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THE EFFECT OF TIME MANAGEMENT ON AIRPORT FEMALE EMPLOYEES COPING WITH JOB STRESS

Serap ERTEK[1]*, Vildan DURMAZ[2]

[1]*KTO Karatay University, Department of Civil Aviation Cabin Services, 42005, Konya, Türkiye*
[2]*Eskişehir Technical University, Department of Aviation Management, 26010, Eskişehir, Türkiye*

Abstract: It has been observed that time is a critical factor in the aviation sector and airport operations, and that this creates pressure on employees, leading to stress. In particular, female employees are exposed to greater stress due to various pressures in both their work and private lives, making it necessary to examine the relationship between time management and work stress among female airport employees. In this context, the aim of this study is to investigate the relationship between job stress and time management among female airport employees. In addition, the role of time management in helping female employees cope with work stress was also examined. A total of 383 women working at airports in different regions of Türkiye participated in the study. Data were collected from participants using a personal information form, a time management scale, and a perceived work stress scale. The data were analyzed using SPSS software. According to the findings, female airport employees were found to have slightly above-average success in time management (mean = 3.07). The analyses showed that women's marital status, type of institution they work for, and age have no significant effect on work stress and time management. However, significant differences were found in terms of educational status and length of service, and it was observed that as the level of education increased, employees were more successful in terms of work stress, time management, time planning, and time loss. In addition, it has been found that women working in the Aegean and Mediterranean regions perceive higher levels of work stress. The findings of this study provide managerial implications for airports with high time pressure and operational complexity in terms of operational efficiency and workforce management.

Keywords: Aviation, Airport, Job stress, Female employees, Time management

***Corresponding author:** KTO Karatay University, Department of Civil Aviation Cabin Services, 42005, Konya, Türkiye
E mail: serap.ertek@karatay.edu.tr (S. ERTEK)
Serap ERTEK https://orcid.org/0009-0002-5477-0855
Vildan DURMAZ https://orcid.org/0000-0003-3649-1780

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1. Introduction

The social status of women has undergone significant changes throughout history, and these changes have also affected women's place in the workforce. In the past, women's social roles were mostly limited to domestic responsibilities, and it was widely believed that family life was more suitable than working life. However, despite facing many obstacles throughout history, women have made significant efforts to earn their rightful place in the business world. Today, it is observed that women are successfully working in different sectors, their numbers are increasing, and they are accomplishing important work in various fields. As a reflection of this trend, the aviation sector has become an area where the number of female employees is rapidly increasing. In organizations such as airports and airlines, the number of female employees in various fields such as passenger services, ticket sales, consulting, marketing, and public relations is remarkable. However, it is important to examine the difficulties women face in reaching this point, gender inequality, and other obstacles in order to better understand these processes.

Among the difficulties women face in their professional lives, issues such as gender discrimination, psychological pressure, and harassment stand out. Dealing with these kinds of challenges inevitably leads to work-related stress. In fact, work stress is an important factor for all employees, regardless of gender. The main objective of this study is to examine work stress among female employees and to investigate whether this stress stems from various factors, thereby assessing the impact of time management on this process. Although various studies have examined the relationship between personality types and work stress, the factors that cause work stress are not limited to personality traits alone; other social, psychological, and environmental factors must also be taken into account.

Time is a crucial factor in the aviation industry and airport operations, and it has been observed that this time pressure creates stress for employees. Airports are complex structures with high time pressure and multiple operation phases. Women working at the airport carry out multiple tasks in both their personal and professional lives. This situation causes them to experience stress in

their business life in terms of time management. The relationship between time management and work stress of female employees is an important issue that needs to be addressed in terms of airport management and human resources planning.

In such a time-critical industry, especially when considering the number of female employees, the impact of time management on work stress is becoming increasingly apparent. In this context, this study focuses on the work stress of women working at airports and the relationship between time management and this stress. How women's work stress is shaped by both visible and invisible obstacles is analysed together with the role of time management in this process.

1.1. Conceptual Framework

The subject of the study is to examine the coping methods for the work stress experienced by female employees at airports and to determine the effect of time management on this issue. While the concept of stress was used in negative expressions such as unwanted bad events and trouble in the 17th century, the way the concept was expressed changed in the 18th and 19th centuries, and the concept was used to express meanings such as forcing and pressurising a person and that person's mental state (Ulusoy and Turunç, 2023). The World Health Organisation defines stress as "a state of anxiety or mental tension caused by a difficult situation". Stress is defined as a natural reaction that enables people to cope with the challenges they face throughout their lives (WHO, 2023). According to Wu et al. (2007), work stress is one of the most significant problems encountered in organizations and is widely accepted as an occupational disease in the 21st century. Organisations achieve the goals they set and want to achieve with human resources. The aim of the employees is to fulfil the different roles required in line with the wishes and objectives of the organisation. Depending on these roles, managers and employees face stresses arising from various reasons (Yarangümelioğlu, 2014).

For women workers, in the current context, various underlying social factors such as workload, lack of support, job insecurity, work-life imbalance, mental health, gender bias, financial pressure, harassment and discrimination cause stress. Despite increasing research into the factors that cause stress in women at work, specific stressful situations still exist in everyday life, such as less pay, gender discrimination, time pressure and mental health (Chandrasekaran et al., 2025).

Job stress can be caused by organisational factors as well as internal factors, i.e. the psychological state of the person. Sometimes, although it varies according to the individual, it can be seen that the person has a higher potential under stress and pressure. In the aviation sector, work stress is also observed quite frequently on employees. The fact that the aviation sector is a service sector offered directly to people, the shift working system and the consequent serious consequences of a mistake or a wrong application make the job stressful. In addition, reasons such as the vital importance of safety and time pressure may cause job stress in the aviation sector in general. Aviation sector is highly prone to crises, characterized by intense competition and strict time pressure, which collectively generate substantial organizational stress on employees. In this context, managerial approaches and leadership styles play a decisive role in shaping employees' decision-making under pressure, their ability to cope with time constraints, and their perception of stress. Studies focusing on airline businesses indicate that during crisis periods, managers tend to exhibit limited risk-taking and innovative behavior, which may further intensify organizational pressure (Ertek and Taşcı, 2023). This situation suggests that job stress becomes a structural component for airport personnel who operate under severe time constraints.

Time management is a concept that deals with the effective management of time. No matter what age group, job or position one holds, one should organise all tasks according to schedules. This makes it more disciplined, organised and efficient as it performs all its functions in accordance with the time. Because time management gives people the opportunity to decide how to make use of their time; people realise how to systematise and manage their lifestyles and do not feel pressured or overburdened by any work. What is meant by the concept of time management is to fit more activities into time, which is considered an indispensable part of doing every job and activity. The individual who wants to manage his/her time effectively should take into account the time traps and make the necessary efforts to avoid falling into these time traps. Time management is a struggle for efficiency in spending time, which is very important in achieving goals (Karaoğlan and Yaman, 2009). Failure to manage time well can make people's lives difficult and disrupt the balance of life. Due to situations such as not being able to complete the work that needs to be done, pressure may occur in the person and stress is observed. From this perspective, time management is a simple and cost-effective way to minimise stressors.

Finally, if we need to examine the place of women in working life, it is important for women to find a place for themselves in working life and to provide them with a certain amount of employment in individual and social terms. The number of women in the global labour force is increasing and women are now more involved in professions that were previously dominated by men (Lindberg et al., 2023). When women's employment is considered in terms of sustainability, it emerges as a striking factor. When compared to the population growth rate, it is observed that the employment growth rate is lower than the population growth rate. As a result, insufficient employment in the economy also affects women's inclusion in the labour force (Karabıyık, 2012). Although there has been an increase in women's employment, in general, women are engaged in more

traditional jobs that do not require education with low income and limited opportunities for promotion. Women are underrepresented in some professions with managerial and career opportunities (Kırkpınar, 1998). Nevertheless, there are also areas where the number of women has increased. Over the last two decades, women's participation in sport and non-traditional employment has increased in the United States. The aerospace sector is one of the areas where the increasing participation of women in non-traditional and physically intensive occupations has been observed. The number of female astronauts at NASA increased from 11 per cent in 1978 to 50 per cent in 2013. Many women are involved in aviation, including commercial and military fixed and rotary wing pilots, parachutists, flight engineers and aircraft mechanics. However, in 2021, only 6% of commercially licensed pilots in the US were women (compared to 5% in 2017), indicating that women are still significantly underrepresented in aviation. (Lindberg et al., 2023)

When the place of women in working life is analysed in the aviation sector, it is seen that women are generally concentrated in areas such as cabin services, passenger services and customer relations, while they work less in areas such as pilotage and maintenance-repair. This is also the case at airports, where there are so many business lines and therefore so many different businesses. Looking at the fields of work, it can be said that there are more female employees compared to other fields. However, in terms of gender, it is seen that gender is one of the most important determinants in working life and in general, women's progress in working life is hindered by social, organisational and individual reasons. Ratios of female and male employees in the field of aviation also differ accordingly (Durmaz, 2021). There are women workers in almost every field that does not require physical strength. Women are more preferred than men in departments where visuality is prioritised. Although the number of female employees at airports is higher than in other sectors, working conditions at airports are not very different from other working areas. Depending on these conditions, female employment at airports also varies. Deficiencies are especially noticeable in technical issues and managerial positions. In this regard, female employment should be increased in all areas of the aviation sector. Although there have been recent studies on this subject, they are not sufficient. Looking at the aviation sector, it is seen that women are less common in pilots, engineers, technicians, managers and air traffic controllers (Lutte, 2019). Efforts for the employment of women in the field of aviation are ongoing and IATA's "25by2025" project can be cited as an example. Significant progress has been made by 2023 in line with the objectives of the IATA 25by2025 initiative set out in this report. Although the goals of the initiative were set for 2025, these goals were achieved before 2025. Between 2021 and 2023, around 149,000 new employees were hired, of which almost 48 per cent were women. This led to a 1.0 percentage point increase in the share of women in total employment. Around 4,200 senior employees were recruited between 2021 and 2023, 38 per cent of whom are women. As a result, the proportion of women in senior positions increased to 31%, an increase of 1.6 percentage points since 2021. More than half (30 out of 52, or 58 per cent) of the signatories reporting flight crew employees achieved the growth target, increasing the share of female flight crew employees by at least 25 per cent (IATA, 2024).

2. Materials and Methods

This research was carried out to determine the effect of time management on airport women employees' coping with work stress. Job stress is an important problem that employees generally face in their business life. According to the studies, inability to manage time effectively causes employees to experience stress in their work. Stress of working women is stated as a situation that affects not only herself but also the whole family. Reasons other than work life that cause stress affect the general condition of the person. Stress factors at home are caused by unexpected guests, the absence of a domestic helper, worries about the future of the child, job insecurity of the spouse and marital disputes. Workplace stress factors are harassment at work, workplace gossip and criticism are the main proven factors. Work pressure from different work locations, unplanned working time and customer complaints are other major problems (Lakhute et al., 2024).

Research such as Can (2017) and Güven (2019), the study shows that time management skills of working women have positive effects on work-life balance and coping with stress. These studies have revealed that time management skills reduce women's stress in areas such as work, family and health. The aim of the study is to examine the causes of work stress of women working at airports and the role of time management in coping with this stress. In business areas such as airports where time is a critical factor, it is assumed that time management is an important factor in balancing work and family life, especially for women employees. Based on this idea, the scope of the study consists of female employees working at 58 civil airports in Türkiye. It is assumed that the participants fill in the questionnaire correctly and objectively, and that the research data are complete and accurate. It was also accepted that the participants did not consciously provide false information. In addition, the data obtained through the questionnaire method may have a limited representativeness considering the level of awareness of the participants on the subject. The research has received ethical committee approval as a result of the Ethics Committee Decision No. 4/4 dated 02/03/2022 by the Ethics Committee of Eskişehir Technical University.

2.1. Research Methodology

In this research, quantitative research method was used and questionnaire form was used as data collection

method. Within the scope of the research, female employees at airports are included. Accordingly, the population of the study consists of women working at airports in Türkiye. In line with the workload and accessibility constraints at the airports, the research sample consists of airports operating in Marmara, Aegean, Mediterranean, Central Anatolia, Black Sea, Southeastern Anatolia and Eastern Anatolia Regions. The research, in which perceived job stress scale and time management scale were used, was conducted in March and April in 2022. While some of the questionnaire forms were applied face-to-face, for the squares that could not be visited due to transportation difficulties and traffic density, questionnaire forms prepared in electronic mail and online environment were applied. Questionnaire forms were collected at Adana Şakirpaşa Airport, Adıyaman Airport, Alanya Gazipaşa Airport, Ankara Esenboğa Airport, Antalya Airport, Balıkesir Kocaseyit Airport, Batman Airport, Bodrum-Milas Airport, Çanakkale Gökçeada Airport, Dalaman Airport, Denizli Çardak Airport, Diyarbakır Airport, Gaziantep Airport, Hatay Airport, Iğdır Şehit Bülent Aydın Airport, İstanbul Airport, İstanbul Sabiha Gökçen Airport, İzmir Adnan Menderes Airport, Kayseri Erkilet Airport, Konya Airport, Samsun Çarşamba Airport, Siirt Airport, Sivas Nuri Demirağ Airport, Şanlıurfa Airport, Şırnak Şerafettin Elçi Airport, Uşak Airport and sent to the female personnel working at Van Airport. After the data collection process, 392 questionnaires were returned out of 750 questionnaires sent. Nine of the returned questionnaires were not included in the analysis because they were filled out by men. When 9 questionnaires were removed, the data obtained from the remaining 383 questionnaires were analysed using IBM SPSS Statistics software.

The hypotheses determined within the scope of the research and to be included in the research analysis are given below:

H1: Time management has a significant effect on perceived job stress.

H1a: Time Planning has a positive effect on perceived job stress.

H1b: Time Attitudes have a positive effect on perceived job stress.

H1c: Time Loss has a positive effect on perceived job stress.

H2: Perceived job stress differs according to the marital status of female employees.

H3: Time management skill differs according to the marital status of female employees.

H3a: Time planning skill differs according to the marital status of female employees.

H3b: Time attitudes differ according to the marital status of female employees.

H3c: Time loss differs according to the marital status of female employees.

H4: Perceived job stress differs according to the sector in which female employees work.

H5: Time management skill differs according to the sector in which female employees work.

H5a: Time planning skill differs according to the sector in which female employees work.

H5b: Time attitudes differ according to the sector in which female employees work.

H5c: Time loss varies according to the sector in which female employees work.

H6: Perceived job stress differs according to the age of female employees.

H7: Time management skill differs according to the age of female employees.

H7a: Time planning skill differs according to the age of female employees.

H7b: Time attitudes differ according to the age of female employees.

H7c: Time loss differs according to the age of female employees.

H8: Perceived job stress differs according to the educational level of female employees.

H9: Time management skill differs according to the educational level of female employees.

H9a: Time planning skill differs according to the educational level of female employees.

H9b: Time attitudes differ according to the education level of female employees.

H9c: Time loss differs according to the education level of female employees.

H10: Perceived job stress differs according to the region where female employees work.

H11: Time management skill differs according to the region where female employees work.

H11a: Time planning skill differs according to the region where female employees work.

H11b: Time attitudes differ according to the region where female employees work.

H11c: Time loss differs according to the region where female employees work.

H12: Perceived job stress differs according to the duration of employment of female employees.

H13: Time management skill differs according to the working hours of female employees.

H13a: Time planning skill differs according to the working hours of female employees.

H13b: Time attitudes differ according to the working hours of female employees.

H13c: Time loss differs according to the length of service of female employees.

2.2. Data Collection Method

The data collection process of the research consists of face-to-face survey method and questionnaires prepared online using google.com infrastructure. In the first part of the questionnaire where demographic and work-related information is asked, there are 7 questions in total about gender, age, education level, marital status, city, type of institution and working period. These questions were prepared as multiple choice or fill-in-the-blank. In the second part of the questionnaire form, the perceived job stress scale developed by Cohen and

Williamson and the reliability and validity of which was conducted by Baltaş (1998) was utilised. There are 15 questions in the scale and a 5-point Likert scale is used. In the third part of the questionnaire form, the time management scale developed by Britton and Tesser (1991) and validated and reliably validated by Alay and Koçak (2002) for Türkiye was utilised. There are 27 questions in the time management scale and a 5-point Likert scale is used.

Reliability measurement is carried out in order to evaluate the consistency of the questions in the studies conducted with the survey method and the extent to which the scale reflects what is intended to be measured. In this study, reliability assessment was made through cronbach's alpha coefficient, which is frequently used in the literature. According to general acceptance, scales with an alpha coefficient of 0.60 and above are reliable. In cases where the number of statements/questions in the scale is small, lower values can be accepted for scale reliability (Kalaycı, 2014).

Table 1 shows that the Cronbach Alpha values of Time Management and Job Stress scales are above the accepted limit of 0.60. Accordingly, it is concluded that our scales are reliable. On the other hand, when the total item correlations and reliability changes in item extraction were analysed, it was seen that S14 decreased the scale reliability and had a negative correlation. Accordingly, the reliability of the job stress scale was recalculated by removing the statement from the scale.

Table 1. Scale reliabilities (First case)

	Article Count	Cronbach's Alpha Value	Measurement Range
Time Management Scale	27	0.835	5-point scale (1-5)
Time Planning	16	0.847	
Time Attitudes	7	0.582	
Time Loss	4	0.465	
Job Stress Scale	15	0.730	

Table 2. Scale reliabilities (Final status)

	Article Count	Cronbach's Alpha Value	Measurement Range
Time Management Scale	27	0.835	5-point scale (1-5)
Time Planning	16	0.847	
Time Attitudes	7	0.582	
Time Loss	4	0.465	
Job Stress Scale	14	0.773	

According to the table, all main and subscales are generally reliable. Although the overall reliability of the time management scale is acceptable, the Cronbach's alpha values of some sub-dimensions, particularly time loss and time attitudes, are relatively low. Therefore, findings related to these sub-dimensions should be interpreted with caution. On the other hand, it is seen that the reliability of the time loss sub-dimension of the time management scale is relatively low. This was attributed to the low number of scale items. The structural validity of the scales used in the study was analysed by KMO and Barlett tests. KMO and Barlett test results show that the scales provide structural validity.

Table 3. Scale structural validations

	KMO	Barlett	P
TMS	0.827	2814.970	0.00
Job Stress Scale	0.823	962.921	0.00

TME= time management scale

2.3. Limitations of Research

This study has some limitations. Firstly, the sample of the study is limited to female employees working at 58 civil airports in Türkiye. The concentration of a significant portion of the participants in Central Anatolia and Marmara regions also limits regional representation. Secondly, the data were collected in the period March-April 2022, during the post-pandemic recovery period. These periodic conditions may have led to the perception of work stress and time management practices differently from usual periods. In addition, only job stress and time management variables were addressed in the study; variables such as burnout, work-family conflict, job satisfaction or performance were excluded.

3. Results

In this section, the results of statistical analyses examining the relationship between time management, sub-dimensions of time management and job stress are given. The results of frequency analysis, validity and reliability of job stress and time management scales, participants' general evaluation of the scales and other analyses used to test the research hypotheses are given.

3.1. Demographic Characteristics of Participants,

The participant profile consisting of private and public sector employees from different regions of Türkiye is analysed in the tables below. The distribution of the participants according to age is given in Table 4. 37.6% of the participants were 26-35 years old, 33.9% were 36-45 years old, 17.8% were 18-25 years old, 9.9% were 46-55 years old and 0.8% were 56-65 years old. It can be said that the participant profile consists of young female employees. The distribution of the participants according to their educational status is given in Table 5.

Table 4. Distribution by age

Age	18-25 age	26-35 age	36-45 age	46-55 age	56-65 age	Total
Frequency	68	144	130	38	3	383
Per cent	17.8	37.6	33.9	9.9	0.8	100

Table 5. Distribution according to educational background

Education	Primary School	Middle School	High school	Associate Degree	Bachelor's degree.	Postgraduate Education	Total
Frequency	5	4	66	137	163	8	383
Per cent	1.3	1	17.2	35.8	42.6	2.1	100

42.6% of the participants have undergraduate, 35.8% associate, 17.2% high school, 2.1% postgraduate, 1.3% primary school and 1% secondary school education. According to this, it can be said that female employees of the airport have secondary education and level of education. The distribution of the participants according to their marital status is given in Table 6.

Table 6. Distribution according to marital status

Marital Status	Married	Single	Total
Frequency	208	175	383
Per cent	54.3	45.7	100

54.3% of the participants were married and 45.7% were single. The distribution of the participants according to the region where they work/live is given in Table 7.

36% of the participants live in Central Anatolia Region, 27.9% in Marmara Region, 13.8% in Mediterranean Region, 10.4% in Aegean Region, 9.4% in Southeastern Anatolia Region, 1.3% in Black Sea Region and 1% in Eastern Anatolia Region. The distribution of the participants according to the institution they work in is given in Table 8.

Table 7. Distribution by region

Region	Central Anatolia Region	Marmara Region	Aegean Region	Mediterranean Region	Southeastern Anatolia Region	Black Sea Region	Eastern Anatolia Region	Total
Frequency	138	107	40	53	36	5	3	383
Per cent	36	27.9	10.4	13.8	9.4	1.3	1	100

Table 8. Distribution by Institution of Employment

Organisation	Private Company	Public Institution	Total
Frequency	250	133	383
Per cent	65.3	34.7	100

65.3% of the participants are employees of private companies and 34.7% of them are employees of public institutions. The distribution of the participants according to the duration of their employment is given in Table 9. 32.9% of the participants have been working in their organisations for 1-5 years, 30.3% for 5-10 years, 21.4% for 10 years or more, 9.7% for 6-12 months and 5.7% for 0-6 months. It is seen that most of the participants have been working in their organisations for a long time.

Table 9. Distribution According to Duration of Employment

Duration	0-6 months	6-12 months	1-5 years	5-10 years	10 years and over	Total
Frequency	22	37	126	116	82	383
Per cent	5.7	9.7	32.9	30.3	21.4	100

3.2. Time Management Scale Evaluation

Participants' evaluations on time management were collected on a 5-point Likert scale (1=Never, 5=Always). The time management scale directed to the participants was handled in 3 sub-sections: time planning, time attitudes and time loss.

Table 10. Evaluation on time management

TMS	Mean	SD
S37	3.78	1.16
S32	3.43	1.38
S31	3.35	1.11
S23	3.34	1.29
S30	3.33	1.13
S33	3.32	1.24
S24	3.22	1.24
S38	3.21	1.25
S26	3.07	1.17
S34	3.05	1.36
S36	3.03	1.20
S27	2.95	1.22
S35	2.84	1.22
S28	2.75	1.21
S29	2.69	1.20
S25	2.60	1.29
Time planning	3.12	0.68
S41	3.69	1.15
S42	3.61	1.02
S40	3.61	1.19
S43	3.55	1.22
S39	3.28	1.08
S44	2.86	1.22
S45	2.63	1.17
Time attitudes	3.32	0.57
S49	3.12	1.16
S48	2.34	1.47
S47	2.22	1.16
S46	2.11	1.09
Waste of time	2.45	0.69
Time management	3.07	0.53

TMS= time management scale, SD= standard deviation. Notes: (i) n=383, (ii) 1=Never and 5=Always in the scale. (iii) According to Friedman two-way ANOVA test, $\chi 2$= 1322,632; P=0.00<0.05 results are statistically significant.

According to Table 10, it can be said that female employees are slightly more successful than the average (mean =3.07) in time management. Within the scope of the sub-dimensions of time management, the most important issue for female employees was determined as time attitudes and then time planning. In terms of time loss, there was an evaluation below the average (2.45<3). Within the time planning dimension, setting and keeping priorities, marking important dates on a calendar and planning the best time for tasks that require a lot of effort are the most frequently performed actions. On the other hand, in terms of time planning, allocating time for planning every day, clearly planning what they want to do for the next week and making the programme of the activities that they have to do during the working days were determined as activities that they rarely/sometimes do.

Within the dimension of time attitudes, the feeling of planning one's own time was the most frequently felt feeling, while finding oneself waiting for a long time with nothing to do was determined as rarely/sometimes encountered attitudes.

Within the dimension of time loss, while working on it before the audit and on the day of the audit is the most frequently performed activity, spending more time on one's own private business than the organisation's business on a normal working day is rarely/sometimes performed.

3.3. Job Stress Scale Evaluation

Participants' evaluations of job stress were collected on a 5-point Likert scale (1=Never, 5=Always). The perceived job stress scale directed to the participants was handled in a single dimension.

Table 11. Evaluation of job stress

JSS	Mean	SD
S10	2.91	1.14
S22	2.90	1.30
S20	2.90	1.23
S8	2.85	1.13
S18	2.80	1.20
S16	2.64	1.12
S21	2.61	1.18
S12	2.55	0.96
S11	2.54	1.08
S9	2.30	1.03
S19	2.20	1.02
S17	2.16	1.13
S13	2.02	1.12
S15	1.99	1.04
Work Stress	2.53	0.56

JSS= job stress scale, , SD= standard deviation. Notes: (i) n=383, (ii) 1=Never and 5=Always in the scale. (iii) According to Friedman two-way ANOVA test, $\chi 2$= 469.437; P=0.00<0.05 results are statistically significant.

According to Table 11, it can be said that the perceived job stress of female employees in the dimension of all statements is below the average. Accordingly, the highest contribution to the perceived job stress of female employees was to doubt the opportunities available for you to develop and progress in your job, while the lowest contribution was to encounter difficulties in obtaining the information needed to do the job.

3.4. Relationship and Effect (Correlation and Regression) Assessment

Correlation and regression analyses were conducted in order to test the hypotheses of this research, which was conducted to measure the role of time management in coping with work stress of airport women employees. As it is known, correlation analysis provides information about the existence, statistical significance and strength of the relationship between the variables analysed. As the correlation coefficient approaches 1 in absolute value, the strength of the relationship increases. In addition, the sign of the correlation coefficient provides information about the direction of the relationship between variables. The results of the correlation analyses between the main variables of our study, perceived work stress and time management, and the sub-variables of time planning, time attitudes and time loss are given below:

Table 12. Correlation analysis

	Work stress	Time planning	Time attitudes	Waste of time	Time management
Work stress	1	0.052	0.124*	0.188**	0.111*
Time planning		1	0.513**	0.191**	0.944**
Time attitudes			1	0.229**	0.717**
Waste of time				1	0.403**
Time management					1

* The correlation is significant at 0.05 level. ** Correlation is significant at 0.01 level.

According to Table 12, there is a positive, significant and weak relationship between job stress and time attitudes and time loss sub-dimensions and between job stress and time management main dimension. Accordingly, "Hypothesis 1, which proposes that time management has a significant effect on perceived job stress." The hypothesis is accepted. On the other hand "Hypothesis 1a: Time Planning has a positive effect on perceived job stress." While the hypothesis is rejected; "Hypothesis 1b: Time Attitudes have a positive effect on perceived job stress." and "Hypothesis 1c: Time Loss has a positive effect on perceived job stress." Hypotheses are accepted.

Considering the accepted hypotheses, regression analysis was performed to determine the effect between the variables that were found to have a significant relationship. The results of the regression analysis conducted to measure the effect of time management on perceived job stress (PJS) are given below. The proposed regression model is as follows (equation 1):

$$PJS = a0 + a1\ \text{Time Management} + \varepsilon \quad (1)$$

When Table 13 is analysed, the proposed regression model is significant and perceived job stress can be explained by time management variable. In addition, time management variable explains 11.1% of the perceived job stress (PJS) variable. Established model (equation 2):

$$PJS = 2.159 + 0.119\ \text{Time Management} \quad (2)$$

The results of the multiple regression analysis to measure the effect of time attitudes and time loss on perceived job stress (PJS) are given below. The proposed regression model is as follows (equation 3):

$$PJS = a0 + a1\ \text{Time Attitudes} + a2\ \text{Time Loss} + \varepsilon \quad (3)$$

Table 13. Time management-perceived job stress regression analysis

Dependent Variable	R^2	ΔR^2	Independent Variable	B	Std. Error	t	F
Perceived Job Stress	0.111	0.012	Constant	2.159	0.17	12.673	4.779*
			Time Management	0.119	0.055	2.186	

*=P<0.05

Table 14. Time attitudes, time loss-perceived job stress regression analysis

Dependent Variable	R^2	ΔR^2	Independent Variable	B	Std. Error	t	F*
Perceived Job Stress	0.205	0.042	Constant	1.907	0.18	10.596	8.363*
			Time Attitudes	0.085	0.051	1.653	
			Time Loss	0.138	0.042	3.261	

*=P<0.05

When Table 14 is analysed, the proposed regression model is significant. On the other hand, when it was analysed whether perceived job stress could be explained together with time attitudes and time loss variables, it was found that the coefficient of time attitudes variable was not statistically significant according to t test. Therefore, the time attitudes variable was removed from the model and the model was run again. The proposed regression model is as follows (equation 4):

Perceived Job Stress=a0 +a1 Time Loss + ε (4)

When Table 15 is analysed, the proposed regression model is significant and perceived job stress can be explained by the time loss variable. In addition, time loss variable explains 18.8% of the perceived job stress variable Established model (equation 5):

Perceived Job Stress=2.148 +0.154 Time Loss (5)

Table 15. Time loss-perceived job stress regression analysis

Dependent Variable	R^2	ΔR^2	Independent Variable	B	Std. Error	t	F
Perceived Job Stress	0.188	0.035	Constant	2.148	0.105	20.434	13.93*
			Time Loss	0.154	0.041	3.732	

*=P<0.05

3.5. Difference Analyses

Whether the evaluations of airport women employees in the context of Perceived Job Stress, Time Management, Time Planning, Time Planning, Time Loss and Time Attitudes vary according to their demographic characteristics (age, education level, marital status, region of employment, institution of employment and working time) were examined by difference analyses. In this context, t-test was conducted for demographic variables with two sub-groups (marital status, institution of employment) and anova test was conducted for demographic variables with more than two sub-groups (age, education level, region of employment and working period).

While conducting the difference tests, firstly, the equality of variances of the demographic variable groups analysed was examined by Levene's test. For the variables with Levene's test P>0.05, it is concluded that the group variances are equal, and for the variables with P<0.05, it is concluded that the group variances are not equal.

In the independent groups t test for two-group demographic variables, if the group variances are equal, the differences are interpreted according to the p value of the relevant t test if the group variances are equal, or according to the p value of the t test when the group variances are not equal. Accordingly, it was concluded that there was no difference of opinion in the context of the examined groups for the variables with t-test P>0.05, while there was a difference of opinion in the context of the examined groups for the variables with P<0.05. Again, according to the t-test results, the origin of the difference is interpreted by looking at the group averages.

In the ANOVA test for demographic variables with more than two groups, if the group variances were equal, the differences were interpreted according to the p value of the ANOVA test, if not, according to the Welch test p value. Accordingly, it was concluded that there was no difference of opinion in the context of the examined groups for the variables with t-test P>0.05, while there was a difference of opinion in the context of the examined groups for the variables with P<0.05. Again, according to the ANOVA/Welch test result, the origin of the difference is firstly interpreted by post hoc tests (Scheffé and Tukey test for ANOVA test, Tamhane test for Welch test) and then by looking at the averages of the related groups.

Table 16. Difference tests according to marital status

	Levene Test		Single (n=175)		Married (n=208)		t test	
	F	P	Mean	Standard deviation	Mean	Standard deviation	t	P
Work Stress	0.42	0.52	2.51	0.55	2.54	0.58	0.41	0.69
Time planning	0.32	0.57	3.09	0.68	3.16	0.67	1.01	0.31
Time Attitudes	0.12	0.73	3.30	0.57	3.33	0.57	0.60	0.55
Time Loss	0.12	0.73	2.43	0.69	2.46	0.69	0.35	0.73
Time management	0.21	0.65	3.04	0.52	3.10	0.53	1.01	0.32

Table 17. Difference Tests According to Sector of Employment

	Levene Test		Private Sector (n=250)		Public Sector (n=133)		t test	
	F	p	Mean	Standard Deviation	Mean	Standard Deviation	t	P
Work Stress	13.09	0.00	2.55	0.51	2.49	0.66	0.95	0.34
Time planning	0.00	0.96	3.13	0.70	3.11	0.65	0.32	0.75
Time Attitudes	2.52	0.11	3.32	0.60	3.32	0.50	-0.05	0.96
Time Loss	0.23	0.63	2.43	0.68	2.49	0.71	-0.77	0.44
Time management	0.49	0.49	3.07	0.55	3.07	0.49	0.08	0.94

The opinions of female airport employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a significant difference according to their marital status. Accordingly, "H2: Perceived job stress differs according to the marital status of female employees.", "H3: Time management skill differs according to the marital status of female employees.", "H3a: Time planning skill differs according to marital status of female employees.", "H3b: Time attitudes differ according to the marital status of female employees.", "H3c: Time loss differs according to the marital status of female employees." Hypotheses are rejected.

The opinions of airport female employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a significant difference according to the sector they work in. Accordingly, "H4: Perceived job stress differs according to the sector in which female employees work.", "H5: Time management skills differ according to the sector in which female employees work.", "H5a: Time planning skill differs according to the sector in which female employees work.", "H5b: Time attitudes differ according to the sector in which female employees work.", "H5c: Time loss differs according to the sector in which female employees work." hypotheses are rejected.

Table 18. Difference tests by age

	Levene Test		ANOVA Test	
		P	F	P
Work Stress	2.19	0.07	2.02	0.09
Time planning	1.91	0.11	1.50	0.20
Time Attitudes	0.83	0.51	1.46	0.21
Time Loss	1.10	0.36	0.20	0.94
Time management	1.38	0.24	1.37	0.24

The opinions of female employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a significant difference according to their age. Accordingly, "H6: Perceived job stress differs according to the age of female employees.", "H7: Time management skill differs according to the age of female employees.", "H7a: Time planning skill differs according to the age of female employees.", "H7b: Time attitudes differ according to the age of female employees.", "H7c: Time loss differs according to the age of female employees." hypotheses were rejected.

The opinions of airport female employees in the context of time attitudes variable do not show a significant difference according to their educational status. Accordingly, "H9b: Time attitudes differ according to the educational level of female employees." hypothesis is rejected. On the other hand, a significant difference was observed for work stress, time management, time planning and time loss variables according to educational status. According to this; "H8: Perceived job stress differs according to the educational level of female employees.", "H9: Time management skill differs according to the educational level of female employees.", "H9a: Time planning skill differs according to the educational level of female employees.", "H9c: Time loss differs according to the educational level of female employees." hypotheses are accepted. According to the Scheffé and Tukey test, perceived job stress between high school (2.32)-associate degree (2.65) groups, According to the Tamhane test, time planning skill is between secondary school (1.91)-graduate (3.54) groups According to Scheffé and Tukey test, time loss is between high school (2.24)- associate degree (2.54) groups According to Tamhane test, time management skills differ significantly between secondary school (2.15)-graduate (3.31) groups.

Table 19. Difference tests according to education level

	Levene Test		ANOVA Test	
		P	F/Welch	P
Work Stress	1.42	0.22	(F)4.274	0.00
Time planning	6.68	0.00	(W)8.65	0.00
Time Attitudes	4.22	0.00	(W)1.408	0.27
Time Loss	0.33	0.90	(F)4.274	0.01
Time management	8.34	0.00	(W)6.415	0.00

Table 20. Difference tests according to region of employment

	Levene Test		ANOVA Test	
		p	F/Welch	p
Work Stress	2.86	0.01	3.66	0.01
Time planning	4.52	0.00	2.31	0.07
Time Attitudes	3.33	0.00	1.79	0.14
Time Loss	0.80	0.57	(F)1.89	0.08
Time management	5.12	0.00	2.49	0.05

The opinions of airport female employees on time planning, time attitudes, time loss and time management variables do not show a significant difference according to the region. Accordingly, "H11a: Time planning skill differs according to the region where female employees", "H11b: Time attitudes differ according to the region where female employees.", "H11c: Time loss varies according to the region where female employees.", "H11: Time management skill differs according to the region where female employees.", hypotheses were rejected. On the other hand, a significant difference was observed for the job stress variable according to the region of employment. According to this; "H10: Perceived job stress differs according to the region where female employees." hypothesis is accepted. According to the Tamhane test, perceived job stress differs significantly between the Aegean Region (2.31)-Mediterranean Region (2.70) groups.

Table 21. Difference tests according to duration of employment

	Levene Test		ANOVA Test	
		p	F/Welch	P
Work Stress	1.29	0.27	(F)3.697	0.01
Time planning	7.51	0.00	0.20	0.94
Time Attitudes	4.47	0.00	1.37	0.25
Time Loss	0.51	0.73	(F)0.508	0.73
Time management	6.60	0.00	0.32	0.87

The opinions of airport female employees on time planning, time attitudes, time loss and time management variables do not show a significant difference according to their working hours. Accordingly, "H13a: Time planning skill differs according to the working hours of female employees.", "H13b: Time attitudes differ according to the working time of female employees.", "H13c: Time loss differs according to the working hours of female employees.", "H13: Time management skill differs according to the working time of female employees.", hypotheses are rejected. On the other hand, a significant difference was observed for the job stress variable according to the region of employment. According to this; "H12: Perceived job stress differs according to the duration of employment of female employees." hypothesis is accepted. According to Scheffé and Tukey test, perceived job stress differs significantly between 0-6 months (2.19) - 6-12 months (2.74) groups and between 0-6 months (2.19) - 10 years and over (2.59) groups.

4. Discussion

When the findings of the research are considered, it is expected that time management is effective in coping with work stress; however, no strong relationship was observed in this study. In this regard, although the participants are private sector employees, it is thought that these participants generally consist of employees working in subcontractor companies under the public institution. Considering the tasks normally performed in the aviation sector and airports, it is known that there is time pressure in air traffic controllers, technical enterprises, ground handling organisations. However, when it is considered in terms of state airports and terminal management, it is a generalisable result that there is not much time pressure and therefore there is no problem in terms of work stress and time management in female employees. As another point of view, the fact that we are in the pandemic process, the density at airports has eased and the survey was conducted in the winter season, the possibility that the employees answered the survey questions as a result of the period they were in can be considered as a factor in the results of the research findings in this way. Another factor is thought to be due to the employees' hesitation to transfer the situations that they criticise verbally into a written document, although they don't report company information. In line with these opinions, it can be suggested that since the time pressure is intense in ground handling services, air traffic and technical enterprises, it can be suggested that such a study can be carried out by directly including the employees in these enterprises in the study. Considering the limitation of the sample, the research can be repeated in future studies with larger samples of women working in different enterprises and departments. However, the effect of time management on coping with stress can be compared between male and female samples. Thus, more generalisable results will be obtained. In future studies, it is suggested that variables such as burnout, work-family conflict, job satisfaction, productivity and performance, which are thought to be effective in time management, should be included in the research.

5. Conclusion

The aim of this study is to examine the effect of time management on women's coping with work stress at the point of visible or invisible obstacles by considering female employees at the airport. For this purpose, it has been examined whether time management has an effect on women's work stress and if so, what kind of an effect.

According to the research data, it can be said that airport female employees are slightly above average (mean =3.07) successful in time management. Within the scope of the sub-dimensions of time management, the most important issue for female employees was determined as time attitudes and then time planning. In terms of time loss, there was an evaluation below the average (2.45<3). Within the time planning dimension, setting and keeping priorities, marking important dates on a calendar and planning the best time for tasks that require a lot of effort are the most frequently performed actions. On the other hand, in terms of time planning, allocating time for planning every day, clearly planning what they want to do for the next week and making the programme of the activities that they have to do during the working days were determined as activities that they rarely/sometimes. Within the dimension of time attitudes, the feeling of planning one's own time was the most frequently felt feeling, while finding oneself waiting for a long time with nothing to do was determined as rarely/sometimes encountered attitudes. Within the dimension of time loss, while working on it before the audit and on the day of the audit is the most frequently performed activity, spending more time on one's own private business than the organisation's business on a normal working day is rarely/sometimes performed.

The opinions of female airport employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a significant difference according to their marital status. The opinions of airport female employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a

significant difference according to the sector. The opinions of female employees in the context of work stress, time management, time planning, time attitudes and time loss variables do not show a significant difference according to their age. The opinions of airport female employees in the context of time attitudes variable do not show a significant difference according to their educational status. On the other hand, a significant difference was observed for work stress, time management, time planning and time loss variables according to educational status. According to Scheffé and Tukey test, perceived job stress is between high school (2.32)- associate degree (2.65) groups, According to the Tamhane test, time planning skill is between secondary school (1.91)-graduate (3.54) groups, According to Scheffé and Tukey test, time loss is between high school (2.24)- associate degree (2.54) groups, According to Tamhane test, time management skills differ significantly between secondary school (2.15)-graduate (3.31) groups. The opinions of airport female employees on time planning, time attitudes, time loss and time management variables do not show a significant difference according to the region. On the other hand, a significant difference was observed for the job stress variable according to the region of employment. According to the Tamhane test, perceived job stress differs significantly between the Aegean Region (2.31)-Mediterranean Region (2.70) groups. The opinions of female airport employees on time planning, time attitudes, time loss and time management variables show a significant difference according to their working hours. On the other hand, a significant difference was observed for the job stress variable according to the region of employment. According to Scheffé and Tukey test, perceived job stress differs significantly between 0-6 months (2.19) - 6-12 months (2.74) groups and between 0-6 months (2.19) - 10 years and over (2.59) groups.

When the findings of the research are evaluated in general, it is determined that the airport women employees are less successful in time management and within the time planning dimension, setting priorities and complying with them, marking important dates on a calendar and planning the best time for tasks that require a lot of effort are determined as the processes they frequently perform. It was also observed that there were times when they planned their own time but found themselves waiting idly without doing anything. In general, it was determined that they were still working on it before and on the day of the audit, but they spent less time on their private work than on the organisation's work on the normal working day. It was observed that marital status, type of organisation and age of the women did not have any effect on job stress and time management. It was observed that there was a significant difference in terms of educational level and working hours, and as a result, the higher the educational level, the more successful they were in terms of work stress, time management, time planning and time loss. It was determined that the perceived job stress of women working in the Aegean and Mediterranean regions was higher.

Author Contributions

The percentages of the authors' contributions are presented below. All authors reviewed and approved the final version of the manuscript.

	S.E.	V.D
C	50	50
D	50	50
S	50	50
DCP	50	50
DAI	50	50
L	50	50
W	50	50
CR	50	50
SR	50	50
PM	50	50
FA	50	50

C= concept, D= design, S= supervision, DCP= data collection and/or processing, DAI= data analysis and/or interpretation, L= literature search, W= writing, CR= critical review, SR= submission and revision, PM= project management, FA= funding acquisition.

Conflict of Interest

The authors declared that there is no conflict of interest.

Ethical Consideration

The research has received ethical committee approval as a result of the Ethics Committee of Eskişehir Technical University (Approval date: March 02, 2022, protocol code: 4/4).

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