A FIELD RESEARCH ON THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND SATISFACTION

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ABSTRACT

This research was conducted to examine the phenomenon of job satisfaction in the context of job stress and was carried out with 319 academicians working at a state university in the Western Black Sea region of Türkiye. In the research, the "Job Satisfaction" Scale was used to examine the job satisfaction of academicians, and the "A Job Stress Scale-20" was used to examine their job stress. The data obtained from the research revealed that female academicians' job stress was higher, and their job satisfaction was lower than the men who were examined for the research, and that academic staff aged 30 and under had higher job stress and lower job satisfaction than the older employees.

Keywords: Occupational Stress, Job Satisfaction, Job Dissatisfaction, Productivity, Management, Strategic Management

İŞ STRESİ VE İŞ TATMİNİ ARASINDAKİ İLİŞKİYE YÖNELİK BİR SAHA ARAŞTIRMASI

ÖZ

İş tatmini olgusunu iş stresi bağlamında incelemek amacıyla gerçekleştirilen bu araştırma, Türkiye'nin batı Karadeniz bölgesindeki bir devlet üniversitesinde çalışan 319 akademisyenle gerçekleştirilmiştir. Bu doğrultuda gerçekleştirilen araştırmada, akademisyenlerin iş tatminlerini incelemek amacıyla "İş Tatmini" ölçeğinden, iş streslerini incelemek amacıyla "A İş Stresi Ölçeği-20"den yararlanılmıştır. Araştırmadan elde edilen veriler, kadın akademisyenlerin iş stresinin erkeklere oranla daha yüksek ve iş tatmininin ise daha düşük olduğu; 30 yaş ve altındaki akademik personelin iş stresinin daha yüksek ve iş tatmininin ise daha düşük seviyelerde bulunduğu tespit edilmiştir.

Anahtar Kelimeler: İş Stresi, İş Tatmini, İş Memnuniyetsizliği, Verimlilik, Yönetim, Stratejik Yönetim

INTRODUCTION

Education is the most vital and critical issue for all countries for their success and future projections of where they would like to see themselves. Academicians are the fundamental element of an educational system and the main ingredient for its success and productivity. To improve the educational systems and improve the learning process, countries must start ensuring their university teachers' wellbeing. Unsatisfied and stressful academicians create stressful and unsatisfied educational institutions that produce below-standard students vis-à-vis society. After all, every profession from law, music, medicine, and engineering to piloting, starts with teaching, and teachers usually become role models for their students who will be future professionals in their communities. This is why this study is very important in guiding people on how to rebuild healthy communities.

Due to the importance of this topic, job satisfaction and job-related stress have been in the scope of many researchers who have been studying this topic in recent years. Following the industrialization trends and people starting to live and work in urban cities in large numbers, the issue of providing a pleasant work environment has been on the agendas of researchers, businesses, policymakers, and employee safety experts. Employers have been striving to hire the right individuals for the right job, who would not become a burden for them after being employed. Similarly, policymakers and employees want to ensure a safe and pleasant workplace that does not drive their employees to psychological breakdown. This is why the researchers have been working hard to identify conditions that elicit anger and anxiety and recommend steps to limit these anxious and stressful conditions so that the employees' psychological breakdowns do not occur, and productivity can be assured (Spector, 1998; Jex & Beehr, 1991).

Studies such as Fletcher & Payne (1980); Landsbergis (1988); Cooper, DeJong, Forsythe, & Ross, (1989); Vinokur-Kaplan (1991); Koslowsky, Aizer, & Krausz (1996); Stamps (1998), and many others have already established the relationship between job stress and job satisfaction, so this research does not try to reevaluate this connection one more time.

Before the US Postal worker named Patrick Henry Sherrill equipped with two 0.45 caliber weapons, walked into his workplace, locked the exit doors, and killed fourteen coworkers before committing suicide in 1986; decreasing occupational stress and providing pleasant work environments for the employees were on the minds of many researchers and policymakers (Talley, 2006). Since then, the unpleasant "going postal" terminology has been part of the daily jargon of many people. Foreseeing these

kinds of employee stress and dissatisfaction issues and trying to keep them healthy, the US Congress passed the Fair Labor Standards Act, which limited workers' schedules to five days and 44 hours a week schedule in 1933 (McCusker 1991). The US Congress also passed the National Labor Relations Act into law to guarantee many of the employee rights that may be taken granted as natural rights today, for the first time. These types of labor laws became realities in many other European countries in the following years. Türkiye passed Law 3008, guaranteeing the labor rights of employees which came into effect in 1936 (Oğuzhan, 2022).

After various regulations and providing various rights to the labor, employees and Human Resources professionals started to apply added measures to ensure a less stressful workplace and give priority to workplace safety issues. One of the earliest measures was to recruit more qualified employees who would be less likely to create problems during their employment. Minnesota Multiphasic Personality Inventory (MMPI) psychological test, which was developed by Starke R. Hathaway and J. C. McKinley from Minnesota University to screen individuals for their psychological fitness was administered to almost all employees before they started their employment (Schiele, B. C.; Baker, A. B.; Hathaway, S. R., 1943). In later years, drug and physical well-being tests were also added to the procedure for recruiting to ensure addicted people are not employed and safer and less stressful workplaces are warranted.

In developing countries such as Türkiye, the industrialization trends and mass employment activities started a little later than the industrialized countries. Unfortunately, “going postal” types of occupational labor issues are becoming more and more part of their daily lives decades later than the developed countries. The higher education sector, being the catalyzer of change and transition, is not immune to these kinds of job-related stress associated with job dissatisfaction and employment-related problems. As in many other countries, it is expected that universities carry out needed research and develop methods to cure all of the problems related to labor issues for the public. Having dissatisfied academicians on their payrolls cannot only prevent their institutions from finding remedies for their issues, but they would also be unable to carry out any needed research for the public on these kinds of crucial issues. Satisfied higher education professionals will not only have a better working environment, but they will also educate the public and managers on finding a suitable labor force and increased productivity for the nation. Their productivity is not just important for their institutions, it is also crucial for the economic and social health of the nation as a whole (Greenberg, 2002; Küskü, 2003; Chaudhry, 2012). This is why a Black Sea region-public university’s academic employees were chosen for this job stress and satisfaction-related research. It is expected that this research will not only be a helpful resource for

the organization, it will also help other higher education institutions and employees.

LITERATURE REVIEW

Job satisfaction is defined differently by many of the authors and researchers who have contributed to this scientific area of research. The term was defined for the first time by Fisher and Hanna (1931). These two researchers not only carried out the said 1931 research, but they also conducted many other case studies and investigations and published their works as books, conference proceedings, and articles in later years. The common theme for job satisfaction in Fisher and Hanna (1931), Herzberg (1968), Locke (1976), Robins (2003), Armstrong (2006), and Zhu (2012), defined as job satisfaction being employees' feelings towards their workplaces and this could be satisfactory or dissatisfactory.

There has been numerous research conducted in this area in the Western world other than the mentioned studies above. We can add Pierson and Seiler (1983); Moir, (1990); Hagedorn, (1994); and 1996; Shalvey, (1995); Johnsrud and Heck, (1998); and Kanji & Tambi, (1999) to this crowd. On the other hand, this research area is still a fairly new research field for developing countries such as Türkiye, Pakistan, and India. Nonetheless, these shortcomings have been eradicated quickly in recent years by respected researchers, such as Küskü (2003), Irfan & Farooqi (2004), Chaudhry (2012), and Kaur (2017).

Historically, Herzberg's Two-Factor Theory of Motivation was instrumental in this research area that started the trend, and it has been replicated, expanded, and tested over and over by other investigators. Herzberg (1968) theorized that motivation factors such as recognition, praise, achievement, advancement, growth, and responsibility; and hygiene factors such as company policy, salary, job security, and supervision determine employees' satisfaction in their workplaces. According to Herzberg motivation factors lead employees to job satisfaction, while lack of hygiene factors create dissatisfaction at work.

Della A. Pearson and Robert E. Seiler carried out research in various universities in the USA. The research included 336 participants in 24 different, public, private, large, and small universities throughout the country. The study found academicians were more satisfied than dissatisfied (Pearson and Seiler, 1983).

Rue and Byars (2003), and Robins (2003) evaluated factors influencing job satisfaction and dissatisfaction and also detailed and expanded Herzberg's motivation and hygiene factors to make the theory more inclusive and complex. As time passed, the research area expanded, the literature accumulated, and more and more researchers

conducted research in this field.

Greenberg (2002), found academic jobs to be generally more satisfying and less stressful than other professionals. Conducting a similar investigation in a university setting Abdul Qayyum Chaudhry found an inverse relationship between occupational stress satisfaction. He did not find any difference in the stress levels of male and female respondents while younger age academicians had more job stress than the mature ones in his study. He also did not find any stress level differentiation between demographic groups of visiting, contract, or permanent employees (Chaudhry, 2012).

Varkey, Marcenaro-Gutierrez, Pota, Boxser & Pajpani (2013), conducted comparative global research evaluating the status of academicians in various countries. Using a scale called StatusIndex, they measured how each country was honoring and compensating their academicians. According to this research, Luxembourg and Switzerland compensated their academicians better than all other countries, while India scored the lowest in this measurement. As far as status and respect are concerned, academicians were regarded as the most astute and highly regarded in South Korea, China, Türkiye, Egypt, and Greece compared to other European and Anglo-Saxon countries. The researchers found the status index to be at the lowest end in Israel and Brazil.

Job Stress and the Factors that Create Job-Related Dissatisfaction

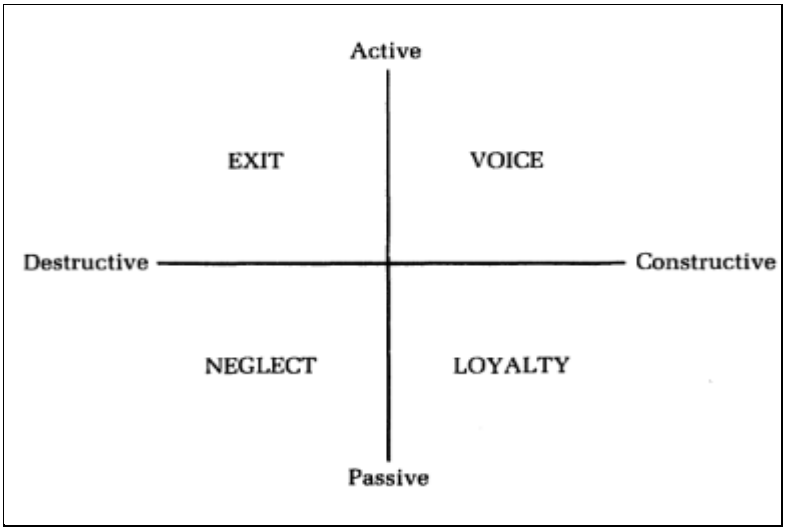
Stress is defined as "the burden on one's emotional or mental well-being created by demands on one's time," by William Webster Dictionary. Synonymous words are listed as pressure, tension, strain, worry, anxiety, load, concern, weight, anger, irritation, etc. by the same source (The American College Dictionary, 1993).

As mentioned above, Herzberg's two-factor analysis measured satisfaction-creating factors as motivational, and dissatisfaction-creating factors as hygiene factors (Herzberg, 1968). In a way, satisfaction and dissatisfaction are like a scale balance, if one side is down, the other side would be up.

According to Robins (2003), dissatisfied employees would show their discontent by leaving the workplace, voicing their objections for fixing problems that they believe create displeasure, losing their loyalties to their workplaces, and finally reaching a stage called neglect, where the employees show chronic absenteeism, neglecting their jobs, frequent tardiness, reduced work efforts and increased errors and wrongdoings at work.

The relationship between active and passive job dissatisfaction and constructive and destructive employee reactions to these stimuli is depicted in the following Graph 1 by C Rusbult and D. Lowery (1995).

Graph 1: Responses to Job Dissatisfaction



Source: C. Rusbult and D. Lowery (1985), "When Bureaucrats get the Blues."

Similar to Rusbult and Lowery's research, Nilufar Ahsan, Zaini Abdulah, David Yong Gun Fie, and Syed Shah Alam's work conducted similar research in 2009, and found work stress and satisfaction are related and interconnected. This research depicts Role Conflict, Relationships with Others, Workload Pressure Home-work Interface, Role ambiguity, and Performance Pressure factors that influence occupational stress, and this stress, in turn, influences job satisfaction.

Job Satisfaction and the Factors that Influence Being Satisfied at Work

Job satisfaction can be defined as how content employees are with their workplaces. As mentioned above in the literature review section, Herzberg (1968), working with 203 engineers and accountants determined that "achievement, competency, status, personal worth, and self-realization" were factors that make employees happy and satisfied. Following Herzberg's footsteps, there was additional research conducted on job satisfaction areas by others.

According to Mullins, Nelson, Busciglio, and Weiner (1988), in the research conducted in a nursing home environment, working condition was the most important factor influencing job satisfaction. The other research was conducted in the same year by Abraham Pizam and Yoram Neumann with hotel employees in the hospitality industry, which found that satisfaction with supervisors and co-workers, and the meaningfulness of the job, were the two factors that most influenced employees' satisfaction with their jobs (Pizam & Newman, 1988).

Kelly Mollica Duke and Jeannie Sneed also carried out similar research to determine factors that influence job satisfaction with university food service workers. Their result showed that the highest level of job satisfaction was attained by employees who got feedback from management and had good dealings with their co-workers (Duke and Sneed, 1989).

Wattson and Slack (1993) conducted a study on university employees and found the presence of quality-of-life programs on their job sites, such as childcare centers, fitness centers, and healthcare clinics were satisfactory factors with their jobs.

John E. Mathieu, David A. Hofmann, and James L. Farr in their research with 450 male engineers concluded that smaller departmental size and demographic indicators such as higher educational levels were important in their professional lives to be satisfied and happy (Mathieu, Hoffman, and Farr, 1993).

Similar research was conducted with 150 sales representatives of a publishing company and discovered that having sociable co-workers and better working conditions were the reasons behind organizational commitment and satisfied employees (Russ & McNeilly, 1995).

More comprehensive research involving about 55 thousand federal employees revealed that the factors creating satisfied employees were involved with more intrinsic rewards such as making contributions to the workplace and advancements and promotions were more important than the increased salaries (Ting, 1997).

Öznur Bozkurt and İlhan Bozkurt carried out research in a university setting to determine factors affecting university professors' job satisfaction (Bozkurt and Bozkurt, 2008). The researchers discovered that while university professors were overall satisfied with their jobs, the most important factor for academicians to be more satisfied with their jobs was an increase in their salaries. Bozkurts found university professors to be dissatisfied with their insufficient salaries and satisfied with the friendship relationships and social environments of their workplace.

If we summarize the factors that influence being satisfied or dissatisfied, here are the items:

- Salary
- Communication
- Management Style
- Friendship or Social Environment
- Getting Compliments
- Promotions

METHODOLOGY

Purpose of the Research

This research examines the phenomenon of job satisfaction concerning job stress. For this purpose, academicians who were expected to feel the facts in question intensely constitute the experimental group of the study, and through groups formed by taking demographic variables into account; It was examined whether there was a significant difference in terms of job satisfaction and job stress and the effect of job stress on job satisfaction.

Research Population and Subject Selection

Since the research was conducted with academics employed by a public university, all academicians working at the same university constituted the population of this research. There were a total of 1108 academicians working at this relevant public institution. In the study, Krejcie and Morgan's (1970) sample size calculation is used to determine the acceptable sample size. According to this methodology, it is expected that in a population of 1108, the smallest sample size is required to be 286 people, based on α=0.05 significance and ± 5% margin of error (Davis and Cosenza, 1998). Based on these calculations and expectations, the research was carried out with a total of 319 academics, which is more than the minimal threshold.

Data Collection

The survey method was employed for data collection purposes in this study. The survey form consists of a total of 3 parts and 33 questions. The first part of the survey form contains demographic questions, the second part consists of the "Job Satisfaction" scale to examine the job satisfaction of academicians, and the final part comprises "A Job Stress Scale-20" to examine academicians' job stress.

Seven open and closed-ended questions are part of the survey to describe the demographics of the participants. The "Job Stress Scale" was used to determine the stress levels of academic staff, and the "Job Satisfaction Scale" was used to determine their satisfaction levels with their occupation. The job stress scale used for this research was developed by Arkun Tatar (Tatar, 2020). The Work Stress Scale, which has a unidimensional structure, consists of 20 questions. The internal consistency level of the scale, in which a 5-point Likert scale was used determined to be 0.91. The job satisfaction scale which contains 18 items was developed by Arthur H. Brayfield and Harold F. Rothe (Brayfield and Rothe, 1951), and a 5-item short version was created by Timothy A. Judge, Edwin A. Locke, Cathy C. Durham, and Avraham N. Kluger (Judge, Locke, Durham and Kluger, 1998). The scale was also adapted into the Turkish

language by Oğuz Başol and Mehmet F. Çömlekçi (Başal and Çömlekçi, 2020). As a result of the adaptation study, the Chi-Square/Freedom Value of the scale was found to be 2.00; the Root Mean Square Error of Approximation (RMSEA): 0.06; the Normed Fit Index (NFI): 0.99; the Non-Normed Fit Index (NNFI): 0.99; Confirmatory Factor Analysis (CFI): 0.99; Goodness of Fit Index (GFI): 0.98, and Adjusted Goodness of Fit Index (AGFI): 0.95.

Data Analysis

The data collected within the scope of the research were analyzed using Statistical Package for Social Sciences (SPSS). Exploratory Factor Analysis (EFA) and Reliability analysis tests were first carried out to determine whether the scales used in the research showed a valid structure and whether the data were reliable. After determining whether the scales used were structurally valid and reliable, it was examined whether the data showed normal distribution. In this context, it was determined that the data regarding job stress and job satisfaction scales were ±1.5, and parametric tests were performed in subsequent analyses. In the following step, the Independent Sample T-test and One-Way ANOVA test were used to determine the distribution of academic staff in terms of the descriptive characteristics of job stress and job satisfaction. In the last stage, the interaction between work stress and satisfaction was determined by simple regression analysis.

FINDINGS

Findings Based on Demographics

39.2% of the 319 total participants used for this research were women, and 60.8% were men. The age group was representative of the total workforce population consisting of 4.7%, 30 years old and under; 27.6%, 31-35 years old; 41.1%, 36-40 years old; and finally, 26.6%, 41 years old and over. In terms of educational levels, 76.5% representing the majority of the staff have a doctoral degree. 66.8% of the total respondents are married and 33.2% are single. 29.5% of the subjects did not have any children, while 22.6% had 1 child, 34.5% had 2 children, and 13.5% had 3 or more children. 106 personnel did not share their spouse's employment status because they were still single. On the other hand, 45.1% of the 213 married personnel have spouses who work, and 21.6% of married participants' spouses do not work. As far as the length of the employment demographic is concerned, the majority of the total employees tested have 11 years or more of professional experience at their employment place. Please see the following Table 1 below for details.

Table 1: Demographics of the Participants

Variables	Frequency	Percentage
Gender		
Female	125	39,2
Male	194	60,8
Age		
30 years and below	15	4,7
31-35 years	88	27,6
36-40 years	131	41,1
41 years and above	85	26,6
Marital Status		
Married	213	66,8
Single	106	33,2
Education Levels		
Graduate Education	75	23,5
Doctoral Education	244	76,5
Number of Offspring		
No children	94	29,5
1 child	72	22,6
2 children	110	34,5
3 or more children	43	13,5
Spouse's Employment		
Employees	144	45,1
Homemaker	69	21,6
Didn't disclose	106	33,3
Academic Experience		
5 years and below	48	15,0
6-10 Years	53	16,6
11-15 Years	129	40,4
16 Years and above	89	27,9
Totals	**319**	**100**

Source: Researcher's calculations

Findings Regarding the Validity and Reliability of the Scales Used

EFA was conducted to determine whether the job stress and job satisfaction scales used in the study were structurally valid for the research. In this context, the Varimax Rotation Method, one of the vertical rotation methods that have a wide usage

area and provide ease of interpretation, was preferred (Tavşancıl, 2002). In line with the obtained structure, the reliability coefficients of the scales were also measured with the Cronbach Alpha value. Structural validity and reliability results of the job stress scale are provided below in Table 2.

Table 2: EFA and Reliability Results of the Work Stress Scale

Types of Stresses	**Job Stress Levels**	**α**
JS-2	0,940	0,982
JS-4	0,939	
JS-17	0,936	
JS-3	0,935	
JS-5	0,916	
JS-11	0,915	
JS-1	0,915	
JS-6	0,913	
JS-13	0,912	
JS-20	0,905	
JS-14	0,893	
JS-15	0,889	
JS-12	0,863	
JS-7	0,804	
JS-9	0,786	
JS-8	0,778	
Eigenvalues	12,717	
Explained Variance Value	**79,480**	
Total Explained Variance Value	**79,480**	
Kaiser-Meyer-Olkin (KMO) Sampling Adequacy	**0,960**	
Bartlett's Test for Sphericity: χ^2	**8090,691**	**p=0,000**

Source: Researcher's calculations

EFA was applied to the data collected from academic participants. However, in the first stage, items IS-10, IS-16, IS-18, and IS-19 were removed from the scale due to the cross-loading, and the analysis was repeated. In line with the new structure that was obtained, a single-factor structure with 16 items was formed. With KMO=0.960 and Barlett value of $p<0.01$, it was determined that the data regarding job stress was sufficient for factor analysis. It is stated that the variance explanation ratio in single-factor scales should be at least 0.30 (Gürbüz and Şahin, 2018). However, in this study, the value obtained was much higher than the expected amount. Therefore, we

can conclude that the data is sufficient to answer the research problem (Yaşlıoğlu, 2017). When the factor loadings of the scale items are examined; it can be seen that it varies between 0.77-0.94 and meets the rule that it must be at least 0.35 (Büyüköztürk, 2007). In addition, the reliability coefficient of the scale was determined as α=0.982, and according to the >0.70 rule, the scale is seen to be highly reliable (Akgül and Çevik, 2003).

In line with the data collected from the 319 subjects participating in this research, EFA was applied to the job satisfaction scale and the reliability of the resulting structure was tested. Findings obtained from these calculations are presented below in Table 3.

Table 3: EFA and Reliability Results of the Job Satisfaction Scale

Types of Job Satisfaction	**Job Satisfaction Levels**	**α**
JS2	0,937	0,961
JS5	0,937	
JS1	0,931	
JS3	0,931	
JS4	0,914	
Eigenvalues	12,717	
Explained Variance Value	**86,534**	
Total Explained Variance Value	**86,534**	
Kaiser-Meyer-Olkin (KMO) Sampling Adequacy	**0,898**	
Bartlett's Test for Sphericity: χ^2	**1854,951**	**p=0,000**

Source: Researcher's calculation. *p<0.05

As a result of Confirmatory Factor Analysis (CFA), the KMO value of the job satisfaction scale, which has a single-factor structure, was found to be 0.898 and the Bartlett value was found to be significant at p<0.01. These values mean that the data collected from 319 people is sufficient for structural validity. The job satisfaction scale explains 86.534% of the variance. Looking at the factor loadings; It was determined that it ranged between 0.91-0.93 and satisfied the ≥0.35 rule (Tabachnick and Fidell, 2013). However, the scale for the research is found to be highly reliable with a rate of 0.961 (Akgül and Çevik, 2003).

Descriptive Analyses

At this stage, the arithmetic mean calculation was made from the descriptive analyses. In other words, the level of job stress and job satisfaction of the academic staff participating in the research was examined. The findings from these calculations

are presented in the following table 4.

Table 4: Descriptive Analyses Results of Job Stress and Satisfaction Levels

Variables	n	Min.	Max.	$\bar{X}$	SS
Job Stress	319	1,00	5,00	2,746	1,247
Job Satisfaction	319	1,00	5,00	3,228	1,348

Source: Researcher's calculation

As we can see from Table 4, the job stress experienced by the academic staff who participated in the study is calculated to be $\bar{X}$=2.75, and accordingly, the job satisfaction is determined to be the medium level of $\bar{X}$=3.23.

Variable Analyses

The job stress and job satisfaction levels of academic staff were also compared in terms of gender, age, marital status, education level, number of children, spouse's working status, and professional experience for this investigation. In this context, the independent sample T-test was performed for binary variables, and the One-Way ANOVA test was performed for multiple variables.

Detailed analyses of job stress and satisfaction comparison in terms of gender are given below in Table 5.

Table 5: Comparison of Job Stress and Satisfaction Levels According to Gender

Variables	Gender	N	$\bar{X}$	SS	t	p
Job Stress	Female	125	3,345	1,230	7,454	**0,000***
	Male	194	2,360	1,099		
Job Satisfaction	Female	125	3,017	1,447	-2,260	**0,025***
	Male	194	3,364	1,266		

Source: Researcher's calculation. *p<0.05

As can be seen in Table 5, the job stress of the female academic participants in this research was higher with t=7.454, and p<0.05. On the other hand, their job satisfaction was lower with t=-2.266, and p<0.05.

For this research, whether job stress and job satisfaction differed significantly according to the ages of academic staff participating in this study was investigated and the analyses are presented in the following Table 6.

Table 6: Comparison of Job Stress and Satisfaction Levels According to Age Demographics

Variables	Age Brackets	N	$\bar{X}$	SS	F	p	Scheffe
Job Stress	**1.** 30 Years and Blow	15	3,829	0,860	5,121	**0,002***	**1>2**
	2. 31-35 Years	88	2,627	1,218			**1>3**
	3. 36-40 Years	131	2,829	1,268			**1>4**
	4. 41 Years and Above	85	2,550	1,208			
Job Satisfaction	**1.** 30 Years and Blow	15	2,040	0,941	6,007	**0,001***	**1<2**
	2. 31-35 Years	88	3,372	1,275			**1<3**
	3. 36-40 Years	131	3,096	1,425			**1<4**
	4. 41 Years and Above	85	3,494	1,238			

Source: Researcher's calculation. *p<0.05

Table 6 shows a significant difference in the feelings of job stress and job satisfaction according to the tested age groups. Job stress level displayed at F=5.121, a p-value of 0.002 which is less than the expected p<0.05, and job satisfaction level, F=6.007, p<0.05 indicated this difference. We can conclude from these findings that the job stress of younger employees, aged 30 and under is greater than the older groups, and the job satisfaction of the same group is also lower than the other brackets.

The job stress and satisfaction level differentiation among the married and single participants were also investigated for this research, and the findings are displayed below, in Table 7.

Table 7: Comparison of Job Stress and Satisfaction Levels According to Marital Status

Variables	Marital Status	N	$\bar{X}$	SS	t	p
Job Stress	Married	213	2,849	1,289	2,096	**0,037***
	Single	106	2,540	1,136		
Job Satisfaction	Married	213	3,091	1,367	-2,609	**0,010***
	Single	106	3,505	1,272		

Source: Researcher's calculation. *p<0.05

According to the analysis and the depicted table, we see that the married participants' job stress t=2,096, p<0,05 is higher than the singles group, and the job satisfaction of t=-2,609, p<0,05 is lower than the single groups of participants.

The research also entailed job stress and job satisfaction levels of academic staff working at the university compared to their educational status. The findings of this

analysis are depicted below in Table 8.

Table 8: Comparison of Job Stress and Satisfaction Levels According to Education Levels

Variables	**Education Levels**	**N**	$\bar{X}$	**SS**	**t**	**p**
Job Stress	Master's Education	75	2,512	1,206	-1,908	0,059
	Doctoral Education	244	2,818	1,254		
Job Satisfaction	Master's Education	75	2,960	1,460	-1,868	0,064
	Doctoral Education	244	3,311	1,304		

Source: Researcher's calculation. *p<0.05

As seen in Table 8, it was determined that the job stress and job satisfaction levels of academic staff with both master's and doctoral degrees were close to each other with levels of p>0.05, indicating an insignificant difference.

The relationship between occupational stress and satisfaction of participants in terms of the number of children they have was analyzed and the results are presented in the following Table 9.

Table 9: Comparison of Job Stress and Satisfaction Levels According to the Number of Children

Variables	**Number of Children**	**N**	$\bar{X}$	σ	**F**	**p**	**Scheffe**
Job Stress	**1.** Without Children	94	2,539	1,089	3,525	**0,015***	**4>1**
	2. One Child	72	2,684	1,304			
	3. Two Children	110	2,759	1,282			
	4. 3 or More Children	43	3,268	1,273			
Job Satisfaction	**1.** Without Children	94	3,568	1,201	7,478	**0,000***	**4<1**
	2. One Child	72	3,363	1,389			**4<2**
	3. Two Children	110	3,152	1,293			**4<3**
	4. 3 or More Children	43	2,455	1,435			

Source: Researcher's calculation. *p<0.05

According to the result presented in Table 9, the work stress experienced by academic staff with three or more children who participated in the research was higher than those who did not have any children, where F=3.525, and p<0.05.

As depicted in Table 10, the number of married personnel who participated in this study was 213 individuals. The job stress and job satisfaction levels of the participants were compared according to their spouses' working status, and the results are shown below.

Table 10: Comparison of Job Stress and Satisfaction According to Spouse's Employment

Variables	Spouse's Employment Status	N	X̄	SS	t	p
Job Stress	Employed	144	2,649	1,239	-3,283	**0,001***
	Unemployed	69	3,265	1,299		
Job Satisfaction	Employed	144	3,283	1,307	2,940	**0,004***
	Unemployed	69	2,689	1,411		

Source: Researcher's calculation. *p<0.05

In the analysis depicted in Table 10, it may be determined that the stress level of academic staff whose spouses were not working was higher with t=-3.283, and p<0.05, whereas the satisfaction level was lower with t=2.940, and p<0.05.

For the following analysis, it was examined whether job stress and job satisfaction differ significantly in terms of the professional experience of the academic staff tested. As a result of this analysis Table 11, which is depicted below was obtained.

Table 11: Comparison of Job Stress and Satisfaction According to Job Experience

Variables	Job Experience	N	X̄	SS	F	p	Scheffe
Job Stress	**1.** 5 years and below	48	3,289	1,163	4,811	**0,003***	**1>3** **1>4**
	2. 6-10 Years	53	2,827	1,219			
	3. 11-15 Years	129	2,704	1,218			
	4. 16 Years and above	89	2,467	1,270			
Job Satisfaction	**1.** 5 years and below	48	2,608	1,270	8,647	**0,000***	**3>1,2** **4>1,2**
	2. 6-10 Years	53	2,766	1,383			
	3. 11-15 Years	129	3,432	1,278			
	4. 16 Years and above	89	3,543	1,304			

Source: Researcher's calculation. *p<0.05

The stress level of academic staff with five years and less work experience was higher than the academic staff with 11-15 years, and 16 and more years of experience with a value of F=4.811, and p<0.05. Less stressful groups 11-15 years and 16 or more years of experienced participants were also found to have higher satisfaction level than the personnel with 5 years and less and 6-10 years of experience with F values of 8.647, and p<0.05.

Findings According to Regression Analyses

Simple linear regression analysis was carried out on the data to determine the

effect of job stress on the job satisfaction of academic staff who were tested. The result of the analysis is depicted in Table 12.

Table 12: The Effects of Job Stress on Job Satisfaction

Mode	**Non-Standardized Coefficients**		**Standardized Coefficients**	**t**	**p**
	B	**Std. Dev.**	**β**		
Fixed	4,591	0,163		28,197	**0,000***
Job Stress	-0,496	0,054	-0,458	-9,183	**0,000***
R	0,458				
R^2	0,210				
Adjusted R^2	0,208				
Standard Deviation	1,200				
F	84,334				**0,000***

Source: Researcher's calculation. *p<0.05

According to these calculations, we can conclude that the work stress of academic staff affects their satisfaction levels by 20.8%. In other words, it was determined that a one-unit increase in job stress causes a 0.496-unit decrease in job satisfaction.

LIMITATION OF THE RESEARCH

As many behavioral scientists point out in the literature, many statistical calculations just like what the researcher has done for this study, intend to make generalizations, disregarding individual differences and personality traits. These qualitative studies are intended to explain average behaviors, despite considerable differences between individuals that may influence individual motivational factors. For example, while money could be regarded as the ultimate motivator for some employees, recognition, and lack of stress could be more important for others.

This is why Canadian Psychologist and Business School Professor Victor Vroom proposed The Expectancy Theory like Maslow's Hierarchy of Needs Theory, providing the framework for various motivational expectations (Vroom, Porter & Lawler, 2015). For this research, individual differences, preferences, and expectations were not considered to reach a general understanding of job stress and job satisfaction. The research also did not measure performance-related output increases or decreases. Additional studies may be conducted in these mentioned areas, and decision-makers and researchers must factor in these shortcomings while evaluating this research and applying it to their work environments.

Other than the individual differences and expectations, country and regulation differences that exist in each country, locality, and state may limit the generalization and application of every situation and locality.

DISCUSSION AND CONCLUSION

As a result of the analysis, it was determined that the job stress experienced by academic staff and, accordingly, their job satisfaction was at a medium level. This finding was in agreement with the literature. Pearson and Seiler's (1983) research at American universities also found academic jobs to be more satisfying than dissatisfying. Spector (1998) found teaching jobs to be generally satisfying, and satisfaction, performance, and better productivity are directly related phenomena. Greenberg's (2002) research result is also in agreement with the research outcome indicating university jobs to be more satisfying occupations. Bozkurt and Bozkurt (2008) indicate that while academicians are found to have many occupational problems with their work, they find their jobs to be valuable and enjoyable. Chaudhry (2012) found no significant relationship between overall job satisfaction and work stress while finding an inverse relationship between these two factors among private university professors.

It was determined that the female staff participating in the research had higher job stress and lower job satisfaction. This outcome is not always in agreement with others in the literature. While most of the literature research agreed with our findings of a significant difference between male and female participants in their job stress and satisfaction, Bilgiç (1998), and Chaudhry (2012) found no significant difference between male and female participants in their research.

It has been revealed that the job stress and job satisfaction of personnel aged 30 and under are higher. This outcome has been confirmed in all other research that has been investigated in the literature. There is no contradictory finding in this area.

It has been determined that married academic staff have higher job stress, but lower job satisfaction. This analysis result may be reached due to one of the potential factors called the home-work interface that influences job stress and job stress lowers job satisfaction (Ahsan et all, 2009).

It has been determined that the work stress experienced by academic staff who have three or more children is higher than those who do not have children. Likewise, the job satisfaction levels of participants with three or more children were lower compared to other participants. This result again, is no different than the above factor of being married. The other mentioned studies conducted in this regard like Ahsan et

al (2009) and others are indicative of the home-work interface increasing the stress and lowering the satisfaction levels of the employees.

For the same reasons mentioned above two related factors, in the study, it was determined that the stress level of academic staff whose spouses are not working was higher, but their satisfaction level was lower than their counterparts.

The stress level of academic staff with five and six years of experience was higher than the stress level of academic staff with 11 to 15 years of experience and 16 or more years of experience. On the other hand, the job satisfaction of the personnel with 11-15 years of experience and 16 or more years of experience was found to be higher than the satisfaction level of the personnel with 5 years or less and 6-10 years of experience. These results were in accord with other studies mentioned above in the literature section of the study (Bozkurt & Bozkurt, 2008; Chaudhry, 2012; Kaur, 2017).

In the analysis conducted to determine the effect of job stress on job satisfaction, it was found that job stress affected the satisfaction level by 20.8%. In other words, it was determined that a one-unit increase in job stress caused a 0.496-unit decrease in job satisfaction.

Recommendations

While conducting this research, it was noted that most of the research dealing with job satisfaction and stress in the literature has been done in the fields of Higher Education and Healthcare industries. Conducting similar studies in other fields, such as manufacturing or service industries would be beneficial and more comprehensive. This way, the application of the findings would be broader and applicable.

The other improvement that could be made to produce more accurate and reliable results would be using a bigger sample size and conducting longer time series studies to eliminate external factors such as political and economic influences.

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