WORK RELATED FACTORS THAT AFFECT

BURNOUT AMONG ACCOUNTING

AND FINANCE ACADEMICIANS

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ÖZET

Bu çalışmanın amacı, Türkiye'deki akademisyenlerin tükenmişlik düzeylerini ölçmek ve akademisyenlerin tükenmişlik düzeylerini etkileyen faktörleri araştırmaktır. Veriler, toplam 78 kamu üniversitesinin ve özel üniversitenin İktisadi ve İdari Bilimler Fakültelerinde muhasebe - finansman anabilim dalında görev yapan 160 akademisyenden, sosyo-demografik anket formu, Maslach Tükenmişlik Envanteri ve "iş ve iş çevresi" ölçeği kullanılarak toplanmıştır. Verilerin analizinde tanımlayıcı istatistik (ortalama ve standart sapma), korelasyon analizi, faktör analizi ve lojistik regresyon analizi kullanılmıştır. Çalışmada, genel tükenmişlik ve tükenmişlik alt boyutlarının skorları, diğer çalışmaların sonuçlarına göre daha düşük bulunmuştur. Akademisyenlerin tükenmişlik düzeylerini etkileme olasılığı bulunan 12 maddeli "iş ve iş çevresi" ölçeğine uygulanan faktör analizi sonucunda, dört temel faktör ortaya çıkmıştır. Bu faktörler; iş çevresi, idari işyükü, akademik işyükü ve ilerleme ve değerlemedir. Bu faktörlerin akademisyenlerin genel tükenmişlik düzeyleri ve tükenmişliğin alt boyutları üzerindeki etkilerini belirlemek amacıyla, lojistik regresyon analizi kullanılmıştır. Lojistik regresyon analizinin sonuçları, tükenmişlik düzeyi üzerinde en fazla etkiye iş çevresi faktörünün sahip olduğunu, bunu, idari işyükü, akademik işyükü ve ilerleme ve değerleme faktörlerinin izlediğini göstermiştir.

Abstract:

The purpose of this study was to measure the levels of burnout among academicians and to investigate the factors that affect burnout levels of academicians in Turkey. The data were obtained by using sociodemographic data form, Maslach Burnout Inventory and "work and work environment" scale from 160 academicians that have been working in accounting and finance sub-department in Faculties of Economics and Administrative Sciences in 78 public and private universities. In the analysis of data, descriptive statistics (mean and standard deviation), correlation analysis, factor analysis and logistic regression analysis were used. In this study, general burnout scores and subscales of burnout scores were found to be lower than other studies. The factor analysis of the 12 item "work and work environment" scale which has possible effects on burnout among academicians revealed four factors: Work environment, administrative workload, academic workload and promotion and evaluation. For determining the possible influence of factors which were revealed by factor analysis upon general burnout levels and burnout subscales, logistic regression analysis was used. Results of the logistic regression analysis indicated that the most significant predictor of burnout was the factor of work environment, followed by the factors of administrative workload, academic workload, and promotion and evaluation.

Keywords: *Burnout, academicians, factors affecting burnout, academic work and work environment.*

Introduction

The feeling of burnout which is experienced heavily in jobs requiring face-to-face relations but which also might be faced in many branches of business, has been described as a psychological syndrome today. This feeling, which is also defined as a reduction of psychological and physical energy that comes out after the process of a chronic stress related with work, is likely to be considered as a higly stressed and felt psychological fact of society of modern performance.

The term burnout was transferred to social sciences from the language of aerospace. While the term burnout is used to describe the consumption of fuel in rockets and nuclear reactors in language of aerospace, in social sciences, burnout is used to define becoming exhausted, especially as a result of overwork or occupational stress (Briscoe, 1984). The concept of burnout was first used by Freudenberger in 1974. Freudenberger (1974) defined burnout as a state of fatigue and emptiness of physical and mental power, a state of

being worn out. In the most widely used definition which was done by Maslach (1993), burnout is described as "a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity." It is a response to the chronic emotional strain of dealing extensively with other individuals, particularly when they are troubled or have problems. It can be considered as one type of job stress. According to Maslach (1993), there are three components of burnout: Emotional exhaustion, depersonalization and reduced personal accomplishment. Emotional exhaustion refers to the depletion of psychic energy or the draining of emotional resources. Depersonalization refers to the development of negative, cynical attitudes toward the recipients of one's services. Reduced personal accomplishment is the tendency to evaluate one's own work with recipients negatively, an evaluation that is often accompanied by feelings of insufficiency. Individuals with high levels of emotional exhaustion report feeling psychologically drained. They have little energy or motivation left from themselves to give to others or to their job. Individuals with high levels of depersonalization report feeling cynical, pessimistic, and apathetic towards one's clients. Low levels of personal accomplishment are associated with feelings of negativity towards oneself, especially in the context of one's relationship to clients.

Burnout is important for business and social life because of its devastative effects. Firstly, burnout has negative impacts on the psychological and physical health of individuals. Burnout is assumed to be a contributing factor in the development of family discord, drug and alcohol abuse, insomnia, and fatigue (Jackson & Maslach, 1982; Mcdonald & Siegall, 1998; Evers & Tomic, 2003; Bailey, 2006). Also, burnout is positively correlated with reports of headaches, sleep disturbances, and other somatic symptoms of stress (Kacmaz, 2005; Taycan et al., 2006; Bauer et al., 2006; Bailey, 2006). Secondly, burnout has an effect on job productivity and performance. In general, burnout decreases job performance, job satisfaction, job commitment and quality of service, and increases absenteeism, low morale, and job turnover (Maslach & Jackson, 1984; Nowack et al., 1985; Schwab et al., 1986; Rocca & Kostanski, 2001; Ing-Chung et al., 2003; Marchiori & Henkin, 2004; Uskun et al., 2005; Toppinen-Tanner et al., 2005; Piko, 2006). In order to suggest prevention strategies, the factors which cause burnout have to be identified and accordingly, differential methods may be recommended. In the last two decades, a lot of studies have been conducted about burnout in both academic world and

business world for the purpose of explaining the phenomenon and suggesting prevention strategies.

A broad range of occupations can experience burnout. Burnout is a prolonged response to chronic job-related stressors. Thus, various studies have been carried out on members of different occupations such as doctors, nurses, policemen, teachers, librarians, and managers. In these studies, a lot of factors were found to be considerable predictors of burnout. In general, these factors are divided into two groups: Personal (demographics) factors and environmental (organizational and work) factors. Several studies have found that organizational factors and work features were more highly correlated with burnout than personal factors (Pagel & Wittman, 1986; Lecroy & Rank, 1987; Schaufeli & Janczur, 1994; Maslanka, 1996; Zellars et al., 2000; Rocca & Kostanski, 2001; Kırılmaz et al., 2003). In addition to organizational and work features, some demographic characteristics, such as age, gender and marital status were found to be related to burnout in several studies (Maslach & Jackson, 1985; Poulin & Walter, 1993; Sucuoglu & Kuloglu, 1996; Sarı, 2004; Lau et al., 2005; Siebert, 2006; Taycan et al., 2006; Sunter et al., 2006). Attention to these factors may alleviate symptoms of burnout among employees.

Educators are particularly susceptible to burnout, probably due to the close and persistent contact with students. But, many of the burnout studies related to educators included teachers as participants. Another educator group, academicians also deserve the attention of researchers as an occupational group candidate for burnout symptoms. Several factors contribute to academic burnout due to different work conditions and organizational characteristics. Some of these factors are number of students that one must deal with (Lackritz, 2004: 713), levels of job satisfaction (Seiler/Pearson, 1984: 301), reward systems (Todd-Mancillas/Johnson, 1987), promotion in occupation (Bilici et al., 1998: 186), level of income/salary (Bilici et al., 1998: 186; Briscoe, 1984: 4), teaching load (Todd-Mancillas/Johnson, 1987), unappreciative students (Todd-Mancillas/Johnson, 1987), budget concerns (Johnson, 1989), administrative style (Johnson, 1989), communication and environmental problems (Johnson, 1989), job security (University of Plymouth, 2003: 6; Tytherleigh, 2005: 41), time invested in various activities (Lackritz, 2004: 713) and personal characteristics such as age, gender, and marital status (Lackritz, 2004: 713; Faculty Recruitment & Retention Committee, 1999: 11; Jaschik, 2005; Johnson, 1989; Bilici et al., 1998: 181; Özdemir et al., 1999: 98; Barut/Kalkan, 2002: 66).

In our study, organizational and work related factors that affect burnout levels of academicians were examined, so that results of the related litareture were presented here in detail. In these studies, different findings have been found. A study which was done by Johnson (1989) to identify factors contributing to burnout experienced by full time faculty members and sfaff showed that full-time faculty burnout was a significant problem; gender, ethnicity and length of service were not significantly related to burnout; and major contributors to burnout were treatment of faculty, budget concerns, administrative style, the cluster system, communication problems and environmental problems. Lackritz (2004) examined burnout among 265 university faculty members and found that burnout showed significant correlations with numbers of students taught, time invested in various activities and numerical student evaluations. Talbot (2000) investigated the relationship between burnout among community college nursing faculty members and their use of humor to mediate academic stress related to burnout, and found that differences in burnout between high versus low humor usage respondents showed a higher sense of personal accomplishment with high humor usage and workload was related to emotional exhaustion and depersonalization with low humor usage. Neidle (1984) concluded that burnout often occurs at various intervals throughout one's academic career. McDonald and Siegall (1998) explored the effects of job burnout and positive expectations regarding alcohol use among university professors. Results of this study showed that faculty members who experienced greater degrees of job burnout and had more positive expectations regarding the use of alcohol reported a significantly higher level of binge drinking. Differences in factors contributing to the relationship between burnout and drinking were found between men and women. Diminished personal accomplishment was found significantly related to drinking for women and depersonalization was found significantly related to drinking for men. Doyle and Hind (1998) examined whether differences in work-related stress and burnout existed among male and female academics working in psychology departments. They found that females had greater work stress but lower levels of burnout. Siegall and McDonald (2004) investigated the role of person-organization value congruence on the experience of burnout among academicians. They found that burnout was associated with less time spent on teaching, service/administrative tasks and professional development activities and person-organization value congruence was strongly associated with burnout. Singh et al. (1998) investigated the effects of intrinsic motivation to do research and perceived lack of rewards contingent on doing research on burnout

among academicians and found that these two variables were related to burnout. In other words, the effects of perceived lack of rewards contingent on doing research and intrinsic motivation to do research contributed to burnout levels of academicians. Chalmers (1998) investigated workload and stress in New Zealand universities and found that the main sources of work related stress for many university staff were linked to their work and workload, rather than the contents of their jobs, most academicians worked in the evening or took work home on one evening or more a week, and university staff were concerned about funding, career prospects, the ability to exercise academic freedom and to take research leave and working life in general. Jacobs and Winslow (2004) stated that academicians have more autonomy regarding the substance of their work and more flexibility in their daily schedules but they work long hours for less pay than many other professionals. These researchers indicated that the average workweek for full-time academicians exceeds fifty hours.

In Turkey, there is not enough research about burnout among Turkish academicians and most of these studies are related to the relationship between burnout levels and demographic factors. In these studies, Barut and Kalkan (2002) investigated the relationship between burnout and demographic characteristics among academicians in Ondokuz Mayıs University; Özdemir et al. (1999) compared the levels of burnout among academicians in two faculties in Cumhuriyet University; Bilici et al. (1998) investigated the association between the level of burnout and demographic factors and depression in five faculties in Karadeniz Technical University. The aim of this study is to explore the levels of burnout among academicians and to investigate the factors that affect burnout levels of academicians.

Methodology

Population of the study and sample

The population of the study comprised academicians that have been working in accounting and finance sub-departments in faculties of Economic and Administrative Sciences in 78 public and private universities in Turkey. The questionnaires were sent through electronic mail to 400 academic staff which constitutes the universe of the study. The survey was conducted between May 1, 2006 and July 30, 2006. A total of 160 completed questionnaires were received back, giving a response rate of 40%.

Data instruments

Data were collected using three different questionnaires. The first questionnaire was sociodemographic data form which was designed to gather information regarding gender, age, marital status and number of children, level of education, academic title, institution, years in occupation and years in institution. This questionnaire consisted of nine questions.

The second questionnaire was the Maslach Burnout Inventory (MBI) which developed by Maslach and Jackson (1981) and for measuring burnout. It has been translated and adapted into Turkish by Ergin (1992). The inventory consists of 22 items forming three subscales: Emotional exhaustion, personal accomplishment and depersonalization. The emotional exhaustion subscale consists of nine items which describe feelings of being emotionally over extended and exhausted by one's work. The five items on the depersonalization subscale describe unfeeling and impersonal responses to co-workers or recipients of services. The personal accomplishment subscale consists of eight items, describing feelings of competence and success about one's achievements. These items' coding was reversed in this study therefore the analyses were done after adjusting the reverse items. The items in the scale are scored on a five-point scale ranging from "never" (0) to "always" (4). High scores on emotional exhaustion and depersonalization, and low scores on personal accomplishment are indicative of burnout. For determining the reliability of the Maslach Burnout Inventory used in this study, Cronbach's alpha was used. Cronbach's alpha coefficient was 0,88 for general burnout, 0,86 for emotional exhaustion, 0,72 for depersonalization, and 0,58 for personal accomplishment.

The third questionnaire was "work and work environment" scale which was developed by Houston et al. (2004) for investigating the factors that affect burnout levels of academicians. This scale was translated into Turkish and performed a validity and reliability analysis of the Turkish version of the scale by ourselves. The "work and work environment" scale consists of 13 items with five alternative responses i.e., strongly agree, agree, undecided, disagree and strongly disagree which are scored from 1 to 5.

Analysis of data

The data were analyzed by using SPSS 13 (The Statistical Package for Social Sciences). The descriptive data analysis was conducted by calculating frequencies, mean scores and standard deviations for describing background characteristics of the respondents and determining burnout levels. Pearson correlations were calculated to

examine the associations among the burnout subscales. Exploratory factor analysis was used to uncover the latent structure (dimensions) of the items in the "work and work environment" scale. Logistic regression analysis was used to assess the effect of the work and work environment factors on general burnout level and burnout subscales.

Findings

The findings of the study were examined in two sections. In the first section, the demographic characteristics of the respondents, and in the second section, the results of the analyses were presented.

Demographic characteristics of the respondents

Demographic characteristics of the sample are shown in Table 1. The table shows the distribution of respondents by gender, age, marital status, number of children, level of education, institution (public or private university), academic title, years in institution and years in occupation (tenure).

As seen in Table 1, 66% of the respondents were female and 34% of the respondents were male. According to the age of academicians, 28,9% of the respondents were between 21-30 years, 44,7% of the respondents were between 31-40 years, 19,5% of the respondents were between 41-50 years. Only 1,3% of the respondents were 61 or above years of age. Most of the participants were married (71%). While 44% of the participants had no children, 56% of them had one or more children. According to the level of education, 70% of the academicians had Ph.D. degree. According to the academic title, 35,2% of the respondents were research assistant, 12,6% of the respondents were lecturer, 30,2% of the respondents were assistant professor, 12,6% of the respondents were associate professor and 9,4% of the respondents were professor. While 88,7% of the participants had worked in a public university, 11,3% of the participants had worked in a private university. According to the years in occupation or tenure, 22% of the participants had been in high education between 1-5 years, 25,2% of the participants had been in higher education between 6-10 years, 28,3% of the participants had been in higher education between 11-15 years, %8,8 of the participants had been in higher education between 16- 20 years and 11,9% of the participants had been in higher education for more than 20 years. According to the years in institution, percent rates were equal for 1-5 years, 6-10 years and 11-15 years. It

was seen that 15,6% of the participants had been at the institution for more than 15 years.

Results

Burnout scores of academicians

The means and standard deviations of the general burnout and three burnout subscale scores are shown in Table 2. As seen in Table 2, four different scores were calculated; general burnout score, emotional exhaustion score, depersonalization score and personal accomplishment score. Possible minimum - maximum-scores were 0-88, 0-36, 0-20 and 0-32 for general burnout, emotional exhaustion, depersonalization and personal accomplishment, respectively. The higher mean scores of the emotional exhaustion and depersonalization subscales and lower mean scores on personal accomplishment subscale correspond to greater degrees of burnout. The general burnout scores changed between 7-61, mean score of the general burnout was 24,7 and standard deviation of the general burnout score was 10.25. While the mean score on the emotional exhaustion subscale was 10,2 (SD=6,10), the mean score on the depersonalization subscale was 2,9 (SD = 2,64). On the personal accomplishment subscale, the mean score was 11,6 (SD = 3,45). The average scores seem to imply that burnout levels of academicians were not higher, however, since a norm table of the burnout level of academicians that would make comparisons possible does not exist, this conclusion has to be approached with caution.

Table 2. Means and standard deviations of burnout scores

Subscales	N	Item Number	Mean	Std. Deviation	Minimum Score	Maximum Score
Emotional Exhaustion	160	9	10,2000	6,10269	,00	30,00
Depersonalization	160	5	2,9250	2,64349	,00	13,00
Personal Accomplishment	160	8	11,6000	3,44991	5,00	24,00
General Burnout	160	22	24,7250	10,25704	7,00	61,00

To examine the relationship between the general burnout and burnout subscales, Pearson correlation analysis was used. The results of this anaysis are shown in Table 3. There were significant positive relationships among general burnout and burnout subscales. General

burnout was strongly correlated with the level of emotional exhaustion subscale (r =0,94). Also, there were significant intercorrelations among burnout subscales. The emotional exhaustion had positive and significant correlations with depersonalization and personal accomplishment. The relationship between personal accomplishment and depersonalization was significant, but lower.

Table 3. Correlation coefficients

Subscales	EE	D	PA	GB
Emotional Exhaustion (EE)	1	,661(**)	,529(**)	,943(**)
Depersonalization (D)	,661(**)	1	,300(**)	,752(**)
Personal Accomplishment (PA)	,529(**)	,300(**)	1	,728(**)
General Burnout (GB)	,943(**)	,752(**)	,728(**)	1

** p= 0.01 significance level (Pearson Correlation)

Factor analysis

Exploratory factor analysis was used to assess the work and work environment factors that were supposed to affect burnout among academicians. Firstly, KMO (Kaiser-Meyer-Olkin) sampling adequacy measure was calculated for determining the convenience of data for factor analysis. KMO varies from 0 to 1. This measure shows that sampling is convenient for factor analysis when it is close to 1 and it shows that sampling is not convenient for factor analysis when it is under 0,50. KMO sampling adequacy measure was 0,765, therefore, sampling was convenient for factor analysis. Also, significance level of Bartlett test was calculated as 0,00. Consequently, both of the tests showed that factor analysis could be applied to the data.

In the factor analysis, principal components analysis and varimax rotation technique were used. The obtained factor analysis results were examined, because of the the factor related to research fund having only one item, the analysis has been done again excluding that variable. The results of this analysis revealed four factors with eigenvalues of 1,0 or higher. These factors explained 65% of the total variance. Factor 1 explained the highest proportion of the total variance (22%) and consisted of items which were labeled "work environment". Factor 2 explained 16,15% of the total variance and consisted of items which were related to "administrative workload". Factor 3 explained 13,8% of the total variance and factor 4 explained 13% of the total variance and they consisted of items which were related to "academic

(occupational) workload" and "promotion and evaluation", respectively. Table 4 shows factor distribution of items.

Table 4. Factor analysis results of work and work environment scale

Work and Work Environment Factors	**Factor 1**	**Factor 2**	**Factor 3**	**Factor 4**
Work Environment				
I am willing to put in a great deal of effort in order to help this university be successful.	,474			
I feel acknowledged for a job well done.	,884			
I am supported when change and new initiatives are being introduced.	,850			
Staff morale is high within my department, institute, school, or unit.	,763			
Administrative Workload				
The amount of administration I am expected to do is reasonable.		,587		
The number of students I am expected to teach and/or supervise is reasonable.		,812		
I have time to do good quality research.		,703		
Academic Workload				
My workload has increased over the past 12 months.			,718	
I often need to work after hours to meet my work requirements.			,742	
Promotion and Evaluation				
I believe the promotion procedures recognize the variety of work that staff do.				,863
I believe that teaching and research achievements are considered equally by promotion committees.				,636
I know what is expected of me in my role.				,498

For internal reliability of the factors, Cronbach's alpha coefficient was calculated and reliability of the factors were 0,772, 0,661, 0,648 and 0,549 for work environment, administrative workload, academic

workload and promotion and evaluation, respectively. Also, total reliability of the scale was 0,781 Therefore, Work and Work Environment scale appeared to be a reliable instrument.

Logistic regression analysis

In this section, the effects of variables which were revealed by factor analysis (work environment, administrative workload, academic workload and promotion and evaluation) upon burnout levels of academicians were investigated by using a logistic regression analysis. For this purpose, logistic regression analysis was used which is one of the multi variable statistical techniques and aimed to appraise the relationships between the dependent variable and metric independent variables. As it's known, in a logistic regression analysis the effects of independent variables on dependent variables are determined by using probability of the levels of dependent variables. Logistic regression was preferred instead of other similar methods such as regression analysis and discriminant analysis because of its less stringent assumptions. Logistic regression does not assume linearity of relationship between the independent variables and the dependent, does not require normally distributed variables, and does not assume homoscedasticity. For selecting variables in the logistic regression the stepwise forward selection method was used. In the logistic regression analysis, for determining the impact of independent variables on dependent variables, the academicians who had low scores of general burnout, emotional exhaustion, depersonalization and personal accomplishment was coded with the reference category=0 and the academicians who had high scores of general burnout, emotional exhaustion, depersonalization and personal accomplishment was coded with the reference category=1.

Predictor variables of general burnout. In the logistic regression model which was constituted for determining the effect of predictor variables (work environment, administrative workload, academic workload, promotion and evaluation, and research fund) on general burnout levels of academicians, Hosmer-Lemeshow statistic was 7,637, -2 log likelihood statistic (LL) was 58,024 and significant level (p) was 0,470 (p>,05) with 8 degrees of freedom. The results of goodness-of-fit test which are shown in Table 6 indicated that the logistic regression model was not a good fit. The Cox and Snell R^2 was found to be 9,8% in the first step and this statistic indicated that there was an approximately

10% relationship between general burnout and predictor variable of work environment. Also, Nagelkerke R^2 indicated that there was a 25,3% relationship between general burnout and work environment predictor variable. In other words it showed that 25% of the variation in the dependent variable was explained by work environment predictor in the model.

Table 5. Goodness-of-fit test of model for general burnout

Step	-2 Log likelihood	Cox & Snell R^2	Nagelkerke R^2	Chi-square	Df	Sig.
1	58,024(a)	,098	,253	7,637	8	,470

a: Estimation terminated at iteration number 7 because parameter estimates changed by less than ,001.

Table 6 shows the results of the regression model which was constituted for determining the predictors of general burnout. In Table 6, "B" column shows the coefficients (called Beta Coefficients) associated with each predictor, "sig." column shows the significant levels and "Exp(B)" column shows the odds ratios. The *odds* ratio is defined as the probability of the outcome event occurring divided by the probability of the event not occurring and the odds ratio for a predictor tells the relative amount by which the odds of the outcome increase (odds ratio greater than 1,00) or decrease (odds ratio less than 1,00) when the value of the predictor value is increased by 1.0 units. In the model, the "B" coefficent was 1,374 for work environment factor, p value was 0,001 and the model was statistically significant (p<,05). The odds ratio was 3,950 and it indicated that one unit increase in work environment increases 3,950 times the odds of increasing general burnout.

Table 6. Results of logistic regression for general burnout

		B	S.E.	Wald	Df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1(a)	Work Environment	1,374	,397	11,988	1	,001	3,950	1,815	8,597
	Constant	-3,421	,546	39,263	1	,000	,033		

a: Variable(s) entered on step 1: Work Environment.

The success of the logistic regression can be assessed by looking at the classification table. Table 7 shows correct and incorrect estimates. The columns are the two predicted values of the dependent,

while the rows are the two observed (actual) values of the dependent. According to this table, when decreasing of general burnout level was 100%, increasing of general burnout level was 0%. The overall correct classification percentage of the model was 93,2%.

Table 7. Classification table of logistic regression for general burnout

		Predicted		Percentage
		GB		Correct
		0	1	
Observed	0	140	0	100,0
GB	1	10	0	,0
Overall Percentage				93,3

The cut value is ,500

Predictor variables of emotional exhaustion. In the logistic regression model which was constituted for determining the effect of predictors on emotional exhaustion levels of academicians, Hosmer-Lemeshow statistic was 6,399 and marginal significant level was 0,603 (p>,05) with 8 degrees of freedom. The results of goodness-of-fit test which are shown in Table 9 indicated that the logistic regression model was not a good fit. When the Cox and Snell R^2 indicated that 21,8% of the variation in emotional exhaustion level was explained by work environment, administrative workload and academic workload, Nagelkerke R^2 indicated that 42,9% of the variation in emotional exhaustion level was explained by these three predictor variables in the model.

Table 8. Goodness-of-fit test of model for emotional exhaustion

Step	-2 Log likelihood	Cox & Snell R^2	Nagelkerke R^2	Chi-square	Df	Sig.
1	83,404(a)	,140	,276	9,910	8	,271
2	78,948(a)	,165	,326	14,608	8	,067
3	73,696(b)	,194	,383	5,373	8	,717
4	69,207(b)	,218	,429	6,399	8	,603

a: Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.
b: Estimation terminated at iteration number 7 because parameter estimates changed by less than ,001.

Table 9 shows the results of the regression model which was constituted for determining the predictors of emotional exhaustion. The table's left column shows that stepwise model-building process included four steps. In the first step, a constant as well as work environment predictor variable was entered into the model, at the second step, administrative workload predictor variable was added to the model, at the third step, academic workload predictor variable was added to the model and at the four step, promotion and evaluation predictor variable was added to the model. The beta coefficient (B) of work environment was 1,783 and p value was 0,00 and statistically significant at 0,05 level (p<,05). The odds ratio of work environment predictor was 5,945 and this statistic indicated that one unit increase in work environment increases 5,945 times the odds of increasing emotional exhaustion. The beta coefficient for administrative workload was 0,960 and p value was 0,010 and significant at 0,05 level. The odds ratio of administrative workload was 2,611 and indicated that one unit increase in this independent variable increases 2,611 times the odds of increasing emotional exhaustion. The beta coefficient for academic workload was 1,313 and p value was 0,013 and significant at 0,05 level. The odds ratio of academic workload was 3,715 and indicated that one unit increase in this independent variable increases 3,715 times the odds of emotional exhaustion. The beta coefficient for promotion and evaluation was 0,636 and p value was 0,039 (p<,05). The odds ratio of promotion and evaluation was 1,889 and indicated that one unit increase in promotion and evaluation predictor variable increases 1,889 times the odds of increasing emotional exhaustion when other variables are controlled.

Table 9. Results of logistic regression for emotional exhaustion

		B	S.E.	Wald	Df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1(a)	Work Environment	1,333	,320	17,292	1	,000	3,791	2,023	7,104
	Constant	-2,685	,394	46,426	1	,000	,068		
Step 2(b)	Work Environment	1,335	,328	16,518	1	,000	3,798	1,996	7,229
	Administrative Workload	,609	,299	4,145	1	,042	1,838	1,023	3,302
	Constant	-2,790	,412	45,769	1	,000	,061		

Step 3(c)	**Work Environment**	1,543	,367	17,663	1	,000	4,678	2,278	9,606
	Administrative Workload	,860	,342	6,332	1	,012	2,364	1,210	4,621
	Academic Workload	,937	,444	4,451	1	,035	2,551	1,069	6,091
	Constant	-3,185	,524	36,942	1	,000	,041		
Step 4(d)	**Work Environment**	1,783	,428	17,379	1	,000	5,945	2,572	13,745
	Administrative Workload	,960	,372	6,662	1	,010	2,611	1,260	5,411
	Academic Workload	1,313	,527	6,212	1	,013	3,715	1,324	10,429
	Promotion and Evaluation	,636	,308	4,255	1	,039	1,889	1,032	3,456
	Constant	-3,555	,633	31,520	1	,000	,029		

a: Variable(s) entered on step 1: Work Environment.
b: Variable(s) entered on step 2: Administrative Workload.
c: Variable(s) entered on step 3: Academic Workload.
d: Variable(s) entered on step 4: Promotion and Evaluation

The classification table of the model is shown in Table 10. According to this table, the correct classification percentage of low level of emotional exhaustion was 97,7% and the correct classification percentage of high level of emotional exhaustion was 47,1%. The overall correct classification percentage of the model was 92,0%.

Table 10. Classification table of logistic regression for emotional exhaustion

		Predicted		**Percentage**
		EE		**Correct**
		0	**1**	
Observed EE	0	130	3	97,7
	1	9	8	47,1
Overall Percentage				92,0

The cut value is ,500

Predictor variables of depersonalization. Table 11 shows the goodness-of-fit test of the logistic regression model which was constituted for determining the effect of predictors on depersonalization levels of academicians. As seen in Table 11, Hosmer-Lemeshow statistic was 0,000 and marginal significant level was 1,00 (p>,05) with 8

degrees of freedom. These results indicated that the logistic regression model was not a good fit. Cox and Snell R^2 indicated that 10,1% of the variation in depersonalization level was explained by administrative workload and Nagelkerke R^2 indicated that 76,6% of the variation in depersonalization level was explained by administrative workload predictor variable.

Tablo 11. Goodness-of-fit test of model for depersonalization

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Chi-square	Df	Sig.
1	5,253(a)	,101	,766	,000	8	1,000

a: Estimation terminated at iteration number 14 because parameter estimates changed by less than ,001

Table 12 shows the results of the regression model which was constructed for determining the predictors of depersonalization. The beta coefficient (B) of administrative workload was 28,395. P-value=0,229 was found and it was not statistically significant at 0,05 level (p>,05).

Table 12. Results of logistic regression for depersonalization

		B	S.E.	Wald	Df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1(a)	Administrative Workload	28,395	23,610	1,446	1	,229	2E+012	,000	3E+032
	Constant	-51,516	41,564	1,536	1	,215	,000		

a: Variable(s) entered on step 1: Administrative Workload.

As seen in Table 13, the correct classification percentage of low level of depersonalization was 100% and the correct classification percentage of high level of depersonalizaiton was 50%. The overall correct classification percentage of the regression model for depersonalizaiton was 99,3%.

Table 13. Classification table of logistic regression for depersonalization

		Predicted		Percentage Correct
		D		
		0	1	
Observed	0	148	0	100

D	1	1	1	50,0
Overall Percentage				99,3

The cut value is ,500

Predictor variables of personal accomplishment. In the logistic regression model which was constituted for determining the effect of predictor variables on personal accomplishment levels of academicians, Hosmer-Lemeshow statistic was 14,501 and marginal significant level was 0,070 (p>,05) with 8 degrees of freedom. The results of goodness-of-fit test which are shown in Table 15 indicated that the logistic regression model was a good fit. The Cox and Snell R^2 was found to be 20,2% in the second step and indicated that approximately 20% of the variation in personal accomplishment level was explained by work environment predictor and promotion and evaluation predictor. According to the Nagelkerke R^2, 37,9% of the variation in personal accomplishment was explained by these two predictors.

Table 14. Goodness-of-fit test of model for personal accomplishment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Chi-square	Df	Sig.
1	95,275(a)	,117	,220	6,456	8	,596
2	80,238(a)	,202	,379	14,501	8	,070

a: Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Results of the logistic regression model for personal accomplishment are shown in Table 14. As seen in Table 14, logistic regression analysis had two steps. In the first step, work environment predictor variable was entered into the model, and in the second step, promotion and evaluation predictor variable was added to the model. The beta coefficient (B) of work environment was 1,343 and p value was 0,00 which was statistically significant at 0,05 level (p<,05). The odds ratio of work environment predictor was 3,831 and indicated that one unit increase in work environment increases 3,831 times the odds of decreasing personal accomplishment. The beta coefficient for promotion and evaluation predictor was 1,020 and p value was 0,000 and significant at 0,05 level. The odds ratio of promotion and evaluation predictor was 2,774 and indicated that one unit increase in this independent variable increases 2,774 times the odds of decreasing personal accomplishment, controlling for other variables in the model.

Table 15. Results of logistic regression for personal accomplishment

		B	S.E.	Wald	Df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1(a)	Work Environment	1,123	,286	15,435	1	,000	3,073	1,755	5,381
	Constant	-2,369	,336	49,800	1	,000	,094		
Step 2(b)	Work Environment	1,343	,338	15,799	1	,000	3,831	1,976	7,430
	Promotion and Evaluation	1,020	,292	12,224	1	,000	2,774	1,566	4,915
	Constant	-2,770	,413	44,890	1	,000	,063		

a: Variable(s) entered on step 1: Work Environment.
b: Variable(s) entered on step 2: Promotion and Evaluation.

Classification table of logistic regresson model for personal accomplishment is shown in Table 16. The correct classification percentage of low level of personal accomplishment was 98,5 % and the correct classification percentage of high level of personal accomplishment was 31,6 %. The overall correct classification percentage of the logistic regression model was 90,0 %.

Table 16. Classification table of logistic regression for personal accomplishment

		Predicted		Percentage Correct
		PA		
		0	1	
Observed PA	0	129	2	98,5
	1	13	6	31,6
Overall Percentage				90,0

The cut value is 500

In conclusion, the logistic regression analysis indicated that there was a significant relationship between level of general burnout and work environment predictor. There was a significant relationship between level of emotional exhaustion and the predictors of work

environment, administrative workload and academic workload. Also, there was a significant relationship between level of personal accomplishment and the predictors of work environment and promotion and evaluation. However, there was not a significant relationship between the level of depersonalization and predictor variables which was included in the model.

Discussion

Burnout levels of academicians and the factors that affect burnout levels of academicians were investigated in this study. The population for this study comprised of academicians from 78 universities in Turkey. But this study only comprised of academicians who have been working in accountant and finance sub-department in Faculties of Economics and Administrative Sciences. For the aim of the study, three questionnaires were used (sosciodemographic data form, Maslach Burnout Inventory and the scale of "work and work environment") and these questionnaires sent to 400 academic staff through electronic mail. 160 academicians responded the questionnaires. The response rate was 40%. In the analysis of data, descriptive statistic (mean and standard deviation), correlation analysis, factor analysis and discriminant function analysis were used.

According to the means and standard deviations of burnout subscales, levels of burnout on academicians were lower than expected. The mean scores for emotional exhaustion, depersonalization and personal accomplishment are 10,2 (SD=6,10), 2,92 (SD=2,64) and 11,6 (SD=3,45), respectively. Ozdemir et al. (1999) found out that the mean scores on emotional exhaustion were 11,93 (SD=0,84) for academicians in Faculty of Dentistry and 12,78 (SD=0,94) for academicians in Faculty of Economic and Administrative Sciences. They found that the mean scores on depersonalization were 4,11 (SD=0,14) for academicians in Faculty of Dentistry and 5,26 (SD=0,69) for academicians in Faculty of Economic and Administrative Sciences. In their study the mean scores on personal accomplishment were also 21,86 (SD=0,73) and 22 (SD=0,78) for academicians in two faculties. Barut and Kalkan (2002) found that the mean scores on emotional exhaustion, depersonalization and personal accomplishment were 11,80 (SD=6,17), 3,6 (SD=3,44) and 21,7 (SD=4,9), respectively. While the mean score on emotional exhaustion was similiar to the results of two studies, the scores on depersonalization and personal accomplishment were lower than the other studies. Particularly, the

level of personal accomplishment was rather low. The low score on personal accomplishment indicated that academicians who have been working in accounting and finance discipline perceived low competence and success about their achievements.

The factor analysis of the 12 items which have possible effect on burnout among academicians revealed four factors: Work environment, administrative workload, academic workload and promotion and evaluation. These four factors explained 65% of the total variance. After the factor analysis, logistic regression analysis was employed to determine the predictors that affect burnout levels of academicians who have been working in accounting and finance sub-department. For this reason, four analyses were constituted for determining the predictor variables of general burnout level, emotional exhaustion level, depersonalization level and personal accomplishment level.

In the first logistic regression model which was constituted for determining the factors that affect general burnout levels of academicians, only the factor of work environment was found to be a significant predictor. The odds ratio of work environment predictor was 3,950 and indicated that one unit increase in work environment increases 3,950 times the odds of increasing general burnout level. The overall correct classification percentage of the logistic regression model was found to be 93,2%. The results of the logistic regression model was constituted for determining the effect of predictor variables on emotional exhaustion level showed that the factors of work environment, administrative workload and academic workload were significant predictors for academicians. The odds ratio of work environment predictor was 5,945 and indicated that one unit increase in work environment increases 5,945 times the odds of increasing emotional exhaustion. The odds ratio of administrative workload was 2,611 and indicated that one unit increase in administrative workload increases 2,611 times the odds of increasing emotional exhaustion. The odds ratio of academic workload was 3,715 and indicated that one unit increase in academic workload predictor variable increases 3,715 times the odds of increasing emotional exhaustion. The odds ratio of promotion and evaluation was 1,889 and indicated that one unit increase in promotion and evaluation predictor variable increases 1,889 times the odds of increasing emotional exhaustion. The overall correct classification percentage of this logistic regression model was found to be 92%.

In the logistic regression model which was constituted for determining the effect of predictor variables on depersonalization level of academicians, none of the factors was found to be significant

predictor for academicians. In other words, there was not a significant relationship between depersonalization level and predictor variables.

According to the logistic regression model which was constituted for determining the effect of predictor variables on personal accomplishment, the factors of work environment and promotion and evaluation were seen to influence the personal accomplishment level of academicians. The odds ratio of work environment predictor was 3,831 and indicated that one unit increase in work environment increases 3,831 times the odds of decreasing personal accomplishment. The odds ratio of promotion and evaluation predictor was 2,774 and indicated that one unit increase in promotion and evaluation predictor increases 2,774 times the odds of decreasing personal accomplishment. The overall correct classification percentage of the logistic regression model was 90%.

In general, the factors that have possible effect on burnout are divided into two groups: Personal (demographics) factors and environmental (organizational and work) factors. In this study, only possible effects of environmental factors were investigated. The effects of demographic factors on burnout are potential areas for future research. In our study, the most significant predictor of burnout was the factor of work environment, followed by the factors of administrative workload, academic workload, and promotion and evaluation.

All in all, academicians do complex work in an increasingly demanding environment. Universities are the only organizations focused on dual core functions of knowledge creation and knowledge transmission through the processes of research and teaching. But academicians have faced some problems such as heavy teaching loads, unsatisfactory reward structure, high number of students, budget concerns and insufficient research funds, low salaries and long working hours. Therefore, academicians may experience burnout at some point in their careers. Futhermore, burnout is a costly and distressing phenomenon, which damages both individuals and organizations because of the fact that burnout is associated with decreased job performance and reduced job commitment, and it predicts stress-related health problems and low job satisfaction. Hence, university administrators and academicians are aware of burnout syndrome and deal with it openly. The studies related to burnout among academicians can help and guide both university administrators and academicians.

There were some limitations in this study. First limitation of our study was the number of respondent (160 academicians). Second limitation was that the sample included only accountant and finance

academicians, in other words, the study did not include academicians from different faculties and disciplines. Burnout levels and factors that affect burnout can be different among disciplines. Another limitation was that the sample included a wide range of academic titles; research assistant, lecturer, assistant professor, associate professor and professor. Burnout levels and factors that affect burnout can differentiate among academicians according to the academic title, because academicians in different academic career position have different work conditions, administrative and academic workload.

However, we believe that the results of this study and the other studies related to burnout among academicians can help and guide both university administrators and academicians. We recommend further follow-up studies on the burnout levels of academicians and determinants of burnout, and what is realistically required to manage or prevent burnout.

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