

ISTANBUL BILGI UNIVERSITY
INSTITUTE OF GRADUATE PROGRAMS
ORGANIZATIONAL PSYCHOLOGY MASTER’S DEGREE PROGRAM

THE IMPACT OF PSYCHOLOGICAL CAPITAL, WORK-LIFE BALANCE, AND
MINDFULNESS ON JOB SATISFACTION: COMMERCIAL AIRLINE PILOTS’
PSYCHOSOCIAL RISK FACTORS

GİZEM KARA ARSEVEN
118634008

DR. ÖĞR. ÜYESİ ELİF YURDAKUL

İSTANBUL

2022

The Impact of Psychological Capital, Work-Life Balance, and Mindfulness on
Job Satisfaction: Commercial Airline Pilots' Psychosocial Risks

Psikolojik Sermaye, İş-Yaşam Dengesi ve Bilinçli Farkındalığın İş Tatmini Üzerindeki Etkisi:
Ticari Havayolu Pilotlarının Psikososyal Riskleri

Gizem Kara Arseven

118634008

Tez Danışmanı: **Dr. Öğr. Üyesi ELİF YURDAKUL** (İmza)
İstanbul Bilgi Üniversitesi

Jüri Üyeleri: **Doç. Dr. İDİL IŞIK** (İmza)
İstanbul Bilgi Üniversitesi

Prof. Dr. ÇİĞDEM VATANSEVER (İmza)
Tekirdağ Namık Kemal Üniversitesi

Tezin Onaylandığı Tarih: 10.02.2022

Toplam Sayfa Sayısı: 122

Anahtar Kelimeler (Türkçe)

- 1) Bilinçli farkındalık
- 2) Psikolojik sermaye
- 3) İş-yaşam dengesi
- 4) İş tatmini
- 5) Psikososyal riskler

Anahtar Kelimeler (İngilizce)

- 1) Mindfulness
- 2) Psychological capital
- 3) Work-life balance
- 4) Job satisfaction
- 5) Psychosocial risks

ACKNOWLEDGEMENTS

I felt the support of many valuable people during this process. First, I would like to thank my advisor, Faculty Member Elif Yurdakul, Ph.D. and Associate Professor İdil IŞIK, Director of the Department, for their valuable contributions.

I am very grateful to my esteemed supervisor Tuba Nur YAZICI, and all my colleagues, who encouraged me to initiate and continue the study and supported all difficult processes. Additionally, I would like to thank my dear friends Emirhan TOPAL and Serenad Selda TERZİ for their interest and support during their busy work schedules.

I want to express my endless thanks to my mother, Meral KARA, my father Mustafa Ferhat KARA, and my spouse Nuri Kerem ARSEVEN, who are always there for me with their constant support and love.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF ABBREVIATIONS	viii
LIST OF SYMBOLS	ix
LIST OF FIGURES	x
LIST OF TABLES	xi
ABSTRACT	xii
ÖZET	xiv
CHAPTER 1 - INTRODUCTION	1
1.1 The Work Experience of Commercial Airline Pilots	3
1.2 The Psychosocial Risk Factors of Commercial Airline Pilots	5
1.2.1 The Importance of Managing Psychosocial Risks in Aviation	7
1.2.2 Proactive Approaches in Aviation to Manage Psychosocial Risks	11
1.2.3 Job Satisfaction Construct as a Psychosocial Risk Factor	13
1.2.4 The Relationship Between Work-Life Balance and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks	17
1.2.5 The Relationship Between Psychological Capital and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks	18
1.2.6 The Relationship Between Mindfulness and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks	20
1.3 Theoretical Background of the Research Variables	21
1.3.1 Job Satisfaction	21
1.3.2 Psychological Capital	25
1.3.3 Work-Life Balance	29

1.3.4	Mindfulness.....	31
1.4	The Study Objective and Hypotheses	34
CHAPTER 2 - METHODOLOGY		41
2.1	Sample.....	41
2.2	Data Collection	44
2.3	Instruments.....	45
2.3.1	Demographic Form	45
2.3.2	Psychological Capital Short Form	45
2.3.3	Work-Life Balance Scale.....	46
2.3.4	Job Satisfaction Scale.....	48
2.3.5	Cognitive and Affective Mindfulness Scale	49
CHAPTER 3 - RESULTS.....		51
3.1	Data Screening.....	51
3.2	Correlation Analysis of Variables.....	52
3.3	Group Differences.....	56
3.4	Predictors of Job Satisfaction.....	56
3.5	Mediation Relations of Variables	60
3.5.1	The Mediator Role of Work-Life Balance Between Mindfulness and Job Satisfaction.....	60
3.5.2	The Mediator Role of Work-Life Balance Between Psychological Capital and Job Satisfaction	62
3.6	The Results of the Hypotheses Testing.....	65
CHAPTER 4 - DISCUSSION.....		66
4.1	Overview.....	66
4.2	Work-Life Balance of Commercial Airline Pilots with Additional Duties.....	67

4.3	Individual Predictors of Job Satisfaction of Commercial Airline Pilots.....	68
4.3.1	Work-Life Compatibility as a Predictor of Job Satisfaction	68
4.3.2	Taking Time for Self as a Predictor of Job Satisfaction	69
4.4	The Mediating Role of Work-Life Balance in the Relationship Between Mindfulness and Job Satisfaction	70
4.5	The Mediating Role of Work-Life Balance in the Relationship Between Psychological Capital and Job Satisfaction	72
4.6	Practical Implications.....	73
4.7	Contributions and Limitations of the Study	74
4.8	Implications for Future Research.....	76
CHAPTER 5 - CONCLUSION		77
References.....		78
Appendixes		93
Appendix A1 – Informed Consent (Turkish).....		93
Appendix A2 – Informed Consent (English)		94
Appendix B1 - Demographic Form (Turkish)		95
Appendix B2 - Demographic Form (English).....		96
Appendix C1 - Psychological Capital Short Form (Turkish).....		97
Appendix C2 - Psychological Capital Short Form (English).....		98
Appendix D1 - Work-Life Balance Scale (Turkish).....		99
Appendix D2 - Work-Life Balance Scale (English)		101
Appendix E1 - Job Satisfaction Scale (Turkish).....		103
Appendix E2 - Job Satisfaction Scale (English)		104
Appendix F1 - The Cognitive and Affective Mindfulness Scale-Revised (Turkish).....		105
Appendix F2 - The Cognitive and Affective Mindfulness Scale-Revised (English).....		106

Appendix G - Ethics Committee Approval Form	107
---	-----



LIST OF ABBREVIATIONS

ATC (Air Traffic Controller)

BAE (Bureau d'Enquêtes et d'Analyses)

CAMS-R (Cognitive and Affective Mindfulness Scale-Revised)

DGCA (Directorate General of Civil Aviation)

EASA (European Aviation Safety Agency)

EPPSI (European Pilot Peer Support Initiative)

FSF (Flight Safety Foundation)

PsyCap (Psychological Capital)

WLB (Work-Life Balance)

LIST OF SYMBOLS

n (Number of Members in the Sample)

$\bar{x}$ (Sample Mean)

s (Standard Deviation)

SE (Standard Error)

B - b (Unstandardized Beta Coefficients)

β (Standardized Beta Coefficients)

LIST OF FIGURES

Figure 1: The Factors Influencing Retention of Commercial Airline Pilots Based on Interviews.....	14
Figure 2: Proposed Hypotheses of the Direct Effects and Mediator Roles.....	38
Figure 3: Proposed Hypotheses for Individual Predictors of Job Satisfaction.....	39
Figure 4: Model for Mediator Role of Work-Life Balance Between Mindfulness and Job Satisfaction.....	62
Figure 5: Model for Mediator Role of Work-Life Balance Between Psychological Capital and Job Satisfaction	64

LIST OF TABLES

Table 1: Sources of Work-Related Stress	6
Table 2: Summary of Job and Life Satisfaction Association	23
Table 3: Operational Definition of PsyCap	27
Table 4: Research Hypotheses	40
Table 5: The Frequencies of Demographic Variables.....	42
Table 6: Descriptive Analysis	43
Table 7: Sub-Dimensions of Work-Life Balance Scale	47
Table 8: Correlation Analysis	54
Table 9: Tolerance and VIF Scores of Variables	57
Table 10: Results of Hierarchical Regression Analysis for Job Satisfaction.....	59
Table 11: The Results for the Mediator Role of the Work-Life Balance Between Mindfulness and Job Satisfaction	61
Table 12: The Results for the Mediator Role of the Work-Life Balance Between Psychological Capital and Job Satisfaction	63
Table 13: Results of Hypotheses Testing.....	65

ABSTRACT

The aviation industry provides 7/24 service due to the growing sector in the globalized world. To make air transport more accessible to passengers, airlines have increased their flight frequencies and networks. These conditions require commercial airline pilots to keep up with the crowded and changeable flight schedules while managing their flight duties which are complex and demanding. Biological and psychosocial risks of commercial airline pilots such as fatigue, distorted circadian rhythm, increased stress arising from the nature of the aviation industry have been garnered attention due to its direct relationship with flight safety. However, investigating the psychosocial risk factors of commercial airline pilots within the scope of the Industrial/Organizational Psychology topic is still a considerably novel approach. The current study aimed to contribute to the developing field by assessing underlying mechanisms of job satisfaction of commercial airline pilots and contextualizing the models around psychosocial risk factors in commercial airline pilot occupation. The relationship between psychological capital, mindfulness, work-life balance, and job satisfaction was tested to reach this aim.

This study was designed as exploratory research to underline mechanisms of job satisfaction of pilots working in commercial airlines based in Turkey. The data were obtained from 94 commercial airline pilots. Results revealed a positive relationship between psychological capital, mindfulness, work-life balance, and job satisfaction. Additionally, the findings indicated that work-life balance mediates both mindfulness-job satisfaction and psychological capital-job satisfaction relationships.

According to the study findings, work-life balance has a significant role in mediating the personal strengths and pilots' satisfaction level with their jobs. Direct and indirect effects of mindfulness, psychological capital, and work-life balance on job satisfaction indicate that increased work-life balance and strength of personal

resources can positively affect job satisfaction, contextualized as psychosocial risk factors of commercial airline pilots.

Keywords: Mindfulness, psychological capital, work-life balance, job satisfaction, psychosocial risks



ÖZET

Havacılık endüstrisi, küreselleşen dünyada büyüyen sektör nedeniyle 7/24 hizmet vermektedir. Hava ulaşımının yolcular için daha erişilebilir hale getirmek için havayolları uçuş frekanslarını ve ağırlarını çoğaltmışlardır. Bu koşullar, ticari havayolu pilotlarının karmaşık ve zorlu uçuş görevlerini yönetirken, yoğun ve değişken uçuş programlarına ayak uydurmalarını gerektirmektedir. Ticari havayolu pilotlarının, havacılık endüstrisinin doğasından kaynaklanan yorgunluk, bozulmuş sirkadiyen ritim, artan stres gibi biyolojik ve psikososyal riskleri, uçuş güvenliği ile doğrudan ilişkisi nedeniyle dikkat çekmektedir. Ancak ticari havayolu pilotlarının psikososyal risk faktörlerinin Endüstriyel/Örgüt Psikolojisi kapsamında araştırılması halen oldukça yeni bir yaklaşımdır. Mevcut çalışma, ticari havayolu pilotlarının iş tatmininin altında yatan mekanizmaları değerlendirerek ve ticari havayolu pilotluğu mesleğinde psikososyal risk faktörleri etrafındaki modelleri bağlamsallaştırarak gelişen alana katkıda bulunmayı amaçlamıştır. Bu amaca ulaşmak için psikolojik sermaye, bilinçli farkındalık, iş-yaşam dengesi ve iş tatmini arasındaki ilişki test edilmiştir.

Bu çalışma, Türkiye merkezli ticari havayollarında çalışan pilotların iş tatmini mekanizmalarının altını çizmek için keşfedici bir araştırma olarak tasarlanmıştır. Veriler 94 ticari havayolu pilotunun katılımı ile elde edilmiştir. Sonuçlar, psikolojik sermaye, bilinçli farkındalık, iş yaşam dengesi ve iş tatmini arasında pozitif bir ilişki olduğunu ortaya koymuştur. Ayrıca bulgular, iş-yaşam dengesinin hem bilinçli farkındalık-iş tatmini hem de psikolojik sermaye-iş tatmini ilişkilerine aracılık ettiğini göstermiştir.

Araştırma bulguları bilinçli farkındalık, psikolojik sermaye ve iş-yaşam dengesinin iş tatmini üzerindeki doğrudan ve dolaylı etkilerini; artan iş-yaşam dengesi ve güçlü kişisel kaynakların, ticari havayolu pilotlarının psikososyal risk

faktörü olarak bağlamsallaştırılan iş tatminini olumlu yönde etkileyebileceğini göstermektedir.

Anahtar Kelimeler: Bilinçli farkındalık, psikolojik sermaye, iş-yaşam dengesi, iş tatmini, psikososyal riskler



CHAPTER 1 - INTRODUCTION

The aviation industry provides 7/24 service due to the growing sector in the globalized world. The industry has changed noticeably regarding flight schedules and price policies to make air transportation more convenient for passengers. Airlines try to provide distinguished services to prominence in a competitive sector. Increased frequencies and active schedules directly affect the pilot's health, well-being, performance, and safety. These conditions require commercial airline pilots to keep up with the crowded and changeable flight schedules while managing their flight duties which are complex and demanding. Pilots must manually manage the aircraft and sophisticated equipment and work closely with the flight crew and ATC (Bor et al., 2002). Additionally, they have to be cautious of any malfunction and emergencies. Working irregular hours and continually changing flight schedules create obstacles to sustaining healthy lifestyle habits (Cahill, Cullen, Anwer, et al., 2020).

The well-being of pilots affects their relationships with others in terms of nature and quality. Their well-being influences their social relationships and their colleagues. It also affects awareness, attention, decision-making process in both work and other domains of life (Cahill, Cullen, Anwer, et al., 2020). Occupational socialization and learning, according to symbolic interactionism, comprise a continual comparison of information and cues, debate of multiple point of views, and trying to find a consensual understanding and interpretation of occurrences, processes, and activities at work. (Bergheim et al., 2015). This suggests that when certain employees exhibit a regular pattern of behavior concerning anticipated work attitudes, it promotes shared views of similar attitudes among other workers.

There are several psychosocial risk factors for pilots that may increase their job-related stress and decrease job satisfaction. These factors can be exemplified as irregular working hours, working anti-social hours, being away from the house, lack

of certainty due to the crew planning, being contacted by work when off-work days due to roster issues, etc. (Cahill et al., 2020). Psychosocial risk factors can increase work-related stress and lead to dissatisfaction with the job.

Previous studies have indicated an association between job satisfaction and well-being (Rathi & Rastogi, 2008), burnout (Ali & Ali, 2014), and physical well-being (Çatalsakal, 2016). This indicates that job satisfaction has an essential role in both pilots' views regarding meeting expectations in the job environment and mitigating organizational concerns. Studies showed that employees who have more psychological capital scores have higher job satisfaction levels (İştar Işıklı, 2018).

When considering the working conditions of commercial airline pilots, work-life balance is an essential factor to investigate. Work-life balance is a concept that addresses reducing the tensions between work and life aspects (Hayman, 2005). Most of the employees encounter the problems of balancing work-related issues and other domains of life. The pressure of being a member of an organization and pressure arising from being a member of other groups may create inter-role conflict that may correlate with various negative outcomes such as job dissatisfaction, quitting intentions, and physical and psychological symptoms (Levinson, 1965). Higher work-life balance leads to higher job satisfaction (Orkibi & Brandt, 2015). Incorporating work-life balance into the design is meaningful due to the blurry distinction between the pilots' occupation and personal life due to quick changes in the roster.

Another variable that is significant to consider is the mindfulness level of pilots. Mindfulness refers to immediate experience and high awareness regarding the current moment, and acceptance without approaching judgmentally (Catak, 2012). The factors of mindfulness are also important for pilots' ability to sustain different domains in life in a balance.

Studies in the aviation sector mostly focus on errors in behaviors so that researchers can uncover the reasons behind hazardous attitudes or fatal accidents.

However, it is important to examine pilots' psychological capitals to try to underpin strong qualifications and try to improve their weaker sources.

This study aims to investigate job satisfaction as a psychosocial risk factor in the commercial airline pilot profession and to determine the predictive variables and thus the aspects that can be improved. Especially in the period when positive psychology had a wide place in organizational psychology, the safety II perspective that developed in the aviation industry, and the creation of peer support programs with a proactive approach, which is a significant positive psychology component, made the integration of positive psychology into these areas. For this reason, it is aimed to contribute to the field by making the variables subject to the developable research features.

The impacts of job satisfaction on psychological and physical health conditions have been revealed in previous studies; therefore, it is important to study job satisfaction as one of the psychosocial risks of the pilot profession and to prevent psychological and physical health issues arising from lower job satisfaction with a proactive approach. In this framework, it is anticipated that the factors identified as significant predictors of job satisfaction can be provided with the opportunity to develop by including peer training in the flight training phase, training units of airline companies, and peer support programs.

1.1 The Work Experience of Commercial Airline Pilots

Airline pilots are mainly responsible for transporting passengers and cargo on a set timetable. Pilots have duties in the flight phase and prior to the flight. For each operation, they must check that the weather conditions are adequate, that the operation is implemented safely, and the cargo has been properly placed. The flights necessitate tight collaboration among the pilots, first officers, ATCs, dispatchers, and other personnel responsible for ground operation. The pilot in command is the status

for experienced pilots, who is in charge of the flight and oversees all other crew members. First officers or co-pilots who share the duties with captains can have both flight and monitoring responsibilities in the aircraft.

Pilots typically ensure for each flight that the overall condition of the aircraft is proper, the aircraft does not exceed the weight limits, weather conditions are within the boundaries, fuel is adequate, flight plans are prepared, aircraft is monitored and operated correctly along planned routes, any situation arising from a malfunction or suddenly changed weather condition is controlled (Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook, Airline and Commercial Pilots, n.d.).

The flight process is quite demanding. In addition to the workload of each unique flight operation, fatigue is one of the most significant risk factors for commercial airline pilots. Flight operations require deep concentration and mental workload due to safety responsibilities which also create stress. Additionally, irregular working schedules may cause psychosocial risk for pilots due to disrupted circadian rhythm, time spent away from home, limited opportunity for socialization, stress caused by missing important days of family members or holidays, or the pressure of uncertainty to take that important day off.

Limitations of flight hours are determined and stated by national and international authorities. According to the national regulation of SHT-FTL Instruction on Limitations for Flight and Duty Time and Rest Requirements, the operators shall determine and establish procedures stating how the pilot-in-command shall shorten the Flight Duty Time (UGS) and/or expand the resting time in case of special circumstances that may cause acute fatigue and, following contact with the relevant crew members, to avoid any devastating effect on flight safety (SHT-FTL Instruction on Limitations for Flight and Duty Time and Rest Requirements, 2018). Maximum flight time and duty period have also been stated in the regulation. Pilots work on

flexible schedules involving some working days followed by days off. Airlines pilots may spend couple of days away from home each week since flight assignments usually include overnight layovers.

Even though limitations for flight and rest periods enforced by law, factors interfering non-work domain of commercial airlines are not widely studied in the aviation field.

1.2 The Psychosocial Risk Factors of Commercial Airline Pilots

Commercial airline pilots experience unique job-related risk factors. Specific aspects of the profession might enhance a pilot's risk of experiencing a mental and physical health problem. However, a high-stress scenario does not have to be harmful to a person if they learn to cope with it in a healthy way. It is difficult to eliminate all stress from pilots' work lives; however, the threat of work-related stress must be effectively handled by operators (Cahill, Cullen, & Gaynor, 2020). Cahill and her colleagues (2020) conducted a comprehensive study and defined work-related stressors that pilots are exposed to. Table 1 shows the work-related stress factors special to commercial airline pilots. The stress factors, which are also risk factors, are categorized into three pillars: biological, psychological, and social items.

Defining the risk factors of commercial airline pilots may provide a framework to establish effective management systems. Therefore, it is important to evaluate psychosocial risk factors with a wider point of view and suggest practical and theoretical implications regarding their management.

Table 1: Sources of Work-Related Stress (Cahill et al., 2020)

BIOLOGICAL	Working irregular hours (*b,*c)
	Working anti-social hours (*b,*c)
	Working within the close confines of the cockpit (*b,*c)
	Divergence of values between management and pilots (*b,*c)
	Unnatural location of the work environment (*b,*c)
	Working long duties
	Difficulties accessing fresh, healthy food
	Sedentary nature of working as a pilot
	Cockpit environment-air quality, oxygen levels, noise
PSYCHOLOGICAL	Increased responsibility with reducing authority/support (*c)
	Lack of engagement (management and pilots) (*c)
	Perception of pilots possessing “The Right Stuff” (*c)
	The perception that pilots are “living the dream” (*c)
	Time away from home (*c)
	Not having a sense of home/never at home (*c)
	Lack of certainty in relation to the roster (changes) (*c)
	Managing and understanding cultural differences (international workforce) (*c)
	Commuting lifestyle (*c)
	Long working day in close contact with one other person (may or may not get on with) (*c)
	Captain responsibility – never switch off
	Changing nature of the industry
	Automation and prolonged periods of low stimulation
	High training costs

	Stringent medical certification
SOCIAL	Working inflexible/disruptive schedules
	Inflexible annual leave allocations
	Ever-changing crew composition

*b: the factor that is also included in psychological stressors

*c: the factor that is also included in social stressors

1.2.1 The Importance of Managing Psychosocial Risks in Aviation

Pilots encounter many physical, psychological, and environmental stress sources as other shift employees; therefore, recent studies focused on these risk factors and found that both demands and nature of the pilot occupation tend to create mental health risks (Cahill, Cullen, & Gaynor, 2020). Poor psychological health condition of airline pilots was found to be related to less individual control overwork, fatigue, and actively changing roster, working in a less social environment (Cooper & Sloan, 1985). According to a systematic review conducted by Pasha and Stokes (2018), depression is very common among pilots, and rates are higher than the population. Mood disorders that commercial airline pilots experience may result from distress because of disrupted circadian rhythm (Pasha & Stokes, 2018). Excessive demands of flight and feeling less support were found to be related to musculoskeletal complaints among pilots, particularly first officers (Runeson-Broberg et al., 2014). Consideration of the psychosocial implications of organizational changes in commercial airlines was suggested by researchers.

Especially after the Germanwings 9525 accident in 2015, pilots' mental health issues and solutions to manage these issues have been garnering more consideration. Germanwings 9525 tragedy was committed by the co-pilot, who had experienced severe depression, and due to his suicidal tendencies, he was told unfit to fly by his

doctor; however, the airline had not been informed (BEA - Bureau d'Enquêtes et d'Analyses, 2016).

In the detailed report of the accident, the reason has been defined as: "The collision with the ground was due to the deliberate and planned action of the co-pilot who decided to commit suicide while alone in the cockpit. The process for medical certification of pilots, in particular self-reporting in case of a decrease in medical fitness between two periodic medical evaluations, did not succeed in preventing the co-pilot, who was experiencing mental disorder with psychotic symptoms, from exercising the privilege of his license."(BEA - Bureau d'Enquêtes et d'Analyses, 2016).

After this catastrophic accident, European Aviation Safety Agency (EASA) provided a response stating that if the ineligible medical and psychological state of the flight crew is not detected, catastrophic results can be faced. After a short time from the occurrence, the task force of EASA issued its recommendation, which focused on the medical fitness of the flight crew. According to the report, pilots should be required to undergo a psychological evaluation before starting the job, random drug and alcohol testing should be implemented, and pilot support programs should be established (European Commission, 2015). In line with these recommendations, EASA stated new rules regarding the management and evaluation of flight crew mental health (Commission Regulation (EU) 2018/1042, 2018).

Directorate General of Civil Aviation has legislated SHT-PSP Instruction on Aviation Personnel Peer Support Program, which is effective as of 01.01.2022, and provided a roadmap for airlines to implement support programs (SHT-PSP), 2021). The aim of the regulation has been stated as "...to regulate the rules of peer support programs and their implementation procedures, to increase aviation safety by coping with factors that cause anxiety and/or stress for aviation personnel, and to prevent the loss of license or certificate of trained personnel, and to regulate the implementation

procedures of public, private institutions and organizations, and to determine the characteristics, duties, powers, and responsibilities of real and legal persons, and to regulate the activities in this regard.” (SHT-PSP, 2021).

According to Cahill et al. (2020), in order to prevent such catastrophic events, there should be more effort on the promotion of wellbeing and coping strategies. In line with the SHT-PSP’s aim of coping with factors that cause anxiety and/or stress for aviation personnel, a more comprehensive approach to increasing wellbeing should be established.

FSF has published an informative document to help aviation personnel to improve personal wellbeing by biological (sleep, physical activities, nutrition), psychological (coping strategies, meditation, managing stress), and social (social support) points of view (Flight Safety Foundation, 2020). One of the most significant notions of the guide is its approach to wellbeing from a collective perspective. According to the document, safety performance is associated with the individual and collective wellbeing of all crew working in the organization. Therefore, airline staff from all department such as training centers, crew rostering, health departments, risk assessment takes part in safety performance.

Employees at safety-critical organizations (SCOs) confront substantial hazards (Bergheim et al., 2015). Regulations clearly state minimum rest time, a requirement for being fit for flight. However, there is a lack of guidance that indicates the importance of balancing the work and life domain of life and its impact on one’s job satisfaction. A pilot’s work-life does not consist of flight duties only. Pilots are required to attend annual training, line checks, communication/correspondence with relevant departments of a company, and in some cases, additional duties (instructor, manager, office duty, etc.). All these unseen workloads create a burden and affect work-life balance because scattered nature of job expectations.

Cahill et al. (2020) has defined stressors for airline pilots and clustered factors as the biopsychosocial approach. Some of the factors in the approach indicate issues concerning work-life balance. Working irregular/anti-social hours, long duties, being away from home, roster changes and lack of certainty, being reachable by work when off duty, working inflexible schedules, inflexible annual leave plans (Cahill, Cullen, Anwer, et al., 2020) are the factors that concern balancing work and other domains of life. After the Covid-19 pandemic, bio-psycho-social risk factors concerning the work-life balance of pilots have increased. Requirements of isolation because of Covid-19 risk and lack of social activities may negatively affect differentiating work and other domains of pilots' life.

COVID-19 pandemic caused changed and increased psychosocial risks for pilots. Therefore, availability of psychological and medical reinforcement should be developed to indicate pilot stress, even pilot suicides especially arising from the economic effects of the pandemic (Mordukhovich et al., 2020).

Additionally, dramatically changed conditions in the aviation sector due to the COVID-19 pandemic significantly changed the routine procedures in airlines. Airlines tried to adapt changes in procedures and implementation, which required management of relations with employees. Airlines that did not effectively implement change management with their relations and the way of communication with their employees may impact employees' perspective to their job and satisfaction level with their job.

The current study aimed to expand the perspective regarding commercial airline pilots' psychosocial risk factors by integrating developable personal resources and regarding the job satisfaction level of pilots as a psychosocial risk. In this context, it has been tried to explain job satisfaction with mindfulness, work-life balance, and psychological capital variables, which have been found to be developable sources.

1.2.2 Proactive Approaches in Aviation to Manage Psychosocial Risks

1.2.2.1 Safety-I to Safety-II

Safety refers to an ability to execute a planned purpose while inhibiting any harm (Provan et al., 2020). The aviation sector always prioritizes safety to prevent incidents and accidents. The causality core belief globally prevalent idea that unpleasant events (accidents, incidents) occur because something goes wrong, and so have causes that can be located and treated—is the general mechanism of Safety-I. While it is evident that causes precede outcomes, it is a fallacy to believe that the causes are minor or that they can always be identified (Hollnagel et al., 2015). Safety I can be described as centralized determinism of what is a safe and executing system in line with the prescribed roles, regulations, and procedures. From this point of view, incidents and accidents occur due to deviations from the frame, as mentioned above (Provan et al., 2020). The alternative system for safety approaches is Safety-II highlighting the need to employ both proactive and anticipatory safety/risk management strategies (Hollnagel et al., 2015). Safety-II addresses how work is achieved by focusing on various ways people overcome challenges, obstacles and how they act together to settle conflicts and succeed in common objectives (Provan et al., 2020).

The significance of learning from regular operations, especially when things go smoothly, is central to Safety-II ideas (Cahill et al., 2021). In other words, Safety I stands for “what went wrong,” which is essential to understand; however, there is also Safety-II perspective looking for answers to “what went right” so that strengths can be emphasized (Patterson & Deutsch, 2015).

1.2.2.2 Pilot Peer Support Programs

Peer support is a context that is benefitted by many areas. This system is based on a specific relationship fed by lived experience, shared values, and situations (Ahluwalia, 2018). A peer support program is constructed on receiving and giving help, shared responsibility, and a mutually shaped path of benefit (Mead et al., 2001).

Regulations state the requirement for establishing a support program, which is proactive and non-punitive, to assist pilots in awareness of and overcome any issue that might damage pilots' ability to use the privileges of their license safely (Easy Access Rules for Air Operations, 2021).

Pilots are reluctant to share their problems, especially psychological issues, because of the concerns regarding the loss of their license. In February 2020, the EPPSI published a guide about designing and implementing peer support programs. According to the manual, a pilot peer support program (PPSP) is a constructed system that pilots who need help can seek support about mental wellbeing issues and various life stressors and are supported by trained colleagues in a confidential environment (European Pilot Peer Support Initiative, 2020).

According to the guide, the program's objective is to prevent issues and detect any problem in an early stage, enable appropriate advice and assistance to the concerned pilot, and facilitate treatment if necessary. The primary purpose is to protect pilots' licenses or to include the pilot in the program in the early stages (European Pilot Peer Support Initiative, 2020).

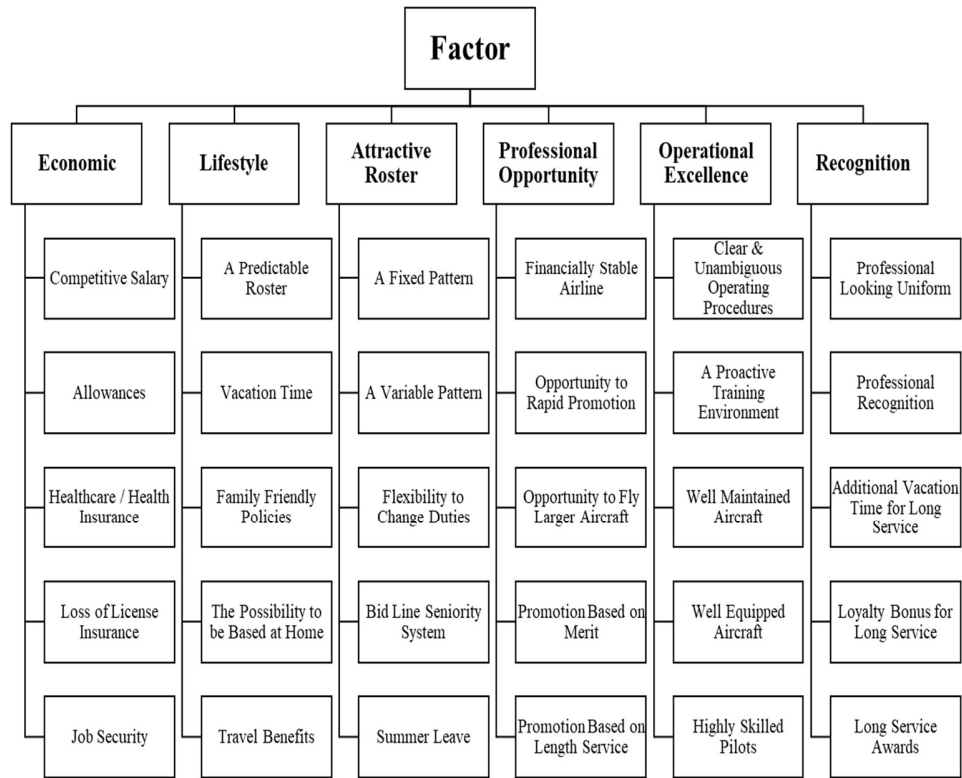
Peers represent the heart of the program. Peers are dedicated colleagues familiar with pilots' working conditions, joint issues and who have been through the same paths. Their approach to their colleague is nonjudgmental, considered, and supportive. Peers are trained pilots and have a fundamental knowledge of psychological first aid, listening, and counseling skills.

1.2.3 Job Satisfaction Construct as a Psychosocial Risk Factor

Job satisfaction is a concept that is frequently emphasized and studied, specifically in the areas of Organizational/Industrial Psychology, Human Resources, and Business Management. Studies have revealed the effect of job satisfaction on individuals' quality of life, health conditions, and sustainability of work-life, so the concept of job satisfaction has been examined with different variables and in other contexts. Views of job satisfaction have turned into a broad-spectrum structure due to studies do not approach job satisfaction as being a factor that only develops depending on the work conditions and one's approach to work and only impacts business life. Due to its significant impact on life and health quality, job satisfaction should be evaluated as a distinct psychosocial risk factor. The risk factors should be differentiated from job dissatisfaction since lowering job dissatisfaction does not always lead to higher job satisfaction. The two attitudes are impacted by distinct variables; therefore, negative study and practice are restricted in their ability to produce a deeper knowledge of strengths, optimum performance, and achieving individual development (Luthans et al., 2015).

Work is the area where people spend most of their waking time, socialize, and are in the process of realizing themselves in their career journey. This vast area is part of life rather than just a means of making a living; therefore, it has physical, psychological, and social impacts on life. A study conducted with entry levels of commercial airline pilots indicated the factors affecting retention. Factors that have been concluded with semi-structured interviews with pilots are presented in Figure 1.

Figure 1: The Factors Influencing Retention of Commercial Airline Pilots Based on Interviews (Efthymiou et al., 2021)



Results indicated that the most significant factor to pilots was the “Lifestyle” category which was followed by the “Economic” and the “Attractive Rosters” categories (Faragher et al., 2013). Overall, participants rated the most important factors for themselves as a fixed pattern. The authors suggested that this result represents the value people place on predictability that stable flight patterns provide in their lives. This enables pilots to plan vacations and family gatherings while also getting enough rest. Foreseen rosters also provide the sense that pilots have control over their lives. Previous studies indicate that perceived control is also strongly related to employees’ job satisfaction (Spector, 1986).

Positive well-being creation in businesses and workforces is called healthy work, and it has enormous social repercussions. As part of their professions, pilots are exposed to a variety of occupational dangers. The numerous activities that contribute to pilot well-being, including their satisfaction with their jobs, should be supported and recognized by pilots, regulators, and the industry (Cahill, Cullen, Anwer, et al., 2020).

1.2.3.1 The Impact of Job Satisfaction on Physical and Psychological Health

There is mounting evidence that present conditions in employment circumstances undermine job satisfaction and consequently harm employees' physical and mental health (Faragher et al., 2013). Researchers have long considered the contributions of social and environmental factors to health. Because work dominates most of the day, it is expected that stress and pressure arising from work-related sources have a significant influence on one's health. The demands-control-support paradigm is commonly used to study the psychosocial work environment's effect on health, and it suggests that the most hazardous working conditions are those with excessive demands, minimal control, and little social support. Low social support was found as a significant risk factor for commercial airline pilots. The psychosocial atmosphere of the job setting has an impact on perceived health, recuperation from work, exhaustion, and insomnia, which can even be affected by the operational type of aircraft (Fu et al., 2020).

Faragher et al. (2013) has shown the positive association between job satisfaction and a good health state in a meta-analysis; however, its association with psychosocial issues was much more robust. The highest correlations with job satisfaction were burnout, mental health problems, confidence, mental state, subjective physical illness, and cardiovascular/musculoskeletal diseases, respectively. In other words, the highest statistical correlations were found between mental health factors and job satisfaction; more minor associations were seen between job

satisfaction and physical symptoms. The correlations are positive and highly significant.

A longitudinal study conducted with various companies in the Netherlands indicated that physical and psychosocial load leads to higher absenteeism rates due to low back pain. Results imply that reducing physical stress at work, particularly for workers with musculoskeletal problems, and enhancing support and job satisfaction may be helpful for the prevention of sick leave due to low back pain (Hoogendoorn et al., 2002).

Job satisfaction is also introduced with its preventive and protective roles. The results revealed that individuals' satisfaction with their jobs affects health, well-being, and confidence, emphasizing the necessity of keeping a good appraisal of one's work, in a protective way. As practical implementation, the results can imply that policies on personnel management emphasizing job satisfaction may result in improved levels of physical function and general health perception, reduced performance restrictions owing to physical health concerns, and body discomfort, which boosts sustainable organizational performance (Satuf et al., 2018). Various studies from many points indicate the relationship between work-related stress and wellbeing (Faragher et al., 2013). Reduced performance constraints caused by mental health issues and enhanced emotional performance, social function, and vitality were relevant to job satisfaction (Satuf et al., 2018).

It is also found that promoting job satisfaction may assist workers in preserving their well-being while dealing with the negative impacts of a negative working conditions (di Marco et al., 2016). Low-level job satisfaction indicates increased burnout risk, lower self-esteem, and increased level of depression and anxiety.

These results were associated with working time dominating most of the day. As employees spend most of the day on work-related activities, dissatisfaction with work indicates negative feelings that overwhelm the day. Continuation of these

problems for a long time, especially if the employee has no control over its solution, emotional exhaustion becomes inevitable (Faragher et al., 2013).

1.2.4 The Relationship Between Work-Life Balance and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks

Balancing different domains of life requires more effort when the working conditions include irregular hours. The fact that the "workplace" is not a defined physical place with specified operation time is a growing source of worry for many businesses to keep work and life in a balance. As a result, these two domains are not entirely separate from the job (Kreiner et al., 2009).

A literature review covering 100 papers of job satisfaction and aviation studies in Thailand stated that the most often mentioned factor among commercial airline flight crew is a lack of work-life balance. Some pilots are compelled to work longer time than agreed upon, resulting in a loss of performance and efficiency, increased stress, sleep deprivation, and family strain (Mat Tiya & Mohd Yunos, 2021).

Airlines are obliged to establish fatigue risk management systems that oversight rostering/flight planning systems. However, this system only focuses on fatigue risk that is controlled based on flight and rest periods. The fatigue risk management system might be expanded based on the association between tiredness risk and other aspects of well-being of flight crew. (Cahill, Cullen, Anwer, et al., 2020). Fatigue is closely related to mental health and the association between them has gained heightened attention, and current studies indicate that pilots who spent more time on duty were three times more probable to declare increased level depression than those whose flights were less (O'Hagan et al., 2016).

According to the study conducted by Goose Recruitment and Flight Global, pilots give the highest priority to work-life balance when choosing flying jobs and wages, organizational culture, training, and career development follow this priority.

The results are almost totally different for new pilots giving the highest priority to company culture, and work-life balance is least important (Goose Recruitment & Flight Global, 2020). According to the report, differentiation may occur due to the requirement for new pilots to work long hours to make progress in their careers to manage their debts, and be in an organization where they share values (Goose Recruitment & Flight Global, 2020). Therefore, the work-life balance factor should be studied by considering various qualifications of airline pilots.

1.2.5 The Relationship Between Psychological Capital and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks

Because job satisfaction is so essential to organization operation and employee well-being, examining the underlying components that lead to employee wellbeing is advantageous. Cultivating strengths and competencies allows a person to overcome conflicts more effectively in the workplace and regard the work as more rewarding and enjoyable. As a result, positive psychological capital operates as internal determinants impacting job satisfaction (Kwok et al., 2015).

Psychological capital's impact on positive work outcomes can be described within the frame of Conservation of Resources Theory. As the Conservation of Resources Theory proposes, people must dedicate resources in order to avoid losing existing ones and to get new resources, and hence their abundance of resources makes them powerful. (Yürür, 2011). The resources that the person attempts to get, preserve, and grow in value are essential both for their own features and for providing the individual with the potential to obtain additional resources. People who are truly highly resource-equipped owing to their own work and their social position are better prepared to plan for future emergencies, invest resources for future resource augmentation, and position themselves in situations that enable risk avoidance and

resource maximizing. Individuals who lack resources, on the other hand, cannot jeopardize resource investment as they either do not have suitable resources to spend or must hold resources in store for emergency eventualities (Hobfoll, 2001).

Employees with a high level of psychological capital were more content with their jobs and dedicated to the organization because they had a broader expectation of success generated from optimistic attitude and a conviction in their skills obtained from confidence (Avey et al., 2011). A study that looked at psychological capital in connection to employee performance and attitudes revealed that PsyCap is positively associated with employee attitudes, especially job satisfaction and engagement to the organization. Furthermore, it was shown that a higher PsyCap leads to greater satisfaction, dedication, and high performance (Burhanuddin et al., 2019; Nafei, 2015). Additionally, the effectivity of the psychological capital intervention was stated in previous studies showing increased job satisfaction and decreased intention of turnover (Da et al., 2020).

In a study of military personnel, psychological capital, job satisfaction, and perceived health and psychological well-being were found to be positively connected. Authors suggested that psychological capital, within the positive psychology frameworks, may be improved by the implementation of specialized programs targeted at increasing individuals' physical and psychological well-being. Additionally, such interventions are critical for organizations where mental and physical fitness is required (Hernández-Varas et al., 2019).

Previous studies indicated that, in addition to its positive work outcomes, psychological capital is significantly related to physical and mental health. Positive individual perceptions and positive personality attributes, according to positive psychology, help to enhance an individual's quality of life and reduce the psychopathology occurrence (Seligman & Csikszentmihalyi, 2000). The impact of today's VUCA (Volatile, Uncertain, Complex, Ambiguous) atmosphere, especially

the serious effect of the pandemic, makes psychological capital role significant in terms of its potential to combat rapidly expanding mental disease caused by these effects (Luthans & Broad, 2020).

1.2.6 The Relationship Between Mindfulness and Job Satisfaction of Commercial Airline Pilots Within the Scope of Psychosocial Risks

Mindfulness is an awakened mind state in which one's attention, backed by sensitive awareness, monitors what is happening and fear regarding the future, as well as unpleasant ruminations or projections, are brought back to the present, where the situation is viewed for what it is. (Roche et al., 2014).

Research on mindfulness shows that mindfulness carries many benefits (Baer et al., 2004; Dane, 2010b; Shapiro et al., 2006; Wallace & Shapiro, 2006). Studies show that mindfulness impacts mental and physical health, quality of social relations, and regulation of behaviors (Brown et al., 2007). For example, mindfulness training is provided in the military to decrease anxiety (Meland et al., 2015). Mindfulness inhibits automatic brain processes that limit thinking due to past cognitive habits, thinking patterns, and experiences. As a result, secondary functions such as reduced fixation and greater emotional regulation are enhanced (Glomb et al., 2011). Rather than just responding to inputs mechanically, such subsequent steps demonstrate individuals' purposeful decisions in response to a circumstance. (Roche et al., 2014).

Mindfulness helps employees to accrue positive work outcomes (McNall et al., 2021). A study conducted with teachers showed that teachers' stress, anxiety, depression, exhaustion, and burn-out rates who participated in mindfulness training were significantly lower (Roeser et al., 2013). Similar studies also showed both mindfulness interventions and training reduce depression, anxiety, burnout (Fortney et al., 2013), and work and family dispute (Morganson et al., 2015).

Sirgy and Lee (2018) conceptualized mindfulness theories as role engagement and role conflict. From a role engagement point of view, the main characteristics of work-life balance are engaging multiple roles attentively, equally allocated time across these roles, and equal satisfaction across life domains. The mitigating conflict approach indicates minimal dispute between parts of work and life, enrichment of function without any role conflict, and resource management to mitigate conflicts (Sirgy & Lee, 2018). To achieve the balance, individuals must involve in roles in both work and outside of work. Participating in numerous roles improves role performance, resulting in happiness that spreads throughout life domains. (Clark, 2000; Greenhaus et al., 2003; Sirgy & Lee, 2018).

1.3 Theoretical Background of the Research Variables

1.3.1 Job Satisfaction

Work is a significant concept that has economic influences and spreads over many domains of life. Therefore, it is an economic construct aiming to gain money and a social idea that involves psychological aspects.

Well-being encompasses cognitive and emotional. As a mental experience, life satisfaction symbolizes one's evaluation of several aspects of life. Increasing numbers of studies show the association between life satisfaction and many organizational outcomes, such as increased satisfaction with one's career, commitment and, job experiences. Job and life satisfaction has a powerful association. Contemporaneous and longitudinal studies show that higher job satisfaction and higher life satisfaction predict each other (Unanue et al., 2017).

As the nature of the job brings, pilots are exposed to work-related stress. Anxiety can have acute psychological consequences such as hypersensitivity and persistent anxiety (Kennerley, 1995) and diminished ability to concentrate, remember, perceive,

eat, and sleep (Kennerley, 1995; Roche et al., 2014). This wide variety of actions, influenced by an individual's anxiety, can cause a physiological and psychological disturbance at work (Roche et al., 2014).

Depression, on the other hand, is among the most commonly encountered mental diseases. Depression manifests itself in a number of ways, including chronic and prolonged melancholy, sleeping problems, weariness, a reduced ability to focus, a lack of enjoyment in something normally enjoyed, and feelings of inadequacy (Roche et al., 2014). Depressive symptoms at work might emerge as a loss of excitement, frequent complaints, lower productivity, aggressive conduct, diminished professional motivation, and absenteeism (Gray, 2008). Depression can also affect how an individual interacts with colleagues, especially when persons' job necessitates them to collaborate since these workplace relationships may be demanding and cause discomfort (Johnson & Indvik, 1997).

Considering all major effects of work on physical and psychological wellbeing, people's satisfaction with their job becomes more significant to investigate, especially in the aviation sector. Several hypotheses were put forth to show the relationship between job satisfaction and one's approach to other domains of life. Table 2 summarizes the segmentation, compensation, spillover hypotheses, role enrichment principle, and satisfaction limits principle that points out the mechanism behind the association of job satisfaction and life aspects.

Table 2: Summary of Job and Life Satisfaction Association

Model	Summary	Representative
The Segmentation Model	There is no link between job contentment and life satisfaction, according to this viewpoint. To explain the connection between the two ideas, theoretical stances such as partial inclusion have been presented.	(Rain et al., 1991; Unanue et al., 2017)
The Compensation Model	One seeks enjoyment and contentment in other areas of life to compensate for a dissatisfying career and vice versa.	(Heller et al., 2002; Unanue et al., 2017)
The Spillover Model	A positive association exists between job satisfaction and life contentment. Work experiences influence other aspects of life and vice versa.	(Bowling et al., 2010; Unanue et al., 2017)
The Bottom-Up and Top-Down Model	Job is a crucial aspect of adult life, according to the bottom-up model showing situational description, and those who like their jobs report better overall satisfaction. The top-down approach indicates that dispositional variables influence happiness with many elements of life.	(Brief et al., 1993)
Role Enrichment Principle	Positive experiences and outcomes in a position can result in more positive experiences. The assumption that abilities and experiences gained in one function would improve or boost performance and pleasure in another is referred to as position enrichment.	(Greenhaus & Powell, 2006; Mcnall et al., 2010; Sirgy & Lee, 2018)
Satisfaction Limits Principle	The amount of positive effect given to life satisfaction by a single life domain is restricted, according to the concept of satisfaction limits. Satisfaction in several areas of life leads to	(Sirgy & Lee, 2018)

	overall life satisfaction.	
--	----------------------------	--

Job satisfaction has been in the spotlight for a long time, and the initiation of scientific studies goes back to the 1930s. Robert Hoppock is credited as the pioneering name of job satisfaction studies (Attar et al., 2020). From this starting point, different aspects of job satisfaction have been studied, and published studies have indicated that current employment conditions may decrease levels of job satisfaction and negatively impact employees' physical and psychological health (Faragher et al., 2013).

Job satisfaction has been evaluated from three main perspectives (Faragher et al., 2013):

- a). One's a positive affective reaction and attitude towards the job they have,
- b). Two-dimensional construct such as internal/external or satisfaction/dissatisfaction,
- c). Job satisfaction is a global concept or constructs encompassed by various aspects of a job one has.

Job satisfaction definitions generally focus on the feeling and thoughts of employees regarding work. Regarding affectivity, feelings, and cognitive evaluations, job satisfaction definitions are very similar to life satisfaction explanations (Unanue et al., 2017).

Job satisfaction can be described as an employee's positive attribution towards a job due to their appraisal of the characteristics of work (Robbins & Judge, 2012). Luthans (1998) defines job satisfaction with three dimensions. Job satisfaction is an emotional response determined by the level of met expectancies, and it represents several relevant concepts such as the job itself, salary, career opportunities that create job characteristics.

Work-related activities are an essential part of life; therefore, employee happiness, wellbeing at work, and high job satisfaction significantly affect one's quality of life. Improvement in this area of life positively affects mental and physical health, increasing personal happiness and positively affecting job performance (Örücü et al., 2006).

1.3.2 Psychological Capital

1.3.2.1 Historical Roots: Positive Organizational Behavior

Martin Seligman and Ed Diener's approach regarding positive psychology have been shedding light on the organizational behavior research area. Fred Luthans has taken positive psychology to organizational behavior (Luthans, 2002). When appraising the positive psychology concept, Luthans focused on the state-like aspects and developable capacities in the workplace. As the psychology approach, organizational behavior has focused on the opposing sides of workplace behavior and concepts such as turnover, negative affectivity, and stress. Due to the challenging condition of today's workplace environment, it is vital to consider the aspects that keep people strong and sustain positive behavior.

The positive organizational behavior concept (POB) developed by Luthans consists of emotional intelligence, confidence (self-efficacy), happiness, optimism, and hope (Luthans, 2002). This concept is significant in providing measurement, development, and implementation criteria for positive work outcomes.

a. Confidence

Bandura's concept of self-efficacy is quite an extensive research area, especially in positive psychology. Positive psychology is concerned with dispositional, trait-like, even genetically encoded aspects of self-efficacy. However,

Luthans preferred to refer to self-efficacy as confidence and integrated into the POB as a developable, state-like concept (Luthans, 2002).

Bandura states that self-efficacy stands for the perception regarding people's ability to manage actions required to cope with the forecasted situations (Bandura, 1982) Stajkovic and Luthans (1998) presented a broader term for self-efficacy. They stated that self-efficacy is a personal belief that one is able to adjust motivation and cognitive abilities to manage a situation successfully (Stajkovic & Luthans, 1998).

b. Hope

Hope is a cognitive set that combines agency -determination directed to the goal- and pathway -designing the ways to meet goals- (Stajkovic & Luthans, 1998). Hope differs from optimism. Optimism expectancies are formed through external factors. On the other hand, Hope is started and determined through self (Snyder, 2000). Previous studies provided that hope has an association between positive affect, goal setting, perceived control (Curry et al., 1997). Additionally, findings suggested that hope positively affects performance even in stressful jobs (Luthans & Peterson, 2002).

c. Resilience

Resilience is a positive psychology concept and is the capacity to handle difficult situations, dilemmas, and failure without giving up (Luthans, 2002). The ability may decrease or increase by several factors (Stewart et al., 1997). It is more than adapting; however, it includes resources of adaptational systems (Masten, 2001). Regardless of the type or importance of the encountered situation, resilience is how people take it. Resilience is a reaction to a stressful situation rather than an individual capacity of a person (Fikretoglu & McCreary, 2012).

In the workplace, it may be helpful for both employees and leaders to filter stressful, adverse situations from a resilience point of view (Luthans, 2002). Previous

studies indicated that people with higher resilience are effective in an uncertain world; therefore, organizations may need to consider resilience as a developable source (Block & Kremen, 1996; Luthans, 2002).

Resilience helps both employees and employers balance work and life domains by identifying techniques to preserve energy, reduce energy depletion, and increase perceived individual control resulting in more work-life balance (Marques & Berry, 2021).

1.3.2.2 The Chronological Process of Psychological Capital

The roots of PsyCap theory and the chronological process have been summarized by Luthans and Avolio (2014). According to the timeline and resources they have provided, the concept's development and criteria that the idea is based on can be observed clearly. Historical background, theory, measurement, aspects of improvement, study findings on desired work outcomes have been stated by Luthans and his colleagues, and an operational definition of the term has been provided. The operational definition and qualifications of the PsyCap are presented in Table 3.

Table 3: Operational Definition of PsyCap (Luthans & Avolio, 2014)

No.	Operational Definition	Criteria
1	Having efficacy to put required effort to reach success in hard tasks.	Has a theoretical and scientific background
2	Appraise success positively and make positive attributions to success (optimism)	Measurable
3	Dedicating oneself to objectives and reconsidering ways to objectives when required (hope) to reach success and	Improvable
4	When encountering obstacles, bouncing back and even going further (resilience) to succeed. (Luthans, Youssef, et al., 2007, p. 3)	Observable outcomes

1.3.2.3 Contemporary Approach to Psychological Capital

Organizations must place higher value on their employees more and reveal their actual potential to maintain long-term competitive edge and response to altering environmental conditions. To broaden the conventional view of economic capital, there is a shift from the human and then social capital (Larson & Luthans, 2006). A study conducted by Larson and Luthans (2006) has posited and experimentally examined the potential added value PsyCap may have on employee satisfaction and commitment. They have stated that PsyCap explains the concepts better than the human and social capital.

Research on samples consisting of employees from various organizations and cultures, psychological capital is associated with intention to leave, deviant employee behavior, employee absenteeism, employee stress negatively; life satisfaction, organizational commitment, performance, job satisfaction (İştar Işıklı, 2018) positively. Literature provides consistent results regarding the association between psychological capital and job satisfaction. When the components of PsyCap are included in the analysis, it is found that optimism, resilience, and hope positively promote the organizational commitment and job satisfaction of employees.

Positive psychological capital is the sum of optimism, hope, self-efficacy, and resilience and can be developed through experience or intervention. When the characteristics of psychological capital are considered, measurable, developable aspects stand out (Luthans & Youssef, 2004). Definitions of sub-dimensions can be summarized as follows:

a). Self-Efficacy: It means confidence regarding one's ability to succeed in a given scenario. Self-efficacy is described in work as individuals' conviction or confidence in their capacity to generate the motivation and procedure required to adequately accomplish an objective within a given circumstance (Sen & Hooja, 2015).

b). Optimism: Optimism comprises positive emotions and determination, as well as an accurate assessment of the situation. Positive performance appraisal, satisfaction, and happiness have all been linked to optimism (Luthans et al., 2008).

c) Hope: Hope comprises two components: a chosen path to the destination and the construction of paths to fulfill aspirations (Snyder et al., 1991). Hope has been demonstrated to have a favorable association with employee engagement, organizational commitment, job satisfaction, and productivity (Luthans & Peterson, 2002; Luthans & Youssef, 2004).

d). Resilience: It is individuals' power to rebound from adversity, like failings, and also from positive occasions, such as improvements and greater responsibilities (Luthans, 2002). According to research, employee job satisfaction, involvement, and contentment are all connected to resilience (Sen & Hooja, 2015).

Positive psychological capital refers to an image composed of hope, self-efficacy, optimism, and resilience, which are changeable and developable qualifications by experience and training.

1.3.3 Work-Life Balance

Work takes ample space in one's life, and most of the time, there is a conflict between work requirements and personal time. Due to accessibility arising from increased communication channels, the line between work and personal life becomes blurry. Work-life balance (WLB) fundamentally refers to balancing one's work and non-work part of life. Work-life balance is critical for developing sustained energy both at work and outside of work. (Marques & Berry, 2021). In other words, "work-life balance" works as a roof over daily activities of paid work and outside of work (Dizaho et al., 2017).

WLB has recently received a lot of attention. Many academics are increasingly focusing on work-life balance rather than work-family conflict. This is important to include and address employees who are not parents but prefer to devote time to personal interests. (Greenhaus et al., 2003). Many people try to schedule their professional and personal activities to balance these two domains. As a result, employees are more focused and striving for a better fit between their personal and professional lives.

Organizations that have procedures and programs in place to assist workers in maintaining a healthy balance between their professional and personal life are regarded to be superior to those that do not. (Mas-Machuca et al., 2016). Organizations that appreciate and promote work-life balance for their workers boost productivity and happiness. Work-life balance is beneficial for employees by providing lower stress and individual control over programs and responsibilities. This balance is achieved when there is long-term harmony between work and other domains of one's life. (Marques & Berry, 2021).

Work-life balance research aims to eliminate work and non-work conflicts by discovering and specifying the changes or adjustments required to, resulting in more fulfilling outcomes for both work and non-work, as well as for both employer and employee side. (Jensen, 2014). It is also extremely important to be considered by policymakers since the person is at the heart of society's good functioning.

Work-life balance is not just about work and home-family life anymore. This three-pillar aspect includes work, home, and third-place domains that have importance or meaning for individuals' lives. This third place depends on a person's choices; learning activities, leisure activities, or sports do not belong to the work domain, nor "house" either. Furthermore, these pillars are abstract, posing demands and tensions in numerous facets of one's life. (Marques & Berry, 2021). Work-life balance research seeks to identify and specify the necessary modifications to

reconcile the tension between work and non-work in order to provide more favorable results for both individuals and businesses.

1.3.4 Mindfulness

The philosophy behind the concept, definition, and subdimension of mindfulness and its explanation within the organizational concept, especially in the aviation field, will be described to elucidate mindfulness comprehensively.

Mindfulness is a mental process and functioning construct whose roots go back to ancient Buddhist tradition (Chan et al., 2016; Siegel et al., 2009). Mindful awareness is the ability to concentrate on chosen things and not be distracted by irrelevant thoughts and stimulants (Chan et al., 2016; Smallwood & Schooler, 2006). Mindfulness has become a mainstream concept and has been widely studied, especially for mindfulness-based interventions in the clinical field. Ancient Eastern cultures have cultivated mindfulness that consists of both theoretical and practical dimensions. Mindfulness has become well-known and reached more awareness in public primarily because of its clinical application by both psychologists and practitioners (Glomb et al., 2015). It is also related to psychoeducation in terms of techniques regarding training patients to increase their attention, directing them to stay in the moment, and accept this experience without judging, attempting to identify and control (Glomb et al., 2015)

Until mindfulness garnered attention and was studied in a clinical or organizational context, concepts regarding mindfulness mainly were considered within the scope of religion and philosophy fields (Dane, 2010a). This dismissal may occur due to the interbedded perception of mindfulness and meditation. Mindfulness is considered a trait or state, and meditation is not a prerequisite to possessing mindfulness. Researchers have shown that meditation practice is not an obligatory way to acquire mindfulness (Raza et al., 2018). The trait mindfulness view considers mindfulness as an intrinsic capacity that varies from individual to individual (Robbins

& Judge, 2012) for the reasons arising from biological and environmental differences (Davidson, 2010).

Singla (2011) defines mindfulness practices as “The mindfulness practice that involves training the mind to observe thoughts as just thoughts, feelings as just feelings and similarly physical sensations as just sensations rather than letting the mind move, as just it usually does, into chains of interpretation, reactions or associated memories, it is not just a technique, it is a state of mind rather a way of life.”

Mindfulness can be basically described as paying attention to, being conscious of what is happening in the present moment. (Brown & Ryan, 2003; Dane, 2010a). In addition to mindfulness-meditation understanding, there is confusion about what mindfulness does not mean. Scholars have tried to incorporate mindfulness structures into conceptual networks. This abstract network has been investigated to uncover the essence of mindfulness by defining the junction of mindfulness and separation from other attention-related facilities in order to distinguish itself and acquire scholarly interest. (Dane, 2010).

The basic definition for mindfulness is heightening attention to what is experienced at the moment in terms of stimulus obtained from both internal and external resources and approaching stimulus without judgment, elaboration, or identification (Glomb et al., 2015). This definition indicates two essential dimensions: awareness and attention. According to Brown and Ryan (2003), understanding and attention construct consciousness. Awareness as a background radar observes both the inner self of the one and the environment, while attention focuses on what particular experience in a limited time extends (Brown & Ryan, 2003; Westen, 1999). What differentiates mindfulness from these features is that heightened awareness of and attention to experience or moment can identify mindfulness (Brown & Ryan, 2003).

Mindfulness was defined with its two dimensions: attention regulation implicating sustained attentional control that provides heightened recognition of

experiences happening in the present; and individual's direction to experience with curiosity, acceptance, and without judgment (Bishop et al., 2004; Feldman et al., 2007). These dimensions can be summarized as a). attention regulation ability, b). the direction the attention toward the moment, c). being aware of the experience, d). openness to or nonjudgmental approach towards events (Feldman et al., 2007).

1.3.4.1 Mechanisms of Mindfulness in Organizational Context

Mindfulness is garnering increased attention in the organizational field to understand mechanisms behind job satisfaction, performance, corporate safety, and many other concepts within the work context (Dane, 2010; Raza et al., 2018; Kao et al., 2019). Individuals differ in their mindfulness levels (Brown & Ryan, 2003); however, interventions can boost mindfulness (McNall et al., 2021).

Individual differences indicate an essential part in job satisfaction mediated by job engagement, and mindfulness is related to more job satisfaction (Zivnuska et al., 2016). Mindfulness helps employees gain more resources that provide increased well-being and benefit organizations through decreased turnover intentions and more affective commitment (Zivnuska et al., 2016). Another research indicates that a person with increased attention implies more concentration at work and experience more job satisfaction (Wongtongkam et al., 2017). As this study suggests, the underlying mechanism in the effect of mindfulness on job satisfaction may be hypothesized as increased attention towards the essence of the job and disregarding distractions coming from the non-relevant resources, and considering the work experience with a nonjudgmental attitude.

1.4 The Study Objective and Hypotheses

Flight duty is a complex and demanding process. It requires pilots to control various variables while simultaneously gathering-sharing information, solving problem, making decisions, and communicating with other crew members. Although pilots are selected with strictly structured processes and well-trained, their psychological resources are a significant factor for both safe flight operations and their satisfaction level with their job.

As the nature of the job requires, pilots of commercial airlines have flight schedules that include flight times that could be any time of the day, and changeable rosters due to active, large operations. This job structure obstructs distinct work and out-of-work life areas of pilots. In this case, it is significant to incorporate work-life balance into the design to examine its role.

Pilots are obliged to normal healthy controls to sustain using the privileges of their licenses by aviation authorities. Health controls include psychiatric examinations to eliminate any risks arising from psychological disorders. In line with this point of view, aviation industry literature focuses on the negative attitudes or errors in behaviors so that researchers can uncover the reasons behind hazardous attitudes or fatal accidents. However, as positive psychology tries to reveal and underpin the strengths of individuals, positive qualifications of pilots should be investigated to observe which constructs support their well-being and satisfaction, hence safer operations. Only a few research have put a spotlight on positive psychology notions that signal the strengths of flight crews and their sources to sustain their job satisfaction.

The psychosocial risk management approach should not be limited to preventing negative factors such as job dissatisfaction, negative affect, and burnout. As stated by the pioneers of positive psychology, the point of view only to develop or suppress negative aspects may limit the opportunity to examine the strengths in-depth

and to reveal the developable aspects of individuals. In addition, it was stated that reducing negative attitudes such as job dissatisfaction is not a guarantee of job satisfaction. For all these reasons, while developing strategies for the management of psychosocial risks in airline pilots, it is thought that it is important to include aspects that can be improved in the light of research findings in the management system.

The aim of this study is to contribute to the literature by considering the job satisfaction of airline pilots within the scope of psychosocial risk, evaluating the positive psychology elements and developable personal resources in the context of psychosocial risks, revealing the mechanisms that affect the job satisfaction of commercial airline pilots and examining the variables of mindfulness, psychological capital, work-life balance as predictors of job satisfaction of commercial airline pilots.

As previously mentioned, job satisfaction is a positive work outcome that is related to personal resources. Cultivating strengths and competencies enhance one's ability to overcome conflicts more effectively in the workplace, and one can approach the job as more rewarding; therefore, a positive relationship between psychological capital and job satisfaction was defined in previous studies (Burhanuddin et al., 2019; Da et al., 2020; Nafei, 2015). In line with the earlier findings, in the current study, it is expected that there is a positive association between psychological capital and job satisfaction. Subdimensions of psychological capital consist of hope, optimism, resilience, and self-efficacy. These dimensions stand for:

- individuals' conviction in their ability to complete the work effectively and utilize motivational, mental, and practical resources,
- persons' conviction in determining key goals and a procedure by which an individual copes with setbacks,
- when confronted with unpleasant conditions, risks, or significant changes, one's capacity to resolve and deal with the issue, and

- positive outlook for the future, respectively.

Positive associations were found between these resources and job satisfaction in the previous studies (Kaplan & Biçkes, 2013).

Psychological capital is a positive psychology concept that focuses on individuals' strengths and resources. These resources are significant in the organizational context. Employees who are equipped with higher psychological capital have higher scores in work-life balance (Sen & Hooja, 2015). Hope, optimism, resilience, and self-efficacy were also found positively significantly correlated with work-life balance (Siu, 2013). Therefore, it is expected that commercial airline pilots' psychological capital level and the subdimensions of psychological capital are positively associated with work-life balance. Additionally, the impact of psychological capital on work-life balance was put forth to describe the paths leading to higher work-life balance. In line with this aim, it was revealed that as a higher-order construct, PsyCap significantly predicts work-life balance (Christy et al., 2021). As its impact on work-life balance was described in previous studies, it is hypothesized that the psychological capital of commercial airline pilots significantly predicts work-life balance (H.1.).

In addition to the studies conducted to reveal the association between psychological capital and positive work outcomes, its association with other personal resources was also a widely studied concept. Mindfulness is heightening attention to what is experienced at the moment and approaching stimulus without judgment, elaboration, or identification (Glomb et al., 2015). Cognitive and affective mindfulness consists of present-focus, attention, acceptance, and awareness. Previous studies addressed whether there is a significant association between psychological capital and mindfulness, and results showed a positive association (Roche et al., 2014). Malinowski & Lim (2015) found that mindfulness is significantly correlated with subdimensions of psychological capital.

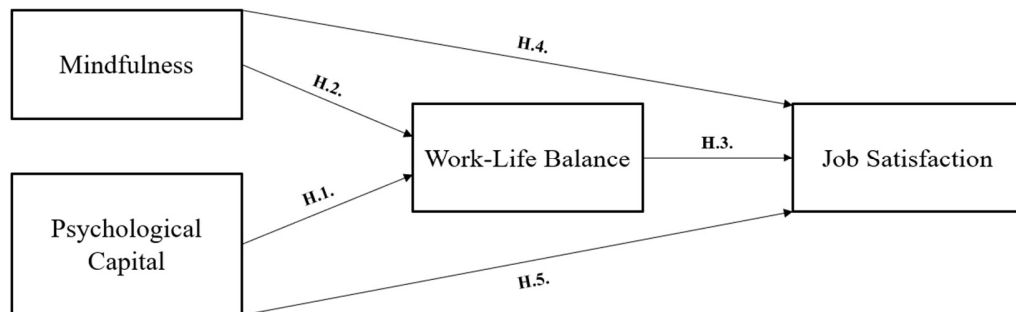
Mindfulness addresses an awake state of mind in which one's attention, supported by sensitive awareness, observes the environment without worry or unpleasant ruminations. It is referred to as a significant resource in terms of increased attention towards the essence of what is happening in that specific time and disregarding distractions arising from the non-relevant resources. One with increased attention may have more concentration at work and may experience more job satisfaction (Wongtongkam et al., 2017). It is also expected in this study that the mindfulness level of commercial airline pilots is positively associated with their job satisfaction .

Positive associations between mindfulness and work-life balance were defined in several contexts. An experimental study showed that participants who were in the group taking mindfulness intervention reported much less strain-based work-family conflict and significantly higher work-life balance arising from higher detachment. Therefore, in the current study, it is expected that pilots who have higher mindfulness scores also have higher work-life balance scores and hypothesized that mindfulness significantly predicts work-life balance (H.2.).

Work-life balance study aims to discover and describe the essential changes to reconcile the tension between work and non-work in order to offer better results for both individuals and organizations. Balancing work and outside of work domains of life is important to eliminate any distress caused by conflicts. Individuals' satisfaction with their jobs was found to be related to how they balance work and other domains of life, and perception of a work-life balance was found as a significant predictor of job satisfaction (Azeem & Akhtar, 2014). Due to the work conditions of commercial airline pilots, work-life balance is a significant subject to investigate. As literature addresses, it is hypothesized that work-life balance has a significant impact on job satisfaction (H.3.).

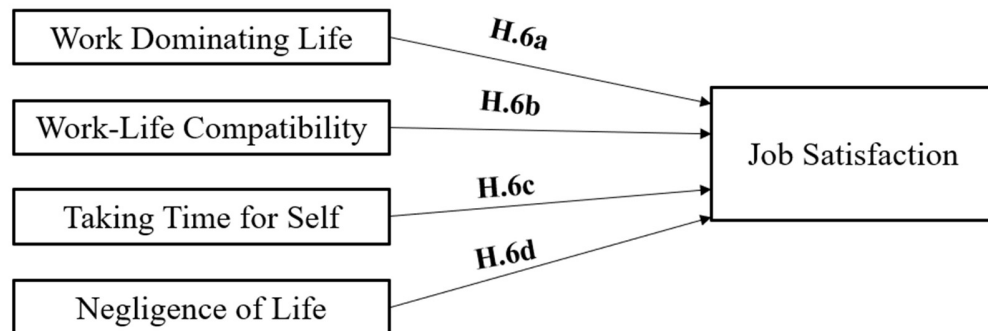
The present study tries to find out underlying mechanisms of job satisfaction of commercial airline pilots. In order to reach this aim, the direct and indirect effects of variables on job satisfaction should be highlighted. Previous findings showed that personal strengths and resources tap workplace resources such as work-life balance, work-life enrichment, or reduced work-family instead of a direct path towards job satisfaction. As stated in previous studies, the relationship between personal resources and job satisfaction was mediated by work-life balance (Orkibi & Brandt, 2015), therefore it is hypothesized that work-life balance mediates relationships between both mindfulness-job satisfaction and psychological capital-job satisfaction relationship of commercial airline pilots (H.4. and H.5. respectively). Figure 2 presents proposed hypotheses of the direct effects and mediator roles.

Figure 2: Proposed Hypotheses of the Direct Effects and Mediator Roles



In addition to underlying mechanisms of job satisfaction, the direct, individual effect of work-life balance components are trying to be revealed to enable interventions directly addressing the job satisfaction of commercial airline pilots. Studies directing their interests towards commercial airline pilots' both psychosocial risk factors and reasons of retention in a company show that foreseen rosters, holiday times, family-friendly company policies, fixed flight patterns, being able to change duties flexibly, time spent away from home are in the major issues in airline pilots' career. These aspects are relevant to work-life balance constructs. Subdimensions of work-life balance are hypothesized as individual predictors of job satisfaction (H.6a, H.6b, H.6c, H.6d). Figure 3 indicates proposed individual predictors of job satisfaction.

Figure 3: Proposed Hypotheses for Individual Predictors of Job Satisfaction



Finally, the difference between work-life balance scores of pilots who have additional duty and those who do not have was hypothesized due to finding out any potential role of additional duty (H.7.). The study hypotheses are presented in Table 4.

Table 4: Research Hypotheses

H.1.	Psychological capital significantly predicts work-life balance.
H.2.	Mindfulness significantly predicts work-life balance.
H.3.	Work-life balance significantly predicts job satisfaction.
H.4.	Work-life balance has a mediator role between the relationship of mindfulness and job satisfaction.
H.5.	Work-life balance has a mediator role between the relationship of psychological capital and job satisfaction.
H.6.	Sub-dimensions of work-life balance significantly predict job satisfaction.
H.6a	Work dominating life sub-dimension significantly predicts job satisfaction.
H.6b	The work-life compatibility sub-dimension significantly predicts job satisfaction.
H.6c	Taking time for self sub-dimension significantly predicts job satisfaction.
H.6d	Negligence of life sub-dimension significantly predicts job satisfaction.
H.7.	There is a difference between the work-life balance scores of pilots who have additional duty and those who do not have.

CHAPTER 2 - METHODOLOGY

The study's objective is to investigate the impact of psychological capital, work-life balance, and mindfulness on job satisfaction within the scope of psychosocial risk factors of commercial airline pilots. The purpose of this study was to conduct exploratory research. Data collecting procedures, instruments, samples, and measurements are described in this section. Because the questionnaires were shared in a single time, a cross-sectional design was employed. The hypotheses were tested using correlation, hierarchical regression, and mediation analyses.

2.1 Sample

The study participants are composed of Turkish pilots who currently perform flight duties in commercial airlines based in Turkey. Ninety-four commercial airline pilots participated in this study using the convenience sampling method. Scores of four participants were discarded because they were detected as outliers. Table 5 presents frequencies of the demographic variables. Descriptive analysis of study variables is shown in Table 6.

Table 5: The Frequencies of Demographic Variables

Variables	Categories	Frequencies	Percent
Age	25-31	8	9.3
	32-38	27	31.4
	39-45	29	33.7
	46 and above	22	25.6
Marital Status	Single	12	14
	Married	74	86
Status as pilot	Captain	64	74.4
	First Officer	22	25.6
Additional Duty	Yes	44	51.2
	No	42	48.8
Experience as a commercial airline pilot	0-5	15	17.5
	6-10	18	20.9
	11-15	35	40.7
	16 and above	18	20.9

Table 6: Descriptive Analysis

	<i>n</i>	Min.	Max.	$\bar{x}$	s
Psychological Capital Scale					
Self-Efficacy	86	7	12	10.56	1.15
Hope	86	14	24	20.19	2.29
Resilience	86	6	12	10.05	1.40
Optimism	86	4	12	9.16	1.99
Work-Life Balance Scale					
Work-Life Compatibility	86	11	36	26.10	5.38
Negligence of Life	86	6	29	17.47	5.55
Taking Time for Self	86	4	21	9.71	4.02
Work Dominating Life	86	4	21	12.53	3.66
Job Satisfaction Scale					
Job Satisfaction	86	7	30	22.98	4.94
Cognitive and Affective Mindfulness Scale					
Cognitive and Affective Mindfulness	86	35	58	47.44	5.53

2.2 Data Collection

To measure the impact of psychological capital, work-life balance, and mindfulness on job satisfaction within the scope of psychosocial risk factors of commercial airline pilots, the study consists of Demographic Form (Appendix B), Psychological Capital Short Form (Appendix C), Work-Life Balance Scale (Appendix D), Job Satisfaction Scale (Appendix E), The Cognitive and Affective Mindfulness Scale (Appendix F). Ethics board approval of research was acquired from Istanbul Bilgi University.

An online survey was announced through social media accounts to reach participants in the aviation industry. Participants were asked to share the survey link with their contacts. It was specified that the survey took approximately 10 minutes to complete. All data were obtained in 3 weeks. There were no missing data, and all responses were used for the study.

Pilots' concerns regarding job security have been a widely discussed subject, especially after the Covid-19 outbreak, which resulted in the unemployment of many airline pilots. For this reason, mitigating the concerns was ensured by emphasizing anonymity within the informed consent, which highlighted that volunteer participation was fundamental and that responses provided would be collected in a pool and would not be evaluated in person. It was also ensured that no one felt obliged to participate in the study. Participants were informed that all information submitted would be kept strictly confidential and the data will not be shared with anyone and/or any organization. The aggregated data will only be used for academic purposes. Participants were also informed about the contact information of the researcher and advisor to ask questions and share concerns in case of any hesitation.

The anonymity of the study and the confidentiality of responders have been preserved in all stages of the study. Participants have been shared an online survey link, which allows responses not to be attributed to any responder.

2.3 Instruments

Five instruments (Demographic Form (Appendix B), Psychological Capital Short Form (Appendix C), Work-Life Balance Scale (Appendix D), Job Satisfaction Scale (Appendix E), The Cognitive and Affective Mindfulness Scale (Appendix F)) have been employed for the study.

2.3.1 Demographic Form

Demographic Form includes gender, age, marital status, number of children, status as a pilot, additional duty information, experience as an airline pilot, total flight hours, current fleet, and pilot training background. (Appendix B)

2.3.2 Psychological Capital Short Form

PsyCap combines self-efficacy, resilience optimism, and hope that creates a positive construct and underpin motivational aspects of employees to achieve their objectives. Organizations need to appreciate and reveal the potential of their employees to be able to reach advantages that last in changing and competitive environments (Oruç, 2018), and measuring psychological capital is a way to achieve this.

The Psychological Capital Scale, which consists of 24 items, was originally developed by Luthans and colleagues (Luthans et al., 2007). Reliability and validity tests performed for the 12-item form were conducted by Avey, Avolio, and Luthans (Avey et al., 2011). Oruç (2018) examined the Turkish context's validity and reliability scores of the short 12-item version. “I think I'm pretty good at work right now.”, “I've been achieving the work-related goals I've set for myself lately.”, “Since

I have faced many challenges before, I can overcome difficulties in the workplace.” items are examples from the scale. The survey was designed as a 6-point Likert-type, where participants were asked to rate in a range from “1-Strongly Disagree” to “6-Strongly Agree”. Participants were reminded at the beginning of the section with “Please consider all aspects of your occupation (flight duty, training, practical-theoretical evaluations, and extra duty if applicable) while responding to following items.” sentence so that all participants respond the items with a common perspective. The scale has four factors that are self-efficacy, resilience, hope, and optimism. The model fit index of the scale was stated as $\chi^2/df = 1,56$, indicating good model fit. High internal consistency score was found with the .93 Cronbach’s Alpha level .

One item has been edited in accordance with the working nature of airline pilots. The edited “I am confident in contributing to the process of determining the strategies of the airline, where I work.” item from the self-efficacy sub-scale has been discarded due to low item-total correlation. Additionally, “I don't dwell on stressful situations I face at work.” from the original item of resilience sub-scale was eliminated due to low item-total correlation. Reliability scores of sub-scales without the aforementioned items for hope, optimism, self-efficacy, and resilience are .72, .82, .77, and .70, respectively. The reliability score of the Psychological Capital scale is .86.

2.3.3 Work-Life Balance Scale

In order to measure the level of balance that one achieves between the work and life domain, Work-Life Balance Scale was employed. Work-Life Balance Scale, developed by Apaydin (2011), consists of 20 items and four factors. These factors are work-life compatibility, negligence of life, taking time for self, and work dominating life. Table 7 represents sub-dimensions of the Work-Life Balance Scale and their explanations.

Table 7: Sub-Dimensions of Work-Life Balance Scale (Apaydin, 2011)

Work-Life Compatibility	Work-life compatibility sub-dimension measures the extent to which individuals can equally distribute their time to their work and private lives, their ability to prioritize work and allocate time effectively, and their satisfaction with activities in business and private life.
Negligence of Life	The dimension of neglecting life measures the ability to allocate time for the work that needs to be done during the day, the neglect of basic needs due to work requirements, and the extent to which the individuals consider the time they can spare for their non-work life sufficiently.
Work Dominating Life	Work dominating life sub-dimension measures what extent work-related tasks are spread over time outside of work, to what extent the time spent at work is reflected in activities outside of work, and whether the time is spared for socialization on off days.
Taking Time for Self	The dimension of taking time for self measures the quality of the interaction between time allocated to the social and work lives of individuals, the level of satisfaction with the activities they do outside of work, and the extent to which work-related tensions affect the activities in private life.

Following items can be presented as examples from the scale; “I don't even have time for simple things during the day.”, “I can do anything by planning my life well.”, “My work-related duties take up most of my time.”. 6-point Likert-type

ranging from “1-Strongly Disagree” to “6-Strongly Agree” was used. In order to ensure a common perspective, “Please consider all aspects of your occupation (flight duty, training, preparation for practical-theoretical evaluations, and extra duty if applicable) while responding to following items.” note was included at the beginning of the scale. Validity scores indicated $\chi^2/df = 1.99$ fit index. Cronbach alfa scores of work-life compatibility, negligence of life, taking time off for self, work dominating life are .88, .81, .77, and .79, respectively. The internal consistency coefficient of the scale is .91, which indicates a high-reliability score. Some of the items have been edited in accordance with the working nature of airline pilots. For example, the “I continue to work non-stop on weekends.” item has been edited as “I keep busy with my job-related endeavors on my off days.”. Internal consistency was calculated again to control any possible effect of edited items. In our sample, the reliability scores of work-life compatibility, negligence of life, taking time for self, work dominating life were .91, .80, .79, and .67, respectively. The Cronbach’s Alpha score for the overall Work-Life Balance scale was .93.

2.3.4 Job Satisfaction Scale

Job satisfaction is the satisfaction or dissatisfaction of the employees with their jobs and arises when the features of the work settings and employees’ aspirations and wishes intersect (Keser & Bilir, 2019). Job dissatisfaction is important for the organization due to its positive impact on employee productivity, productivity, and performance. It is also important for the individual because of its negative relationship with unhappiness, restlessness, dissatisfaction, mental and physical problems.

The fact that job satisfaction is a significant concept in the I/O Psychology field, the job satisfaction scale is one of the most used tools in organizational

research. Various scales in the literature have been utilized; however, most of them consist of 72-100 items. Shorter versions of the scales have been tried to develop to eliminate the negative attitudes of respondents toward the study. Brayfield and Rothe (1951) developed an 18-item short form, and Judge, Locke, Durham and, Kluger (1998) created a 5-item shorter form. Items indicate different aspects of work-life to evaluate how satisfied individuals are with their job.

The psychometric properties of short the form was examined by Keser & Bilir (2019). One factor structure was confirmed in the study. CFA indicates model fit index as $\chi^2/df = 4.6$, which is an acceptable fit index, and the internal consistency score shows high reliability (Cronbach's alpha = 0.85). Cronbach's alpha level in the present study is .81 showing high internal consistency.

2.3.5 Cognitive and Affective Mindfulness Scale

Cognitive and Affective Mindfulness Scale-Revised (CAMS-R) is composed of 12 items and was developed by Feldman, Hayes, Kumar, Greeson, and Laurenceau (2007). The scale indicates the multi-faceted concept of mindfulness tapping into acceptance, present-focus, attention, and awareness. The Turkish version of the CAMS-R scale was adapted by Catak (2012). Due to the recommendation of the authors of the original scale, two items confounded with rumination and worry were not utilized, and a one-factor structure with ten items was confirmed in the study. Because overall structure has a better reliability score than individual subdimensions, the developers of CAMS-R propose utilizing total score rather than the scores of subdimensions (Catak, 2012).

CAMS-R provides several advantages with the scale's short structure, and it does not require previous experience in mindfulness practice. "It is easy for me to concentrate on what I am doing.", "I am easily distracted.", "I am able to pay close

attention to one thing for a long period of time” items are examples from the scale. Internal experiences, especially thoughts and feelings, are tried to be conveyed by each item. Root Mean Square Residual statistic was stated as 0.08, indicating a marginal fit; with .94 GFI (Goodness of Fit Index) and .91 CFI (Comparative Fit Index) levels indicating good index, the Turkish version of the CAMS-R is defined as a valid scale for measuring mindfulness. The internal consistency of the scale was stated as .77, which shows an acceptable level. In the current study, the reliability score of the scale was found as .81.

CHAPTER 3 - RESULTS

3.1 Data Screening

As mentioned in the Methodology section, participants filled out the surveys in an online format. Participants were not allowed to proceed to the next page without completing all items; therefore, there were no missing data. In order to prepare the data for further analyses, the data screening process was made by controlling normality and outliers in addition to missing data.

Univariate outliers were tried to be detected by comparing standardized scores with critical values. Data exceeding the critical value of $z = +3.29$ ($p < .001$, two-tailed test) were regarded as a univariate outlier. Answers of 4 participants whose scores exceeded the critical value and were also detected as an outlier in histograms were discarded from the data. Additionally, the gender variable was not included in the analysis due to the major difference between the number of participants of each group. The answers of 4 female participants were eliminated due to the limited data that cannot be generalized.

The normality of the study was assessed with both histograms and skewness & kurtosis scores. Skewness and kurtosis statistic should be divided by its standard error, and the results were not exceeding $z = \pm 3.29$ ($p < .001$, two-tailed test) does not arise significant problems about normal distribution (Fidell & Tabachnick, 2003). Results of the skewness and kurtosis scores which are divided by their standard errors, do not exceed the critical value.

3.2 Correlation Analysis of Variables

Correlation analysis was applied to all variables to see associations between variables. Spearman rho was used to see the degree of linear relations. Demographic variables, psychological capital and its sub-dimensions, mindfulness, work-life balance and subdimensions, and job satisfaction variables were included. The results are indicated in Table 8, and significant results are interpreted in the following paragraphs.

Mindfulness was positively, significantly correlated with work-life balance ($r=.49$, $p<.01$), work-life compatibility ($r=.63$, $p<.01$), psychological capital ($r=.70$, $p<.01$) and sub-dimensions of psychological capital: self-efficacy ($r=.55$, $p<.01$), hope ($r=.62$, $p<.01$), resilience ($r=.60$, $p<.01$), optimism ($r=.48$, $p<.01$), and with job satisfaction ($r=.32$, $p<.01$). Mindfulness is negatively correlated with taking time off ($r=-.48$, $p<.01$), negligence of life ($r=-.31$, $p<.01$), and work-dominating life ($r=-.31$, $p<.01$) variables. These results can be interpreted as when the mindfulness level of pilots is higher; they tend to have compatibility between work and life, more balance between work and life domains. Additionally, higher mindfulness scores of pilots are associated with experiencing less negligence of life and feeling less domination of work over life. Overall, mindfulness is related to both positive work outcomes and psychological capital.

Work-life balance is positively and significantly correlated with psychological capital ($r=.38$, $p<.01$) and sub-dimensions of psychological capital: self-efficacy ($r=.21$, $p<.05$), hope ($r=.32$, $p<.01$), resilience ($r=.36$, $p<.01$), optimism ($r=.34$, $p<.01$), and with job satisfaction ($r=.53$, $p<.01$).

Work-life compatibility is also positively and significantly correlated with psychological capital ($r=.52$, $p<.01$) and its subdimensions: self-efficacy ($r=.34$, $p<.01$), hope ($r=.46$, $p<.01$), resilience ($r=.56$, $p<.01$), optimism ($r=.37$, $p<.01$) and also with job satisfaction ($r=.51$, $p<.01$) as a positive work outcome.

Negligence of life, which is a sub-dimension of work-life balance, is significantly and negatively correlated with psychological capital ($r=-.22$, $p<.05$), hope ($r=-.20$, $p<.05$), resilience ($r=-.20$, $p<.05$), optimism ($r=-.22$, $p<.05$), and job satisfaction ($r=-.47$, $p<.01$).

Work dominating life sub-dimension of work-life balance is significantly and negatively correlated with job satisfaction ($r=-.29$, $p<.01$).

Taking time off sub-dimension of work-life balance is significantly and negatively correlated with psychological capital ($r=-.39$, $p<.01$), hope ($r=-.33$, $p<.01$), resilience ($r=-.30$, $p<.01$), optimism ($r=-.40$, $p<.01$), and job satisfaction ($r=-.51$, $p<.01$).

Job satisfaction is positively and significantly correlated with psychological capital ($r=.40$, $p<.01$), hope ($r=.34$, $p<.01$), resilience ($r=.29$, $p<.01$), and optimism ($r=.41$, $p<.01$). The correlation between self-efficacy and job satisfaction is not statistically significant.

Table 8: Correlation Analysis

Spearman's rho	1	2	3	4	5	6	7	8	9	10	11
1. Status as Pilot	1										
2. Marital Status	-.38**	1									
3. Additional Duty	1.00**	-.38**	1								
4. Age	.60*	-.31**	.60**	1							
5. Experience	.73**	-.26*	.73**	.62**	1						
6. Mindfulness	.13	-.11	.13	.20	.13	1 (.81)					
7. Work-Life Balance	.05	-.12	.05	.13	.10	.49**	1 (.92)				
8. Work-Life Compatibility	.13	-.19	.13	.19	.13	.63**	.86**	1 (.91)			
9. Negligence of Life	-.02	.04	-.02	-.08	-.11	-.31**	-.89**	-.66**	1 (.80)		
10. Work Dominating Life	.02	.08	.02	-.03	.01	-.31**	-.78**	-.56**	.63**	1 (.67)	
11. Taking Time for Self	-.08	.10	-.08	-.13	-.11	-.48**	-.87**	-.68**	.75**	.60**	1 (.79)

Note. *p <.05, **p <.01, status as pilot codings:0 = first officer, 1 = captain; marital status codings:0 = married, 1 = single; presence of additional duty codings:0 = no, 1 = yes. Internal consistency reliability estimates (i.e., alpha values) for the scales are presented in bold at the diagonal.

Spearman's rho (following)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
12. Psychological Capital	.21	-.17	.21	.22*	.15	.70**	.38**	.52**	-.22*	-.19	-.39**	1 (.86)					
13. Self-Efficacy	.10	-.09	.09	.11	.09	.55**	.21*	.34**	-.11	-.16	-.20	.67**	1 (.77)				
14. Hope	.24*	-.23	.24*	.20	.19	.62**	.32**	.46**	-.20*	-.11	-.33**	.90**	.53**	1 (.72)			
15. Resilience	.14	-.12	.14	.20	.14	.60**	.36**	.56**	-.20*	-.18	-.30**	.73**	.54**	.58**	1 (.70)		
16. Optimism	.21	-.09	.21	.21	.12	.48**	.34**	.37**	-.22*	-.21	-.40**	.81**	.33**	.62**	.48**	1 (.82)	
17. Job Satisfaction	.01	-.01	.01	.13	.12	.32**	.53**	.51**	-.47**	-.29**	-.51**	.40**	.18	.34**	.29**	.41**	1 (.81)

Note.*p <.05, **p <.01, status as pilot codings:0 = first officer, 1 = captain; marital status codings:0 = married, 1 = single; presence of additional duty codings:0 = no, 1 = yes. Internal consistency reliability estimates (i.e., alpha values) for the scales are presented in bold at the diagonal.

3.3 Group Differences

Commercial airline pilots can be assigned or apply for additional duties in the airlines they work. They can work in various positions as they can be assigned to managerial positions or work as instructors and in other office duties within the companies. Establishing the balance between work and other domains of life may become harder due to the demanding requirements of the job itself. Therefore, it is hypothesized that there is a difference between the work-life balance levels of pilots who have additional duty and those who do not have.

An independent sample t-test was conducted to find out whether there is a difference between the work-life balance of pilots with additional duty and those who do not have. Commercial airline pilots who have additional duty ($M = 85.89$, $SD = 14.77$) in their companies reported higher work-life balance scores than those who do not have any additional duty ($M = 82.83$, $SD = 16.94$) however this difference was not found statistically significant ($t(84) = .89$, $p > .05$). In accordance with this result, hypothesis H4.1 was rejected.

3.4 Predictors of Job Satisfaction

Hierarchical multiple regression analysis was performed to identify significant predictors of job satisfaction after controlling for the influence of the demographic variables, which are gender, status, age, and experience. The study it is aimed to investigate the variables that have an individual effect on job satisfaction. It is hypothesized that subdimensions of work-life balance are significant predictors of job satisfaction in line with the previous studies. In order to monitor unique contributions of the work-life balance subdimensions when other research variables are integrated, Work-Life Compatibility, Negligence of Life, Work-Dominating Life, Taking Time

for Self, Hope, Resilience, Self-Efficacy, Optimism, and Mindfulness are included in the analysis.

Preliminary analyses were applied. Multicollinearity and singularity were controlled prior to the analysis. The tolerance value, which is a measure of the total variability of a specific independent variable, is not explained by the model's other independents. If the tolerance value is less than .10, the possibility of multicollinearity should be considered. VIF (Variance Inflation Factor) value, on the other hand, is expected to be less than 10). Additionally, correlations were controlled for both low and high intercorrelations.

Table 9: Tolerance and VIF Scores of Variables

Independent Variables	Tolerance	VIF
WLC	.95	1.05
NL	.95	1.06
WDL	.87	1.15
TT	.95	1.05
SE	.91	1.10
HP	.91	1.10
RS	.92	1.09
OPT	.91	1.10
MN	.91	1.10

Note. WLC: Work-Life Compatibility, NL: Negligence of Life, WDL: Work-Dominating Life, TT: Taking Time for Self, SE: Self-Efficacy, HP: Hope, RS: Resilience, OPT: Optimism, MN: Mindfulness

Status, age, and experience were included in Step 1, explaining 6,6% of the variance in job satisfaction. After entry of Work-Life Compatibility, Negligence of Life, Work-Dominating Life, Taking Time for Self, Self-Efficacy, Hope, Resilience, Optimism, and Mindfulness variables, the total variation explained by the model as a whole was 48.1%, $F(16, 69) = 3.99, p < .001$. All measures explained an additional 41,5% of the variance in job satisfaction; after controlling status, age, and experience, $R^2 \text{ change} = .41, F \text{ change}(9, 69) = 6.13, p < .001$. In the final model, only the two control measures were statistically significant, with the Taking Time for Self recording a higher beta value ($\beta = -.40, p < .01$) than the Work-Life Compatibility ($\beta = .37, p < .05$). Demographic variables did not make a unique contribution to the analysis.

Table 10: Results of Hierarchical Regression Analysis for Job Satisfaction

Variables	Step 1				Step 2			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Status	-2.23	2.33	-.20	-.96	-2.98	2.04	-.27	-1.50
Age								
1). 32-38	1.99	2.25	.19	.88	2.60	1.90	.25	1.37
2). 39-45	3.24	2.62	.31	1.24	3.98	2.14	.38	1.86
3). 46 and above	3.79	2.70	.34	1.40	3.27	2.20	.29	1.49
Experience								
1). 6-10	-.75	2.06	-.06	-.36	-.42	1.91	-.03	-.22
2). 11-15	.18	2.55	.02	.07	-.18	2.31	-.02	-.08
3). 16 and above	1.72	2.75	.14	.63	1.78	2.34	.15	.76
MN					-.11	.13	-.12	-.81
WLC					.34	.15	.37	2.30*
NL					.04	.13	.004	.32
WDL					.01	.19	.02	.16
TT					-.49	.18	-.40	-2.77**
SE					-.39	.52	-.09	-.75
HP					.40	.28	.19	1.41
RS					-.19	.48	-.05	-.39
OPT					.18	.31	.07	.60
R		.26				.69		
<i>R</i> ²		.07				.48		
F for change in <i>R</i> ²		.78				6.13***		

Note. **p*<.05, ***p*<.01, ****p*<.001. WLC: Work-Life Compatibility, NL: Negligence of Life, WDL: Work-Dominating Life, TT: Taking Time for Self, SE: Self-Efficacy, HP: Hope, RS: Resilience, OPT: Optimism, MN: Mindfulness. Status: captain=1, first officer=0. The reference values for age and experience are 25-31, 0-5, respectively.

3.5 Mediation Relations of Variables

The mediator role of work-life balance between the relationship of mindfulness-job satisfaction and psychological capital-job satisfaction was tested. Process Macro v4 extension that was developed by Andrew F. Hayes was utilized. Indirect effect and bootstrapping results were used for the mediator role of work-life balance between the relationship of mindfulness-job satisfaction and psychological capital-job satisfaction.

3.5.1 The Mediator Role of Work-Life Balance Between Mindfulness and Job Satisfaction

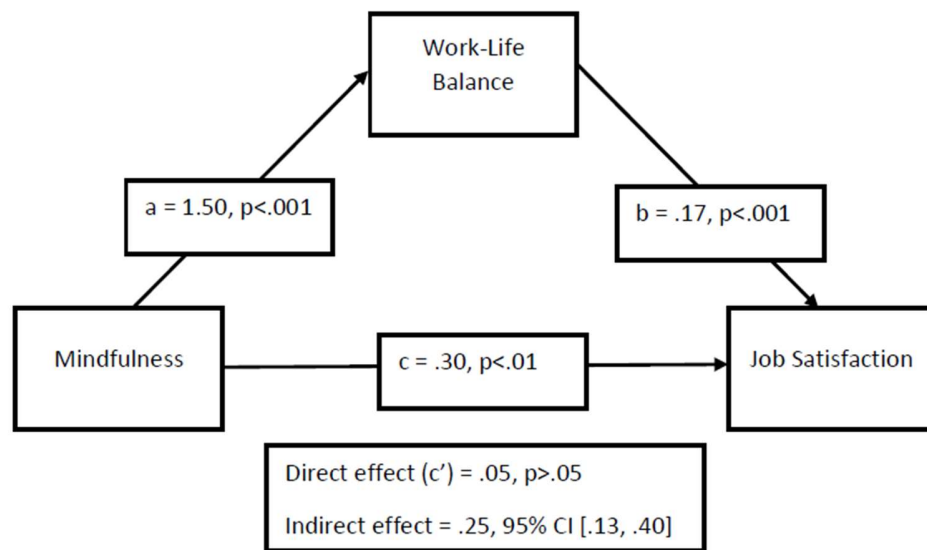
In this section, regression analysis based on the bootstrap technique was utilized to test the mediator role of work-life balance between cognitive and affective mindfulness and job satisfaction. Analysis was conducted by including mindfulness to analysis as the independent variable, job satisfaction as the dependent variable, and work-life balance as the mediator variable. Process Macro Model 4 was used to test the model (Hayes, 2013). The number of bootstrap samples for percentile bootstrap confidence interval was selected as 10.000. The values in the 95% confidence interval generated as a consequence of the analysis should not include a 0 value in order to support the research hypothesis. It has been determined that work-life balance mediates the relationship between mindfulness and job satisfaction since mindfulness has a significant indirect effect on job satisfaction.

Table 11: The Results for the Mediator Role of the Work-Life Balance Between Mindfulness and Job Satisfaction

Predictors	Outcome Variables					
	M (Work-Life Balance)			Y (Job Satisfaction)		
		<i>b</i>	<i>S.E.</i>		<i>b</i>	<i>S.E.</i>
X (Mindfulness)	<i>a</i>	1.50***	.26	<i>c'</i>	.05	.09
M (Work-Life Balance)	-	-	-	<i>b</i>	.17***	.03
Constant	<i>i_M</i>	13.27	12,40	<i>i_y</i>	6.58	3,74
		<i>R</i> ² =.27			<i>R</i> ² =.33	
		<i>F</i> (1; 84) = 33.32, <i>p</i> <.001			<i>F</i> (2; 83) = 21,42, <i>p</i> <.001	

Note. * *p* < .05, ** *p* < .01, *** *p* < .001, *S.E.*: Standard Error. Unstandardized beta values were (*b*) reported.

Figure 4: Model for Mediator Role of Work-Life Balance Between Mindfulness and Job Satisfaction



Note: Unstandardized beta coefficients were reported.

3.5.2 The Mediator Role of Work-Life Balance Between Psychological Capital and Job Satisfaction

The function of work-life balance as a mediator in the link between psychological capital and job satisfaction was investigated. As illustrated in Figure 5, work-life balance has a significant mediator role between psychological capital and job satisfaction.

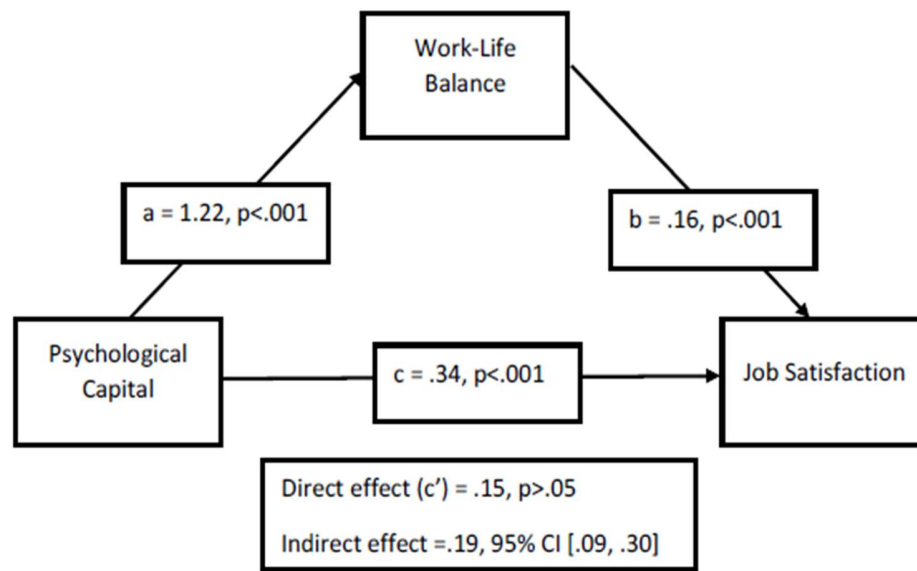
Table 12: The Results for the Mediator Role of the Work-Life Balance Between Psychological Capital and Job Satisfaction

Predictors	Outcome Variables					
	M (Work-Life Balance)			Y (Job Satisfaction)		
		<i>b</i>	<i>S.E.</i>		<i>b</i>	<i>S.E.</i>
X						
(Psychological Capital)	<i>a</i>	1.22***	.28	<i>c'</i>	.15	.08
M						
(Work-Life Balance)	-	-	-	<i>b</i>	.16***	.03
Constant	<i>i_M</i>	23.61	13.95	<i>i_y</i>	2.51	3.92
		<i>R</i> ² = .18			<i>R</i> ² = .35	
		<i>F</i> (1; 84) = 19.20, <i>p</i> <.001			<i>F</i> (2; 83) = 23.55, <i>p</i> <.001	

Note. * *p* < .05, ** *p* < .01, *** *p* < .001, *S.E.*: Standard Error. Unstandardized beta values were (*b*) reported.

In this section, psychological capital was included in the analysis as an independent variable, job satisfaction was included in the analysis as a dependent variable, and work-life balance was included as a mediator variable. First, the direct effect of the psychological capital on work-life balance was tested, and results indicated that psychological capital predicts work-life balance significantly ($b=1.22$, $t(84)= 4.38$, $p<.001$). Secondly, the direct effects of work-life balance and psychological capital on job satisfaction were tested. Work-life balance was found to be significant predictor of job satisfaction ($b=0.16$, $t(83)= 5.25$, $p<.001$), whereas psychological capital does not significantly predict job satisfaction ($b=0.15$, $t(87)= 1.78$, $p>.05$). Psychological capital's impact on job satisfaction through work-life balance was tested. Work-life balance mediates the relationship between psychological capital and job satisfaction indirect effect =0.21, $SE=0.08$, 95% CI [0.08, 0.38].

Figure 5: Model for Mediator Role of Work-Life Balance Between Psychological Capital and Job Satisfaction



Note: Unstandardized beta coefficients were reported.

3.6 The Results of the Hypotheses Testing

Table 13: Results of Hypotheses Testing

Hypotheses		Results
H.1.	Psychological capital significantly predicts work-life balance	Supported
H.2.	Mindfulness significantly predicts work-life balance.	Supported
H.3.	Work-life balance significantly predicts job satisfaction.	Supported
H.4.	Work-life balance has a mediator role between the relationship of mindfulness and job satisfaction.	Supported
H.5.	Work-life balance has a mediator role between the relationship of psychological capital and job satisfaction.	Supported
H.6	Sub-dimensions of work-life balance significantly predict job satisfaction.	
H.6a	Work dominating life sub-dimension significantly predicts job satisfaction.	Not Supported
H.6b	The work-life compatibility sub-dimension significantly predicts job satisfaction.	Supported
H.6c	Taking time for self sub-dimension significantly predicts job satisfaction.	Supported
H.6d	Negligence of life sub-dimension significantly predicts job satisfaction.	Not Supported
H7	There is a difference between the work-life balance scores of pilots who have additional duty and those who do not have.	Not Supported

CHAPTER 4 - DISCUSSION

4.1 Overview

Despite increased interest in the aviation field, evaluating psychosocial risk factors of commercial airline pilots within the scope of the Industrial/Organizational Psychology topic is still a considerably novel approach. The current study aimed to contribute to the developing field by investigating underlying mechanisms of job satisfaction of commercial airline pilots and contextualizing the models around psychosocial risk factors in commercial airline pilot occupation. To reach this aim, the relationship between psychological capital, mindfulness, work-life balance, and job satisfaction was tested. Work-life balance was considered to be the mechanism through which mindfulness and psychological capital as personal resources would affect job satisfaction. The study was designed as exploratory research, and results suggested that work-life balance mediates both mindfulness-job satisfaction and psychological capital-job satisfaction relationships. Additionally, individual predictors of job satisfaction were investigated. The findings of the studies are expected to provide major theoretical and practical contributions to the aviation industry as well as the field of Industrial/Organizational Psychology.

In this chapter, results obtained from analyses were presented within the frame of psychosocial risks of commercial airline pilots. Furthermore, practical implications of the findings for the regulators, operators, and support programs are discussed.

According to the findings obtained from the analysis, demographic variables are only associated with psychological capital and its two sub-dimensions, hope and optimism. Age is significantly and positively correlated with both psychological capital and optimism. Captains and pilots who have additional duty have higher hope scores.

How and why personal resources lead to positive work outcomes such as job satisfaction is a significant question to investigate. Previous studies provided support for mindfulness, which was considered as a psychological resource, assists employees to acquire increasing positive work outcomes through higher work-life enrichment and positive affectivity.

4.2 Work-Life Balance of Commercial Airline Pilots with Additional Duties

Commercial airlines may prefer to assign pilots for positions that require aviation experience and know-how. In this case, pilots may have instructor, manager, inspector roles in addition to their flight operations. In fact, Commercial Air Transport Operations Regulation (SHY-6A), (2013) obliges airlines to assign employees who currently hold licenses valid for at least one of the aircraft in the operator's fleet for several managerial positions.

Having an additional responsibility brings another source to manage in life. This new source demands performance, takes time, creates new stressors specific to the area. Therefore, additional duties of commercial airline pilots require special attention in terms of its potential positive and negative impacts on work experience, job satisfaction, and work-life balance.

Because the special concern of the current study investigating the impact developable aspects on positive work outcomes within the scope of potential psychosocial risk for commercial airline pilots, whether there is a difference between work-life balance levels of pilots who have additional duties in their companies and those who do not have any additional duty.

The results were not significant, implying there is no significant difference between the work-life balance levels of pilots having another duty within the company in addition to their flight duties and those who do not have one.

4.3 Individual Predictors of Job Satisfaction of Commercial Airline Pilots

Job satisfaction levels of pilots and the factors that affect job satisfaction within the scope of psychosocial risks were aimed to examine within this study. Previous studies reveal pilots' psychosocial risks and priorities in their professional circumstances. When these factors are examined, it has been seen that one of the most basic factors affecting job satisfaction is the elements pointing to work-life balance. For this reason, it is thought that factors individually predicting job satisfaction should be examined. Comprehensive studies that will be designed by examining the interventions to be made on the factors that directly affect job satisfaction and examining the indirect effects will contribute to the management of the psychosocial risks faced by the pilots.

4.3.1 Work-Life Compatibility as a Predictor of Job Satisfaction

The work-life compatibility subdimension of the Work-Life Balance Scale stands for the extent to which individuals can equally distribute their time to their work and private lives, their ability to prioritize work and allocate time effectively, and their satisfaction with activities in business and private life. In general definition, it represents harmony and contentment in employees' work and other domains of life.

In the hierarchical regression analysis run within the current study, results indicated that the work-life compatibility dimension is a significant predictor of job satisfaction of commercial airline pilots.

4.3.2 Taking Time for Self as a Predictor of Job Satisfaction

Taking time for self subdimension of the Work-Life Balance Scale represents the quality of the interaction between time allocated to the social and work lives of individuals, the level of satisfaction with the activities they do outside of work, and the extent to which work-related tensions affect the activities in private life.

The career path of a commercial airline pilot is generally initiated with strict training followed by long selection and recruitment processes. In some cases, the process starts with the selection of inexperienced candidates to provide initial flight training to recruit them as first officer candidates for companies. Initial flight training and type rating training is demanding and stressful periods. The pressure of the theoretical and practical checks throughout the training also creates distress. Completing these processes and starting to fly in the line as a first officer still requires hard work, and the career path of a commercial airline pilot includes periodic training and controls in addition to their flight duties. Airlines are obliged to follow national and international regulations and establish operational procedures; therefore, as a part of their job description, pilots must follow all these rules and keep their information regarding all operational and training documents up to date. These requirements of an airline pilot's career path take a long time in addition to busy flight schedules.

The results of hierarchical regression analysis conducted in the current study showed that taking time for self subdimension of the Work-Life Balance Scale is a significant predictor of job satisfaction. Work-related stress and conflict arising from the expansion of work-related responsibilities over life affect the level of satisfaction with the job. As previously described, the career journey of pilots includes strict training and control processes; therefore, their work-related responsibilities cover more than the flight schedules.

4.4 The Mediating Role of Work-Life Balance in the Relationship Between Mindfulness and Job Satisfaction

Mindfulness has been a widely studied subject in the Organizational/Industrial field due to its outstanding personal and professional contributions. Earlier studies have indicated a positive association between mindfulness and mental health, confidence, life satisfaction, and emotional control, whereas it is negatively associated with anxiety, negative affection, stress, and depression. The contributions of mindfulness in professional settings have been investigated in previous studies, which indicate its positive association between job satisfaction, performance, and effective social interactions (Raza et al., 2017). Mindfulness also has been studied in terms of its positive impact on work-life balance. Mindfulness is defined as a dispositional attribute or an experienced condition that incorporates the interweaving and overlapping of consciousness, attention to, and acceptance of present-moment experience as an individual ability (Badham & King, 2019). Work experiences, according to Affective Events Theory, are the origins of employee emotional response, which in turn influence job satisfaction (Hülshager et al., 2012). When mindful people listen to the moment in an open, non-judgmental manner, they are able to observe difficult situations with a more objective view and does not attribute subjective meaning or appraisal. This keeps people from being misled by biased cognitive processes, which in turn inhibits overly exaggerated appraisal of the situation. (Hülshager et al., 2012). Furthermore, mindful individuals have stronger awareness, attention and focus on their obligations, better regulate emotions, and more efficiently allocate resources. These abilities assist in the responsibilities of both work and non-work domains (McNall et al., 2021).

The current study aimed to investigate the underlying mechanisms of job satisfaction of commercial airline pilots. The results of this study show that the direct effect of cognitive and affective mindfulness on job satisfaction is not significant, which indicates that cognitive and affective mindfulness does not individually predict

job satisfaction, whereas it affects job satisfaction when the impact is indirect through work-life balance. In other words, mindfulness may affect the perception of the effective establishment of work-life balance, which in turn may lead to increased job satisfaction.

The findings regarding the indirect effect of mindfulness on job satisfaction are consistent with the results of previous studies. One of the findings of the study conducted by Raza and his colleagues (2017) focused on the mediating role of work-family balance within the relationship of trait mindfulness and both intentions of turnover and job satisfaction. The results indicated that trait mindfulness was linked to work-family balancing, which was related to reduced turnover intents and a greater degree of job satisfaction. Additionally, in a study exploring the links and their mechanisms between mindfulness and positive work outcomes, no significant direct effect of mindfulness on job satisfaction were found; however, the serial mediation model concluded that the relationship between mindfulness and job satisfaction was significantly mediated by work-life enrichment, which indicates the quality of one domain increase or decreases the quality of other areas, and positive affectivity (McNall et al., 2021).

The results of the research showed that the work-life balance of the pilots was an important predictor of their job satisfaction and mediated the relationship between mindfulness and job satisfaction. According to the results, pilots with high cognitive and emotional mindfulness have a psychological resource equipped with attention, awareness, focus on the moment, and acceptance factors of mindfulness. It is thought that this resource contributes to the pilots' ability to concentrate on the moment and pay attention to their current processes, to have a high awareness of their experiences, to accept their experiences and not to attribute negative emotions to them, and to maintain a healthy balance between their job and personal life. Thus, the fact that pilots can spare time for other areas of life, are interested in activities outside of work

and work, and think that there is a harmony between their work and life, affects their job satisfaction positively.

4.5 The Mediating Role of Work-Life Balance in the Relationship Between Psychological Capital and Job Satisfaction

The emergence of psychological capital broadens the previous views of human (what is known) and social capital (who is known) that had shifted from the traditional approach of economic capital concerning “what we have” (Larson & Luthans, 2006). A study conducted by Larson and Luthans (2006) has put forth and experimentally examined the potential added value PsyCap on job satisfaction which concluded that PsyCap explains more of the variance than the human and social capital. Psychological capital investigates the psychological capacities and strengths of positively oriented people resources in order to enhance organizational and individual potential and meet organizational success (Çetin, 2011).

Psychological capital is the individual resources and characteristics that contribute to personal strengths. Psychological capital concentrates on the elements required to develop pleasant emotions that boost mental strengths in persons, as Conservation of Resource Theory (COR) says, and outlines four particular personality characteristics to build positive power inside (Salam, 2017).

The psychological state of employees is not like traits or characteristics that exhibit consistency in all contexts, but rather positive states that fluctuate depending on the circumstances (Çetin, 2011). Therefore, it is important to investigate psychological capital construct for different job characteristics and regard the concept as a developable resource.

The current study tries to consider job satisfaction as a psychosocial risk factor for commercial airline pilots and investigate the underlying mechanisms of job satisfaction. To achieve this, psychological capital as an improvable personal

resource and work-life balance were utilized to explain the job satisfaction of pilots. The results indicated that work-life balance mediates the relationship between psychological capital and job satisfaction. The findings imply that pilots who have greater psychological capital levels may have powerful resources to balance work and life domains which in turn leads to higher job satisfaction. The results are consistent with the study conducted by Orkibi and Brandt, which emphasizes individuals with a positive attitude and resources may be more probable to manage resource gain in terms of managing and coping with the difficulties connected with work interfering with personal life and vice versa (Orkibi & Brandt, 2015). As Orkibi and Brandt stated, individuals who have more resources may be able to manage job and personal life. This favorable experience may spill over and enhance the satisfaction levels of commercial airline pilots with their jobs. Psychological capital may enhance work-life balance and, in turn, job satisfaction by eliminating interference of work in personal life via:

- a). Pilots' belief to themselves regarding their ability to achieve requirements of work,
- b) Motivational state to reach work-related goals in terms of trying new paths by taking into account all available sources effectively,
- c). Positive future expectations regarding the job to be accomplished, and
- d). Coping mechanisms by increasing the ability to bounce back from any work-related conflict, negative experiences at work, or any overwhelming processes.

4.6 Practical Implications

Determination of strategies by airlines for the management of psychosocial risks is a factor that may provide positive benefits to flight safety by creating a preventive and improving culture, especially the well-being and health of pilots.

Considering the research data, when determining psychosocial risk factors, it may be beneficial to include the management of developable personal resources instead of focusing only on the factors that pilots are exposed to and negatively affect pilots' job satisfaction. Constructing the psychosocial risk factors management system as in the safety management system; development of training, reports, and integration with the safety management system may contribute to a comprehensive risk management approach.

Inclusion of the psychosocial risks specific to airline pilots and psychological capital and mindfulness, which are significant predictors of work-life balance, in the initial and periodic training that airline pilots should take in order to obtain their licenses and ensure their license continuity, will create awareness for the pilots to observe their own resources and will be beneficial for the well-being of the pilots.

In addition, in the Peer Support Programs, which are obligatory to be designed for pilots as per the aviation legislation, the inclusion of the concepts of mindfulness, psychological capital, work-life balance and, job satisfaction in the training processes of the pilots selected as peers, within the scope of the management of psychosocial risks, may allow peers to have a more in-depth perspective while handling the cases.

4.7 Contributions and Limitations of the Study

The present study examines the effects of mindfulness, psychological capital, and work-life balance levels of airline pilots on their job satisfaction and contributes to the determination of the factors that contribute to the job satisfaction of airline pilots. It is aimed that the evaluation of job satisfaction and the developable resources of pilots within the scope of psychosocial risk management will shed light on the processes of determining and managing the psychosocial risks specific to airline pilots.

In addition to Industrial/Organizational Psychology literature, contribution to the Aviation Psychology literature was aimed by evaluating mindfulness, psychological capital, work-life balance, and job satisfaction specifically for airline pilots and establishing an analysis model for the factors affecting job satisfaction.

In addition to the potential strengths of the study, the limitations should be acknowledged. The first limitation of the study is the limited number of participants. Limited participation may be restricting the generalization of research data. In addition, in order to obtain the data anonymously and not to cause distress to the participants, the airline information of the pilots was not obtained. For this reason, the difference in company culture, which may have an impact on the research results, could not be added as a control variable.

Although the data collection process was carried out during the period when the effect of the pandemic period was less, and the flights were active, the effect of the Covid-19 pandemic should be taken into account when generalizing the results of the study.

Within the scope of the research, the work experiences of the pilots were tried to be evaluated in a way to cover flight, training, and control processes. For this reason, it was stated that a response was expected by considering the flight, training, and control processes per the scales used. It is thought that the use of comprehensive scales developed specifically for aviation in order to develop the scope of the research may be beneficial in to obtain more detailed and field-specific data.

4.8 Implications for Future Research

The working conditions of airline pilots are unique to them. For this reason, it is anticipated that studies to be conducted on the region, period, and company-specific evaluation of psychosocial risk factors may contribute significantly to the field. In addition, studies including positive psychology subjects and developable aspects may provide the potential for a more comprehensive psychosocial risk management perspective.



CHAPTER 5 - CONCLUSION

The current study aimed to contribute to the developing field by investigating underlying mechanisms of job satisfaction of commercial airline pilots and contextualizing the models around psychosocial risk factors in commercial airline pilot occupation. Results of the study indicated that cognitive and affective mindfulness and psychological capital helps employees to have higher job satisfaction through higher work-life balance. According to the study findings, work-life balance has a significant role in mediating the personal strengths and pilots' satisfaction level with their jobs. Direct and indirect effects of mindfulness, psychological capital, and work-life balance on job satisfaction indicate that increased work-life balance and strength of personal resources can positively affect job satisfaction, which is contextualized as psychosocial risk factors of commercial airline pilots.

References

- Ahluwalia, A. (2018). *Peer support in practice*.
- Ali, N., & Ali, A. (2014). The mediating effect of job satisfaction between psychological capital and job burnout of Pakistani nurses. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 8(2), 399–412.
- Apaydın, Ç. (2011). Öğretim üyelerinin işe bağlılık düzeyi ile iş-yaşam dengesi ve iş-aile yaşam dengesi arasındaki ilişki.
- Attar, M., Çağlıyan, V., & Abdul-Kareem, A. (2020). Evaluating the moderating role of work-life balance on the effect of job stress on job satisfaction. *Istanbul Business Research*, 49(2), 201–223. <https://doi.org/10.26650/ibr.2020.49.0081>
- Avey, J. B., Avolio, B. J., & Luthans, F. (2011). Experimentally analyzing the impact of leader positivity on follower positivity and performance. *The Leadership Quarterly*, 22(2), 282–294.
- Azeem, S. M., & Akhtar, N. (2014). The influence of work life balance and job satisfaction on organizational commitment of healthcare employees. *International Journal of Human Resource Studies*, 4(2), 18.
- Badham, R., & King, E. (2019). Mindfulness at work: A critical re-view. *Organization*, 28(4), 531–554. <https://doi.org/10.1177/1350508419888897>
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment*, 11(3), 191–206.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- BEA - Bureau d'Enquêtes et d'Analyses. (2016). *Accident to the Airbus A320-211, registered D-AIPX and operated by Germanwings, flight GW118G, on 03/24/15 at Prads-Haute-Bléone - BEA - Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile*. <https://www.bea.aero/en/investigation-reports/notified-events/detail/accident-to-the->

airbus-a320-211-registered-d-aipx-and-operated-by-germanwings-flight-gwi18g-on-03-24-15-at-prads-haute-bleone

- Bergheim, K., Nielsen, M. B., Mearns, K., & Eid, J. (2015). The relationship between psychological capital, job satisfaction, and safety perceptions in the maritime industry. *Safety Science*, 74, 27–36. <https://doi.org/10.1016/J.SSCI.2014.11.024>
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. v., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11(3), 230–241. <https://doi.org/10.1093/clipsy.bph077>
- Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70(2), 349.
- Bor, R., Field, G., & Scragg, P. (2002). Counselling psychology quarterly The mental health of pilots: An overview. *Counselling Psychology Quarterly*, 15(3), 239–256. <https://doi.org/10.1080/09515070210143471>
- Bowling, N., Eschleman, K., & Wang, Q. (2010). A meta-analytic examination of the relationship between job satisfaction and subjective well-being. *Journal of Occupational and Organizational Psychology*, 83, 915–934. <https://doi.org/10.1348/096317909X478557>
- Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35(5), 307–311. <https://doi.org/10.1037/h0055617>
- Brief, A. P., Houston Butcher, A., George, J. M., & Link, K. E. (1993). Integrating bottom-up and top-down theories of subjective well-being: The case of health. *Journal of Personality and Social Psychology*, 64(4), 646–653.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. <https://doi.org/10.1037/0022-3514.84.4.822>

- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18(4), 211–237.
- Bureau of labor statistics, U.S. Department of Labor occupational outlook handbook, airline and commercial pilots. (n.d.). Retrieved January 14, 2022, from <https://www.bls.gov/ooh/transportation-and-material-moving/airline-and-commercial-pilots.htm>
- Burhanuddin, N. A. N., Ahmad, N. A., Said, R. R., & Asimiran, S. (2019). A systematic review of the psychological capital (PsyCap) research development: Implementation and gaps. *International Journal of Academic Research in Progressive Education and Development*, 8(3), 133–150.
- Cahill, J., Cullen, P., Anwer, S., Gaynor, K., & Wilson, S. (2020). The requirements for new tools for use by pilots and the aviation industry to manage risks pertaining to work-related stress (WRS) and wellbeing, and the ensuing impact on performance and safety. *Technologies* (8) 40. <https://doi.org/10.3390/technologies8030040>
- Cahill, J., Cullen, P., Anwer, S., Wilson, S., & Gaynor, K. (2021). Pilot work related stress (WRS), effects on wellbeing and mental health, and coping methods. *The International Journal of Aerospace Psychology*, 31(2), 87–109. <https://doi.org/10.1080/24721840.2020.1858714>
- Cahill, J., Cullen, P., & Gaynor, K. (2020). Interventions to support the management of work-related stress (WRS) and wellbeing/mental health issues for commercial pilots. *Cognition, Technology & Work*, 22, 517-547. <https://doi.org/10.1007/s10111-019-00586-z>
- Catak, P. D. (2012). The Turkish version of the cognitive and affective mindfulness scale-revised. *Europe's Journal of Psychology*, 8(4). <https://doi.org/10.5964/ejop.v8i4.436>
- Çatalsakal, S. (2016). How trait mindfulness is related to job performance and job satisfaction: Self-regulation as a potential mediator.

- Çetin, F. (2011). The effects of the organizational psychological capital on the attitudes of commitment and satisfaction: A public sample in Turkey. *European Journal of Social Sciences*, 21, 373–380. <https://doi.org/10.4026/1303-2860.2011.0184.x>
- Chan, H. L., Lo, L. Y., Lin, M., & Thompson, N. (2016). Revalidation of the cognitive and affective mindfulness scale — revised (CAMS-R) with its newly developed Chinese version (Ch-CAMS-R). *Journal of Pacific Rim Psychology*, 10. <https://doi.org/10.1017/PRP.2015.4>
- Christy, F., David, A., Choudhary, N., Kalgi, N., Vibha.V, & Mainthan, M. (2021). Impact of psychological capacities on the work-life balance of entrepreneurs. *Psychology (Savannah, Ga.)*, 58, 3869–3875. <https://doi.org/10.17762/pae.v58i3.4594>
- Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations*, 53(6), 747–770. <https://doi.org/10.1177/0018726700536001>
- Commercial air transport operations regulation (SHY-6A), (2013).
- Cooper, C. L., & Sloan, S. (1985). Occupational and psychosocial stress among commercial aviation pilots. *Journal of Occupational and Environmental Medicine*, 27(8), 570–576. <https://doi.org/10.1097/00043764-198508000-00014>
- Curry, L. A., Snyder, C. R., Cook, D. L., Ruby, B. C., & Rehm, M. (1997). Role of hope in academic and sport achievement. *Journal of Personality and Social Psychology*, 73(6), 1257–1267. <https://doi.org/10.1037/0022-3514.73.6.1257>
- Da, S., He, Y., & Zhang, X. (2020). Effectiveness of psychological capital intervention and its influence on work-related attitudes: Daily online self-learning method and randomized controlled trial design. *International Journal of Environmental Research and Public Health*, 17(23), 8754. <https://doi.org/10.3390/ijerph17238754>
- Dane, E. (2010a). Paying attention to mindfulness and its effects on task performance in the workplace. *Journal of Management*, 37(4), 997–1018. <https://doi.org/10.1177/0149206310367948>

- Dane, E. (2010b). Reconsidering the trade-off between expertise and flexibility: A cognitive entrenchment perspective. *Academy of Management Review*, 35(4), 579–603.
- Davidson, R. J. (2010). Empirical explorations of mindfulness: conceptual and methodological conundrums.
- di Marco, D., López-Cabrera, R., Arenas, A., Giorgi, G., Arcangeli, G., & Mucci, N. (2016). Approaching the discriminatory work environment as stressor: The protective role of job satisfaction on health. *Frontiers in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.01313>
- Havacılık personeli akran destek program talimatı (SHT-PSP). (2021) (testimony of Directorate General of Civil Aviation). <http://web.shgm.gov.tr/documents/sivilhavacilik/files/mevzuat/sektorel/talimatlar/2021/SHT-PSP.PDF>
- Dizaho, E. K., Salleh, R., & Abdullah, A. (2017). Achieving work life balance through flexible work schedules and arrangements. *Global Business and Management Research: An International Journal*, 455.
- Efthymiou, M., Usher, D., O'Connell, J. F., Warnock-Smith, D., & Conyngham, G. (2021). The factors influencing entry level airline pilot retention: An empirical study of Ryanair. *Journal of Air Transport Management*, 91, 101997. <https://doi.org/10.1016/J.JAIRTRAMAN.2020.101997>
- European Commission. (2015). *European aviation: Commission releases task force's report on Germanwings incident*. https://ec.europa.eu/commission/presscorner/detail/en/IP_15_5392
- European Pilot Peer Support Initiative. (2020). *Pilot peer support programmes The EPPSI guide Vol 1: Design and implementation*.
- Easy access rules for air operations, (2021). <https://www.easa.europa.eu/document-library/easy-access-rules/online-publications/easy-access-rules-air-operations?page=36>

- Faragher, E. B., Cass, M., & Cooper, C. L. (2013). The relationship between job satisfaction and health: A meta-analysis. *From Stress to Wellbeing, 1*, 254–271.
- Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J.-P. (2007). Mindfulness and emotion regulation: The development and initial validation of the cognitive and affective mindfulness scale-revised (CAMS-R). *Journal of Psychopathology and Behavioral Assessment, 29*(3), 177–190. <https://doi.org/10.1007/s10862-006-9035-8>
- Feldman, G., Hayes, A., Kumar, S., Greeson, J., Laurenceau, J.-P., Feldman, G., Greeson, J., Hayes, A., Laurenceau, J.-P., Kumar, S., & Greeson, J. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). *J Psychopathol Behav Assess, 29*, 177–190. <https://doi.org/10.1007/s10862-006-9035-8>
- Fidell, L. S., & Tabachnick, B. G. (2003). Preparatory data analysis. In *Handbook of psychology: Research methods in psychology, 2*, 115–141.
- Fikretoglu, D., & McCreary, D. R. (2012). Psychological resilience: A brief review of definitions, and key theoretical, conceptual, and methodological issues.
- Flight Safety Foundation. (2020). *An aviation professional's guide to wellbeing*. <https://flightsafety.org/wp-content/uploads/2020/04/Guide-to-Wellbeing.pdf>
- Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. *The Annals of Family Medicine, 11*(5), 412. <https://doi.org/10.1370/afm.1511>
- Fu, X., Norbäck, D., Lindgren, T., Janson, C., Hu, Q., & Runeson-Broberg, R. (2020). Self-rated health (SRH), recovery from work, fatigue, and insomnia among commercial pilots in relation to occupational and non-occupational factors. <https://doi.org/10.21203/rs.3.rs-74099/v1>
- Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). *Mindfulness at work. In Research in personnel and human resources management*. Emerald Group Publishing Limited.

- Glomb, T. M., Duffy, M. K., Bono, J. E., Yang, T., Hede, A., Bayraktar, A., Oly Ndubisi, N., Andrews, M. C., Michele Kacmar, K., & Kacmar, C. (2015). The role of organizational mindfulness in firms' globalization and global market performance. *Journal of Research in Marketing and Entrepreneurship*, 29, 494–507. [https://doi.org/10.1108/S0742-7301\(2011\)0000030005](https://doi.org/10.1108/S0742-7301(2011)0000030005)
- Goose Recruitment, & Flight Global. (2020). The pilot survey 2020 report. <https://www.goose-recruitment.com/the-pilot-survey-2020-report>
- Gray, H. (2008). Work and depression in economic organizations: the need for action. *Development and Learning in Organizations: An International Journal*, 22(3), 9–11. <https://doi.org/10.1108/14777280810861758>
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work-family balance and quality of life. *Journal of Vocational Behavior*, 63(3), 510–531. [https://doi.org/10.1016/S0001-8791\(02\)00042-8](https://doi.org/10.1016/S0001-8791(02)00042-8)
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *The Academy of Management Review*, 31(1), 72–92. <https://doi.org/10.2307/20159186>
- Hayes, A. F. (2013). *Model Templates for PROCESS for SPSS and SAS*. [Http://Www.Afhayes.Com/](http://Www.Afhayes.Com/).
- Hayman, J. (2005). Psychometric assessment of an instrument designed to measure work life balance. *Research and Practice in Human Resource Management*, 13(1), 85–91.
- Heller, D., Judge, T. A., & Watson, D. (2002). The confounding role of personality and trait affectivity in the relationship between job and life satisfaction. *Journal of Organizational Behavior*, 23(7), 815–835. <http://www.jstor.org/stable/4093635>
- Hernández-Varas, E., Encinas, F. J. L., & Suárez, M. M. (2019). Psychological capital, work satisfaction and health self-perception as predictors of psychological wellbeing in military personnel. *Psicothema*, 31(3), 277–283. <https://0-search.ebscohost.com.opac.bilgi.edu.tr/login.aspx?direct=true&db=psych&AN=2019-71041-008&site=eds-live>

- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing Conservation of Resources Theory. *Applied Psychology*, 50(3), 337–421. <https://doi.org/10.1111/1464-0597.00062>
- Hollnagel, E., Wears, R., & Braithwaite, J. (2015). *From Safety-I to Safety-II: A White paper*. <https://doi.org/10.13140/RG.2.1.4051.5282>
- Hoogendoorn, W. E., Bongers, P. M., de Vet, C. W., Ari ns, G. A. M., & van Mechelen, W. (2002). High physical work load and low job satisfaction increase the risk of sickness absence due to low back pain: Results of a prospective cohort study. *Environ Med: First*. <https://doi.org/10.1136/oem.59.5.323>
- H lsheger, U., Alberts, H., Feinholdt, A., & Lang, J. (2012). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *The Journal of Applied Psychology*, 98. <https://doi.org/10.1037/a0031313>
-    tar I  ıkl , E. (2018). Saėlık y netimi b l m   ėrencilerinde psikolojik sermayenin ya am tatmini ile ili kisi: D zce  niversitesi  rneėi. *Journal of Turkish Studies*, 13(7), 163–174. <https://doi.org/10.7827/TurkishStudies.12934>
- Jensen, M. T. (2014). Exploring business travel with work–family conflict and the emotional exhaustion component of burnout as outcome variables: The job demands–resources perspective. *European Journal of Work and Organizational Psychology*, 23(4), 497–510. <https://doi.org/10.1080/1359432X.2013.787183>
- Johnson, P. R., & Indvik, J. (1997). Blue on blue: depression in the workplace. *Journal of Managerial Psychology*, 12(6), 359–364. <https://doi.org/10.1108/02683949710176106>
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83(1), 17–34. <https://doi.org/10.1037/0021-9010.83.1.17>
- Kaplan, M., & Bi kes, D. M. (2013). The relationship between psychological capital and job satisfaction: A study of hotel businesses in Nev ehir. *Journal of Management & Economics*, 20(2).

- Kennerley, H. (1995). Managing anxiety training manual: A training manual. Oxford University Press. <https://doi.org/10.1093/med:psych/9780192624420.001.0001>
- Keser, A., & Bilir, K. B. Ö. (2019). İş tatmini ölçeğinin Türkçe güvenirlik ve geçerlilik çalışması. *Kırklareli Üniversitesi Sosyal Bilimler Dergisi*, 3(3), 229–239.
- Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2009). Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics. *Academy of Management Journal*, 52(4), 704–730. <https://doi.org/10.5465/AMJ.2009.43669916>
- Kwok, S. Y. C. L., Cheng, L., & Wong, D. F. K. (2015). Family emotional support, positive psychological capital and job satisfaction among Chinese white-collar workers. *Journal of Happiness Studies*, 16(3), 561–582. <https://doi.org/10.1007/s10902-014-9522-7>
- Larson, M., & Luthans, F. (2006). Potential added value of psychological capital in predicting work attitudes. *Journal of Leadership & Organizational Studies*, 13(2), 75–92. <https://doi.org/10.1177/10717919070130020601>
- Levinson, H. (1965). Organizational stress: Studies in role conflict and ambiguity. *Administrative Science Quarterly* 10(1), 125–129. Cornell University Graduate School of Business and Public Administration. <https://doi.org/10.2307/2391654>
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695–706. <https://doi.org/10.1002/job.165>
- Luthans, F., Avey, J., Clapp-Smith, R., & Li, W. (2008). More evidence on the value of Chinese workers' psychological capital. *International Journal of Human Resource Management*, 19, 818–827. <https://doi.org/10.1080/09585190801991194>
- Luthans, F., & Avolio, B. J. (2014). Brief summary of psychological capital and introduction to the special issue. In *Journal of Leadership & Organizational Studies*, 21(2), 125–129. SAGE Publications Sage CA: Los Angeles, CA.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: measurement and relationship positive psychological capital: Measurement and relationship with performance and satisfaction.

- Luthans, F., & Broad, J. D. (2020). Positive psychological capital to help combat the mental health fallout from the pandemic and VUCA environment. *Organizational Dynamics*, 100817. <https://doi.org/10.1016/j.orgdyn.2020.100817>
- Luthans, F., & Peterson, S. J. (2002). Employee engagement and manager self-efficacy. *Journal of Management Development*.
- Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, 33(2), 143–160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2015). *Psychological capital and beyond*. Oxford University Press, USA.
- Malinowski, P., & Lim, H. J. (2015). Mindfulness at work: Positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being. *Mindfulness*, 6(6), 1250–1262. <https://doi.org/10.1007/s12671-015-0388-5>
- Marques, V. C., & Berry, G. R. (2021). Enhancing work-life balance using a resilience framework. *Business and Society Review*, 126(3), 263–281. <https://doi.org/10.1111/basr.12237>
- Mas-Machuca, M., Berbegal-Mirabent, J., & Alegre, I. (2016). Work-life balance and its relationship with organizational pride and job satisfaction. *Journal of Managerial Psychology*.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227.
- Mat Tiya, F. A., & Mohd Yunos, S. N. M. (2021). Job satisfaction and quality of work life as a commercial flight crew – A review. *Progress in Aerospace and Aviation Technology*, 1(1). <https://doi.org/10.30880/paat.2021.01.01.002>
- McNall, L. A., Nicklin, J. M., Masuda, A. D., McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work-family

- enrichment. *Journal of Business and Psychology*, 25(3), 381–396.
<https://doi.org/10.1007/s10869-009-9141-1>
- McNall, L. A., Tombari, J. M., & Brown, M. M. (2021). Exploring how mindfulness links to work outcomes: Positive affectivity and work-life enrichment. *Applied Research in Quality of Life*, 16(1), 167–182. <https://doi.org/10.1007/s11482-019-09762-9>
- Mead, S., Hilton, D., & Curtis, L. (2001). Peer support: A theoretical perspective. *Psychiatric Rehabilitation Journal*, 25(2), 134–141.
- Meland, A., Fonne, V., Wagstaff, A., & Pensgaard, A. M. (2015). Mindfulness-based mental training in a high-performance combat aviation population: A one-year intervention study and two-year follow-up. *The International Journal of Aviation Psychology*, 25(1), 48–61. <https://doi.org/10.1080/10508414.2015.995572>
- Mordukhovich, I., Pruchnicki, S. A., Korkeila, J., Vuorio, A., & Bor, R. (2020). Black swan pandemic and the risk of pilot suicide. *Frontiers in Public Health | Www.Frontiersin.Org*, 8, 573006. <https://doi.org/10.3389/fpubh.2020.573006>
- Morganson, V. J., Rotch, M. A., & Christie, A. R. (2015). Being mindful of work-family issues: Intervention to a modern stressor. *Industrial and Organizational Psychology*, 8(4), 682–689. <https://doi.org/10.1017/IOP.2015.100>
- Nafei, W. (2015). The effects of psychological capital on employee attitudes and employee performance: A study on teaching hospitals in Egypt. *International Journal of Business and Management*, 10(3), 249–270.
- Commission regulation (EU) 2018/1042 of 23 July 2018 amending regulation (EU) no 965/2012, (2018). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32018R1042&from=EN>
- O'Hagan, A. D., Issartel, J., Nevill, A., & Warrington, G. (2016). Flying into depression: Pilot's sleep and fatigue experiences can explain differences in perceived depression and anxiety associated with duty hours. *Workplace Health & Safety*, 65(3), 109–117. <https://doi.org/10.1177/2165079916659506>

- Orkibi, H., & Brandt, Y. I. (2015). How Positivity Links with Job Satisfaction: Preliminary Findings on the Mediating Role of Work-Life Balance. *Europe's Journal of Psychology*, 11(3), 406–418. <https://doi.org/10.5964/ejop.v11i3.869>
- Oruç, E. (2018). Psikolojik sermaye ölçeği kısa formunun Türkçe uyarlaması: Geçerlik ve güvenirlik çalışması. *Journal of Turkish Studies*, 13(14), 141–151. <https://doi.org/10.7827/TurkishStudies.13618>
- Örücü, E., Yumuşak, S., & Bozkır, Y. (2006). Bankalarda çalışan personelin iş tatmini ve iş tatminini etkileyen faktörlerin incelenmesine yönelik bir araştırma. *Yönetim ve Ekonomi Dergisi*, 13(1), 39–51. <https://dergipark.org.tr/tr/pub/yonveek/issue/13684/165591>
- Pasha, T., & Stokes, P. R. A. (2018). Reflecting on the Germanwings disaster: A systematic review of depression and suicide in commercial airline pilots. *Frontiers in Psychiatry*, 9(86). <https://doi.org/10.3389/fpsy.2018.00086>
- Patterson, M., & Deutsch, E. S. (2015). Safety-I, Safety-II and resilience engineering. *Current Problems in Pediatric and Adolescent Health Care*, 45(12), 382–389. <https://doi.org/10.1016/J.CPPEDS.2015.10.001>
- Provan, D. J., Woods, D. D., Dekker, S. W. A., & Rae, A. J. (2020). Safety II professionals: How resilience engineering can transform safety practice. *Reliability Engineering & System Safety*, 195, 106740. <https://doi.org/https://doi.org/10.1016/j.ress.2019.106740>
- Rain, J. S., Lane, I. M., & Steiner, D. D. (1991). A current look at the job satisfaction/life satisfaction relationship: Review and future considerations. *Human Relations*, 44(3), 287–307. <https://doi.org/10.1177/001872679104400305>
- Rathi, N., & Rastogi, R. (2008). Job satisfaction and psychological well-being. *The Icfa University Journal of Organizational Behavior*, 7(4), 47–57.
- Raza, B., Ali, M., Naseem, K., Moeed, A., Ahmed, J., & Hamid, M. (2018). Impact of trait mindfulness on job satisfaction and turnover intentions: Mediating role of work–family balance and moderating role of work–family conflict.

Http://Www.Editorialmanager.Com/Cogentbusiness, 5(1), 1–20.
<https://doi.org/10.1080/23311975.2018.1542943>

Raza, B., Ali, M., Naseem, K., Moeed, A., Ahmed, J., Hamid, M., & Aparicio, S. (2017). Impact of trait mindfulness on job satisfaction and turnover intentions: Mediating role of work-family balance and moderating role of work-family conflict. *Cogent Business & Management*, 10, 1542943. <https://doi.org/10.1080/23311975.2018.1542943>

Robbins, S. P., & Judge, T. (2012). *Essentials of organizational behavior*.

Roche, M., Haar, J. M., & Luthans, F. (2014a). *The Role of Mindfulness and Psychological Capital on the Well-Being of Leaders*. <https://doi.org/10.1037/a0037183>

Roche, M., Haar, J. M., & Luthans, F. (2014b). The role of mindfulness and psychological capital on the well-being of leaders. *Journal of Occupational Health Psychology*, 19(4), 476–489. <https://doi.org/10.1037/a0037183>

Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C., & Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, 105(3), 787–804. <https://doi.org/10.1037/A0032093>

Runeson-Broberg, R., Lindgren, T., & Norbäck, D. (2014). Musculoskeletal symptoms and psychosocial work environment, among Swedish commercial pilots. *International Archives of Occupational and Environmental Health*, 87(7), 685–693. <https://doi.org/10.1007/s00420-013-0911-8>

Salam, M. A. (2017). Effects of psychological capital on job satisfaction and turnover intention: Thai higher education perspective. *Journal of Asia Pacific Studies*, 4(3).

Satuf, C., Monteiro, S., Pereira, H., Esgalhado, G., Marina Afonso, R., & Loureiro, M. (2018). The protective effect of job satisfaction in health, happiness, well-being and self-esteem. *International Journal of Occupational Safety and Ergonomics*, 24(2), 181–189. <https://doi.org/10.1080/10803548.2016.1216365>

- Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology. An introduction. *The American Psychologist*, 55(1), 5–14. <https://doi.org/10.1037/0003-066X.55.1.5>
- Sen, C., & Hooja, H. R. (2015). Psychological capital and work-life balance: A study on police officers. *Explore International Research Journal Consortium*, 4(7). <https://ssrn.com/abstract=2946662>
- Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology*, 62(3), 373–386.
- SHT-FTL instruction on limitations for flight and duty time and rest requirements, (2018).
- Siegel, R. D., Germer, C. K., & Olendzki, A. (2009). Mindfulness: What is it? Where did it come from? In *Clinical handbook of mindfulness* (pp. 17–35). Springer.
- Singla, R. (2011). Origins of mindfulness & meditation interplay of Eastern & Western psychology. *Psyke & Logos*, 32(1), 20.
- Sirgy, M. J., & Lee, D.-J. (2018). Work-life balance: An integrative review. *Applied Research in Quality of Life*, 13(1), 229–254. <https://doi.org/10.1007/s11482-017-9509-8>
- Siu, O. L. (2013). Psychological capital, work well-being, and work-life balance among Chinese employees. *Journal of Personnel Psychology*, 12(4), 170–181. <https://doi.org/10.1027/1866-5888/a000092>
- Smallwood, J., & Schooler, J. W. (2006). The restless mind. *Psychological Bulletin*, 132(6), 946.
- Snyder, C. R. (2000). The past and possible futures of hope. *Journal of Social and Clinical Psychology*, 19(1), 11–28. <https://doi.org/10.1521/jscp.2000.19.1.11>
- Spector, P. E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39(11), 1005–1016. <https://doi.org/10.1177/001872678603901104>

- Stajkovic, A. D., & Luthans, F. (1998). *Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioral approaches*.
- Stewart, M., Reid, G., & Mangham, C. (1997). Fostering children's resilience. *Journal of Pediatric Nursing*, 12(1), 21–31.
- Unanue, W., Gómez, M. E., Cortez, D., Oyanedel, J. C., & Mendiburo-Seguel, A. (2017). Revisiting the link between job satisfaction and life satisfaction: The role of basic psychological needs. *Frontiers in Psychology*, 8, 680. <https://doi.org/10.3389/FPSYG.2017.00680/BIBTEX>
- Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and well-being: building bridges between Buddhism and Western psychology. *American Psychologist*, 61(7), 690.
- Wongtongkam, N., Krivokapic-Skoko, B., Duncan, R., & Bellio, M. (2017). The influence of a mindfulness-based intervention on job satisfaction and work-related stress and anxiety. *International Journal of Mental Health Promotion*, 19(3), 134–143. <https://doi.org/10.1080/14623730.2017.1316760>
- Yürür, Ş. (2011). Öğrenilmiş güçlülük, kıdem ve medeni durumun duygusal tükenmedeki rolü: Kaynakların korunması teorisi kapsamında bir analiz. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 25(1), 107–126. <https://dergipark.org.tr/tr/pub/atauniiibd/issue/2697/35630>
- Zivnuska, S., Kacmar, K. M., Ferguson, M., & Carlson, D. S. (2016). Mindfulness at work: resource accumulation, well-being, and attitudes Article information. *Career Development International*, 21(2). <https://doi.org/10.1108/CDI-06-2015-0086>

Appendixes

Appendix A1 – Informed Consent (Turkish)

BİLGİLENDİRİLMİŞ VE GÖNÜLLÜ ONAM FORMU

Değerli Katılımcı,

Bu araştırma İstanbul Bilgi Üniversitesi Sosyal Bilimler Enstitüsü Örgütsel Psikoloji Yüksek Lisans Programı tez çalışması kapsamında Dr. Öğr. Üyesi Elif Yurdakul danışmanlığında Gizem Kara Arseven tarafından yürütülmekte olan “Pilotlarda Psikolojik Sermaye ve İş Tatmininin İncelenmesi” konulu çalışmaya veri toplamak amacıyla gerçekleştirilmektedir.

Soruları dikkatli okuyarak objektif, samimi, gerçek duygu ve düşüncelerinizi yansıtmamız araştırmanın amacına ulaşması için önemlidir. Vereceğiniz tüm bilgiler gizli tutulacak, hiçbir kişi ve/veya kuruluş ile paylaşılmayacaktır. Anketten elde edilen veriler bir havuzda toplanacak ve kişi özelinde değerlendirilmeyecektir.

Katılımınız tamamen gönüllülük esasına bağlıdır. Araştırmaya katılmayı kabul etmeniz halinde aşağıda yer alan ‘Çalışmanın amacını ve içeriğini belirten yukarıdaki bildiriye okudum, anladım ve araştırmaya katılmayı kabul ediyorum.’ seçeneğini işaretleyerek soruları yanıtlamaya başlayabilirsiniz.

Çalışma hakkında daha fazla bilgi edinmek isterseniz aşağıdaki adresler üzerinden iletişime geçebilirsiniz. Ayıracağınız zaman ve göstereceğiniz özenden dolayı şimdiden teşekkür ederim.

Gizem KARA ARSEVEN

e-posta: gizem.kara04@bilgiedu.net

Dr. Öğr. Üyesi Elif YURDAKUL

e-posta: elif.yurdakul@bilgi.edu.tr

Appendix A2 – Informed Consent (English)

INFORMED CONSENT FORM

Dear participant,

This study will be carried out by Istanbul Bilgi University Institute of Social Sciences Organizational Psychology graduate student Gizem Kara Arseven within the scope of thesis study on “Examination of Psychological Capital and Job Satisfaction of Pilots”, under the supervision of Lecturer Elif Yurdakul, PhD.

Reading the questions carefully, reflecting your objective, sincere, true feelings and thoughts are important for the purpose of the research. All information you provide will be kept confidential and will not be shared with anyone and/or any organization. The data obtained from the survey will be collected in a pool and will not be evaluated in person.

If you accept participating in the research, you can answer the questions after selecting the “I have read, understood the form stating the purpose and content of the study above and agree to participate in the research.” statement.

If you would like to acquire more information about the study, you can contact through the addresses below. Thank you in advance for your time and attention.

Gizem KARA ARSEVEN

e-mail: gizem.kara04@bilgiedu.net

Elif YURDAKUL, PhD

e-mail: elif.yurdakul@bilgi.edu.tr

Appendix B1 - Demographic Form (Turkish)

1. **Cinsiyetiniz** (1) Erkek (2) Kadın (3) Diğer
2. **Yaşınız** (1) 25 altı (2) 25-31 (3) 32-38 (4) 39-45 (5): 46 ve üzeri
3. **Medeni Durumunuz** (1) Bekar (2) Evli
4. **Mevcut Göreviniz:** (1) Kaptan Pilot (2) İkinci pilot
5. **Uçuş göreviniz dışında kurumunuzda herhangi bir ek göreviniz mevcut mu?**
(Öğretmenlik, ofis görevi vb.) Var () Yok ()
6. **Varsa görevinizi belirtiniz:**
(1) Öğretmenlik
(2) Ofis Görevi
(3) Diğer: _____
7. **Kaç yıldır bir havayolu şirketinde pilot olarak görev alıyorsunuz?**
8. **Mevcut filonuz:** _____
9. **Toplam uçuş saatiniz:** _____
10. **Pilotaj eğitimi aldığınız kurumu belirtiniz (Hava kuvvetleri, özel uçuş okulu vb.):** _____

Appendix B2 - Demographic Form (English)

- 1. Gender** (1) Male (2) Female (3) Other
- 2. Age** (1) below 25 (2) 25-31 (3) 32-38 (4) 39-45 (5): 46 and above
- 3. Marital Status** (1) Single (2) Married
- 4. Status:** (1): Captain (2): First Officer
- 5. Do you currently have another duty in your company in addition to your flight duty?**
(Instructor, office duty, etc.) Yes () No ()
- 6. If yes, please specify:**
 - (1) Instructor
 - (2) Office duty
 - (3) Other: _____
- 7. How many years have you been working as a pilot in an airline?**
- 8. Current fleet:** _____
- 9. Total flight hours:** _____
- 10. Please specify the institution where you received initial flight training (Air force, private flight academies, etc.):** _____

Appendix C1 - Psychological Capital Short Form (Turkish)

Psikolojik Sermaye Kısa Formu						
Sayın katılımcı, Lütfen aşağıdaki soruları mesleğinizin tüm alanlarını (uçuş görevi, eğitim, uygulamalı-teorik değerlendirmeler, varsa ek görev vb.) göz önünde bulundurarak yanıtlayınız.	Kesinlikle Katılmıyorum					Kesinlikle Katılıyorum
1. İş ortamında kendi uzmanlık alanımla ilgili konuşurken kendime güvenirim.	1	2	3	4	5	6
2. Çalıştığım havayolunun stratejilerinin belirlenmesi sürecine katkı sağlamada kendime güvenirim.	1	2	3	4	5	6
3. İş arkadaşlarıma bir konu hakkında bilgi verirken kendime güvenirim.	1	2	3	4	5	6
4. İşimle ilgili bir problemle karşılaştığımda üstesinden gelmek için birçok yol bulabilirim.	1	2	3	4	5	6
5. Şu anda kendimi işimde oldukça başarılı görüyorum.	1	2	3	4	5	6
6. İşimle ilgili hedeflerime ulaşmada birçok yol bulabilirim.	1	2	3	4	5	6
7. Son zamanlarda kendim için belirlediğim iş hedeflerine ulaşıyorum.	1	2	3	4	5	6
8. İşimle ilgili konularda mecbur kaldığım durumlarda kendi kendime yetebilirim.	1	2	3	4	5	6
9. İşimi yaparken karşılaştığım stresli durumların üstünde durmam.	1	2	3	4	5	6
10. Daha önce birçok zorlukla karşılaştığım için işimle ilgili zorlukların üstesinden gelebilirim.	1	2	3	4	5	6
11. Yaptığım işle ilgili şeylerin hep iyi tarafından bakmaya çalışırım.	1	2	3	4	5	6
12. Yaptığım işle alakalı gelecekte karşılaşacağım durumlarla ilgili iyimser düşünürüm.	1	2	3	4	5	6

Appendix C2 - Psychological Capital Short Form (English)

Psychological Capital Short Form						
Esteemed participant, Please consider all aspects of your occupation (flight duty, training, practical-theoretical evaluations, and extra duty if applicable) while responding following questions.	Strongly Disagree					Strongly Agree
1. I'm confident when I talk about my own area of expertise in the company.	1	2	3	4	5	6
2. I am confident in contributing to the process of determining the strategies of the airline, where I work.	1	2	3	4	5	6
3. I trust myself when I tell my colleagues about something.	1	2	3	4	5	6
4. When I encounter a problem at work, I can find many ways to overcome it.	1	2	3	4	5	6
5. I think I'm pretty good at work right now.	1	2	3	4	5	6
6. I can find many ways to achieve my goals in my work.	1	2	3	4	5	6
7. I've been achieving the work-related goals I've set for myself lately.	1	2	3	4	5	6
8. I can be self-sufficient in situations where I have to in matters related to my job.	1	2	3	4	5	6
9. I don't dwell on stressful situations I face at work.	1	2	3	4	5	6
10. Since I have faced many challenges before, I can overcome difficulties in the workplace.	1	2	3	4	5	6
11. I always try to look on the bright side of what I do.	1	2	3	4	5	6
12. I'm optimistic about what I'm going to face in the future.	1	2	3	4	5	6

Appendix D1 - Work-Life Balance Scale (Turkish)

Sayın katılımcı, Lütfen aşağıdaki soruları mesleğinizin tüm alanlarını (uçuş görevi, eğitim, uygulamalı-teorik değerlendirmelere hazırlık, varsa ek görev vb.) göz önünde bulundurarak yanıtlayınız.	İş-Yaşam Dengesi Ölçeği					
	Hiç Katılmıyorum					Tamamen Katılıyorum
1. Gün içinde basit şeyler için bile zaman bulamıyorum.	1	2	3	4	5	6
2. Kendimi sadece çalışmayı bilen, yaşamın geri kalan kısmını yaşamayan biri olarak görüyorum.	1	2	3	4	5	6
3. Çalışmadığım günlerimi sosyal çevremle birlikte bir şeyler yaparak geçiriyorum.	1	2	3	4	5	6
4. Yaşamı geriden izlediğimi düşünüyorum.	1	2	3	4	5	6
5. Çok fazla işi aynı anda yapmaya çalıştığım için uyku, düzenli beslenme ve hareket etme gibi temel yaşamsal etkinliklerden fedakârlık ediyorum.	1	2	3	4	5	6
6. Yaşamımı iyi planlayarak her işimi yapabiliyorum.	1	2	3	4	5	6
7. İş yaşamımda önceliklerimin neler olduğuna karar veriyor ve bu doğrultuda hareket ediyorum.	1	2	3	4	5	6
8. İşim ve kişisel yaşamım arasında bir denge kurabiliyorum.	1	2	3	4	5	6
9. İş yükümü oldukça iyi yönettiğime inanıyorum.	1	2	3	4	5	6
10. Çalışma programımın yoğunluğuna yetişemiyorum.	1	2	3	4	5	6
11. Yaşamımın ideal yaşam biçimini yansıttığını düşünsem de, bir şeyleri kaçırdığım düşüncesiyle yaşıyorum.	1	2	3	4	5	6
12. Sıradan bir gün içinde, zamanımı ve enerjimi hangi işlere vereceğim konusunda sağlıklı kararlar veriyorum.	1	2	3	4	5	6

13. “Beni mutlu edecek işlerle uğraşsaydım, belki daha mutlu olurdum” diye düşünüyorum.	1	2	3	4	5	6
14. İşle ilgili görevlerim zamanımın büyük bir kısmını kapsıyor.	1	2	3	4	5	6
15. Boş günlerimde de işimle ilgili uğraşlarla meşgul oluyorum.	1	2	3	4	5	6
16. İşime harcadığım zamandan dolayı iş dışındaki etkinlikleri özlüyorum.	1	2	3	4	5	6
17. İşimde ve özel yaşamımda hoşlandığım etkinlikleri yapıyorum.	1	2	3	4	5	6
18. İşimden kaynaklanan gerginlikler özel yaşamımı olumsuz yönde etkiliyor.	1	2	3	4	5	6
19. Hem iş hem özel yaşamıma zamanımı uygun biçimde dağıttığımı düşünüyorum.	1	2	3	4	5	6
20. Özel yaşamımdan ödün vermediğim için işimde zorluk yaşıyorum.	1	2	3	4	5	6

Appendix D2 - Work-Life Balance Scale (English)

	Work-Life Balance Scale					
Esteemed participant, Please consider all aspects of your occupation (flight duty, training, preparation for practical-theoretical evaluations, and extra duty if applicable) while responding following questions.	Strongly Disagree					Strongly Agree
1. I don't even have time for simple things during the day.	1	2	3	4	5	6
2. I see myself as someone who only knows how to work, who doesn't live the rest of life.	1	2	3	4	5	6
3. I spend my non-working days doing things with my loved ones.	1	2	3	4	5	6
4. I think I'm watching life from behind.	1	2	3	4	5	6
5. Because I try to do a lot of work at the same time, I sacrifice basic vital activities such as sleep, regular eating and movement.	1	2	3	4	5	6
6. I can do anything by planning my life well.	1	2	3	4	5	6
7. I decide what my priorities are in my work life and I act accordingly.	1	2	3	4	5	6
8. I can strike a balance between my work and my personal life.	1	2	3	4	5	6
9. I believe I manage my workload very well.	1	2	3	4	5	6
10. I cannot keep up with the intensity of my work schedule.	1	2	3	4	5	6
11. Although I think my life reflects the ideal lifestyle, I live with the thought that I am missing something.	1	2	3	4	5	6
12. In an ordinary day, I make unhealthy decisions about what jobs to put my time and energy into.	1	2	3	4	5	6

13. "If I had to do things that would make me happy, maybe I would be happier" I think.	1	2	3	4	5	6
14. My work-related duties take up most of my time	1	2	3	4	5	6
15. I keep busy with my job-related endeavors on my off days.	1	2	3	4	5	6
16. Because of the time I spend on my job, I miss activities outside of work.	1	2	3	4	5	6
17. I do activities that I enjoy in my work and private life.	1	2	3	4	5	6
18. Tensions arising from my job affect my private life negatively.	1	2	3	4	5	6
19. I think I allocate my time appropriately both in my work and private life.	1	2	3	4	5	6
20. I am having difficulties in my job because I do not compromise my private life.	1	2	3	4	5	6

Appendix E1 - Job Satisfaction Scale (Turkish)

	İş Tatmini Ölçeği					
Sayın Katılımcı, Aşağıdaki soruları yanıtlarken, lütfen mesleğinizi tüm yönleriyle değerlendiriniz.	Kesinlikle Katılmıyorum					Kesinlikle Katılıyorum
1. Şu anki işimden oldukça memnunum.	1	2	3	4	5	6
2. Çoğu günler görevime hevesle giderim.	1	2	3	4	5	6
3. İşimi yaparken gün bitmeyecekmiş gibi gelir.	1	2	3	4	5	6
4. İşimi eğlenceli bulurum.	1	2	3	4	5	6
5. İşimin tatsız olduğunu düşünürüm.	1	2	3	4	5	6

Appendix E2 - Job Satisfaction Scale (English)

	Job Satisfaction Scale					
Esteemed participant, Please evaluate all aspects of your occupation while responding following questions.	Strongly Disagree					Strongly Agree
1. I am quite satisfied with my current job.	1	2	3	4	5	6
2. Most days I go to my duty eagerly.	1	2	3	4	5	6
3. When I'm doing my job, it feels like the day is not going to end.	1	2	3	4	5	6
4. I find my job fun.	1	2	3	4	5	6
5. I think my job is unpleasant.	1	2	3	4	5	6

Appendix F1 - The Cognitive and Affective Mindfulness Scale-Revised (Turkish)

Bilişsel ve Duygusal Bilinçli Farkındalık Ölçeği						
	Kesinlikle Katılmıyorum					Kesinlikle Katılıyorum
1. Yaptığım şeye odaklanmak benim için kolaydır.	1	2	3	4	5	6
2. Duygusal acıya tahammül edebilirim.	1	2	3	4	5	6
3. Değiştiremediğim şeyleri kabullenebiliyorum.	1	2	3	4	5	6
4. O anda nasıl hissettiğimi genelde oldukça detaylı olarak tarif edebilirim.	1	2	3	4	5	6
5. Dikkatim kolaylıkla dağılır.	1	2	3	4	5	6
6. Düşüncelerimi ve duygularımı takip etmek benim için kolaydır.	1	2	3	4	5	6
7. Düşüncelerimi yargılamadan onların farkına varmaya çalışırım.	1	2	3	4	5	6
8. Sahip olduğum düşünce ve duyguları kabullenebiliyorum.	1	2	3	4	5	6
9. Şimdiki ana odaklanabilirim.	1	2	3	4	5	6
10. Uzun süre boyunca dikkatimi tek bir şeye verebilirim.	1	2	3	4	5	6

Appendix F2 - The Cognitive and Affective Mindfulness Scale-Revised (English)

Cognitive and Affective Mindfulness Scale						
	Strongly Disagree					Strongly Agree
1. It is easy for me to concentrate on what I am	1	2	3	4	5	6
2. I can tolerate emotional pain.	1	2	3	4	5	6
3. I can accept things I cannot change.	1	2	3	4	5	6
4. I can usually describe how I feel at the moment in considerable detail.	1	2	3	4	5	6
5. I am easily distracted.	1	2	3	4	5	6
6. It's easy for me to keep track of my thoughts and feelings.	1	2	3	4	5	6
7. I try to notice my thoughts without judging them.	1	2	3	4	5	6
8. I am able to accept the thoughts and feelings I have.	1	2	3	4	5	6
9. I am able to focus on the present moment.	1	2	3	4	5	6
10. I am able to pay close attention to one thing for a long period of time	1	2	3	4	5	6

Appendix G - Ethics Committee Approval Form

Ethics Board Approval is available in the printed version of this dissertation.

