personal development of employees in safety, effective safety leadership and a visionary perspective.* Organizations to which prospective factors are applied can be described as *strong organizations* in terms of just culture.

Strong organizations are organizations that have established just culture in their organizational structures and processes, continuously improve just culture practices and invest in just culture for the future.



Organizations that are strong in terms of a just culture are in a much better position than weak and acceptable organizations. These organizations adapt to changing environmental conditions and try to keep a just culture alive with the best practices and carry it into the future. Following new management and safety approaches, personal development of managers and employees on safety, leadership process to improve safety and designing the future can be just culture practices seen in strong organizations. In addition, the safety vision determined by the senior management in strong organizations is shared by all employees. In strong organizations, it is possible to carry a just culture into the future following *visionary practices*. As a result of the research findings, the factors affecting the just culture in airline companies and the relations between the organizations where these factors are dominant are summarized by the researchers as a figure in the appendix.

According to the research findings, it was seen that the just culture level of airline companies in Turkey in the pre-2010 period was generally weak. However, after 2010, thanks to the publication of Annex-19, the use of the SMS manual and the development factors resulting from the consideration of organizational factors, it has been seen that airline companies' acceptable in terms of just culture have increased today. Therefore, in order for managers to create an acceptable organization in terms of just culture practices, they need to adopt not only the main factors but also the enhancer factors. In a very wide geographical area, in risky operational conditions and in aviation activities carried out with different employee groups, it is possible to say that just culture will become fragile when managers do not pay attention to the enhancer factors. While airlines that take into account prospective factors are strong as a level of just culture, unforeseen causes can jeopardize just culture in these organizations. For example, unexpected problems due to technological changes, economic crises, epidemic diseases, and international political conflicts may adversely affect just culture practices in airline companies. Besides, top managers who do not embrace sustainable aviation values and do not understand the direction the aviation industry is going can jeopardize safety culture and just culture.

It is possible to say that the findings obtained as a result of this research conducted with a qualitative research approach reveal the factors affecting just culture in airline operations and classify these factors within themselves. The research findings identified the factors that contribute to the development of just culture in airline operations as well as the factors that prevent the formation of just culture. It is possible to say that the findings are generally compatible with the literature (Reason, 1997; Reason and Hobbs, 2003; Petschonek et al., 2013; Dekker, 2017; Bükeç and Gerede, 2017) but there are different findings that will contribute to the literature. Each of the factors uncovered by the research can lead to the study of developing a scale to determine the sub-dimensions of the justice culture. It is thought that this study, which is carried



out with the participation of different aviation employees working in real operational conditions, will make significant contributions to the literature on aviation safety, safety culture and just culture concepts and will shed light on future studies in the relevant field. In the future, studies on the concept of just culture in the aviation sector can be designed to verify or falsify the factors determined as a result of this research.

AUTHOR STATEMENT / YAZAR BEYANI

Researchers have jointly contributed to the article. Researchers have not declared any conflict of interest.

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REFERENCES

- Aral, V. (2010). *Hukuk ve hukuk bilimi üzerine* (7th edition). İstanbul: Oniki Levha Yayıncılık.
- Aytaç, S. (2011). İş kazalarını önlemede güvenlik kültürünün önemi. *Türk Metal Sendikası Dergisi*, 147, 30-38.
- Balcerzak, T. A. (2017). Just culture? Conflicts of interest in the investigation of aviation accidents. *Scientific Journal of Silesian University of Technology. Series Transport*, 94, 5-17. doi: 10.20858/sjsutst.2017.94.1
- Balk, A. D., Stroeve, S. H., & Bossenbroek, J. W. (2011). *Just culture and human factors training in ground service providers* (Report No: NLR-TR-2010-43). Amsterdam: NLR Air Transport Safety Institute.
- Bükeç, C. M., & Gerede, E. (2017). A study on current features of discipline systems in aircraft maintenance organizations in Turkey and possible effects of these features on just culture. *Journal of Business Research Turk*, 9(4), 155-195. doi: 10.20491/isarder.2017.326.
- Byrne, R. (2012). Creating a just culture. *The RoSPA Occupational Safety & Health Journal*, 42, 27-29.
- Clarke, S. (1998). Organisational factors affecting the incident reporting of train drivers. *Work and Stress*, 12(1), 6-16. doi.org/10.1080/02678379808256845.

- Çoban, R. (2022). Askeri hava aracı kazalarında insan faktörü kavramı üzerine nitel bir araştırma, In C. Harmanşah ve H. T. Hava (Eds.), *Havacılık teknolojisi ve uygulamaları kitabı* (p. 39-91). Ege Üniversitesi Yayınları: İzmir.
- Cooper, M. (2000). Towards the model of safety culture. *Safety Science*, 36(2), 111-136. doi: 10.1016/S0925-7535(00)00035-7
- Cox, S., & Cox, T. (1991). The structure of employee attitudes to safety: A European example. *Work & Stress*, 5, 93-104. doi: 10.1080/02678379108257007.
- Creswell, J. W. (2017). *Araştırma deseni nitel, nicel, ve karma yöntem yaklaşımları* (Trans: S. B. Demir) (3rd Edition). Ankara: Eğitilen Kitap Yayın Organizasyon.
- Dekker, S. (2013). *A new just culture algorithm*. Retrieved from <https://skybrary.aero/sites/default/files/bookshelf/2558.pdf>.
- Dekker, S. (2016). *Just culture: Balancing safety and accountability* (2nd Edition). Boca Raton, FL: CRC Press.
- Dekker, S. (2017). *Just culture: restoring trust and accountability in your organization* (3rd edition). Boca Raton, FL: CRC Press.
- Dekker, S. (2008). Just culture: Who gets to draw the line? *Cognition Technology and Work*, 11(3)
- Dekker, S. (2002). *The field guide to human error investigations*. Vermont: Ashgate Burlington.
- European Union Aviation Safety Agency. (2003). *The Executive Director of the Agency-Decision No. 2003/19/RM*. Retrieved from <https://www.easa.europa.eu/en/document-library/agency-decisions/ed-decision-2003019rm>
- EC No 691/2010. (2010). *Commission Regulation (EU) No 691/2010*. Retrieved from <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:201:0001:0022:EN:PDF>
- Fleming, M., Filin, R., Mearns, K., & Gordon, R. (1998). Risk perception of offshore workers on UK oil and gas platforms. *Risk Analysis*, 18(1), 103-110. doi: 10.1111/j.1539-6924.1998.tb00920.x.
- Geylan, R. (2018). Personel disiplini. In R. Geylan (Ed.). *Örgütlerde insan kaynakları yönetimi* (p. 110-130). Eskişehir: T.C. Anadolu Üniversitesi Yayını.
- Gill, G.K., & Shergill, G.S. (2004). Perceptions of safety management and safety culture in the aviation industry in New Zealand. *Journal of Air Transport Management*, 10, 233-239. doi: 10.1016/j.jairtraman.2004.02.002.
- Hollnagel, E. (2014). *Safety-I and Safety-II - The Past and Future of Safety Management*. London: Taylor & Francis Ltd.
- International Civil Aviation Organization. (2013). *Safety Management Manual (SMS)* (3rd edition). Quebec: International Civil Aviation.



- Inan, T. T., & Bükeç, C. M. (2020). The relationship between the improvement of the safety management system (SMS) with the civil aviation accident rates. *The Journal of Social Sciences Research*, 15(2), 599-610. doi: 10.48145/gopsbad.744724.
- Ingalls, T. (2002). Risk management. Is punishment an appropriate option? *Occupational Health and Safety*, 71(9), 229-248.
- Kovacova, M. Licu, A., & Balint, J. (2019). Just Culture-eleven steps implementation methodology for organisations in civil aviation-“JC 11”. *Transportation Research Procedia*, 43, 104-112.
- Marx, D., (2001). *Patient safety and the ‘just culture’: A primer for health care executives*. New York: Columbia University.
- Maurino, D. (2017). *Why SMS: An introduction and overview of safety management systems* (ITF Discussion Paper 2017-16). Paris: ITF. Retrieved from <https://www.itfoecd.org/sites/default/files/why-sms.pdf>
- Moshansky, V. P. (1992). *Commission of inquiry into the air Ontario crash at Dryden, Ontario*. Ottawa: Minister of Supply and Services Canada.
- Nemli, E. (1998). Rekabet avantajı kazanmada örgütsel esnekliğin önemi. *Amme İdaresi Dergisi*, 31(3), 75-86.
- Önen, V. (2017). A conceptual study about just culture in the aviation industry. *IJSS International Journal of Social Sciences*, 1(5), 26-48.
- Perrow, C. (1984). *Normal Accidents. Living with High-Risk Technologies*. New York: Basic Books.
- Petschonek, S., Burlinson, J., Cross, C., Martin, K. Laver, J., Landis, R.S., & Hoffman, J. M. (2013). Development of the just culture assessment tool (JCAT): Measuring the perceptions of healthcare professionals in hospitals. *Journal of Patient Safety*, 9(4), 190-197. doi: 10.1097/PTS.0b013e31828fff34.
- Reason J., & Hobbs, A. (2003). *Managing maintenance error: A practical guide*. Aldershot: Ashgate Publishing.
- Reason, J. (1997). *Managing the risks of organizational accidents*. England: Ashgate.
- Reason, J. (2008). *The human contribution: unsafe acts, accidents, and heroic recoveries*. Vermont: Ashgate Burlington.
- Savage, I. (2013). Comparing the fatality risks in United States transportation across modes and over time. *Research in Transportation Economics*, 43(2013), 9-22. doi.org/10.1016/j.retrec.2012.12.011.
- Sığrı, Ü. (2021) *Nitel araştırma yöntemleri* (2nd Edition). İstanbul: Beta Basım.
- Siregar, N. (2019). Air rage arrangement between the United Kingdom and Indonesia based on the Tokyo convention 1963. *Fiat Justisia Jurnal Ilmu Hukum*, 13(1), 19-30. doi: 10.25041/fiatjustisia.v13no1.1472.

- Stewart C. J., & Cash, W. B. (1985). *Interviewing: principles and practices* (4th edition). Dubuque, IO: Wm.C. Brown Pub.
- Ustaömer, C., & U. Şengür, F. (2020). Safety culture in aviation: Investigation of Reason's safety culture model. *Journal of Social Sciences of Mus Alparslan University*, 8(1) 95-104. doi: 10.18506/anemon.520721.
- Ustaömer, C. (2020). *Developing a tool for measuring safety culture in aviation: A research on Turkish pilots* (Unpublished Doctoral Thesis). Anadolu University Graduate School of Social Sciences, Eskişehir.
- Vaisanen, V. O. (2020). *How perception of just culture affects pilot performance in chinese airlines* (Unpublished master thesis). University of London, London.
- VonThaden, T. L., & Hoppes, M. (2005). Measuring a just culture in healthcare professionals: Initial survey results. *Safety Across High-Consequence Industries Conference*. Saint Louis: St. Louis University, USA.
- Wiegmann, D. A., & Shappell, S. A. (2003). *A human error approach to aviation accident analysis: The human factors analysis and classification system*. Aldershot: Taylor & Francis Ltd.
- Wright, P., & Barnard, P. (1975). Just fill in this form. A review for designers. *Applied Ergonomics*, 6(4), 213-220. doi: 10.1016/0003-6870(75)90113-1.
- Yıldırım, A., & Şimşek, H. (2018). *Sosyal bilimlerde nitel araştırma yöntemleri* (11th Edition). Ankara: Seçkin Yayıncılık.

APPENDIX

APPENDIX 1: Factors affecting just culture according to different organizations

