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An Investigation into the Relationships Between Physical Activity Level, Burnout, Job Satisfaction, Quality of Life and Sociodemographic Factors in Academicians

Akademisyenlerde Fiziksel Aktivite Düzeyi, Tükenmişlik, İş Doyumu, Yaşam Kalitesi ve Sosyodemografik Faktörler Arasındaki İlişkilerin İncelenmesi

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ÖZ

Amaç: Çalışmanın amacı, akademisyenlerde fiziksel aktivite düzeyi (FAD), tükenmişlik, iş doyumu, yaşam kalitesi ve bazı sosyodemografik faktörler arasındaki ilişkileri incelemekti.
Araçlar ve Yöntem: Çalışmaya araştırma görevlileri, öğretim görevlileri, doktor öğretim üyeleri, doçent doktorlar ve profesör doktorlardan oluşan 214 akademisyen dahil edildi. Bilgisayar kullanım süresi, görev süresi, yaş, yurt dışı tecrübesi, FAD (Uluslararası Fiziksel Aktivite Anketi ile), tükenmişlik düzeyi (Maslach Tükenmişlik Ölçeği ile), iş doyumu (Öğretim Elemanları İş Doyumu Ölçeği ile) ve yaşam kalitesi (Kısa Form 36 Sağlık Anketi ile) değerlendirildi.
Bulgular: Bilgisayar kullanım süresi, FAD, tükenmişlik, iş doyumu ve yaşam kalitesinin akademik ünvana göre değiştiği görüldü ($p<0.05$). Araştırma görevlilerinde bilgisayar kullanım süresi ve tükenmişlik düzeyi en yüksek iken, iş doyumu ve yaşam kalitesi en düşüktü. Bu bulgu profesörlerde tam tersi olarak bulundu ($p<0.05$). Tükenmişlik ile iş doyumu ve yaşam kalitesi arasında güçlü negatif ilişkiler gözlendi ($p<0.05$). Yurt dışı tecrübesi olanların daha az tükenmişlik, daha yüksek iş doyumu ve yaşam kalitesine sahip olduğu bulundu ($p<0.05$). Her bir akademik unvan grubunda, FAD ile tükenmişlik arasında anlamlı güçlü negatif ilişkiler gözlenirken, FAD ile iş doyumu ve yaşam kalitesi arasında anlamlı güçlü pozitif ilişkiler gözlendi ($p<0.05$).
Sonuç: Çalışma koşullarının iyileştirilmesi, yurtdışı tecrübesi kazanmalarının sağlanması, yeterli ve düzenli fiziksel aktivitenin teşvik edilmesi ile akademisyenlerin tükenmişlik düzeylerinin azaltılabileceği, iş doyumlarının ve yaşam kalitelerinin artırılabileceği düşünülmektedir.

Anahtar Kelimeler: fiziksel aktivite; iş doyumu; sosyodemografik faktörler; tükenmişlik; yaşam kalitesi

ABSTRACT

Purpose: The aim of the study was to examine the relationships between physical activity level (PAL), burnout, job satisfaction, quality of life, and some sociodemographic factors in academicians.
Materials and Methods: The study included 214 academicians, including research assistants, lecturers, assistant professors, associate professors, and professors. Computer usage time, tenure of office, age, experience abroad, PAL (with International Physical Activity Questionnaire), burnout level (with Maslach Burnout Inventory), job satisfaction (with Job Satisfaction Scale for Academicians), and quality of life (with Short Form-36 Health Survey) were evaluated.
Results: It was observed that computer usage time, PAL, burnout, job satisfaction, and quality of life varied according to the academic title ($p<0.05$). Computer usage time and burnout level were the highest among research assistants, while job satisfaction and quality of life were the lowest. This finding was found to be the opposite in professors ($p<0.05$). Strong negative relationships were observed between burnout and job satisfaction, and quality of life ($p<0.05$). Those with experience abroad had lower burnout levels, higher job satisfaction, and quality of life ($p<0.05$). In each academic title group, significant and strong negative relationships were observed between PAL and burnout, while significant strong positive relationships were observed between PAL and job satisfaction and quality of life ($p<0.05$).
Conclusion: It is thought that the academicians' burnout levels can be decreased and job satisfaction and quality of life can be increased by improving working conditions, enabling them to gain experience abroad, and encouraging adequate and regular physical activity.

Keywords: burnout; job satisfaction; physical activity; sociodemographic factors; quality of life

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INTRODUCTION

Physical activity is any activity that requires the use of muscles and joints and results in energy expenditure.[1] Today, various factors such as technological advancements that simplify life, an increase in living standards, rapid urbanization, the inadequacy of social areas, intense competition and stress in the business environment, and ignorance of the importance of physical activity for health have led to a decrease in physical activity level (PAL) and a sedentary lifestyle.[2] The prevalence of various musculoskeletal and cardiovascular diseases increases due to a sedentary lifestyle that negatively affects human life in physiological and psychological aspects.[3] However, regular and adequate physical activity is effective in preventing chronic diseases. In addition, it increases the self-confidence of the individual, improves self-esteem, promotes positive thinking, increases the ability to cope with stress, reduces the risk of depression and anxiety disorders, creates general psychological well-being, and makes the person feel good and happy. As a result, it improves the quality of life. It has been reported that there are positive associations between PAL and quality of life.[2,4-7] Considering that academicians spend most of their working time in the office, it is important to examine the PAL of academicians and investigate factors such as burnout, job satisfaction, and quality of life that may be associated with the PAL in academicians.

Burnout is defined as emotional exhaustion, depersonalization, and a decrease in personal achievement. Emotional exhaustion describes the feeling of being depleted of one's emotional resources and being overburdened. Depersonalization includes negative, rigid, and emotionless behaviors toward other people for whom the person cares, serves, or trains. Personal achievement is defined as feeling competent and successful in one's job.[8] Burnout occurs mostly in individuals who have intense and long working hours, are idealistic, and have a strong desire to serve people.[9] Therefore, academicians who are in constant and intense interaction with people are one of the risk groups most prone to burnout. Academicians may experience burnout due to factors such as heavy working conditions, an excessive course load, an insufficient reward system, a low income level, and a lack of support for research.[8]

Job satisfaction is defined as individuals' satisfaction or dissatisfaction with their jobs.[10] Job satisfaction is an important requirement for a person to be successful, happy, and productive. Considering that individuals are the most important resource of institutions, the satisfaction of individuals with their jobs and institutions has an important role in the success of institutions.[9] Studies show that burnout is higher in individuals with insufficient job satisfaction and that job satisfaction and burnout may be related.[11] Academicians have very important roles in both the scientific and technological developments of countries and the training of specialized individuals. In order for academics to fully fulfill their duties, it is important that they are satisfied with their work.[10] It has been reported that in working environments where stress factors are intense and job satisfaction cannot be achieved sufficiently, the life satisfaction of individuals may decrease and their burnout levels may increase.[12] In the literature, it has been suggested that factors such as daily working time, age, tenure, academic title, and PAL that may affect job satisfaction in academics should be investigated in further studies.[10]

We hypothesized that working conditions (e.g. computer usage time), experience abroad, and physical activity levels may correlate with the burnout level, job satisfaction, and quality of life of academicians. Therefore, the aim of the present study was to investigate the relationships between PAL, burnout, job satisfaction, quality of life, and some sociodemographic factors in academicians, and discuss the results in the light of the literature.

MATERIALS and METHODS

Study Design and Ethical Approval

The study was approved by Karamanoğlu Mehmetbey University Social and Human Sciences Scientific Research and Publication Ethics Committee (Decision date: 24.10.2022 and number: 06-2022/124). The necessary institutional permission was obtained from the university.

Participants

The present study included 214 academicians working at a state university, consisting of research assistants, lecturers, assistant professors, associate professors, and professors.

Written informed consent was obtained from the participants who met the inclusion criteria. The study was carried out in accordance with the principles of the Declaration of Helsinki. The inclusion criteria were as follows: between the ages of 18-65, being an academician for at least 3 years, and understanding Turkish. The individuals with diagnosed psychiatric disorders, difficulties in understanding Turkish, and those who did not volunteer to participate in the study were excluded. Participants' sociodemographic information (age, height, weight, gender, marital status), daily computer usage time, tenure of office, and experience abroad were recorded. Those who had been abroad for at least 3 months for academic purposes were considered to have experience abroad.

Assessment Instruments

International Physical Activity Questionnaire

The Turkish version[13] of the short form of the International Physical Activity Questionnaire (IPAQ) developed by Craig et al.[14] in 2003, was used to assess the level of physical activity. The validity and reliability study of the Turkish version of the short form of the scale was performed by Saglam et al.[13] in 2010, and it was reported to be valid and reliable in evaluating the level of physical activity (ICC: 0.78). The IPAQ consists of a total of 7 questions and provides information on the amount of sitting, walking, and physical activity of varying intensity, and the amount of energy expended. The spent of total metabolic equivalent (MET) value (MET-min/week) is calculated by determining how many days a week and for how long the person does these activities. When calculating the total MET value, the weekly duration of each activity is multiplied by the fixed MET value in the survey. PAL is determined according to the total MET value spent. A high total MET value indicates a high PAL.[13,14]

Maslach Burnout Inventory

The Turkish version[15] of the Maslach Burnout Inventory (MBI) developed by Maslach and Jackson[16] in 1981 was used to evaluate the burnout levels of academicians. The validity and reliability study of the Turkish version of the MBI was performed by Çam[15] in 2001, and it was reported to be valid and reliable in evaluating the burnout levels of academicians (Cronbach's alpha: 0.81, ICC: 0.79). MBI consists of 22 items and evaluates burnout in three subsubscales: emotional exhaustion, depersonalization, and personal achievement. The emotional exhaustion subscale includes eight items related to fatigue, boredom, and decreased emotional energy. The depersonalization subscale consists of six items related to the person's unemotional behavior towards individuals receiving care and service. The personal achievement subscale consists of eight items and describes the individual's feelings of competence and overcoming successfully. Items in the scale are scored between 0-4 points on a five-point Likert scale. Separate scores are obtained for three different sub-scales from the scale. A high score on the emotional exhaustion or depersonalization subscales or a low score on the personal achievement subscale indicates a high level of burnout.[9,15,16]

Job Satisfaction Scale for Academicians

Job satisfaction was evaluated by the Job Satisfaction Scale for Academicians (JSSA) developed by Kelecioğlu et al.[17] in 2006. There are 25 items on the scale, including proficiency in the job, success, interest, autonomy, recognition and appreciation, opportunities for advancement, taking responsibility, working conditions, business policies, supervision, and interpersonal relationships. The total scale score ranges from 0-100, and a high score indicates low job satisfaction. It has been reported that JSSA is valid and reliable in assessing the job satisfaction of academicians (Cronbach's alpha: 0.94, ICC: 0.91).[17]

Short Form-36 Health Survey

The Turkish version[18] of the Short Form-36 Health Survey (SF-36), developed by Ware and Sherbourne[19] in 1992, was used to assess the health-related quality of life. The validity and reliability study of the Turkish version of the SF-36 was performed by Koçyiğit et al.[18] in 1999, and it was reported to be valid and reliable in evaluating the level of physical activity (ICC: 0.78). SF-36 consists of 8 subscales and 36 questions evaluating the quality of life. For practical use, the physical component score (PCS) is obtained by averaging the scores of the four subscales related to physical parameters, and the mental component score (MCS) is obtained by averaging the scores of the four subscales related to mental parameters. PCS and MCS sub-

dimensions are used to express the level of quality of life. The scores that can be obtained from both sub-dimensions range from 0 to 100, and high scores indicate a high quality of life.[18,19]

Statistical Analysis

Statistical analyzes were performed using SPSS software, version 24.0 (IBM SPSS Statistics for Windows, Version 24.0, Armonk, NY: IBM Corp., USA). Analytical (Kolmogorov-Smirnov test) and visual (histogram and probability graphs) methods were used to determine whether the variables were normally distributed. Descriptive statistics were given with mean and standard deviation for numerical variables, and numbers and percentages for categorical variables. One-Way Analysis of Variance (ANOVA) was used to compare academic title groups. Bonferroni test was applied for post-hoc analyses. Relationships between evaluation parameters were examined by Pearson Correlation Analysis. Statistical significance level was accepted as $p<0.05$.

RESULTS

The descriptive features of the data belonging to the numerical and categorical variables of the individuals participating in the study are given in Table 1. The distribution of the participants was as follows; 50 individuals (23.3%) were research assistants, 44 (20.6%) were lecturers, 47 (22%) were assistant professors, 41 (19.1%) were associate professors, and 32 (15%) were professors. 55 (25.7%) of the study participants had experience abroad, whereas 159 (74.3%) did not. While the tenure of office for 22 (10.3%) of the participants was less than 5 years, the tenure of office for 41 (19.2%) was 20 years or more (Table 1).

The comparison of the evaluated parameters of the individuals participating in the study according to their titles is given in Table 2. While there was no difference between the research assistant and lecturer groups in terms of computer usage time (p=0.852), the computer usage times of other groups were different from each other (p=0.028). While computer usage time was highest among research assistants, it was lowest among professors. There were significant differences between all groups in terms of PAL (p=0.006), job satisfaction (p=0.010), burnout levels (emotional exhaustion p=0.017, depersonalization p=0.013, personal accomplishment p=0.021), and quality of life values (PCS p=0.009, MCS p=0.017). The emotional exhaustion (p=0.017) and depersonalization (p=0.013) subscale values of MBI were highest in research assistants and lowest in professors. The highest personal achievement (p=0.021) subscale value was in professors and the lowest was in research assistants. The PCS (PCS p=0.009) and MCS (MCS p=0.017) sub-dimension scores of the SF-36 scale and the JSSA score (p=0.010) were highest in professors and lowest in research assistants (Table 2).

Table 1. Descriptive properties of the data of the participants' numerical and categorical variables.

Variables	Age (years) X± SD	Tenure of office (years) X± SD	
Research assistant	28.46±2.85	6.35±2.49	
Lecturer	36.02±7.17	14.12±5.91	
Assistant professor	38.06±4.41	12.47±2.13	
Associate professor	43.51±2.86	18.28±2.48	
Professor	52.56±6.18	28.32±4.35	
		n	(%)
Gender	Female	116	54.2
	Male	98	45.8
Marital status	Married	145	67.8
	Single	69	32.8
Academic title	Research assistant	50	23.3
	Lecturer	44	20.6
	Assistant professor	47	22.0
	Associate professor	41	19.1
	Professor	32	15.0
Experience abroad	No	159	74.3
	Yes	55	25.7
Tenure of office	Less than 5 years	22	10.3
(years)	5-10 years	61	28.5
	10-15 years	54	25.2
	15-20 years	36	16.8
	20 years or more	41	19.2

X; Mean, SD; Standard deviation, n: Number of participants.

Table 2. Comparison of the evaluation parameters of the participants according to the academic title.

Parameters		Academic title: Research assistant[a] (n=50) X±SD	Lecturer[b] (n=44) X±SD	Assistant professor[c] (n=47) X±SD	Associate professor[d] (n=41) X±SD	Professor[e] (n=32) X±SD	P	Post-hoc
Computer usage time (hours)		9.47 ± 2.01	9.24 ± 1.78	7.73 ± 1.13	6.36 ± 1.27	5.13 ± 1.47	**0.028**	a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
IPAQ (MET-min/week)		2434.16 ± 523.14	1608.68 ± 309.39	2101.06 ± 373.60	1733.17 ± 336.75	1337.22 ± 320.97	**0.006**	a-c, a-b, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
MBI (point)	**EE subscale**	25.65 ± 2.06	23.22 ± 2.48	16.92 ± 3.67	12.02 ± 3.21	5.98 ± 2.46	**0.017**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
	Dp subscale	13.25 ± 1.91	11.87 ± 1.31	8.92 ± 1.74	5.83 ± 1.36	3.27 ± 1.22	**0.013**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
	PA subscale	9.98 ± 2.24	12.71 ± 1.88	17.48 ± 2.36	23.52 ± 2.11	27.39 ± 1.82	**0.021**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
JSSA (point)		78.0 ± 6.30	70.90 ± 7.68	51.66 ± 11.16	37.59 ± 10.14	18.62 ± 7.48	**0.010**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
SF-36 (point)	**PCS**	44.79 ± 4.00	55.00 ± 3.43	66.02 ± 3.27	77.89 ± 2.53	88.03 ± 3.00	**0.009**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e
	MCS	39.24 ± 3.81	48.89 ± 3.37	60.53 ± 3.77	72.82 ± 2.86	81.82 ± 3.43	**0.017**	a-b, a-c, a-d, a-e, b-c, b-d, b-e, c-d, c-e, d-e

One-way ANOVA test, post-hoc Bonferroni test, p<0.05.
X; Mean, SD; Standard deviation, IPAQ: International Physical Activity Questionnaire Short Form, MET: Metabolic equivalent, MBI: Maslach Burnout Inventory, EE: Emotional exhaustion, Dp: Depersonalization, PA: Personal accomplishment, JSSA: Job Satisfaction Scale for Academicians, SF-36: Short Form-36 Health Survey, PCS: Physical component score, MCS: Mental component score.

Significant and strong negative correlations were found between the emotional exhaustion and depersonalization subscale values of MBI and PCS (r=-0.86, p=0.019; r=-0.84, p=0.016) and MCS (r=-0.85, p=0.015; r=-0.82, p=0.006) sub-domain values of the SF-36, the tenure of office (r=-0.82, p=0.018; r=-0.80, p=0.026), and age (r=-0.84, p=0.010; r=-0.88, p=0.027) parameters. On the other hand, significant and strong positive correlations were found between the emotional exhaustion and depersonalization subscale values of the MBI and JSSA score (r=0.86, p=0.020; r=0.84, p=0.017) and computer usage time (r=0.79, p=0.025; r=0.82, p=0.016). It was observed that there were significant and strong positive correlations between the personal accomplishment subscale value of MBI and the PCS (r=0.89, p=0.010) and MCS (r=0.86, p=0.019) sub-domain values of SF-36, the tenure of office (r=0.84, p=0.021), and age (r=0.81, p=0.024) parameters. In addition, it was determined that there were significant and strong negative correlations between the personal accomplishment subscale value of the MBI and JSSA score (r=-0.88, p=0.008) and computer usage time (r=-0.76, p=0.030) (Table 3). Significant and strong negative correlations were found between the PCS and MCS sub-domain values of SF-36 and JSSA score (r=-0.86, p=0.014; r=-0.84, p=0.006), and computer usage time (r=-0.87, p=0.013; r=-0.84, p=0.028). On the other hand, significant and strong positive correlations were found between the PCS and MCS sub-domain values of SF-36 and the tenure of office (r=0.83, p=0.013; r=0.81, p=0.022), and age (r=0.82, p=0.029; r=0.79, p=0.014) (Table 3). Significant strong negative correlations were observed between JSSA score and the tenure of office (r=-0.88, p=0.005) and age (r=-0.85, p=0.003), while significant strong positive correlations were observed between JSSA score and computer usage time (r=0.83, p=0.014) (Table 3).

There were significant differences between the academicians with and without experience abroad in terms of emotional exhaustion (p=0.025), depersonalization (p=0.018), and personal achievement (p=0.009) subscale values of the MBI, the PCS (p=0.013) and MCS (p=0.007) sub-dimension values of the SF-36, and the JSSA score (p=0.012). Academicians with experience abroad had lower levels of burnout but higher levels of job satisfaction and quality of life.

Table 3. The relationships between MBI, JSSA, SF-36 scores, and other assessment parameters.

Parameters		MBI			SF-36		JSSA
		EE subscale	Dp subscale	PA subscale	PCS	MCS	
		r (p)	r (p)	r (p)	r (p)	r (p)	r (p)
MBI	**EE subscale**	1					
	Dp subscale	0.90 (**0.011**)	1				
	PA subscale	-0.92 (**0.009**)	-0.88 (**0.021**)	1			
SF-36	**PCS**	-0.86 (**0.019**)	-0.84 (**0.016**)	0.89 (**0.010**)	1		
	MCS	-0.85 (**0.015**)	-0.82 (**0.006**)	0.86 (**0.019**)	0.92 (**0.012**)	1	
JSSA		0.86 (**0.020**)	0.84 (**0.017**)	-0.88 (**0.008**)	-0.86 (**0.014**)	-0.84 (**0.006**)	1
Tenure of office (years)		-0.82 (**0.018**)	-0.80 (**0.026**)	0.84 (**0.021**)	0.83 (**0.013**)	0.81 (**0.022**)	-0.88 (**0.005**)
Age (years)		-0.84 (**0.010**)	-0.88 (**0.027**)	0.81 (**0.024**)	0.82 (**0.029**)	0.79 (**0.014**)	-0.85 (**0.003**)
Computer usage time (hours)		0.79 (**0.025**)	0.82 (**0.016**)	-0.76 (**0.030**)	-0.87 (**0.013**)	-0.84 (**0.028**)	0.83 (**0.014**)

Pearson correlation analysis, r: correlation coefficient, p<0.05.
MBI: Maslach Burnout Inventory, EE: Emotional exhaustion, Dp: Depersonalization, PA: Personal accomplishment, SF-36: Short Form-36 Health Survey, PCS: Physical component score, MCS: Mental component score, JSSA: Job Satisfaction Scale for Academicians.

In each academic title group, significant and negative strong correlations were found between the IPAQ score and the emotional exhaustion (r=-0.85, p=0.013; r=-0.89, p=0.022; r=-0.85, p=0.019; r=-0.90, p=0.006; r=-0.91, p=0.020) and depersonalization (r=-0.89, p=0.017; r=-0.87, p=0.026; r=-0.87, p=0.007; r=-0.86, p=0.021; r=-0.75, p=0.012) subscale values of the MBI and JSSA score (r=-0.86, p=0.018; r=-0.84, p=0.012; r=-0.77, p=0.032; r=-0.83, p=0.010; r=-0.86, p=0.005). In addition, it was observed that there were significant and positive strong correlations between the IPAQ score and personal achievement (r=0.86, p=0.025; r=0.90, p=0.012; r=0.82, p=0.020; r=0.85, p=0.015; r=0.82, p=0.026) subscale value of the MBI and the PCS (r=0.88, p=0.027; r=0.85, p=0.015; r=0.76, p=0.019; r=0.82, p=0.023; r=0.84, p=0.011) and MCS (r=0.84, p=0.029; r=0.71, p=0.005; r=0.71, p=0.009; r=0.85, p=0.016; r=0.88, p=0.024) sub-domain values of the SF-36 in each academic title group (Table 4).

Table 4. The relationships between IPAQ score and MBI, JSSA, and SF-36 scales scores according to the academic title.

Parameters		IPAQ Score				
		Research assistant	Lecturer	Assistant professor	Associate professor	Professor
		r (p)	r (p)	r (p)	r (p)	r (p)
MBI	**EE subscale**	-0.85 (**0.013**)	-0.89 (**0.022**)	-0.85 (**0.019**)	-0.90 (**0.006**)	-0.91 (**0.020**)
	Dp subscale	-0.89 (**0.017**)	-0.87 (**0.026**)	-0.87 (**0.007**)	-0.86 (**0.021**)	-0.75 (**0.012**)
	PA subscale	0.86 (**0.025**)	0.90 (**0.012**)	0.82 (**0.020**)	0.85 (**0.015**)	0.82 (**0.026**)
SF-36	**PCS**	0.88 (**0.027**)	0.85 (**0.015**)	0.76 (**0.019**)	0.82 (**0.023**)	0.84 (**0.011**)
	MCS	0.84 (**0.029**)	0.71 (**0.005**)	0.71 (**0.009**)	0.85 (**0.016**)	0.88 (**0.024**)
JSSA		-0.86 (**0.018**)	-0.84 (**0.012**)	-0.77 (**0.032**)	-0.83 (**0.010**)	-0.86 (**0.005**)

Pearson correlation analysis, r: correlation coefficient, p<0.05.
IPAQ: International Physical Activity Questionnaire Short Form, MBI: Maslach Burnout Inventory, EE: Emotional exhaustion, Dp: Depersonalization, PA: Personal accomplishment, SF-36: Short Form-36 Health Survey, PCS: Physical component score, MCS: Mental component score, JSSA: Job Satisfaction Scale for Academicians.

DISCUSSION

The present study showed differences between academic title groups in terms of PAL, burnout level, job satisfaction, and quality of life. In addition, significant relationships were observed between PAL and burnout level, job satisfaction, and quality of life in each academic title group.

Burnout, which is seen as an important problem in academic life, can reduce academicians' work efficiency and quality of life. In order to prevent burnout, it is important to identify possible factors associated with burnout and to develop effective avoidance strategies by taking these factors into account.[8] Academicians need to be satisfied with their work in order to better fulfill their duties in basic subjects such as education, research, and social responsibility.[20] In work environments where stress factors are intense and job satisfaction cannot be achieved, academicians' life satisfaction may be negatively affected, and their burnout levels may increase.[12] Gençay[11] reported that daily working time can decrease job satisfaction and increase occupational burnout in physical education teachers. In the current study, it was determined that the research assistants and lecturers who had the most computer usage time had the highest burnout levels, the lowest job satisfaction, and the lowest quality of life. Also supporting these findings, there were strong positive relationships between computer usage time and burnout level, while strong negative relationships were found between job satisfaction and quality of life. Based on these results, which are consistent with the results of Gençay's study[11], it can be said that long computer usage time may increase burnout and decrease job satisfaction and quality of life.

Another result found in this study was that burnout decreased and job satisfaction and quality of life increased as academic title, tenure of office, and age increased. Similarly, in the study of Toker,[21] it was reported that as the academic title, age, and tenure of office increase, job satisfaction increases, and the professors have the highest job satisfaction. Demir et al.[22] found significant negative relationships between the burnout level of academicians and age and tenure of office. In another study, it was stated that high academic titles may be an effective factor in increasing the life and job satisfaction of academicians.[23] Accordingly, it can be said that there are strong relationships between academic title, age, tenure of office, burnout, job satisfaction, and quality of life.

Avşaroğlu et al.[12] reported that burnout may be related to job satisfaction, stress, life satisfaction, and quality of life in technical teachers. Gençay[11] suggested that as occupational burnout increases, job satisfaction decreases in physical education teachers. Arslan and Acar[24] stated that with an increase in life and job satisfaction in academicians, burnout may decrease. In the current study, strong relationships were found between burnout, job satisfaction, and quality of life in academics, consistent with the results of these studies.

It has been reported that the academic experience abroad can be an effective factor in reducing burnout and increasing job satisfaction. Demir et al.[22] found that the burnout levels of academicians who have been abroad are lower than those who have not been abroad. In addition Demir et al.[22] stated that the fact that academicians with experience abroad gain more experience in their field and have a better foreign language may have contributed to this result. Bilge et al.[10] revealed that the job satisfaction of academicians who were abroad for academic purposes is higher than that of those who were not. Similar to the results of the studies above, in the present study, it was found that the burnout levels of the academicians who were abroad for academic purposes were lower and their job satisfaction and quality of life were higher than those who were not.

Today, due to working and living conditions, the decrease in the PAL and the adoption of a sedentary lifestyle have brought along many diseases. Considering that regular physical activity prevents many chronic and systemic diseases, reduces the risk of mortality, and increases the quality and duration of life, the importance of physical activity has gradually increased.[7] It is important to reveal the possible relationships between PAL and burnout, job satisfaction and quality of life in academics who spend most of their daily working hours in the office.[1]

In the systematic review study conducted by Naczenski et al.,[25] it was reported that there is a negative relationship between PAL and burnout and that physical activity is an

effective intervention to reduce the level of burnout. Macilwrait and Bennett[26] revealed that PAL and burnout may be related in their study of medical students. Studies on physician trainees[27] and full-time employees[28] have indicated that physical activity and exercise can help reduce burnout. In another study, Ali et al.[29] found negative relationships between PAL and burnout levels in academics. Consistent with the results of the above studies, in the present study, it was determined that the level of burnout decreased as the level of physical activity increased.

In the study conducted by Arslan et al.[30] on office workers, it was reported that regular physical activity can increase job satisfaction and quality of life. A randomized controlled study of employees in high-tech industries found that physical activity improves physical fitness, job satisfaction, and quality of life in employees.[31] In different studies conducted with healthcare professionals,[6] middle-aged individuals,[4] and university students[5] it has been reported that physical activity can be effective in increasing the quality of life. In line with the above studies, in the current study conducted on academicians strong positive relationships were found between PAL, job satisfaction and quality of life.

The limitation of this study is that gender, marital status, and monthly income factors were not taken into account when comparing the parameters and examining the relationships. According to the results of the study, the burnout level, job satisfaction, and quality of life varied according to the academic title, tenure of office, age, computer usage time, and experience abroad. Also, there were strong negative significant relationships between burnout and job satisfaction, and quality of life. Moreover, strong negative significant relationships were found between PAL and burnout in each academic title group, while there were strong positive significant relationships between PAL and job satisfaction and quality of life. Considering these findings, academicians' burnout levels can be decreased and academic performance, job satisfaction, and quality of life can be increased by improving working conditions, enabling them to gain experience abroad, and encouraging adequate and regular physical activity.

Conflicts of Interest

The authors declare that there is not any conflict of interest regarding the publication of this manuscript.

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Ethics Committee Permission

Approval for this study was obtained from the Karamanoğlu Mehmetbey University Social and Human Sciences Scientific Research and Publication Ethics Committee (24.10.2022 dated and 06-2022/124 numbered).

Authors' Contributions

Concept/Design: NTY, HK. Data Collection and/or Processing: NTY, HK. Data analysis and interpretation: NTY, HK. Literature Search: NTY, HK. Drafting manuscript: NTY, HK. Critical revision of manuscript: NTY, HK.

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