



**IDENTIFYING THE OBSTACLES FACED BY SOFTWARE  
PROFESSIONALS AND INVESTIGATING THE FACTORS AFFECTING  
THEIR JOB ENGAGEMENT**

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## **ABSTRACT**

# **IDENTIFYING THE OBSTACLES FACED BY SOFTWARE PROFESSIONALS AND INVESTIGATING THE FACTORS AFFECTING THEIR JOB ENGAGEMENT**

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Last years, the increases in employee turnover in software area brings new concerns to software professionals. This situation might be associated with engagement. The level of engagement affects the motivation of working of employees.

This motivation affects productivity and quality. Therefore, engagement is an important concept in order to investigate the binding to a job. Software professionals encounter some problems in their working life frequently, and these problems affect their productivity. Investigating these problems and their effects on software professionals is an important issue for both organizations' and employees' in terms of improve the productivity. This study aims that investigate obstacles faced by software professionals and their relationships between job engagement.

The study consists of two stages: Interview and Questionnaire. First of all, interviews were performed with 20 software professionals, and a questionnaire was applied to 314 software professionals. After that, the relationships between job engagement, job insecurity, career insecurity, coping styles and obstacles were analyzed.

**Keywords:** Job engagement, obstacles, software, insecurity, survey

## ÖZET

# YAZILIM PROFESYONELLERİNİN KARŞILAŞTIĞI ENGELLERİN BELİRLENMESİ VE İŞE BAĞLILIKLARINI ETKİLEYEN FAKTÖRLERİN ARAŞTIRILMASI

**KAYA GÜLTEN, ARZU**

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Son yıllarda yazılım alanında çalışan devir oranındaki artışlar yazılım profesyonelleri için yeni endişeler doğurmaktadır. Bu durum bağlılıkla ilişkilendirilebilir. Bağlılık düzeyi çalışanların çalışma motivasyonunu etkiler. Bu motivasyon ise üretkenliği ve kaliteyi etkiler. Bu nedenle bağlılık, bir işe olan bağlanmayı araştırmak için önemli bir kavramdır. Yazılım profesyonelleri çalışma hayatlarında sıklıkla bazı sorunlarla karşılaşır ve bu sorunlar üretkenliklerini etkiler. Bu sorunları ve yazılım profesyonelleri üzerindeki etkilerini araştırmak, üretkenliği artırmak açısından hem kuruluşlar hem de çalışanlar için önemli bir konudur. Bu çalışma, yazılım profesyonellerinin karşılaştığı engelleri ve iş bağlılığı arasındaki ilişkileri araştırmayı amaçlamaktadır.

Çalışma iki aşamadan oluşmaktadır: Mülakat ve Anket. Öncelikle 20 yazılım profesyoneliyle görüşmeler yapılmış ve 314 yazılım profesyoneline anket uygulanmıştır. Daha sonra iş bağlılığı, iş güvencesizliği, kariyer güvencesizliği, başa çıkma stilleri ve engeller arasındaki ilişkiler analiz edilmiştir.

**Anahtar Kelimeler:** İşe bağlılık, engeller, yazılım, güvencesizlik, anket

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## **CHAPTER I**

### **INTRODUCTION**

In the software world, employee turnover is a issue of frequent discussion. The level of engagement individuals have with a workplace, and their acceptance of it, has a significant impact on their motivation at work. This motivation, in turn, affects job productivity and quality. Therefore, using engagement as a means to connect with a job is crucial. Software development is inherently challenging, and the problems that software professionals encounter during the development process impact both the quality and efficiency of projects and tasks. Thus, examining how challenges affect individuals' engagement with their jobs is crucial for the long-term productivity and effectiveness of companies. This study explores the resources influencing the challenges encountered by software professionals and investigates their impact on job engagement. Before presenting the findings of this research, it is essential to provide contextual explanations of terms such as job engagement, job insecurity, career insecurity, and daily hassles. These factors have become increasingly pivotal for employees in contemporary work environments.

Job engagement is defined in many different ways. According to Schaufeli and Bakker, job engagement is defined as "a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al. 2006: 702). Job engagement is important for employees because a worker's productivity and care for their work are directly proportional to their engagement. If an employee is engaged, they strive to do their job to the best of their ability and make every effort to uphold the values of the company they work for. They understand that by contributing positively to the company, they contribute to its growth, which in turn adds value to themselves. As a result, the employee continues to work happily and satisfied as Saks said that "...However, one reason that perceived organizational support might lead to positive outcomes is through employee engagement. In other words, employees' who have higher perceived organizational support might become more engaged to their job

and organization as part of the reciprocity norm of social exchange theory in order to help the organization reach its objectives” (Rhoades et al. 2001).

Job insecurity is a situation that employees who fear losing their jobs may frequently encounter. Although job insecurity has been defined in various ways, De Witte has consolidated these different definitions under a single framework by defining job insecurity as the perception of the threat of job loss and the concerns related to this threat (De Witte 2005: 1). Job insecurity is caused by the employee's lack of a clear idea about the continuity of their job. It is the responsibility of the institutions to ensure that the employee feels secure in their job and to guarantee that they will not lose it. This is important for the success and sustainability of the institutions, as employees feeling secure about their jobs contributes to these goals.

According to Frare and Beuren, job insecurity has a negative impact on job engagement. In other words, to promote high levels of job engagement within an organization, the factor of job insecurity needs to be eliminated (Frare and Beuren 2020: 402). For an employee experiencing insecurity due to the uncertainty of their job's outcome, factors such as stress and anxiety hinder their ability to fully dedicate themselves to their work (Wang et al. 2015: 3).

Recently, with the revival of the software industry, the turnover rate has also increased. Among the reasons for changing jobs, a frequent cause is the lack of engagement with the job or the organization. High turnover in a workplace can lead to other employees experiencing job insecurity. Therefore, job engagement and job insecurity in the software industry will be examined together.

In recent years, the software industry has been experiencing rapid change and development. The policies adopted by companies to keep pace with this change and development affect employees' job engagement and job insecurity. For instance, outdated technology in a company may limit employees' desire to work with current technologies, thereby reducing their engagement with their current jobs since they cannot practice on the latest innovations in the industry.

The influence of social media has also led employees to exchange information with each other, increasing awareness about different work environments. For example, following companies on LinkedIn that value and satisfy their employees could remind software practitioners to reassess their current jobs. Additionally, the Covid-19 pandemic, which entered our lives about five years ago, forced companies to change their working methods, leading employees to acquire new habits. Many

software companies transitioned to long-term remote work, which brought several changes to employees' routines. Some of these changes affected thoughts and feelings of job insecurity. For example, according to Tokdemir, the stress of workload during remote work negatively impacted job engagement (Tokdemir 2022: 4).

In recent years, the increase in the diversity of job roles in the software industry has led to a growth in job opportunities. This increase in job opportunities enables employees to easily switch jobs if they are dissatisfied with their current position. Additionally, the changing values in the software sector due to the COVID-19 pandemic have altered employees' expectations from their jobs and employers, becoming a decisive factor in job resignations. These circumstances have made employees more conscious in expressing their expectations from their jobs and employers.

The Millennial Generation has an increasing impact on the job market as they are in the early to mid stages of their careers (Walden et al. 2017: 74). Recently, software industry employees have shown a preference for working in environments where they feel valued and appreciated for their work. If their expectations are not met, they quickly demonstrate the courage to change jobs. These experiences among employees bring to mind the concepts of job insecurity and job engagement. Therefore, it is necessary to identify the challenges faced by the professionals working in the software industry, understand how they cope with these challenges, and examine the relationship between these factors and job engagement and job insecurity.

This thesis aims to identify the factors effecting job engagement of software professionals. In this regard, obstacles faced by employees of the software sector during working hours were investigated and the relationship of job engagement with these obstacles and concepts such as job insecurity, coping strategies, and career uncertainty were examined. For this study, a survey consisting of seven sections was conducted, including demographic questions, questions related to the work environment, job engagement scale, coping strategies, job insecurity, career insecurity, and a section on Challenges Encountered During Work Hours and Work-Related Issues. Following the survey administration, correlations between these parameters were analyzed. In this study the answers of the following research questions are explored:

1. What are the obstacles faced by software professionals?
2. What are the factors affecting job engagement?

3. Do gender, marital status, coping style, generation category, years of experience, position, job insecurity and career insecurity affect job engagement of software professionals?

In the continuation of the thesis, the concepts of job engagement, job insecurity, career insecurity, and daily hassles will be explained in detail, and information about some past studies related to these topics will be provided. Following this, the methodology of the study will be thoroughly described, and finally, the results will be presented and conclusion will be drawn.



## **CHAPTER II**

### **BACKGROUND AND RELATED WORKS**

#### **2.1 JOB ENGAGEMENT**

In recent years, employee engagement has become a more important concept than before for companies providing services in various fields, because some studies show that employees' commitment to a job can be negatively affected very quickly. Job engagement is defined by Schaufeli and Bakker as a positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli and Bakker 2004: 295). Vigor refers to having high levels of energy and mental resilience while working, being willing to invest effort in one's work, and showing persistence in the face of difficulties. Dedication is associated with a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is described as being fully concentrated and happily engrossed in one's work, experiencing time passing quickly, and finding it difficult to detach from work (Schaufeli and Bakker 2004: 295).

##### **2.1.1 Dimensions of Job Engagement**

According to the findings of Ruck and Welch's study, employee engagement is related to six parameters (Ruck and Welch 2012: 301). These are strategy and goals, support, identification, role, performance, and voice. To explain what these definitions mean: strategy and goals involve the employee being informed about the company's direction and their own future, voice means that the employee knows they have a say and that their input is taken seriously, performance indicates that the employee knows what their job entails and has opportunities for development, support signifies that employees feel supported by their employer, identification represents the employee's advocacy for the company's values, and role denotes that the employee is aware of their responsibilities and understands how these contribute to the company (Ruck and Welch 2012: 300)

### **2.1.2 Related Works with Job Engagement**

Since the early 2000s, extensive research has been conducted on job engagement across various fields. Some of these areas include the software industry, information technology (IT) sector, organizational behavior and psychology, the healthcare sector, the education sector, and the manufacturing and production sector. Some examples of studies in these fields include Schaufeli's research in psychology (Schaufeli et al. 2002), Koyuncu's study in the banking sector (Koyuncu et al. 2006), and Tokdemir's work in the software industry (Tokdemir 2022).

In the field of psychology, Schaufeli et al. conducted a study aiming to confirm the inverse relationship between burnout and engagement (Schaufeli et al. 2002: 71). In this study, surveys were administered to a group of 314 students from various classes at the University of Castellón and 619 employees from various sectors. The Maslach Burnout Inventory-General Survey was used to measure burnout, while a scale developed by the researchers was used to measure engagement. The results of the study confirmed that there is an inverse relationship between engagement and burnout (Schaufeli et al. 2002: 84).

Koyuncu conducted a study examining the factors affecting job engagement and its outcomes among women in managerial and employee positions at a major Turkish bank. In this study, a survey was sent to 400 randomly selected female bank managers and employees, with 286 responses received. The survey included demographic questions to gather personal information, a scale developed by Schaufeli and Bakker to measure job engagement, and a scale by Maslach and Leiter to assess organizational life experiences. Job outcomes were measured using a scale developed by Kofodimos (Kofodimos 1993), psychological well-being was assessed using a scale by Quinn and Shepard (Quinn and Shepard 1974), emotional exhaustion was measured using the Maslach Burnout Inventory (Maslach et al. 1996), and physical and emotional well-being were measured using a scale developed by (Kofodimos 1993). The results of the study indicated that positive job and individual well-being outcomes were associated with job engagement and that organizational experience contributed to job engagement. Additionally, this study is viewed as complementary to other studies focusing on career barriers (Koyuncu et al. 2006: 307).

In the study examining the factors affecting mental well-being and job engagement of software professionals working from home during the COVID-19 pandemic, Tokdemir surveyed 321 volunteer software industry employees. The survey

included scales to measure sleep quality, job strain and decision latitude, work-life balance, exercise, mental well-being, and job engagement. The results of the study revealed a positive relationship between the mental well-being of software professionals and their job engagement (Tokdemir 2022: 3).

### **2.1.3 Measures for Job Engagement**

There are various scales that can be adapted to measure job engagement based on specific needs. One such scale is the Utrecht Work Engagement Scale, developed by Schaufeli et al. (Schaufeli et al. 2002). This scale includes items that evaluate the three parameters of job engagement as defined by Schaufeli: vigor, dedication, and absorption. The Utrecht Work Engagement Scale has been administered in many countries and its validity has been established. Later, Schaufeli et al. (Schaufeli et al. 2006) developed a shorter version of the Utrecht Work Engagement Scale consisting of 9 items (Bakker and Demerouti 2008).

Another scale is the Oldenburg Burnout Inventory, developed by Demerouti and Bakker to address the shortcomings of the Maslach Burnout Inventory (Demerouti and Bakker 2008). This scale has a two-factor structure that includes the dimensions of exhaustion and disengagement. Studies have indicated that this inventory can be used to simultaneously assess both burnout and job engagement (Demerouti and Bakker 2008).

### **2.1.4 Job Engagement in Software Area**

Job engagement concerns all sectors, including the software industry. In this area some researches have been done. Tokdemir's study aims that investigating the factors impacting mental well-being and job engagement of software professionals working from home during the COVID-19 pandemic (Tokdemir 2022: 1). In this study, the relationships between work commitment and various factors were examined. As stated by this study, a positive relationship between well-being and job engagement, a positive association between having freedom of decision on one's job and job engagement are investigated. On the other hand, a relationship between work-life balance and job engagement has not been observed (Tokdemir 2022: 5).

Kataria et al. have aimed that investigation of correlation of job engagement and organizational effectiveness among IT professionals in India (Kataria et al. 2014: 39). According to this research, employees who are committed to their jobs and eager

to do their jobs, positively affect the corporate success and performance of the organization they work for (Kataria et al. 2014: 50).

## **2.2 JOB INSECURITY**

The nature of work continually evolves in response to prevailing conditions. According to Sverke et al., factors contributing to this change include increasing economic interdependence between countries, rapidly developing consumer markets, Additionally, the COVID-19 pandemic, which emerged in 2020, has further exacerbated these issues. Organizations have adopted various strategies to manage changing systems, such as reducing the workforce to lower costs, increasing revenue, outsourcing, or opting for privatization (Sverke et al. 2006: 3).

With the onset of the COVID-19 pandemic, many sectors have been forced to alter their working methods and priorities. Government-imposed lockdown measures aimed at curbing the spread of the virus have led to stagnation in many industries. As Bartik et al. noted, during the first few weeks of the pandemic, many businesses temporarily closed and implemented layoffs. This was attributed to the shock of financial disruptions caused by COVID-19 (Bartik et al. 2020: 6).

These changes inherent in the nature of work have led to increased job insecurity awareness among employees and organizations due to the associated uncertainty in employment. Studies have indicated that job insecurity is often related to the stress employees feel regarding the potential risk of losing their jobs. According to De Witte, job insecurity involves the threat of job loss and the concerns related to that threat (De Witte 2005: 1). Greenhalgh and Rosenblatt define job insecurity as the "perceived powerlessness to maintain desired continuity in a threatened job situation" (Greenhalgh and Rosenblatt 1984: 438). Sverke et al. define job insecurity as the concerns related to the continuity of one's future employment and the worry about losing one's current job (Sverke et al. 2002: 243).

### **2.2.1 Dimensions of Job Insecurity**

Dachapalli and Parumasur have examined job insecurity across six dimensions. These dimensions are: the importance of job features, the presence of job features, perceived threats to job features, the importance of the job, perceived threats to the overall job, and feelings of power or powerlessness (Paul Dachapalli and Parumasur 2012: 32). These dimensions can be detailed as follows:

1. Importance of Job Features: This dimension includes decision-making related to prominent job features such as promotions, positions, and salary. It reflects how crucial these features are perceived to be in the context of job security.

2. Presence of Job Features: This dimension determines the extent to which the prominent job features (like those mentioned above) are actually present within the organization.

3. Perceived Threats to Job Features: This dimension concerns the sense that important job features are under threat and the perceived likelihood of losing these key job aspects.

4. Importance of the Total Job: This dimension assesses how significant the job is perceived to be for the individual in a general sense.

5. Perceived Threats to Total Job: This dimension refers to the perceived likelihood of the job being at risk or the probability of losing the job as a whole.

6. Feelings of Power or Powerlessness: This dimension relates to how individuals feel about their ability to secure their future during the transition process. It is connected to the feelings of insecurity they experience when facing challenges to job security (Paul Dachapalli and Parumasur 2012: 33).

According to the study of Greenhalgh and Rosenblatt, job insecurity is examined in two dimensions (Greenhalgh and Rosenblatt 1984: 440). These dimensions are severity of threat and powerlessness. Severity of threat continuity of a work depends on the scope, importance, and the possibility of loss of the possible loss. The second dimension is indicated that powerlessness. Powerlessness consists of four sub forms, such as lack of protection, unclear expectancies, etc. (Greenhalgh and Rosenblatt 1984: 442).

### **2.2.2 Related Works with Job Insecurity**

In these days job insecurity is a significant issue for lots of different domains. For example, Gurbuz and Dede explored the relationship between job insecurity and organizational trust in middle school teachers in İstanbul, Turkey. In the context of this study, researchers intend to find answer to questions such as “Does job insecurity perception of teachers differ between government school teachers and private school teachers?”, “What are perception levels about the job insecurity and the sub

dimensions of job insecurity in teachers who worked in government schools and private schools?”, etc. According to one of the results of this study, there is a negative difference has been explored between trust to manager and job insecurity and its qualitative and quantitative dimensions in schools which are used for universe (Gurbuz and Dede 2017: 93).

The another research about job insecurity has done between nurses. B. Özyaman explored the effects of job insecurity on depression and anxiety levels on nurses who work at private hospital in Izmir, Turkey (B. Özyaman 2007). In this study researcher aims to investigate two issues. Firstly, determining the perception of job insecurity among nurses who work in private sector, secondly determining the effects of perception of job insecurity on anxiety and depression levels of nurses who worked private sector. In order to measure job insecurity, a nine-item job insecurity scale was used. At the end of the study, the effect of job insecurity on anxiety and depression and a strong relationship was explored between them (B. Özyaman 2007: 39).

In addition to these two studies, research have investigated the effects of vertical information on job insecurity and job engagement in pandemic among the employees who worked at a financial startup in Brazil (Frare and Beuren 2020: 401). This study aims to the effect of sharing vertical information via social media on job insecurity and job engagement. According to Frare and Beuren social media is one of the most current and important communication tools during Covid19 pandemic. At the end of this study, one of the results is the information on social media mediates between job insecurity and job engagement positively (Frare and Beuren 2020: 408).

### **2.2.3 Measures of Job Insecurity**

The researchers need to measure job insecurity, therefore some scales are developed in order to measure it. One of these measures is a job insecurity scale which is developed by Ashford, Lee and Bobko in 1989. This scale has 57 items, and it consists of three main parts which are job features, total job and powerlessness (Ashford et al. 1989: 810). The job features part is created in order to obtain importance of job features and perceived threat to job features, total job part is created in order to obtain importance of possible changes to total job and perceived threat to total job.

Another commonly used scale of job insecurity is Job Insecurity Scale (JIS) developed by De Witte (De Witte 2000). This scale has four items that include the issues about threat or possibility of losing the job, worries about job loss. These items:

“Chances are, I will soon lose my job”, “I am sure I can keep my job” (reverse coded), “I feel insecure about the future of my job”, and “I think I might lose my job in the near future” This scale originally developed in Flemish, and then translated different languages (Vander Elst et al. 2014).

#### **2.2.4 Job Insecurity in Software Area**

In last years with the changing of life conditions and daily routines lead to changing in nature of work regularly. These alteration cause nervousness among employees, because uncertainty means insecurity for employees (Bustillo and Pedraza 2006: 7). Software industry is affected by these changes intensively. Correspondingly, the turnover rate increases in the software sector, because in general, software projects are short-term or contract based. This situation leads to stress and feeling insecure (Memon and Waseem 2023: 333). In addition to this, Covid 19 pandemic has caused alteration of work life, for instance Covid 19 pandemic software industry employees have started to working from home or working hybrid. During this shift, both employees and companies adopted new rules and policies. These changes indicated that economic slowdown, increasing unemployment, interruption in salary that have caused job uncertainty. This job uncertainty has led to stress, anxiety and depression among employees (Obrenovic et al. 2021).

As to the literature review, studies about job insecurity in the software area very limited. Oprea and Iliescu aspire to investigate the relationship between job insecurity and burnout by mediating job crafting in IT industry (Oprea and Iliescu 2015: 236). In this study job crafting is used as a new term which is defined as “the physical and cognitive changes individuals make in the task or relational boundaries of their work” (Wrzesniewski and Dutton 2001: 179). This study was performed among 150 employees which work at a company in the IT industry. The measurements for job insecurity, burnout and job crafting were sent to employees by email. At the end of the study one of the results is job insecurity leads to burnout, then burnout leads to job crafting. Another result is that burnout leads to decrease the tendency of working on increased demand job, then job insecurity levels decrease (Wrzesniewski and Dutton 2001).

Shropshire and Kadlec studied the relationship between job insecurity, burnout and leaving the IT sector. This study has occurred with 65 usable surveys and aims the find answers of four hypothesis. According to one of the results of this study, an IT

employee who is under stress, burnout or worried about his/her job has tendency to looking for different career (Shropshire et al. 2012: 6).

Oprea and Iliescu express that if an organization is associated with job insecurity, management should make the employees aware of changes in company and regulate programs in order to be motivated to additional tasks. According to researchers the same regulations may be valid for burnout (Oprea and Iliescu 2015: 241).

According to Shropshire and Kadlec organizations should give importance to training of IT workers or give opportunity for being well equipped them in order to produce more valuable and marketable IT workers. By these means, IT workers are encouraged and willing to remain this area, and organizations profit from well-equipped and eager workers (Shropshire et al. 2012: 11).

### **2.3 CAREER INSECURITY**

In the last decades, technological, economic, social and organizational changes has led to change in the concept of career (Colakoglu 2011: 47). In this uncertain environment, employees cannot maintain their career at a solitary organization or cannot experience sturdy rising process lifelong and they encounter loss of job against their will (Çetin and Karalar 2016: 166). According to McKinsey, Covid-19 pandemic has caused changes in approach to working because of leading to start to hybrid working model, and now artificial intelligence (AI) and automatization reshapes approach to work. Today, AI and other technologies have the potential to automatize the work which takes up to 70 percent of employees' time (McKinsey 2024).

Being a disruptive technology, AI is expected to transform all the sectors. Accordingly, various studies highlight the potential effects of adopting AI technologies in different areas (Fossen and Sorgner 2019). Although AI technology is anticipated to enhance work processes and boost productivity and innovation across different industries, it is also expected to impact the well-being, satisfaction, and stress levels of workers as it requires them to adapt to new methods of operation and new responsibilities (Bhargava et al. 2021; Brougham and Haar 2020; Rhee, T. and Jin 2021; Schiff et al. 2021). Additionally, AI utilization at the workplace is mentioned to lower job engagement of employees which is an important factor for work performance (Braganza et al. 2021; Thebena et al. 2023). With the widespread deployment of AI technology, workers may perceive a threat to their job security and

feel underappreciated by their employers (Brougham and Haar 2018). Therefore, organizations and governments should carefully consider the impact of AI adoption on workers' health and implement necessary measures to facilitate a smooth transition. As indicated by Roll et al., occupation insecurity is a worry of employees about future of their career because of improvements in technology (Roll et al. 2023: 2).

According to Spurk et al. career insecurity is an employee's worries and consideration about the undesirable changes in central content of his/her future career (Spurk et al. 2022: 256). In the study of Er Ülker, career insecurity is defined as the perceived threat to reach to the career goals of employees' (Er Ülker 2020: 296).

### **2.3.1 Dimensions of Career Insecurity**

In the study of Spurk et al. a multidimensional career insecurity scale has been developed (Spurk et al. 2022). This Multidimensional Career Insecurity Scale (MU-CI-S) measures career insecurity in eight dimensions. These dimensions are “Career opportunities, Decreased prestige and qualification requirements of the employment, Contractual employment conditions, Unemployment, Change of workplace, Retirement, Work-nonwork interactions and Discrepancy between individual resources and work demands” (Spurk et al. 2022: 259).

Roll et al. have developed a measure which introduced as Occupation Insecurity Scale (OCIS) (Roll et al. 2023). They aim to investigate occupation insecurity in terms of two dimensions: “Global Occupation Insecurity” (GOI) and “Content Occupation Insecurity” (COI). Global Occupation Insecurity refers to fear of employee's that their occupations might not exist anymore, and content occupation insecurity mentions about the worries of employees' about the possible changes in their content of occupation because of automation (Roll et al. 2023: 1).

Spurk et al. measured career insecurity by using a one-dimensional scale. This scale aims to measure insecurity evaluation of an employee about reaching to his/her goals in career (Spurk et al. 2016: 8).

### **2.3.2 Related Works with Career Insecurity**

There are several studies that have been researched about career insecurity. Spurk et al. have applied qualitative and quantitative analysis and developed a new career insecurity measure and made clear the definition of career insecurity. As mentioned before, with this study Spurk et al. describe career insecurity as “an

individual's thoughts and worries that central content aspects of one's future career might possibly develop in an undesired manner.”( Spurk et al. 2022: 257). In this study participants were chosen from the German industry sectors. The result of the study shows that career insecurity is a significant term that can be evaluated by MU-CI-S extensively. Career insecurity should be valued as a structure which includes eight specific career insecurity dimensions and is significant in terms of employees' future career improvement (Spurk et al. 2022: 288).

Another study is about the effect of career insecurity perception of employees' to career satisfaction which is performed by Er Ülker (Er Ülker 2020). The sample of this study consists of 110 academicians which work as instructors at vocational high school of a state university. In study survey method was used as research method and career insecurity scale and career satisfaction scale were used. According to the results a negative and weak relationship has been determined between career insecurity and career satisfaction. Variance analysis shows that there is not meaningful variance between career insecurity and gender, age, marital status and time of experience at an organization. On the other hand, a meaningful variance has been detected between career insecurity and educational level.

Van Eetveldt et al., investigate the effect of career insecurity on turnover intentions in the Dutch Military ( van Eetveldt et al. 2013). As methodology, a survey has been applied on 4372 active military employees from Royal Netherlands Army. In this survey career insecurity was measured with three items. As a result, stronger feelings of career insecurity correlated with high turnover intentions. Accordingly, career insecurity has a direct effect on turnover intentions ( van Eetveldt et al. 2013: 495).

### **2.3.3 Measures of Career Insecurity**

Career insecurity is measured on various scales. Spurk et al. developed a 32-item scale in order to measure career insecurity called as Multidimensional Career Insecurity Scale (MU-CI-S) (Spurk et al. 2022). MU-CI-S measures career insecurity in eight dimensions mentioned as before. The career opportunities dimension includes concerns about undesirable alterations in future career chances. Decreased prestige & qualification requirements of future employment dimension is related with “Thoughts and worries that the prestige fixation requirements of the future employment situation might decrease in comparison to the current employment situation” (Spurk et al. 2022:

262). Contractual employment conditions dimension related with consideration and concern about possible undesirable alternation in working conditions in future. The unemployment dimension measures the thoughts and worries about possible unemployment in future career. Change of workplace dimension measure that thoughts of whether the working area will change or not in the future. Retirement dimension measures the worries or thoughts about retirement conditions. Work-non work dimension measure thoughts and worries about whether work life and private life affects each other or not in the future. Discrepancy between individual resources/work demands dimension includes items about worries of whether personal work knowledge is valid about career in the future or not (Spurk et al. 2022:263).

Occupation Insecurity Scale (OCIS) is another scale which is developed by Roll et al. in order to measure employees' occupation insecurity because of automation. OCIS has 11 items which are grouped under two dimensions: Global occupation insecurity and content occupation insecurity (Roll et al. 2023: 6). Global occupation insecurity indicates the employees' worry about that their occupation does not exist anymore and losing occupation completely. Content occupation insecurity associated with employees' worry about possible change in their current occupation responsibilities and tasks. In other words, employees worry about losing worth career characteristics (Roll et al. 2023: 4).

## **2.4 DAILY HASSLES**

In compliance with the natural flow of life, everyone encounters some troubles in his/her daily life. Hassles as stated by Kanner et al. daily operations which are annoying, unnerving and troubling and generally associated with the environment (Kanner et al. 1981: 3). According to them, traffic jams, losing something or something coincidental like weather or disappointments, disputation, and economic or family considerations can be examples of hassles (Kanner et al. 1981: 3). Another definition of daily hassles is the minor troubles that happen because of stress at work, caring for someone else, and commuting to work daily (Serido et al. 2004: 18). Lazarus created another definition for daily hassles as "Daily hassles are experiences and conditions of daily living that have been appraised as salient and harmful or threatening to the endorser's well-being" (Lazarus 1984: 40).

### **2.4.1 Dimensions of Daily Hassles**

There are several attempts to develop scales for measuring daily hassles, such as Kanner et al. (Kanner et al. 1981), Brantley et al. (Brantley et al. 1987) and Junça-Silva et al. (Junça-Silva et al. 2020). Kanner et al. developed 117 items-the hassles scale in order to measure daily hassles (Kanner et al. 1981: 8). This scale consists of seven main issues in terms of work, health, family, friends, the environment, practical consideration, and chance occurrences. Another scale developed by Brantley et al. called “Daily Stress Inventory”. Daily Stress Inventory, which is designed to quantify people’s daily stress has 58 item and its domain of interest is minor stressors (Brantley et al. 1987: 64). Junça-Silva et al. developed a 25-item scale for daily hassles. Dimensions of this scale stem from previous studies as mentioned in the paper (Junça-Silva et al. 2020: 225). This daily hassles scale has five main dimensions: “Time management and task-related hassles, Organizational and leader-related hassles, Conflicts and unpleasant interactions, Threats to self-efficacy and performance, Failures, interruptions, and annoyances” ( Junça-Silva et al. 2020: 227).

### **2.4.2 Related Works with Daily Hassles**

From the very beginning of the 1970s, researchers have done numerous studies to measure daily hassles and investigate the relationship between daily hassles and another factors. One of these studies is performed by Serido et al. (Serido et al. 2004). The purpose of this study is to investigate the effects of role-related chronic stressors and daily hassles in areas of family and work on psychological problems (Serido et al. 2004: 17). Daily hassles are explained as minor situations encountered in daily life, for instance worries about work, caring for somebody etc. As a result of this study chronic home stressors are related to daily hassles in both home and work areas more frequently. The other result is that there is a relationship between home hassles between both chronic home demands and chronic work demands. Consequently, the study supports that chronic stressors are moderators of effect of daily hassles on psychological problems (Serido et al. 2004: 18).

Another study analyzed the daily hassles affects the physical activities of individuals during Covid-19 pandemic pandemic (Hargreaves et al. 2013: 1). Hargreaves et al. have claimed that intensity of daily hassles is not related with physical activities during lockdown and daily hassles had a minor negative effect on physical activities post-lockdown. However, the reason why daily hassles predict post

lockdown physical activities is unclear, despite the fact that the intensity of daily hassles being same for during and post-lockdown (Hargreaves et al. 2013: 11).

### **2.4.3 Daily Hassles in Software Area**

Software professionals often encounter various challenges during their work as they constantly find a solution to a problem during the development of complex software systems based on customers' needs. Willis shows a relationship between stress, cognitive style and job satisfaction of computer programmers (Willis 1994). In this study, a questionnaire was used for data collection which contains Gregorc Style Delineator, Daily Hassles Scale, Job Satisfaction Scale and a demographic questions. As indicated, Daily Hassles Scale was used to measure stress (Willis 1994). As a result of the research, a negative relationship was detected between job satisfaction and stress.

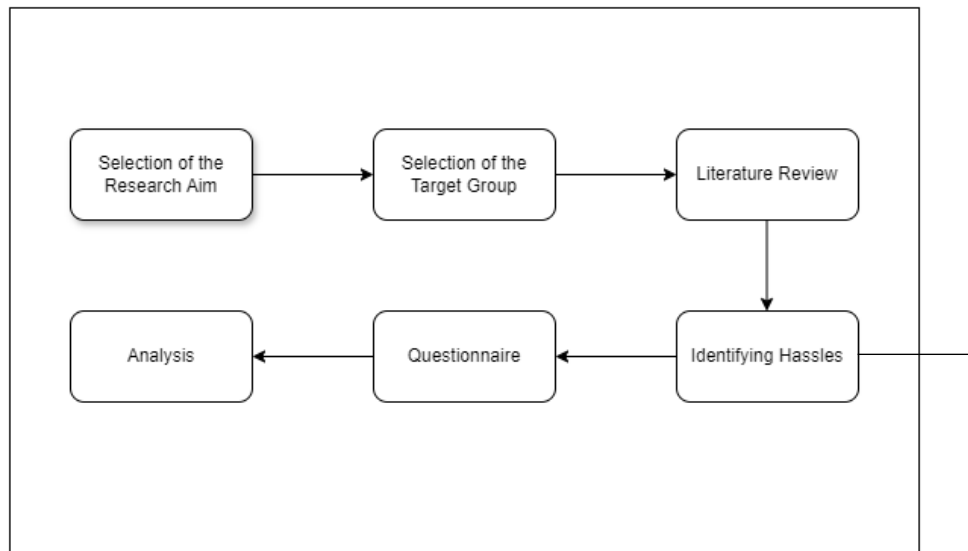
Another research was conducted by Srinivasan in order to investigate association between work environment stress and marital happiness in software professionals from Kuala Lumpur, Selengor and Johor Bahru. As one of the results a negative association between work environment stress and marital happiness (Srinivasan 2010: 114).

## **CHAPTER III**

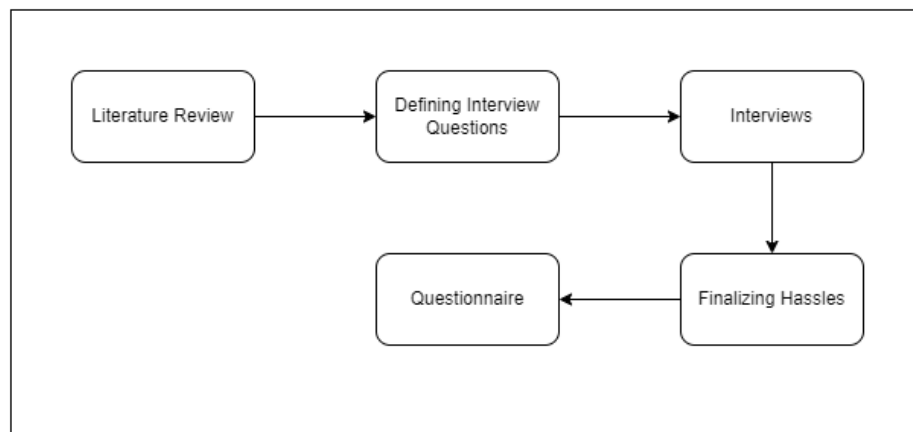
### **METHODOLOGY**

#### **3.1 RESEARCH METHOD**

First of all, the topic of the thesis was determined, and then how to manage the process was determined. It was decided that the study would consist of two stages: Interview and Questionnaire. Then literature was reviewed about the topic and job engagement, job insecurity, coping strategies with problems, career insecurity and daily hassles. And then the target groups for interviews and questionnaires were decided, and questionnaire was prepared. For the purpose of getting feedback, the questionnaire was applied to a pilot group first. After that, interviews were completed, and a questionnaire was applied to the target group. After the data collection process the answers which were out of topic were dropped from data and results were analyzed. In conclusion, data was analyzed by using IBM SPSS Statistics tool. In Figure 1 the research methodology and in Figure 2, identifying daily hassles process has been demonstrated.



**Figure 1: Research Methodology**



**Figure 2: Identifying Hassles**

### 3.2 MEASURES

In this study, an inventory has been used to ask the interviewees, four scales have been used in order to measure job engagement, job insecurity, coping strategies with hassles and job insecurity. Additionally, a list of obstacles was developed in order to determine difficulties encountered during work and work-related problems.

One of the scales is Utrecht Work Engagement Scale (UWES) which is developed by Schaufeli et al.(Schaufeli et al. 2006: 702). Initially, the scale had 24 items, but then seven items were eliminated and number of items was decreased to 17. This scale consists of three dimensions: vigor, dedication, absorption. Vigor refers that being energetic and resilient while working. “Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm,

inspiration, pride, and challenge” (Schaufeli et al. 2006: 702). Absorption refers that being completely focused on the work and being fully concentrated on one’s work that he/she lose track of time (Schaufeli et al. 2006). In the scale, the item numbers 1, 4, 8, 12, 15 and 17 are grouped as vigor scale, 2, 5, 7, 10, 13 are grouped as dedication scale, 3, 6, 9, 11, 14 and 16 are grouped as absorption scale. All items are scored on a 7-point frequency rating scale ranging from 0 (never) to 6 (always) (Schaufeli et al., 2006). Translated to Turkish version is developed and validated by Eryılmaz and Doğan as UWES-TR. They indicated that UWES-TR is a valid and reliable scale to measure job engagement (Eryılmaz and Doğa 2012: 54). In this study this Turkish form of UWES has been used to measure job engagement.

The other scale is Brief Cope which is developed by Carver (Carver 1997). This scale has 28 items and 14 dimensions. Each two item is grouped by a dimension. These dimensions are, active coping, planning, positive refraining, acceptance, humor, religion, using emotional support, using instrumental support, self-distraction, denial, venting, substance use, behavioral disengagement and self-blame. All items are scored on a 4-point frequency rating scale ranging from 0 (I haven't been doing this at all) to 3 (I've been doing this a lot) (Carver 1997: 96). Translated to Turkish version is developed and validated by Bacanlı et al. They indicates that self-blaming and active coping dimensions have not been obtained from their study, but self-limitation has been obtained as a dimension from their study (Bacanli et al. 47). As a result they specifies that the scale is reliable. In this study this Turkish form of Brief Cope Scale has been used.

To measure job insecurity, four-item qualitative dimension of Job Insecurity Scale (JIS) developed by Isaksson, Hellgren and Pettersson was used (Hellgren et al. 1999). All items are scored on a 5-point Likert scale from (1) “strongly disagree” to (5) “strongly agree” and reverse coded.

In order to measure career insecurity, Occupation Insecurity Scale (OCIS) developed by Roll et al. was used (Roll et al. 2023). OCIS consists of 11 item and two dimension as global occupation insecurity (GOI) and content occupation insecurity (COI). Global Occupation Insecurity refers to fear of employee’s that their occupations might not exist anymore and Content Occupation Insecurity mentions about the worries of employees’ about the possible changes in their content of occupation because of automation (Roll et al. 2023: 1). All items are scored on a 5-point Likert scale from (1) “strongly disagree” to (5) “strongly agree”. In literature a translated to

Turkish form of this scale could not be found, therefore the scale was translated to Turkish by competent person in English and Turkish languages.

Daily Stress Inventory developed by Brantley et al. was used at the end of the interviews (Brantley et al. 1987). Daily Stress Inventory is a 58-item inventory has been used to investigate minor stressors. All items are scored on a 5-point Likert scale from (0) “it is nothing” to (4) “all important”. In literature a translated to Turkish form of this scale can not be found, therefore the scale was translated to Turkish by competent person in English and Turkish languages.

Difficulties Encountered During Work and Work-Related Problems is a scale developed as a part of this study. This is a 46-item scale and it consists of items about the possible hassles encountered during work and problems about work. This scale has been developed in order to investigate correlation between these hassles and other scales in the study. Items have been decided according to answers from interviews. All items are scored on a 5-point Likert scale from (1) “never affects” to (4) “totally affects”.

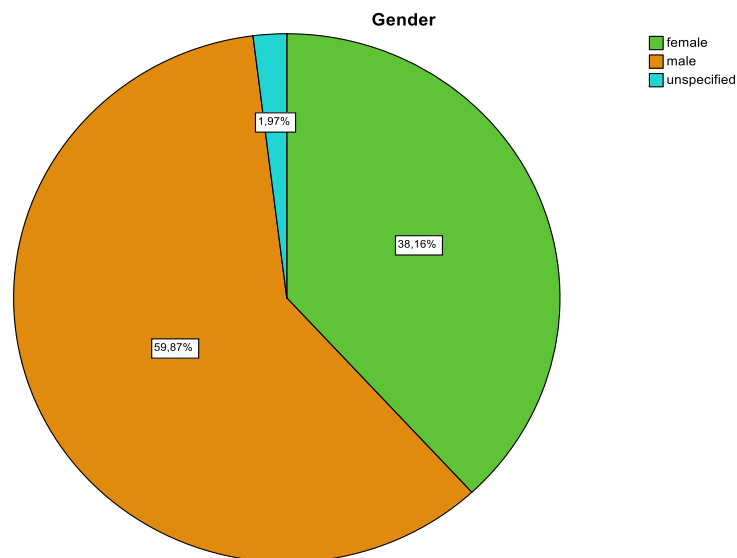
### **3.3 MATERIALS**

Creation of data collection material was performed in two step. Firstly, the scales and demographical questions to be used were decided. It was decided that the questionnaire would consist of six main parts, they are: Demographical Questions, Job Engagement Scale, Coping Strategies Scale, Job Insecurity Scale, Career Insecurity Scale and Difficulties Encountered During Work and Work-Related Problems scale. After literature review, except that Difficulties Encountered During Work and Work-Related Problems scale part, the other scales were determined. Difficulties Encountered During Work and Work-Related Problems scale part was left blank temporary. Secondly, a short question list was created in order to ask the obstacles software professionals face at work while getting interviews. After the completion of interviews, daily stress inventory was presented to interviewees. The answers from interviews were listed and then too specific and duplicate answers were eliminated from the list. The answers of daily stress inventory were scored and the items which have scored 2 or above out of 4 were selected. Lastly, the answers from interviews and Daily stress inventory were combined about to add into questionnaire’s Difficulties Encountered During Work and Work-Related Problems scale part. In this way, the questionnaire has been ready to release.

### 3.4 PARTICIPANTS

Participants have been chosen from software engineering professionals in Turkey. In this study, data collection has two stages, firstly, interviews were conducted with 20 volunteers who work in the software industry to reveal their daily hassles. The interviews were performed online, on Zoom platform. After the interviews a Daily Stress Inventory form was sent to interviewees by an online form. 15 of 20 participants were attended to fill Daily Stress Inventory form. Then, the questionnaire daily hassles list was finalized, and questionnaire was created on an online platform “Jotform”. Then the questionnaire was released by a url link to employees both by specific company email addresses and by social media. The questionnaire was held from 28<sup>th</sup> May 2024 to 22<sup>nd</sup> July 2024 and Questionnaire was responded by 313 people totally. Nine of the responses were eliminated because the entered sector was outside the scope of our study. At the end of the this process, number of responses has been accepted as 304, and the analysis has been performed on this data.

In participants, the number of female is 116 (38,2%), number of male is 182 (59,9%) and number of people who did not want to specify their gender is 6 (2%) (Figure 3).



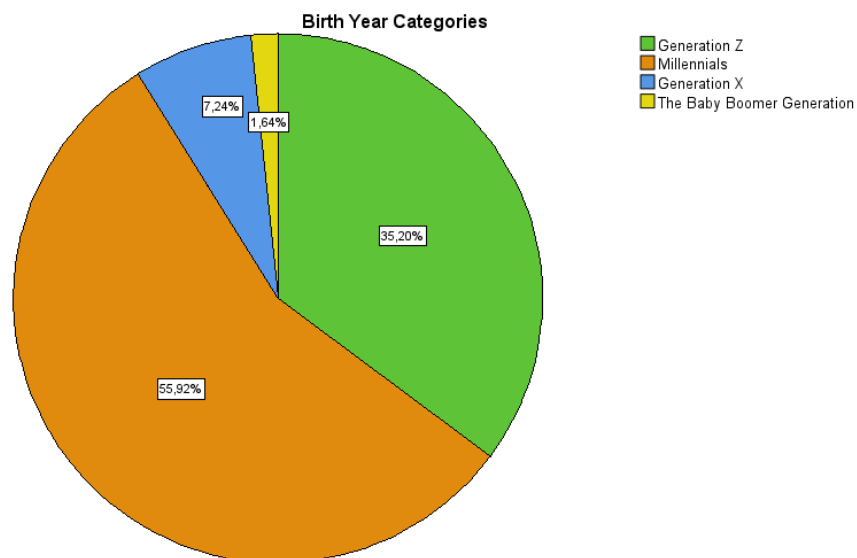
**Figure 3:** Percentage Distribution of Gender Groups

In participants, average age is 34, and the maximum age is 68 and the minimum age is 22. Participants' year of birth was obtained by an open ended question. In order to make the analysis easier, birth years was grouped by

generations (Table 1). Within this scope, the responses between 1946 and 1964 are accepted as The Baby Boomer Generation, the responses between 1965-1979 are accepted as Generation X, responses between 1980 and 1994 are accepted as Millennials, responses between 1995 and 2012 are accepted as Generation Z (The Center for Generational Kinetics, 2024). As a result, it was concluded that 107 (35.2%) people belonged to Generation Z, 170 (55.9%) to the Millennial Generation, 22 (7.2%) to Generation X and 5 (1.6%) to the Baby Boomer Generation (Figure 4).

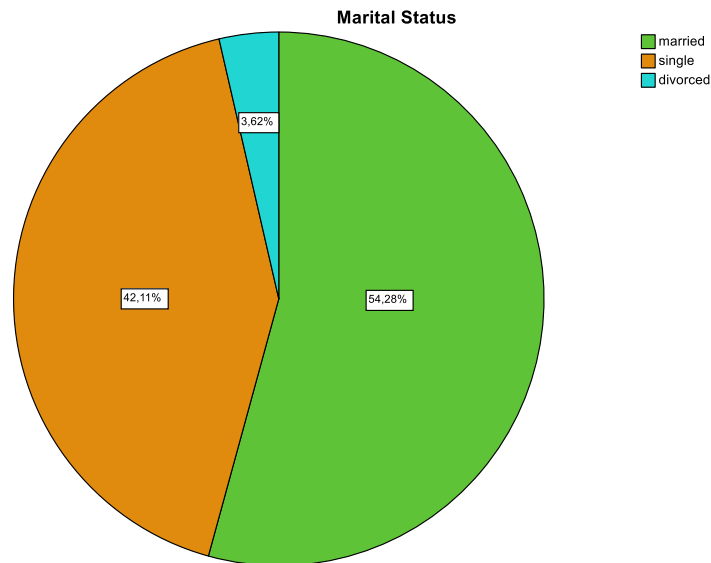
**Table 1:** Frequency Table of Generation Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Generation Z	107	35,2	35,2	35,2
	Millennials	170	55,9	55,9	91,1
	Generation X	22	7,2	7,2	98,4
	The Baby Boomer Generation	5	1,6	1,6	100,0
	Total	304	100,0	100,0	



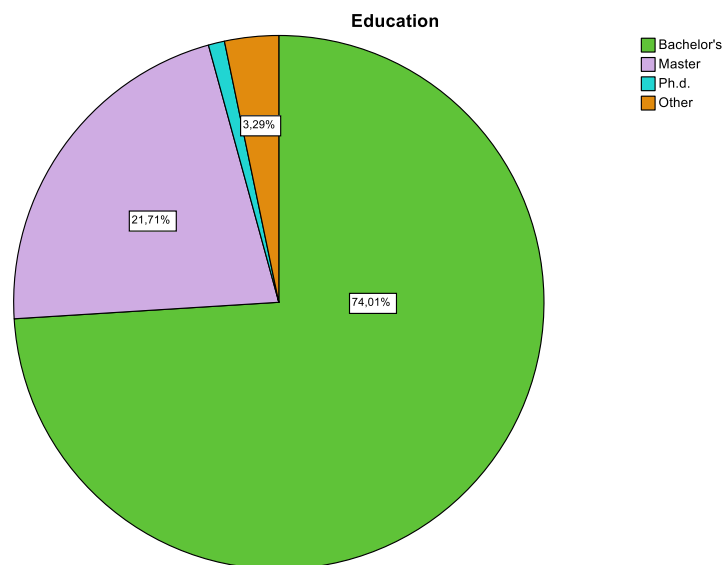
**Figure 4:** Percentage Distribution of Generation Groups

165 (54,%) people are married, 128 (42,1%) people are single and 11(3,6%) people are divorced according to result analysis (Figure 5).



**Figure 5: Percentage Distribution of Marital Status Groups**

In participants, 225 (74%) people have bachelor's degree, 66 (21,7%) people have master's degree, 3 (1%) people have Ph.d., and 10 (3,3%) people have other academic degrees (Figure 6).

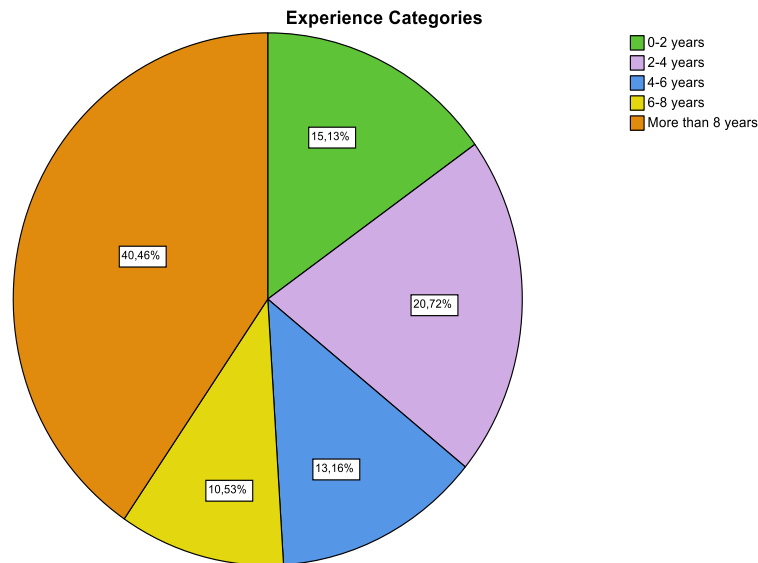


**Figure 6: Percentage Distribution of Education Groups**

The years of experience was obtained by a open-ended question and the results are grouped as follows: 0-2, 2-4, 4-6, 6-8 and more than 8 years (Table 2). As a result 46 (15,1%) people fitted in 0-2 years interval, 63 (20,7%) people fitted in 2-4 years interval, 40 (13,2%) people fitted in 4-6 years interval, 32 (10,5%) people fitted in 6-8 years interval and 123 (40,5%) people fitted in more than 8 years interval (Figure 7).

**Table 2: Frequency Table of Years of Experience Groups**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-2 years	46	15,1	15,1	15,1
	2-4 years	63	20,7	20,7	35,9
	4-6 years	40	13,2	13,2	49,0
	6-8 years	32	10,5	10,5	59,5
	More than 8 years	123	40,5	40,5	100,0
	Total	304	100,0	100,0	



**Figure 7: Percentage Distribution of Years of Experience Groups**

Additionally, some statistics have been considered such as gender and years of experience distributions (Table 3), gender and years of birth categories distributions (Table 4) as shown in the tables.

**Table 3: Table of Gender and Years of Experience Distributions**

			Years of Experience					Total
			0-2 years	2-4 years	4-6 years	6-8 years	More than 8 years	
Gender	Female	Count	16	33	18	14	35	116
		% within Gender	13,8%	28,4%	15,5%	12,1%	30,2%	100,0%
	Male	Count	29	27	22	18	86	182
		% within Gender	15,9%	14,8%	12,1%	9,9%	47,3%	100,0%
	Unspecified	Count	1	3	0	0	2	6
		% within Gender	16,7%	50,0%	0,0%	0,0%	33,3%	100,0%
Total		Count	46	63	40	32	123	304
		% within Gender	15,1%	20,7%	13,2%	10,5%	40,5%	100,0%

**Table 4: Gender and Years of Birth Categories Distributions**

			Gender			Total
			Female	Male	Unspecified	
Years of Birth	Generation Z	Count	54	51	2	107
		% within Years of Birth	50,5%	47,7%	1,9%	100,0%
	Millennials	Count	54	113	3	170
		% within Years of Birth	31,8%	66,5%	1,8%	100,0%
	Generation X	Count	8	13	1	22
		% within Years of Birth	36,4%	59,1%	4,5%	100,0%
	The Baby Boomer Generation	Count	0	5	0	5
		% within Years of Birth	0,0%	100,0%	0,0%	100,0%
Total	Count	116	182	6	304	
	% within Years of Birth	38,2%	59,9%	2,0%	100,0%	

## CHAPTER IV

### RESULTS

The results are analyzed by IBM SPSS Statistics Data Editor tool. In this chapter, reliability tests of scales, normality tests, T-tests, One Way ANOVA and correlations will be examined.

#### 4.1 RELIABILITY TESTS OF SCALES

Cronbach  $\alpha$  value of Job Engagement, Brief Cope, Job Insecurity and Career Insecurity Scale has been investigated as given in Table 5 which shows the reliability of these scales. Cronbach's alpha value of all scales are greater than 0.7 and according to Baum and Wally it might be concluded that the scales are reliable (Baum and Wally 2003: 24).

**Table 5:** Reliability Statistics of Job Engagement, Brief Cope, Job Insecurity and Career Insecurity Scale

	Cronbach's Alpha	N of Items
Job Engagement Scale	,946	17
Brief Cope Scale	,765	28
Job Insecurity Scale	,849	4
Career Insecurity Scale	,884	11

#### 4.2 NORMALITY TESTS

Kolmogorov-Smirnov test have been applied to determine normality of scales which shows that all the scales are at the -1 and +1 interval expected (Table 6), and this values shows that scales have normal distribution (Hair et al. 2013).

**Table 6:** Test of Normality of Job Engagement, Brief Cope, Job Insecurity and Career Insecurity Scale

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Job Engagement Scale	,081	304	<,001	,963	304	<,001
Brief Cope Scale	,051	304	,051	,977	304	<,001
Job Insecurity Scale	,088	304	<,001	,973	304	<,001
Career Insecurity Scale	,081	304	<,001	,973	304	<,001

### 4.3 T-TEST

To determine the significant difference between the independent two groups T-Test was applied. In Table 7, significant differences in gender groups on job engagement were investigated. The value of significance is lower than 0,05, therefore there is a significant difference between male and female groups for job engagement. In Table 8, a significant difference in marital status groups on job engagement was investigated. The value of significance is lower than 0,05, therefore there is a significant difference between married and single groups for job engagement.

**Table 7: T-tests of Gender and Job Engagement**

Independent Samples Tests											
t-test for Equality of Means							Levene's Test for Equality of Variances				
95% Confidence Interval of the		Upper	Lower	Std. Error Difference	Mean Difference	Significance		df	t	Sig.	F
						Two-Sided p	One-Sided p				
-1,9	-10	2,1	-6	0,004	0,002	296	-2,864	0,743	0,11	Equal variances assumed	Job Engagement
-1,8	-10,1	2,1	-6	0,005	0,003	236,27	-2,833			Equal variances not assumed	

**Table 8:** T-tests of Marital Status and Job Engagement

Independent Samples Test									
t-test for Equality of Means							Levene's Test for Equality of Variances		
95% Confidence Interval of the Difference		Std. Error Difference	Mean Difference	Significance		df	t	Sig.	F
Upper	Lower			Two-Sided p	One-Sided p				
0,4916	0,01	0	0	0,04	0,02	291	2,059	0,664	0,189
0,4932	0,01	0	0	0,042	0,021	266,29	2,046		
							Equal variances assumed	Job Engagement	
							Equal variances not assumed		

#### 4.4 ONE WAY ANOVA

By using One Way ANOVA test, significant differences in gender, marital status, generation and years of experience on job engagement, job insecurity, career insecurity and coping styles have been investigated. According to this test, in order to determine a significant difference between the groups, the significance value (p) was required to be less than 0,05.

#### 4.4.1 Job Engagement

There was a statistically significant difference between gender groups detected on the job engagement scale ( $p = 0,012$ ), on the job engagement vigor dimension ( $p = 0,003$ ) and the job engagement dedication dimension ( $p = 0,002$ ). There was no statistically significant difference in gender groups detected in the job engagement absorption dimension (Table 9).

**Table 9:** One Way ANOVA for Job Engagement and Gender Groups

		Sum of Squares	df	Mean Square	F	Sig.
Job Engagement	Between Groups	2704,92	2	1352,46	4,463	0,012
	Within Groups	91215,2	301	303,041		
	Total	93920,2	303			
Vigor	Between Groups	482,785	2	241,392	5,945	0,003
	Within Groups	12222,4	301	40,606		
	Total	12705,2	303			
Dedication	Between Groups	364,591	2	182,295	6,198	0,002
	Within Groups	8853,15	301	29,412		
	Total	9217,74	303			
Absorption	Between Groups	120,513	2	60,257	1,312	0,271
	Within Groups	13819,4	301	45,912		
	Total	13939,9	303			

There was statistically significant differences between generation groups detected on the job engagement scale ( $p = 0,013$ ), on the job engagement vigor dimension ( $p = 0,009$ ) and the job engagement absorption dimension ( $p = 0,002$ ). There was no statistically significant difference in gender groups detected on the job engagement dedication dimension (Table 10).

**Table 10: One Way ANOVA for Job Engagement and Generation Groups**

		Sum of Squares	df	Mean Square	F	Sig.
Job Engagement	Between Groups	3300,23	3	1100,08	3,642	0,013
	Within Groups	90619,9	300	302,066		
	Total	93920,2	303			
Vigor	Between Groups	480,703	3	160,234	3,932	0,009
	Within Groups	12224,5	300	40,748		
	Total	12705,2	303			
Dedication	Between Groups	121,318	3	40,439	1,334	0,263
	Within Groups	9096,42	300	30,321		
	Total	9217,74	303			
Absorption	Between Groups	680,85	3	226,95	5,135	0,002
	Within Groups	13259,1	300	44,197		
	Total	13939,9	303			

There was a statistically significant difference between marital status groups detected on the job engagement scale ( $p = 0,020$ ), on the job engagement vigor dimension ( $p = 0,039$ ) and the job engagement absorption dimension ( $p = 0,007$ ) (Table 11). Significant difference between marital status groups on job engagement dedication dimension has not been evaluated because homogeneity significance value has measured as  $p = 0,028$ , hence homogeneity criteria was not provided.

**Table 11: One way ANOVA for Job engagement and marital status groups**

		Sum of Squares	df	Mean Square	F	Sig.
Job Engagement	Between Groups	2422,42	2	1211,21	3,985	0,02
	Within Groups	91497,7	301	303,979		
	Total	93920,2	303			

**Table 11 Cont.**

Vigor	Between Groups	270,324	2	135,162	3,272	0,039
	Within Groups	12434,9	301	41,312		
	Total	12705,2	303			
Dedication	Between Groups	135,212	2	67,606	2,241	0,108
	Within Groups	9082,53	301	30,175		
	Total	9217,74	303			
Absorption	Between Groups	455,88	2	227,94	5,088	0,007
	Within Groups	13484	301	44,797		
	Total	13939,9	303			

There was a statistically significant difference between years of experience groups detected on the job engagement scale ( $p = 0,017$ ), on the job engagement vigor dimension ( $p = 0,013$ ) and the job engagement absorption dimension ( $p = 0,005$ ). There was no statistically significant difference of years of experience groups detected on job engagement dedication dimension (Table 12).

**Table 12: One Way ANOVA for Job Engagement and Years of Experience Groups**

		Sum of Squares	df	Mean Square	F	Sig.
Job Engagement	Between Groups	3688,12	4	922,03	3,055	0,017
	Within Groups	90232	299	301,779		
	Total	93920,2	303			
Vigor	Between Groups	522,311	4	130,578	3,205	0,013
	Within Groups	12182,9	299	40,746		
	Total	12705,2	303			

**Table 12 Cont.**

Dedication	Between Groups	164,988	4	41,247	1,362	0,247
	Within Groups	9052,75	299	30,277		
	Total	9217,74	303			
Absorption	Between Groups	670,24	4	167,56	3,776	0,005
	Within Groups	13269,7	299	44,38		
	Total	13939,9	303			

There was a statistically significant difference between position groups detected on the job engagement scale ( $p < 0,001$ ), on the job engagement vigor dimension ( $p = 0,02$ ), on the job engagement dedication dimension ( $p = 0,020$ ), and the job engagement absorption dimension ( $p < 0,001$ ) (Table 13).

**Table 13: One Way ANOVA for Job Engagement and Position Groups**

		Sum of Squares	df	Mean Square	F	Sig.
Job Engagement	Between Groups	5670,81	4	1417,7	4,803	<,001
	Within Groups	88249,4	299	295,148		
	Total	93920,2	303			
Vigor	Between Groups	713,896	4	178,474	4,45	0,002
	Within Groups	11991,3	299	40,105		
	Total	12705,2	303			
Dedication	Between Groups	350,887	4	87,722	2,958	0,02
	Within Groups	8866,85	299	29,655		
	Total	9217,74	303			
Absorption	Between Groups	920,357	4	230,089	5,284	<,001
	Within Groups	13019,6	299	43,544		
	Total	13939,9	303			

#### 4.4.2 Job Insecurity

There was no statistically significant difference of gender, generation, years of experience, marital status and position groups detected on job insecurity scale.

#### 4.4.3 Career Insecurity

There was a statistically significant difference between generation groups detected on the career insecurity scale ( $p = 0,006$ ), on the career insecurity content occupation insecurity dimension ( $p = 0,043$ ) (Table 14). Significant difference between generation groups on career insecurity global occupation insecurity dimension has not been evaluated because homogeneity significance value has measured as  $p = 0,031$ , hence homogeneity criteria was not provided.

**Table 14:** One Way ANOVA for Career Insecurity and Generation Groups

		Sum of Squares	df	Mean Square	F	Sig.
Career Insecurity	Between Groups	843,323	3	281,108	4,193	0,006
	Within Groups	20112,9	300	67,043		
	Total	20956,2	303			
Global Occupation Insecurity	Between Groups	274,094	3	91,365	3,742	0,012
	Within Groups	7325,68	300	24,419		
	Total	7599,78	303			
Content Occupation Insecurity	Between Groups	179,075	3	59,692	2,756	0,043
	Within Groups	6497,08	300	21,657		
	Total	6676,16	303			

There was a statistically significant difference between years of experience groups detected on the career insecurity scale ( $p = 0,018$ ) and the career insecurity global occupation insecurity (GOI) dimension ( $p = 0,016$ ). There was no statistically significant difference of years of experience groups detected on career insecurity content occupation insecurity (COI) dimension (Table 15).

**Table 15:** One Way ANOVA for Career Insecurity and Years of Experience Groups

		Sum of Squares	df	Mean Square	F	Sig.	
Career Insecurity	Between Groups	814,291	4	203,573	3,022	0,018	
	Within Groups	20141,9	299	67,364			
	Total	20956,2	303				
Global Insecurity	Occupation	Between Groups	302,544	4	75,636	3,099	0,016
	Within Groups	7297,23	299	24,405			
	Total	7599,78	303				
Content Insecurity	Occupation	Between Groups	160,341	4	40,085	1,839	0,121
	Within Groups	6515,82	299	21,792			
	Total	6676,16	303				

#### 4.4.4 Coping Styles

There was a statistically significant difference between gender groups detected on instrumental social support, humor, on and venting of emotions, acceptance, religion, mental disengagement and emotional social support dimensions (Table 16).

There was a statistically significant difference between generation groups detected on humor, suppression of competing activities, and emotional social support dimensions (Table 16).

There was a statistically significant difference between marital status groups detected on humor and acceptance dimensions (Table 16).

There was a statistically significant difference between years of experience groups detected on humor dimension (Table 16).

There was no statistically significant difference of position groups detected on coping styles (Table 16).

Although the significance value is above 0.05, the variables not mentioned were not evaluated with ANOVA because their homogeneity coefficient is less than 0.05.

**Table 16:** Significance Values of One way ANOVA for Coping Styles and Gender, Generation, Marital Status, Years of Experience and Position Groups

		Sig. (Gender)	Sig. (Generation)	Sig. (Marital Status)	Sig. (Experience Year)	Sig. (Position)
Instrumental Social Support	Between Groups	0,018	0,05	0,345	0,097	0,262
Humor	Between Groups	0,024	<,001	0,001	0,001	0,214
Venting on Emotions	Between Groups	<,001	0,761	0,815	0,949	0,128
Substance Use	Between Groups	0,281	0,438	0,998	0,53	0,454
Acceptance	Between Groups	0,048	0,232	0,08	0,139	0,507
Suppression of Competing Activities	Between Groups	0,514	0,017	0,909	0,172	0,264
Religion	Between Groups	0,027	0,021	0,34	0,253	0,527
Denial	Between Groups	0,488	0,256	0,595	0,809	0,445
Behavioral Disengagement	Between Groups	0,366	0,74	0,259	0,325	0,735
Mental Disengagement	Between Groups	0,021	0,209	0,474	0,249	0,2
Restraint Coping	Between Groups	0,597	0,107	0,975	0,615	0,273
Positive Reinterpretation	Between Groups	0,394	0,307	0,171	0,221	0,137
Using Emotional Social Support	Between Groups	<,001	0,017	0,955	0,155	0,702
Planning	Between Groups	0,952	0,12	0,103	0,846	0,562

#### 4.4.5 Obstacles

There was a statistically significant difference between gender groups detected on challenges related to work setting, challenges related to time management, challenges related to inconvenience about other people, technical challenges, challenges related to physical features of work place and challenges related to employment conditions, personal concerns dimensions (Table 17).

There was no statistically significant difference of generation groups detected on coping styles (Table 17).

There was a statistically significant difference between marital status groups detected challenges related to employment conditions dimensions (Table 17).

There were statistically significant difference between years of experience groups detected on challenges related to employment conditions dimension (Table 17).

There were statistically significant difference between years of experience groups detected was a challenges related to employment conditions dimension (Table 17).

There was a statistically significant difference between position groups detected on challenges related to physical features of work place, challenges related to employment conditions and personal concerns dimensions (Table 17).

Although the significance value was above 0.05, the variables not mentioned were not evaluated with ANOVA because their homogeneity coefficient is less than 0.05.

**Table 17:** Significance Values of One Way ANOVA for Obstacles and Gender, Generation, Marital Status, Years of Experience and Position Groups

		Sig. (Gender)	Sig. (Generation)	Sig. (Marital Status)	Sig. (Experience Year)	Sig. (Position)
Work Setting	Between Groups	0,007	0,637	0,58	0,94	0,569
Time Management	Between Groups	0,026	0,388	0,558	0,296	0,476
Communication	Between Groups	0,014	0,268	0,969	0,199	0,43
Inconvenience about Other People	Between Groups	0,002	0,36	0,424	0,21	0,539
Technical Challenges	Between Groups	0,003	0,928	0,298	0,725	0,653
Physical Features of Work Place	Between Groups	<,001	0,132	0,283	0,478	0,02
Employment Condition	Between Groups	<,001	0,109	0,042	0,003	0,001
Personal Concerns	Between Groups	0,001	0,172	0,144	0,075	0,01

#### 4.5 CORRELATIONS

A relationship has been detected between the job engagement and the job insecurity ( $p < 0.01$ ). This relationship is negative and medium level ( $r = -0,520$ ) (Table 18).

**Table 18: Correlation between Job Engagement and Job Insecurity**

		Job Engagement	Job Insecurity
Job Engagement	Pearson Correlation	1	-,520**
	Sig. (2-tailed)		<,001
	N	304	304
Job Insecurity	Pearson Correlation	-,520**	1
	Sig. (2-tailed)	<,001	
	N	304	304

A relationship has been detected between the job engagement and the obstacles ( $p < 0.01$ ). This relationship is negative and low level ( $r = -0,229$ ) (Table 19).

**Table 19: Correlation between Job Engagement and Obstacles (General)**

		Job Engagement	Obstacles
Job Engagement	Pearson Correlation	1	-,229**
	Sig. (2-tailed)		<,001
	N	304	304
Obstacles	Pearson Correlation	-,229**	1
	Sig. (2-tailed)	<,001	
	N	304	304

A relationship has been detected between the job engagement and the career insecurity ( $p < 0.01$ ). This relationship is negative and low level ( $r = -0,116$ ) (Table 20).

**Table 20: Correlation between Job Engagement and Career Insecurity**

		Job Engagement	Career Insecurity
Job Engagement	Pearson Correlation	1	-,116*
	Sig. (2-tailed)		,042
	N	304	304
Career Insecurity	Pearson Correlation	-,116*	1
	Sig. (2-tailed)	,042	
	N	304	304

The correlation between the job insecurity and the coping styles dimensions has been investigated (Table 21). As a result, it has been detected that 4 dimensions of coping styles had a correlation with job insecurity. Using Instrumental Social Support ( $r = -0,198$ ), Positive Reinterpretation ( $r = -0,170$ ) and Planning ( $r = -0,231$ ) dimensions are negatively and weak correlate with job insecurity. Behavioral

Disengagement dimension correlate with job insecurity as positively and weak ( $r = 0,161$ ).

**Table 21:** Correlation between Job Insecurity and Coping Styles

		Job Insecurity
Job Insecurity	Pearson Correlation	1
	Sig. (2-tailed)	
	N	304
Instrumental Social Support	Pearson Correlation	-,198**
	Sig. (2-tailed)	<,001
	N	304
Behavioral Disengagement	Pearson Correlation	,161**
	Sig. (2-tailed)	,005
	N	304
Positive Reinterpretation	Pearson Correlation	-,170**
	Sig. (2-tailed)	,003
	N	304
Planning	Pearson Correlation	-,231**
	Sig. (2-tailed)	<,001
	N	304

A correlation has been detected between the total coping styles and the career insecurity ( $p = 0.02$ ). This relationship is positive and low level ( $r = 0,175$ ) (Table 22).

**Table 22:** Correlation between Career Insecurity and Total Coping Styles

		Coping Styles (General)	Career Insecurity
Coping Styles(General)	Pearson Correlation	1	,175**
	Sig. (2-tailed)		,002
	N	304	304
Career Insecurity	Pearson Correlation	,175**	1
	Sig. (2-tailed)	,002	
	N	304	304

The correlation between gender and the job engagement in general, and the dimensions of the job engagement has been investigated (Table 23). As a result, gender is correlated with job engagement in general ( $r = 0,169$ ), vigor dimension ( $r = 0,193$ ) and dedication ( $r = 0,198$ ), however the Pearson correlation coefficients were weak. Additionally, correlation between dimensions of the job engagement has been investigated. Consequently, there were high correlations between vigor and dedication ( $r = 0,872$ ), between vigor and absorption ( $r = 0,813$ ), between dedication and absorption ( $r = 0,774$ ) dimensions of job engagement.

**Table 23: Correlation between Job Engagement and Gender**

		Gender	Job Engagement	Vigor	Dedication	Absorption
Gender	Pearson Correlation	1	,169**	,193**	,198**	0,093
	Sig. (2-tailed)		0,003	<,001	<,001	0,106
	N	304	304	304	304	304
Job Engagement	Pearson Correlation	,169**	1	,954**	,932**	,927**
	Sig. (2-tailed)	0,003		<,001	<,001	<,001
	N	304	304	304	304	304
Vigor	Pearson Correlation	,193**	,954**	1	,872**	,813**
	Sig. (2-tailed)	<,001	<,001		<,001	<,001
	N	304	304	304	304	304
Dedication	Pearson Correlation	,198**	,932**	,872**	1	,774**
	Sig. (2-tailed)	<,001	<,001	<,001		<,001
	N	304	304	304	304	304
Absorption	Pearson Correlation	0,093	,927**	,813**	,774**	1
	Sig. (2-tailed)	0,106	<,001	<,001	<,001	
	N	304	304	304	304	304

Additionally, the correlation between job engagement and generation, marital status, year of experience and position has been investigated (Table 24). Correlation between the job engagement and the generation has been detected as positive and weak ( $r = 0,185$ ), and correlation between the job engagement and position has been detected as positive and weak ( $r = 0,167$ ). On the other hand, no correlation has not been detected between job engagement and marital status and year of experience ( $p > 0,05$ ).

**Table 24:** Correlation between Job Engagement and Generation, Marital Status, Years of Experience, Position

		Job Engagement	Vigor	Dedication	Absorption
Job Engagement	Pearson Correlation	1	,954**	,932**	,927**
	Sig. (2-tailed)		<,001	<,001	<,001
	N	304	304	304	304
Vigor	Pearson Correlation	,954**	1	,872**	,813**
	Sig. (2-tailed)	<,001		<,001	<,001
	N	304	304	304	304
Dedication	Pearson Correlation	,932**	,872**	1	,774**
	Sig. (2-tailed)	<,001	<,001		<,001
	N	304	304	304	304
Absorption	Pearson Correlation	,927**	,813**	,774**	1
	Sig. (2-tailed)	<,001	<,001	<,001	
	N	304	304	304	304
Generation	Pearson Correlation	,185**	,186**	0,101	,221**
	Sig. (2-tailed)	0,001	0,001	0,08	<,001
	N	304	304	304	304
Marital Status	Pearson Correlation	-0,046	-0,052	-0,044	-0,033
	Sig. (2-tailed)	0,427	0,366	0,445	0,564
	N	304	304	304	304
Experience Year	Pearson Correlation	0,111	0,106	0,061	,138*
	Sig. (2-tailed)	0,052	0,065	0,287	0,016
	N	304	304	304	304
Position	Pearson Correlation	,167**	,159**	,123*	,181**
	Sig. (2-tailed)	0,003	0,005	0,031	0,002
	N	304	304	304	304

The correlation between obstacles and career insecurity and job insecurity has been investigated. As a result, career insecurity has positive correlations with all obstacle dimensions except challenges related to physical features of the workplace dimension (Table 25). Job insecurity has positive correlations with all obstacle dimensions except that communication and challenges related to physical features of

workplace dimensions (Table 25). In addition, there was a positive correlation between job insecurity and career insecurity ( $r = 0,122$ ) (Table 25).

**Table 25:** Correlation between obstacles and job insecurity, career insecurity

		Career Insecurity	Job Insecurity
Work Setting	Pearson Correlation	,172**	,153**
	Sig. (2-tailed)	0,003	0,007
	N	304	304
Time Management	Pearson Correlation	,225**	,114*
	Sig. (2-tailed)	<,001	0,048
	N	304	304
Communication	Pearson Correlation	,148**	0,102
	Sig. (2-tailed)	0,01	0,077
	N	304	304
Inconvenience about Other People	Pearson Correlation	,208**	,192**
	Sig. (2-tailed)	<,001	<,001
	N	304	304
Technical Challenges	Pearson Correlation	,187**	,122*
	Sig. (2-tailed)	0,001	0,033
	N	304	304
Physical Features of Work Place	Pearson Correlation	0,102	0,103
	Sig. (2-tailed)	0,076	0,073
	N	304	304
Employment Condition	Pearson Correlation	,149**	,244**
	Sig. (2-tailed)	0,009	<,001
	N	304	304
Personal Concerns	Pearson Correlation	,233**	,169**
	Sig. (2-tailed)	<,001	0,003
	N	304	304
Career Insecurity	Pearson Correlation	1	,122*
	Sig. (2-tailed)		0,033
	N	304	304
Job Insecurity	Pearson Correlation	,122*	1
	Sig. (2-tailed)	0,033	
	N	304	304

The correlation between job engagement and all obstacle dimensions has been detected as negative and weak (Table 26). In addition, job engagement dimensions

vigor, dedication, and absorption has also a negative correlation with obstacles (Table 26).

**Table 26:** Correlation between obstacles and job engagement.

		Job Engagement	Vigor	Dedication	Absorption
Work Setting	Pearson Correlation	-,218**	-,252**	-,211**	-,154**
	Sig. (2-tailed)	<,001	<,001	<,001	0,007
	N	304	304	304	304
Time Management	Pearson Correlation	-,182**	-,208**	-,170**	-,136*
	Sig. (2-tailed)	0,001	<,001	0,003	0,018
	N	304	304	304	304
Communication	Pearson Correlation	-,197**	-,234**	-,178**	-,144*
	Sig. (2-tailed)	<,001	<,001	0,002	0,012
	N	304	304	304	304
Inconvenience about Other People	Pearson Correlation	-,207**	-,238**	-,194**	-,153**
	Sig. (2-tailed)	<,001	<,001	<,001	0,007
	N	304	304	304	304
Technical Challenges	Pearson Correlation	-,154**	-,183**	-,161**	-0,095
	Sig. (2-tailed)	0,007	0,001	0,005	0,098
	N	304	304	304	304
Physical Features of Work Place	Pearson Correlation	-,179**	-,204**	-,160**	-,138*
	Sig. (2-tailed)	0,002	<,001	0,005	0,016
	N	304	304	304	304
Employment Condition	Pearson Correlation	-,263**	-,280**	-,247**	-,213**
	Sig. (2-tailed)	<,001	<,001	<,001	<,001
	N	304	304	304	304
Personal Concerns	Pearson Correlation	-,170**	-,183**	-,176**	-,123*
	Sig. (2-tailed)	0,003	0,001	0,002	0,033
	N	304	304	304	304

#### 4.6 HIERARCHICAL REGRESSION

A hierarchical regression analysis was performed on the job engagement scale. For this analysis, job engagement was used as the dependent value. Generation, position, gender, job insecurity, challenges related to the work setting category of obstacles, challenges related to employment condition category of obstacles, positive reinterpretation and planning categories of coping styles were used as independent values according to correlation values.

In model 1, generation and position were used as independent values. In model 2, gender was added to model 1, in model 3 job insecurity was added to model 2, in model 4 challenges related to work setting category of obstacles, challenges related to employment condition category of obstacles were added to model 3, in model 5 positive reinterpretation and planning categories of coping styles were added to model 4. As shown in Table 27, difference of adjusted R square between model 1 and model 2 is 0,017, model 2 and model 3 is 0,256, model 3 and model 4 is 0,014, model 4 and model 5 is 0,032.

**Table 27: Hierarchical Regressions of Job Engagement**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,205 <sup>a</sup>	,042	,036	17,28949
2	,249 <sup>b</sup>	,062	,053	17,13626
3	,564 <sup>c</sup>	,318	,309	14,63125
4	,580 <sup>d</sup>	,336	,323	14,49112
5	,610 <sup>e</sup>	,372	,355	14,13527

## **CHAPTER V**

### **DISCUSSION**

The data is analyzed to answer the research questions through several statistical tests.

#### **5.1 ANOVA AND POST HOC TESTS RESULTS**

##### **5.1.1 Job Engagement**

As mentioned in the previous chapter, according to ANOVA there is a difference between gender groups in terms of job engagement. When it is analyzed in detail, the Post-hoc test with the Hochberg method showed that males have more job engagement perception than females according to the general scale (Mean Difference = 5,95). Also vigor (Mean Difference = 2,54) and dedication (Mean Difference = 2,19) perceptions of males more than females. The reason of this situation might be discrimination against to women employees.

When generation groups are analyzed, generation X has more vigor perception than generation Z (Mean Difference = 4,16). Millennials and Generation X have more absorption perception than Generation Z (Mean Difference for Millennials = 2,33, Mean Difference for Generation X = 4,42). These results might be supported by the responses to questions about Generation Z in the interviews. Some of the answers to these questions include that Generation Z tends to avoid taking responsibility and has low commitment to work.

The homogeneity of marital status, job engagement scale, and vigor dimension is not met, therefore Games-Howell method has been used. As a result, divorced people have more job engagement perception than single people (Mean Difference = 12,62) and divorced people have more vigor perception than single people (Mean Difference = 3,97). Additionally, divorced people have more absorption perception than single people with the Hochberg method (Mean Difference = 5,84).

Employees who have worked more than 8 years have more job engagement (Mean Difference = 7,69) and absorption (Mean Difference = 3,62) perceptions than

those who have worked between 2-4 years. This result might be interpreted as job commitment increases as experience increases.

The top manager group has more job engagement (Mean Difference = 14,50), vigor (Mean Difference = 5,14), and dedication (Mean Difference = 3,74) perception than expert personnel. Also, top managers (Mean Difference = 5,61) and director groups (Mean Difference = 3,14) have more absorption perception than expert personnel.

### **5.1.2 Career Insecurity**

Generation Z has more career insecurity perception than millennials (Mean Difference = 3,17). Generation Z has more global occupation insecurity (GOI) perception than millennials (Mean Difference = 1,93). The reason why Generation Z feels more career insecurity than Millennials may be that Generation Z was born into technology due to their age and grew up with technology, and therefore sees technological developments as a threat to their careers.

### **5.1.3 Coping Styles**

When coping styles and gender groups are analyzed, females have more tendency to use instrumental social support than males (Mean Difference = 3,78) to cope with obstacles. females have more tendency to humor than unspecified gender group (Mean Difference = 1,98) to cope with obstacles. Females have more tendency to focus on and venting of emotions, than males (Mean Difference = 0,75) and unspecified gender group (Mean Difference = 1,53) to cope with obstacles. Homogeneity of gender and use substance dimension is not met, therefore Games-Howell method has been used. As a result, males (Mean Difference = 0,59) and females (Mean Difference = 0,44) have more tendency to use substance than unspecified group. Acceptance is embraced by females as males (Mean Difference = 0,43). Females have more tendency to use emotional social support than males (Mean Difference = 0,57) and unspecified gender groups (Mean Difference = 1,45).

Single people have more perception of humor than married (Mean Difference = 0,76).

Generation Z has more humor perception than millennials (Mean Difference = 0,99). Generation Z has more tendency to suppress competing activities to cope with

obstacles than millennials (Mean Difference = 0,43). Generation Z has more tendency to focus on and venting of emotions, than millennials (Mean Difference = 0,51).

The employees who have worked for between 0-2 years have more humor perception than those who have worked between 4-6 years (Mean Difference = 1,07) and more than 8 years (Mean Difference = 1,08).

#### **5.1.4 Obstacles**

According to a Post-hoc analysis of obstacles and gender, females are more affected by challenges related to the work setting (Mean Difference = 0,26) and challenges related to time management (Mean Difference = 0,26) than males. Females (Mean Difference = 0,33) and unspecified gender groups (Mean Difference = 0,28) are more affected by communication obstacles than males. Females are more affected by challenges related to inconvenience about other people (Mean Difference = 0,35) and technical challenges (Mean Difference = 0,41) than males. Females (Mean Difference = 0,052) and unspecified gender groups (Mean Difference = 1,56) are more affected by challenges related to physical features of work workplace than males. Lastly, females are more affected by challenges related to employment conditions (Mean Difference = 0,53) and personal concerns (Mean Difference = 0,43).

Single people are more affected by challenges related to employment conditions than married people (Mean Difference = 0,34).

Employees who have worked for between 2-4 years are more affected by challenges related to employment conditions than those who have worked for more than 8 years (Mean Difference = 0,69). This result might show that more experienced employees accept weak employment condition easily than 2-4 years experienced employees.

Personnel (Mean Difference = 0,90) and expert personnel (Mean Difference = 0,78) are more affected by challenges related to physical features of the workplace than top management. Personnel (Mean Difference = 1,01) and expert personnel (Mean Difference = 0,89) are more affected by challenges related to employment conditions than top management. The personnel group is more affected by personal concerns than top management (Mean Difference = 0,88).

## 5.2 CORRELATIONS

As mentioned before, correlation analysis has been performed between job engagement, job insecurity, career insecurity, obstacles, gender, marital status, generation groups, years of experience groups, and position.

The correlation of job engagement and job insecurity has been analyzed and a medium-level negative relationship was explored between them. This situation could be interpreted as the level of employees' engagement in their work can be affected when they feel insecure about their job.

The correlation between job engagement and obstacles has been analyzed and a low-level negative relationship was explored between them. It can be said that when employees encounter obstacles in working life, it affects their job engagement negatively.

The correlation of job engagement and career insecurity has been analyzed and a low-level negative relationship was explored between them. The observed correlation between job engagement and career insecurity might be explained in this way, employees' job engagement is affected negatively when they feel insecure in their careers. This situation might be parallel with keeping up with developing technology or changes in dynamics in the software industry as mentioned before.

Another analyzed correlation is between job insecurity and coping styles. According to this test, between job insecurity and four coping styles (Using Instrumental Social Support, Positive Reinterpretation, Planning, and Behavioral Disengagement). Using Instrumental Social Support, Positive Reinterpretation, and Planning have a negative correlation with job insecurity. This might be explained as when people feel job insecurity, they do not need coping by using these coping styles. On the other hand, Behavioral Disengagement has a positive relationship with job insecurity. It might be interpreted that when people feel job insecurity, they use behavioral disengagement as a coping style. These results might be evidence of quiet quitting. Quiet quitting is a trendy phrase that is explained as an action among employees that consists of not taking extra responsibility rather than their major job and giving up doing some extra jobs that are used to do before (Çimen and Yılmaz, 2023: 27). According to Çimen and Yılmaz, the employees who have signs of quitting do not put extra effort into their jobs (Çimen and Yılmaz 2023: 28).

Carrer insecurity and coping styles in general have been analyzed and a positive correlation was explored between them. It might be explained that when the employees' level of coping increases, their career insecurity level increases.

When job engagement correlates with gender in detail, gender and job engagement, vigor dimension and dedication dimension have been explored as correlate positively.

The correlation between job engagement and generation, marital status, years of experience, and position has been analyzed. As a result, job engagement is not correlated with marital status. However, according to T-test marital status has a significant mean differences in job engagement. ANOVA finding a significant difference between groups indicates that the means of the groups are different from each other, but the lack of a significant relationship in the correlation analysis means that these differences do not form a linear relationship or that there is no strong linear relationship between the two variables.

These two results are not contradictory; they simply measure and analyze different aspects of the data. In such cases, it may be necessary to examine the data structure more deeply, evaluate nonlinear relationships, or perform additional analyses. A correlation between year of experience groups and absorption dimension positively. It might be said that when the experience of the year increases, the absorption level of employees increases. Additionally, correlations have been observed between job engagement and position positively. It might show that when the level of seniority increases, job engagement increases.

Another analysis of the correlation is between obstacles, job insecurity, and career insecurity. Challenges related to work settings, challenges related to time management, challenges related to inconvenience about other people, technical challenges, challenges related to employment conditions, and personal concerns correlate with both career insecurity and job insecurity positively. These situations might show that when employees encounter these obstacles, they can feel insecure in terms of both jobs and careers. On the other hand, challenges related to communications correlate only with career insecurity positively. It might be explained that when employees feel career insecurity, it might lead to encountering obstacles in communication.

When the correlation between obstacles and job engagement and its dimensions, challenges related to work setting, challenges related to time management,

communication, challenges related to inconvenience about other people, challenges related to physical features of workplace, and challenges related to employment conditions and personal concerns have been explored as correlate with job engagement, vigor, dedication, and absorption negatively. It might be explained that employees need to choose the workplace on their own, better-planned jobs, regulations for better communication intervals, work under better physical conditions, and better employment conditions to engage in their jobs. Technical challenges are correlated with job engagement, vigor, and dedication negatively. About this result, it might be said that technical obstacles lead to a decrease in enthusiasm and dedication of employees because of the division of continuity of current job.

### **5.3 HIERARCHICAL REGRESSION**

Hierarchical regression was performed for job engagement according to correlation values. In the first step of regression, generation, and position were used as an independent value, At the second step gender was added to step 1, at the third step job insecurity was added to step 2, at the fourth step challenges related to work setting category of obstacles, challenges related to employment condition category of obstacles were added to step 3, at the last step positive reinterpretation and planning categories of coping styles were added to step 4. At the end of the analysis, the difference of adjusted R square between model 1 and model 2 was observed as 0,017, model 2 and model 3 was observed as 0,256, model 3 and model 4 was observed as 0,014, model 4 and model 5 was observed as 0,032.

According to these results, the maximum value of the difference of adjusted R square was observed between model 2 and model 3, therefore it might be said that job insecurity is the strongest factor in job engagement. On the other hand, it might be said that positive reinterpretation and planning categories of coping styles have more power than challenges related to the work setting category of obstacles, challenges related to employment condition category of obstacles on job engagement. Surprisingly, it was observed that gender has a similar effect with challenges related to the work setting category of obstacles and challenges related to employment condition category of obstacles on job engagement.

## **5.4 LIMITATIONS**

In this study, there were some limitations. Firstly, the survey was released via an online link on social media tools. Therefore, the respondents of the survey might not represent the general perceptions of the software professionals in Turkey. Secondly, the number of survey answers might not be enough to generalize the results.



## **CHAPTER VI**

### **CONCLUSION**

The main goal of the current study was to identify the obstacles faced by software professionals and investigate the factors affecting their job engagement. Job engagement is an important concern for all working areas. On the other hand, according to the literature review, there are limited study that investigates job engagement in the software area. Additionally, this study investigates relationships between job engagement, job insecurity, career insecurity, coping styles, and obstacles.

The study was performed in two stages an interview and a questionnaire. First of all, interviews were conducted with 20 software professionals at different seniorities by Zoom platform to ask them about the obstacles they encountered in their work lives. After that, a daily stress inventory was sent to them by email. 15 people filled in the form and the obstacles from interviews and inventory were merged as a new obstacle list. For the questionnaire part, at the end of the literature review to find appropriate scales with the topic, the questionnaire was created.

The results suggest that obstacles, job engagement, job insecurity, career insecurity, and coping styles have relationships with each other. Organizations should focus on obstacles that lead to job insecurity and job engagement because job insecurity and job engagement are correlated concepts. If the obstacles that are causes for job engagement are removed or minimized by organizations might increase the engagement of the employees in their organizations. The employees who are engaged in their jobs will work with enthusiasm, dedication, and focus on the work and thus the works continue without disruption and this will profit for organizations. Additionally, employees who engage in their job, it means the obstacles are minimum for them and they feel secure in their current job. Because of a negative relationship between job engagement and career insecurity, if organizations minimize the factors that lead to career insecurity such as fear about not being able to keep up developing technology, employees might feel more engaged in their current jobs. For example,

organizations might encourage the learning of current technology by tutorials or provide a budget for online courses.

Coping styles have a mostly negative relationship with job insecurity. When employees' level of job insecurity increases, their usage level of coping styles decreases. In this situation, job insecurity is not a threat, conversely, it turns into an indicator of undermining. Supportively, this situation might be associated with quiet quitting as mentioned before. To prevent this, organizations should give importance to employees' feedback and should take action to make better the working conditions.

Surprisingly, the results show that females are more affected by obstacles than males. Organizations might investigate the reason for this situation. It might correlate with the role of women in social life in Turkey.

Hierarchical regression analysis results show that job insecurity has the strongest effect on job engagement. Software companies should pay attention on the employees who feel insecure about their job to increase their engagement on their job.

In conclusion, this study answered all research questions. Results show that job insecurity, career insecurity, and obstacles are the concepts that affect job engagement in different ways. Additionally, these concepts have relationships with each other. Coping styles give an idea about the approach of employees to obstacles and how affects job insecurity and job engagement.

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