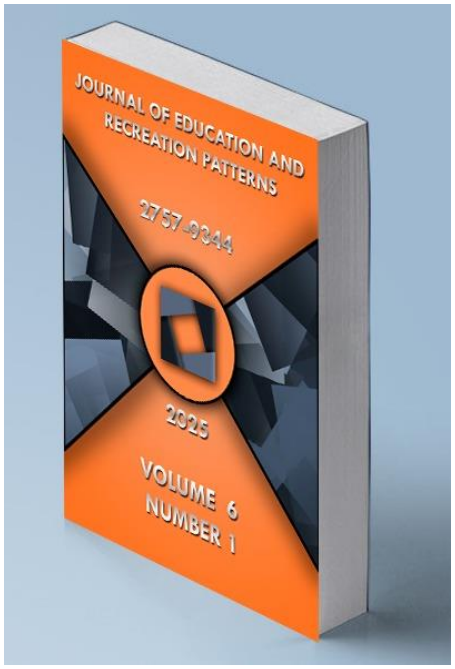

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Investigation of Job Performance and Physical Activity Levels of University Staff

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ABSTRACT

The aim of this study is to examine the job performance and physical activity levels of university staff according to various variables. A descriptive survey model based on the quantitative research method was used in the study. A total of 504 personnel working at Van Yüzüncü Yıl University, including 65 academic, 122 administrative, 89 security, and 228 health staff, selected by random sampling method, participated in the study. Data collection tools included the International Physical Activity Questionnaire (IPAQ), the Job Performance Scale, and a demographic information form prepared by the researcher. The data were analyzed using the SPSS program. Since the data did not meet normality assumptions, the Mann-Whitney U test was used for pairwise group comparisons, the Kruskal-Wallis H test for multiple group comparisons, and the Spearman Correlation test to examine relationships between variables. Eta squared and r (rank-biserial correlation) analyses were performed to assess effect sizes. According to the findings, significant differences were found in the scores of the physical activity scale (IPAQ) and job performance scale according to the variables of gender, marital status, position, educational status, and working time. Additionally, a significant positive relationship was detected between the physical activity levels and job performance of the university staff. The study concluded that these variables affected the physical activity levels and job performance of the university personnel, and that job performance increased as the physical activity levels of the personnel increased.

Keywords: Job Performance, Physical Activity, University Personnel.

INTRODUCTION

The effective functioning of universities, which are considered the cornerstones of knowledge production and social progress, is largely based on the performance of their employees. The job representations of university staff are critical in achieving the mission of the institution, both in academic and administrative roles (Bakker & Demerouti, 2023). Performance is expressed as what is expected of an individual and has organizational value (Koley & Baksi, 2024). Job performance, on the other hand, is shaped by factors such as job satisfaction, stress management, and organizational commitment rather than individual productivity, and these factors directly affect the overall success of the organization (Bakker & Demerouti, 2023).

Developments in science and technology are changing people's daily lives. Although it is thought that the opportunities offered to the service of humanity with these developments facilitate daily life and increase the quality of life, they have led to a less active sedentary lifestyle (Dere & Günay, 2021). In recent years, the impact of employees' physical and mental health status on job performance has been intensively studied, especially in occupational groups where sedentary lifestyles are common. In this context, the relationship between physical activity levels and job performance has become a topic of attention in both health sciences and organizational psychology (Proper et al., 2022; Warburton & Bredin, 2021).

Physical inactivity is recognized as a significant public health issue, with approximately 60% of the global population failing to meet physical activity guidelines (Safi et al., 2021). According to the World Health Organization's (WHO) definition, health is not merely the absence of disease or disability but a state of complete physical, mental, and social well-being (Szarek et al., 2024). Physical activity has been shown to have positive effects not only on cardiovascular health and the musculoskeletal system but also on cognitive functions, emotional resilience, and stress coping mechanisms (Ratey & Hagerman, 2018). The positive impact of physical activity on health is extensively documented in the literature. The WHO recommends at least 150-300 minutes of moderate-intensity aerobic activity per week for adults, with activities exceeding this level offering additional health benefits (World Health Organization, 2024). Regular physical activity and exercise have been shown to not only improve individual health but also enhance productivity in the workplace across all occupational groups (Szarek et al., 2024). On the other hand, there has been a significant rise in physical inactivity in modern professions, and work-related health problems have become more common. Moreover, there is limited clarity regarding the work and physical activity levels of university staff across various job roles in this population (Safi et al., 2021).

Lack of physical activity can lead to problems such as burnout, distraction, and loss of motivation in individuals who work long hours at a desk and often concentrate on jobs that require high mental effort, such as university staff (Holtermann et al., 2023). On the other hand, regular physical activity is stated to improve employees' problem-solving abilities, increase creativity in the workplace, and support emotional well-being (Chekroud et al., 2018). Time constraints, lack of managerial support, inadequate resources or facilitators, imbalanced workloads, and organizational culture are frequently identified as significant barriers to participation in workplace physical activity. These factors not only hinder individuals' ability to engage in regular physical activity, but also reflect deeper systemic challenges within organizational structures. The absence of sufficient support from management, for instance, may limit the prioritization of health-related initiatives within the workplace. Similarly, an imbalance in workload and insufficient resources can make it difficult for employees to allocate time or access the necessary facilities for physical activity. Furthermore, the organizational culture itself often shapes attitudes towards physical activity, with a lack of emphasis on well-being potentially contributing to lower participation rates. Addressing these barriers requires

comprehensive strategies that involve leadership commitment, the provision of adequate resources, and fostering a culture that supports health and well-being. Identifying facilitators of workplace physical activity is rare. The "one-size-fits-all" approach to overcoming barriers may also fail in university settings with a multidisciplinary workforce due to the heterogeneous nature of job roles (Safi et al., 2022).

The body of research exploring the relationship between job performance and physical activity levels among university staff in Türkiye remains relatively scarce. For instance, although Yıldız and Koçaman (2023) examined physical activity among academicians, their focus was primarily on burnout, job satisfaction, and quality of life rather than direct measures of job performance. University employees face factors such as a heavy workload, bureaucratic processes, and academic expectations, which can negatively impact the time allocated to physical activity and motivation (Acar & Şahin, 2020). However, with the increasing implementation of workplace wellness programs in recent years, the potential contributions of physical activity to job performance have gained more attention (Chen et al., 2025). For example, an international meta-analysis confirmed that physical activity positively influences employees' cognitive performance and job satisfaction (Reed & Buck, 2015).

This study aims to examine the relationship between job performance and physical activity levels among university staff. While existing research generally focuses on broader employee groups, such as office or factory workers, there is limited exploration of this relationship within the context of academic staff. This study seeks to fill this gap and provide insights into how physical activity influences job performance in higher education settings. However, studies specifically focusing on university staff, who engage in high levels of mental effort and have heterogeneous workloads, remain limited (Proper et al., 2022; Holtermann et al., 2023). While the relationship between job performance and physical activity among university staff is gaining increasing attention in international literature, studies focusing on this topic within the Türkiye context are still scarce. This research is unique in that it offers a localized perspective by considering the working conditions of university staff in Türkiye. Additionally, the study contributes to the literature by separately examining the physical activity levels of different staff groups, including academic, administrative, security, and healthcare personnel, as there are only a limited number of studies exploring differences among these groups. Furthermore, by focusing not only on the general health effects of physical activity but also on its specific components related to job performance, this study stands out in the literature. The findings of this study aim to provide a scientific basis for university administrations to develop policies that enhance employee well-being and institutional productivity. In this way, a sustainable state of well-being and performance improvement can be achieved at both individual and organizational levels.

METHOD

Research Model

This study employs a descriptive survey model based on quantitative research methods. The descriptive survey model is a research design aimed at identifying the characteristics of individuals within a specific population and revealing the current situation (Karasar, 2009). In this study, the job performance and physical activity levels of university staff were analyzed in relation to various variables.

Population and Sample

A total of 504 personnel from Van Yüzüncü Yıl University participated in the study, including 65 academic, 122 administrative, 89 security, and 228 healthcare staff. The study sample was determined on a voluntary basis. The non-random, purposive sampling method has

been adopted as the sampling method. Büyüköztürk et al. (2010) define purposive sampling as selecting units from easily accessible and applicable ones in the sample due to limitations such as time and labor. Prior to the commencement of the research, ethical approval was obtained from the Van Yüzüncü Yıl University Social and Humanities Research Ethics Committee with the decision number 23 from session 2024/26, dated 23/12/2024. The demographic information of the participants is presented in the table below.

Table 1

Descriptive Statistics of the Participants.

	Gender	**N**	**Mean**	**SD**	**SE**
Age	Female	169	33,08	7,94	0,61
	Male	335	37,44	9,24	0,50
Height (cm)	Female	169	163,97	10,52	0,80
	Male	335	175,01	12,43	0,67
Weight (kg)	Female	169	63,47	9,65	0,74
	Male	335	79,32	12,77	0,69
	Feature	**N**		**%**	
Marital status	Married	322		63,7	
	Single	182		36,1	
Education status	High school	112		22,2	
	Bachelor	284		56,3	
	Master	55		10,9	
	Doctorate	53		10,5	
Position	Security	89		17,7	
	Academic Staff	65		12,9	
	Administrative Staff	122		24,2	
	Healthcare Staff	228		45,2	

It is observed that the male university staff (N=335) who participated in the study have an average age of 37.44±9.244, an average height of 175.01±12.438, and an average weight of 79.32±12.776. The female staff (N=169) have an average age of 33.08±7.947, an average height of 163.97±10.526, and an average weight of 63.47±9.653.

Data Collection Tools

Personal Information Form: A personal information form was created by the researcher to collect descriptive and professional information about the participants. This form includes variables such as age, gender, height, weight, marital status, education level, years of professional experience at the institution, seniority, and physical activity habits.

International Physical Activity Questionnaire (IPAQ): The International Physical Activity Questionnaire (IPAQ) was used to assess participants' physical activity levels. This questionnaire is a tool designed to measure individuals' physical activities over the past week, including vigorous physical activities, moderate activities, and walking. IPAQ is recommended

by the World Health Organization (WHO) and has undergone validity and reliability studies. The scale was developed by Craig et al. (2003) and was adapted for Türkiye by Öztürk (2005). Participants' physical activity levels were classified based on their weekly MET (Metabolic Equivalent) values. Thus, energy expenditures related to vigorous activity, moderate activity, walking, sitting, and total physical activity were obtained in MET-min/week units for each individual. Physical activity levels were categorized as follows: Physically inactive: (<600 MET-min/week), Minimally active: (600–3000 MET-min/week), Highly active (beneficial for health): (>3000 MET-min/week).

Job Performance Scale: The Job Performance Scale was used as a data collection tool in the study. The scale was developed by Çalışkan and Köroğlu (2022) and aims to measure key dimensions such as contextual performance, task performance, and overall job performance. The scale consists of 11 statements and includes two sub-dimensions: Task Performance (5 items): e.g., "I have the competencies required for my job." Contextual Performance (6 items): e.g., "I contribute to a positive work environment in my institution." The scale is rated using a 5-point Likert scale, ranging from "1 = Strongly Disagree" to "5 = Strongly Agree." There are no reverse-coded items, and higher scores indicate a higher level of the respective variable. The validity and reliability analyses of the scale have been thoroughly presented in the original study, confirming that the measurement tool is valid and reliable. Although the scale was initially designed to be used as a whole, the high internal consistency values of its sub-dimensions allow for separate applications of each sub-dimension. Within the scope of the present study, the internal consistency (Cronbach's Alpha) reliability coefficient was calculated as 0.959. An alpha value of 0.70 or above is considered acceptable for internal consistency (Özdamar, 2004).

Data Analysis

The SPSS software package was used for data analysis in this study. Various statistical methods were applied when normality and homogeneity of variances were not met. The Mann-Whitney U test was used for pairwise comparisons, while the Kruskal-Wallis H test was applied for multiple comparisons. The Mann-Whitney U test was also re-applied to analyze differences between groups. Tukey's test was preferred for post hoc analyses to further examine pairwise group comparisons. To examine relationships between variables, the Spearman Correlation Test was conducted. Additionally, descriptive statistics were utilized in all analyses. Eta square and r (rank-biserial correlation) analyses were applied for effect size. According to Cohen (1988), an Eta squared (η^2) value between .01 and .06 indicates a small effect size, values between .06 and .14 indicate a medium effect size, and values equal to or greater than .14 indicate a large effect size. Similarly, the rank-biserial correlation (r) can be interpreted as follows: values between 0.00 and 0.10 represent a negligible effect, between 0.10 and 0.30 a small effect, between 0.30 and 0.50 a medium effect, and values of 0.50 or greater indicate a large effect (Rosenthal and Rubin, 2003). A significance level of $p < 0.05$ was considered for all statistical tests.

FINDINGS

Table 2

U-Test Results of the Physical Activity Scale (IPAQ) and Job Performance Scale by Gender Variable Among University Staff

	Gender	N	Mean Rank	Total Rank	U	p	r
IPAQ	Female	169	269,50	45,00	25435,00	**0,046**	**0,08**
	Male	335	243,93	81,00			
Task Sub-dimension	Female	169	258,26	43,00	27334,00	0,512	-
	Male	335	249,59	83,00			
Contextual Sub-dimension	Female	169	250,54	42,00	27977,00	0,827	-
	Male	335	253,49	84,00			
Total Job Performance Score	Female	169	252,82	42,00	28254,00	0,972	-
	Male	335	252,34	84,00			
	Total	504	269,50	45,00			

N: Number of people, U: Mann-Whitney U Test score, p: Significant difference

In Table 2, the Mann-Whitney U test results for physical activity and job performance scores by gender among university staff are presented. The findings show a significant difference in IPAQ scores in favor of female university staff ($U = 25435.000$; $p < 0.05$). Considering the mean ranks, it is observed that female university staff have better physical activity levels (269.50) compared to their male counterparts. When we look at the effect size ($r=0.08$), we can say that it is negligible effect. No significant difference was found in the job performance scores between university staff based on gender ($p > 0.05$).

Table 3

U-Test Results of the Physical Activity Scale (IPAQ) and Job Performance Scale by Marital Status Variable Among University Staff

	Martial Statüs	N	Mean Rank	Total Rank	U	p	r
IPAQ	Married	322	235,04	75,00	23766,00	**0,001**	0,16
	Single	182	281,92	51,00			
Task Sub-dimension	Married	322	251,92	80,50	29184,50	0,986	-
	Single	182	252,15	45,50			
Contextual Sub-dimension	Married	322	244,05	78,00	26658,00	0,096	-
	Single	182	266,03	48,00			
Total Job Performance Score	Married	322	245,46	78,00	27111,00	0,176	-
	Single	182	263,54	47,00			
	Total	504	235,04	75,00			

N: Number of people, U: Mann-Whitney U Test score, p: Significant difference

In Table 3, the Mann-Whitney U test results for physical activity and job performance scores by marital status among university staff are presented. The findings show a significant difference in IPAQ scores in favor of single university staff ($U = 23766.000$; $p < 0.05$). Considering the mean ranks, it is observed that single university staff have better physical activity levels (281.92) compared to married staff. When we look at the effect size ($r=0.16$), we can say that it is small effect. No significant difference was found in the job performance scores between university staff based on marital status ($p > 0.05$).

Table 4

Kruskal-Wallis Test Results of the Job Performance Scale by Position Among University Staff

	Position	N	Mean Rank	sd	X^2	p	Tukey	η2
Task Sub-dimension	Academic (a)	65	280,42	3	28,276	**0,001**	d>a,c,b	0,8
	Administrative (b)	122	261,25					
	Health (c)	228	219,36					
	Security (d)	89	305,01					
Contextual Sub-dimension	Academic (a)	65	271,95	3	57,752	**0,001**	d>a,c,b	0,09
	Administrative (b)	122	274,62					
	Health (c)	228	204,15					
	Security (d)	89	331,83					
Total Job Performance Score	Academic (a)	65	277,29	3	59,387	**0,001**	d>a,c,b	0,11
	Administrative (b)	122	274,43					
	Health (c)	228	202,54					
	Security (d)	89	332,31					
	Total	504						

N: Number of people, sd: Degrees of freedom, X^2: Kruskal-Wallis score, p: Significance different

In Table 4, the Kruskal-Wallis test results for Job Performance Scale by position among university staff are presented. The findings indicate that there is a significant difference in the task sub-dimension (Mean Rank = 305,01), contextual sub-dimension (Mean Rank = 331,83) and total job performance (Mean Rank = 332,31) scores, in favor of security personnel ($p<0.05$). When the effect sizes are examined, it can be stated that the effects for the Task Sub-dimension ($\eta^2 = 0.08$), the Contextual Sub-dimension ($\eta^2 = 0.09$), and the Total Job Performance Score ($\eta^2 = 0.11$) are between moderate and large. This finding shows that security staff have higher task, contextual, and overall job performance compared to academic, administrative, and healthcare staff. Additionally, a significant difference in Total Job Performance scores was found between academic (Mean Rank=277.29) and administrative (Mean Rank =274.43) staff, in favor of academic and administrative personnel, compared to healthcare staff (Mean Rank=202.54) ($p<0.05$). Furthermore, academic and administrative staff were found to have higher job performance than healthcare staff.

Table 5

Kruskal-Wallis Test Results of the Physical Activity Scale (IPAQ) and Job Performance Scale by Education Level Among University Staff

	Educational Status	N	Mean Rank	sd	X^2	p	Tukey	η2
IPAQ	High School (a)	112	238,08	3	8,119	**0,044**	b>c,d	0,05
	Bachelor's (b)	284	267,35					
	Master's (c)	55	230,64					
	Doctorate (d)	53	226,08					
Task Sub-dimension	High School (a)	112	237,14	3	6,936	0,074	-	-
	Bachelor's (b)	284	262,01					
	Master's (c)	55	217,50					
	Doctorate (d)	53	270,33					
Contextual Sub-dimension	High School (a)	112	252,57	3	3,232	0,357	-	-
	Bachelor's (b)	284	259,82					
	Master's (c)	55	223,57					
	Doctorate (d)	53	243,14					
	High School (a)	112	246,04	3	5,718	0,126	-	-
	Bachelor's (b)	284	262,88					

Total Job Performance Score	Master's (c)	55	213,55
	Doctorate (d)	53	250,95
	Total	504	238,08

N: Number of people, sd: Degrees of freedom, X^2: Kruskal-Wallis score, p: Significance different

In Table 5, the Kruskal-Wallis test results for the Physical Activity Scale (IPAQ) and Job Performance Scale based on the education level of university staff are presented. The findings indicate a significant difference in IPAQ scores ($p < 0.05$), favoring those with a bachelor's degree (Mean Rank = 267.35). This suggests that university staff with a bachelor's degree have higher physical activity levels compared to those with a master's or doctoral degree. Regarding the effect size, it can be interpreted as small to moderate ($\eta^2 = 0.05$).

Table 6

Kruskal-Wallis Test Results of the Physical Activity Scale (IPAQ) and Job Performance Scale by Length of Service at the Institution Among University Staff

	Working Time	N	Mean Rank	sd	X^2	p	Tukey	η2
IPAQ	0-5 year (a)	203	275,10	3	9,701	**0,021**	a>b,c,d	0,04
	6-10 year (b)	102	237,92					
	11-15 year (c)	114	241,07					
	16 and above (d)	85	231,35					
Task Sub-dimension	0-5 year (a)	203	266,20	3	9,008	**0,029**	b>a a>c,d	0,05
	6-10 year (b)	102	268,72					
	11-15 year (c)	114	237,24					
	16 and above (d)	85	220,78					
Contextual Sub-dimension	0-5 year (a)	203	273,83	3	9,019	**0,029**	a>b,c,d	0,05
	6-10 year (b)	102	250,18					
	11-15 year (c)	114	236,94					
	16 and above (d)	85	225,20					
Total Job Performance Score	0-5 year (a)	203	275,76	3	12,471	**0,006**	a>b,c,d	0,06
	6-10 year (b)	102	256,73					
	11-15 year (c)	114	233,62					
	16 and above (d)	85	217,19					
	Total	504						

N: Number of people, sd: Degrees of freedom, X^2: Kruskal-Wallis score, p: Significance different

In Table 6, the Kruskal-Wallis test results for the Physical Activity Scale (IPAQ) and Job Performance Scale by length of service at the institution among university staff are presented. The findings show significant differences in IPAQ, task sub-dimension, contextual sub-dimension, and total job performance scores, favoring staff with 0-5 years of service ($p<0.05$). This indicates that university staff with 0-5 years of service have higher physical activity levels and better task, contextual, and overall job performance compared to those with 6-10 years, 11-15 years, and 16 or more years of service. When looking at effect sizes, the effect is low for IPAQ ($\eta^2 = 0.04$), task sub-dimension ($\eta^2 = 0.04$), and contextual sub-dimension ($\eta^2 = 0.05$), while it is moderate for the total job performance score ($\eta^2 = 0.06$).

Table 7

Kruskal-Wallis Test Results of the Physical Activity Scale (IPAQ) and Job Performance Scale by Income Status Among University Staff

	Income Status	N	Mean Rank	sd	X^2	p	Tukey	η2
IPAQ	Income is less than expenses (a)	238	255,32	2	8,515	**0,014**	b>a,c	0,06
	Income equals expenses (b)	204	263,20					
	Income exceeds expenses(c)	62	206,49					
Task Sub-dimension	Income is less than expenses (a)	238	252,37	2	4,715	0,095	-	-
	Income equals expenses (b)	204	262,91					
	Income exceeds expenses(c)	62	218,76					
Contextual Sub-dimension	Income is less than expenses (a)	238	246,52	2	17,301	**0,001**	b>a,c	0,07
	Income equals expenses (b)	204	277,46					
	Income exceeds expenses(c)	62	193,33					
Total Job Performance Score	Income is less than expenses (a)	238	247,73	2	14,257	**0,001**	b>a,c	0,07
	Income equals expenses (b)	204	274,85					
	Income exceeds expenses(c)	62	197,27					
	Total	504						

N: Number of people, sd: Degrees of freedom, X^2: Kruskal-Wallis score, p: Significance different

Table 7 presents the Kruskal-Wallis test results for the Physical Activity Scale (IPAQ) and Job Performance Scale based on the income status of university staff. The findings indicate significant differences in IPAQ, the contextual sub-dimension, and total job performance scores in favor of those whose income equals their expenses ($p < 0.05$). This suggests that university staff whose income equals their expenses have higher levels of physical activity and better contextual and overall job performance compared to those whose income is either less than or greater than their expenses. When looking at the effect sizes, it can be said that the effect is moderate for IPAQ ($\eta^2 = 0.06$), the contextual sub-dimension ($\eta^2 = 0.07$), and the total job performance score ($\eta^2 = 0.07$).

Table 8

Spearman Correlation Results of the Physical Activity Scale (IPAQ) and Job Performance Scale Scores of University Staff

		Working Time	IPAQ Scale Score	Task Sub-dimension	Contextual Sub-dimension	Total Job Performance Score
Working Time	r.	--				
	p	.				
	N	504				
IPAQ Scale Score	r.	-,128**	--			
	p	0,002	.			
	N	504	504			
Task Sub-dimension	r.	-,120**	,206**	--		
	p	0,004	0,000	.		
	N	504	504	504		
Contextual Sub-dimension	r.	-,134**	,247**	,660**	--	
	p	0,001	0,000	0,000	.	
	N	504	504	504	504	
Total Job Performance Score	r.	-,156**	,252**	,856**	,937**	--
	p	0,000	0,000	0,000	0,000	.
	N	504	504	504	504	504

r: correlation coefficient, N: number of people, p: significance different

As shown in Table 8, A weak and positive significant correlation was found between the IPAQ, task subdimension, contextual subdimension, and total job performance scores of the university staff who participated in the study ($p<0.05$). A positive but non-causal relationship was observed between physical activity levels and job performance scores. As physical activity levels increased, job performance scores tended to increase as well. Furthermore, a high-level and negative correlation was found between the university staff's length of service in the institution and the IPAQ, task subdimension, contextual subdimension, and total job performance scores. This finding indicates that as the length of service of the university staff increased, their physical activity levels and job performance decreased.

DISCUSSION

The relationships between physical activity and its effects on overall health and changes in work flow have been a subject of research for many years. This study evaluated the relationship between the physical activity levels and job performance of the staff responsible for the operations and functions of universities, one of the most important institutions in the country, as well as the effects of various variables such as gender, marital status, employment status, education level, length of service, and income on physical activity levels and job performance. In the discussion section, the studies in the literature were thoroughly examined, and the variables in the research were listed under specific headings for a better understanding of the topic.

Physical Activity and Job Performance by Gender

Physical activity and job performance are critically important for health and productivity, particularly among university staff. Understanding how these factors vary by gender can help in designing targeted interventions aimed at improving overall well-being and efficiency in the

workplace (Wang et al., 2024). In the present study, it was found that female university staff had higher levels of physical activity compared to their male counterparts (U=25435.000; $p<0.05$). However, a small effect was observed in IPAQ scores based on gender. This finding aligns with some studies in the literature. For example, Brown et al. (2020) reported that women tend to spend more time engaging in low-to-moderate intensity physical activities, such as walking. On the other hand, there are also studies in the literature that contradict this result. Safi (2021) found significant gender-based differences among university employees, indicating that men are more likely to engage in moderate-to-vigorous physical activity than women. Moreover, motivation has been shown to play a key role in physical activity levels, with men generally having higher intrinsic and extrinsic motivation compared to women (Sáez et al., 2021; Durán-Vinagre et al., 2023). In this study, no significant difference was found between genders in terms of job performance ($p>0.05$). This suggests that job performance may be related not only to physical activity but also to other factors such as job satisfaction, motivation, and the work environment (Robbins & Judge, 2018).

Physical Activity and Job Performance According to Marital Status Variable

According to the marital status variable, it was found that the physical activity levels of single employees were higher compared to married employees ($U = 23766.000$; $p <0.05$). However, when we look at the effect size ($r = 0.16$), it can be interpreted as a small effect. Studies in the literature indicate that single participants have better physical activity levels compared to married ones (Gül et al., 2023; Puciato & Rozpara, 2021). This finding aligns with studies suggesting that marital responsibilities and family life may limit the time individuals can dedicate to physical activity (Cavazzotto et al., 2021; Rapp and Schneider, 2013; Gordon-Larsen et al., 2010). Marital support and stress affect physical activity both positively and negatively, with men seeking more support for physical activity as they age (Thomas et al., 2022). In the study, marital status did not create a significant difference in terms of job performance ($p> 0.05$). This suggests that job performance can be assessed independently of individual life conditions.

Physical Activity and Job Performance by Job Position

It has been determined that security personnel have higher physical activity levels and job performance scores compared to academic, administrative, and healthcare staff ($p<0.05$). When the effect sizes are examined, it can be stated that the effects for the Task Sub-dimension ($\eta^2 = 0.08$), the Contextual Sub-dimension ($\eta^2 = 0.09$), and the Total Job Performance Score ($\eta^2 = 0.11$) are between moderate and large. This result can be explained by the nature of security officers' jobs, which require more physical movement (Pronk et al., 2004). Physical activity and sedentary behaviors vary across professions (Prince et al., 2019). It is noteworthy that the physical activity levels of academic and administrative staff are higher than those of healthcare personnel in this study. The literature indicates that healthcare workers have less time for physical activity due to long working hours and shift systems (Khan et al., 2023).

Physical Activity and Job Performance by Education Level

It was found that university staff with a bachelor's degree have higher levels of physical activity compared to those with a master's or doctoral degree ($p < 0.05$). When evaluated in terms of effect size, this difference can be interpreted as small to moderate ($\eta^2 = 0.05$). This can be explained by the increase in academic responsibilities and the time spent at a desk as the level of education rises. This finding suggests that job performance may also vary with increasing workload and academic responsibilities (Smith & Jones, 2015).

Physical Activity and Job Performance by Length of Employment

It has been determined that employees who have worked at the institution for 0-5 years have higher physical activity levels and job performance compared to those who have worked for 6-10 years, 11-15 years, and 16 or more years ($p<0.05$). When looking at effect sizes, the effect is low for IPAQ ($\eta^2 = 0.04$), task sub-dimension ($\eta^2 = 0.04$), and contextual sub-dimension ($\eta^2 = 0.05$), while it is moderate for the total job performance score ($\eta^2 = 0.06$). This finding is supported by studies suggesting that newly hired employees may have higher motivation and energy levels. The literature indicates that as the length of employment increases, physical activity levels and job performance tend to decline. This can be explained by factors such as aging, decreased job satisfaction, and neglect of physical activity (Smith & Jones, 2015). Additionally, the decline in physical activity levels and job performance with increasing years of employment may be attributed to aging and loss of motivation due to work routine (Robbins & Judge, 2018). However, studies on the relationship between length of employment, physical activity levels, and job performance remain quite limited in the literature.

Physical Activity and Job Performance by Income Level

It has been found that employees whose income matches their expenses have higher physical activity levels and job performance compared to those whose income is either lower or higher than their expenses ($p<0.05$). The effect size can be said to be at a moderate level for IPAQ ($\eta^2 = 0.06$), contextual sub-dimension ($\eta^2 = 0.07$) and total job performance score ($\eta^2 = 0.07$). This finding suggests that economic stability positively reflects on both physical and professional aspects of individuals' lives (Graff et al., 2022). According to current guidelines, higher levels of physical activity are associated with higher income; however, exceeding these levels may negatively impact income (Junttila et al., 2023). Another study indicates that physical activity is linked to higher average income, while interruptions in physical activity are associated with lower income (Metelski, 2019). Lower financial stress may facilitate individuals' ability to allocate time for physical activity and enhance their job performance.

The Relationship Between Physical Activity and Job Performance

The study found a positive association between physical activity levels and job performance among university staff ($p <0.05$). This finding is consistent with studies demonstrating that physical activity enhances existing functions and contributes to job performance (Wong et al., 2023; Calderwood et al., 2021; Mänttäri et al., 2020; Nawrocka et al., 2018; Calatayud et al., 2015; Hillman et al., 2008). Physical activity levels play a significant role in the job performance of university employees (Szarek et al., 2024). The literature indicates a strong positive correlation between sports participation and job performance. It has been suggested that public sector employees who spend more time engaging in sports or physical activity tend to have better job performance compared to those working outside the public sector (Koley and Baksi, 2024). These findings are consistent with the results of our study. Motivational processes involved in physical activity participation are crucial for maintaining an active lifestyle and significantly enhance employees' job performance and productivity (Durán et al., 2023; Sjøgaard et al., 2016). It has been reported that university employees perceive a high level of physical activity in their daily lives, with more than 78% meeting moderate to high physical activity guidelines. However, professional duties and leisure activities largely fill their schedules, which may negatively affect their overall physical activity levels (Leuciuc et al., 2023). Therefore, incorporating physical activity into the daily lives of university employees can significantly improve their job performance and efficiency.

Conclusion

This study thoroughly examined the relationship between physical activity levels and job

performance among university staff. The findings indicate that as the physical activity levels of university employees increase, their job performance also improves. However, as the length of employment increases, both physical activity levels and job performance tend to decline. It was determined that factors such as gender, marital status, job position, education level, income level, and length of employment have varying effects on physical activity and job performance.

Recommendations

Based on these findings, it is recommended to develop strategies to enhance the physical activity levels of university staff. Increasing the availability of sports facilities in the workplace, organizing programs that encourage physical activity, and conducting awareness activities for employees may contribute to improving job performance.

Limitations

This study is limited to academic, administrative, healthcare, and security staff working at Van Yüzüncü Yıl University. The data are limited to the questions directed to the participants and their responses.

REFERENCES

Acar, H., & Şahin, M. (2020). Work–life balance and health perception among university staff in Türkiye. *Ankara University Journal of Faculty of Educational Sciences*, 53(2), 123–140.

Bakker, A. B., & Demerouti, E. (2023). Job demands–resources theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior, 10*, 25-53. https://doi.org/10.1146/annurev-orgpsych-120920-053933

Brown, D. M., Dudley, D. A., & Cairney, J. (2020). Physical literacy profiles are associated with differences in children's physical activity participation: A latent profile analysis approach. Journal of Science and Medicine in Sport, 23(11), 1062-1067. https://doi.org/10.1016/j.jsams.2020.05.007

Büyüköztürk Ş., Çakmak E.K., Akgün Ö.E., Karadeniz Ş., Demirel F. (2010). *Bilimsel araştırma yöntemleri* (6. baskı). Ankara: Pegem Akademi.

Calatayud, J., Jakobsen, M., Sundstrup, E., Casaña, J., & Andersen, L. (2015). Dose-response association between leisure time physical activity and work ability: Cross-sectional study among 3000 workers. Scandinavian Journal of Public Health, 43, 819 - 824. https://doi.rg/10.1177/1403494815600312

Calderwood, C., Brummelhuis, L., Patel, A., Watkins, T., Gabriel, A., & Rosen, C. (2021). Employee Physical Activity: A Multidisciplinary Integrative Review. Journal of Management, 47, 144 - 170. https://doi.org/10.1177/0149206320940413.

Çalışkan, A., & Köroğlu, Ö. (2022). Job performance, task performance, and contextual performance: Development and validation of a new scale. *International Journal of Economic and Administrative Sciences*, 8(2), 180–201. https://doi.org/10.29131/uiibd.1201880

Cavazzotto, T., De Lima Stavinski, N., Queiroga, M., Da Silva, M., Cyrino, E., Serassuelo, H., & Vieira, E. (2021). Age and Sex-Related Associations between Marital Status, Physical Activity and TV Time. International Journal of Environmental Research and Public Health, 19. https://doi.org/10.3390/ijerph19010502

Chekroud, S. R., Gueorguieva, R., Zheutlin, A. B., Paulus, M., Krumholz, H. M., Krystal, J. H., & Chekroud, A. M. (2018). Association between physical exercise and mental health in 1·2 million individuals in the USA between 2011 and 2015: A cross-sectional study.

The Lancet Psychiatry, 5(9), 739-746. https://doi.org/10.1016/S2215-0366(18)30227-X

Chen, Y., Li, X., & Zhang, Q. (2025). Workplace wellness programs and their impact on employee performance: A meta-analysis. *Journal of Occupational Health Psychology, 30*(1), 12-28.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2. edition). Hillsdale, NJ: Lawrence Earlbaum Associates.

Craig, C.L., Marshall, A.L., Sjöström, M., Bauman, A.E., Booth, M.L., Ainsworth, B.E., Pratt, M., Ekelund, U., Yngve, A., Sallis, J.F., Oja, P., (2003). International Physical Activity Questionnaire: 12-country reliability and validity, Med. Sci. Sports. Exerc., 35, 1381-1395. https://doi.org/10.1249/01.MSS.0000078924.61453.FB

Dere, G., & Günay, M. (2021). A solution proposal to improve workplace performance: Physical activity. *International Journal of Economic and Administrative Sciences*, 7(1), 28–50. https://doi.org/10.29131/uiibd.913029

Durán-Vinagre, M., Ibáñez, S., Feu, S., & Sánchez-Herrera, S. (2023). Analysis of the motivational processes involved in university physical activity. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.1080162

Graff, H., Webber, L., Huerta, M. C., Olney, J., & Sassi, F. (2022). The impact of ill-health on social mobility: A qualitative study. *SSM - Qualitative Research in Health, 2*, Article 100101. https://doi.org/10.1016/j.ssmqr.2022.100101

Gül, F., Alıncak, F., Özdal, M., & Vural, M. (2023). Pedometer-based physical activity levels of academic and administrative university staff in Türkiye. *Gaziantep University Journal of Sport Sciences*, 8(2), 147–158. https://doi.org/10.31680/gaunjss.1286532

Hillman CH, Erickson KI, Kramer AF. (2008). Be smart, exercise your heart: Exercise effects on brain and cognition. *Nature Reviews Neuroscience*. 9(1):58–65. https://doi.org/10.1038/nrn2298

Holtermann, A., Hansen, J. V., & Burr, H. (2023). Physical activity at work and leisure: Effects on burnout and cognitive performance. *Scandinavian Journal of Work, Environment & Health, 49*(2), 89-97.

Junttila HE, Vaaramo MM, Huikari SM, et al. (2023). Association of accelerometer- measured physical activity and midlife income: A Northern Finland Birth Cohort 1966 Study. *Scand J Med Sci Sports.* 33:1765-1778. https://doi.org/10.1111/sms.14421

Khan, R. A., Ali, T., Mehmood, N., Riaz, N., Ghani, U., Riaz, T., Bibi, A., Khan, N., & Nasir, A. (2023). Lifestyle Impacts of Extended Nursing Shifts Among Nurses: A Study in Tertiary Care Hospitals in Karachi, Pakistan: Lifestyle Impacts of Extended Nursing Shifts. *Pakistan Journal of Health Sciences*, *4*(10), 187–193. https://doi.org/10.54393/pjhs.v4i10.1054

Koley, T. Baksi R. (2024). Influence of Sports and Physical Activities on Job Performance of Working Professionals. Interantıonal Journal of Scıentıfıc Research ın Engıneerıng and Management. https://doi.org/10.55041/ijsrem35060

Leuciuc, F., Boca, A., Petrariu, I., Holubiac, I., & Leuciuc, R. (2023). The Perception of Physical Activity / Physical Education Among University Employees. BRAIN. Broad Research in Artificial Intelligence and Neuroscience. https://doi.org/10.18662/brain/14.3/483

Mänttäri, S., Oksa, J., Lusa, S., Korkiakangas, E., Punakallio, A., Oksanen, T. ve Laitinen, J. (2020). Fiziksel olarak yorucu işlerde çalışan işçiler arasında fiziksel aktiviteyi artırarak iş yeteneğini geliştirmeye yönelik müdahaleler: Kapsamlı bir inceleme. İskandinav Halk Sağlığı Dergisi, 49, 206 - 218. https://doi.org/10.1177/1403494820917532

Metelski, A. (2019). Effects of Physical Activity on Income. Studies in Sport Humanities. https://doi.org/10.5604/01.3001.0013.7560

Nawrocka, A., Garbaciak, W., Cholewa, J., & Mynarski, W. (2018). The relationship between meeting of recommendations on physical activity for health and perceived work ability

among white-collar workers. European Journal of Sport Science, 18, 415 - 422. https://doi.org/10.1080/17461391.2018.1424257

Özdamar, K. (2004). Paket programlar ile istatistiksel veri analizi. Eskişehir: Anadolu Üniversitesi Yayınları.

Öztürk, M. (2005). A research on reliability and validity of international physical activity questionnaire and determination of physical activity level in university students (Tez no. 194366 [Yüksek Lisans Tezi, Hacettepe Üniversitesi].

Prince, S., Elliott, C., Scott, K., Visintini, S., & Reed, J. (2019). Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: a systematic review and meta-analysis. The International Journal of Behavioral Nutrition and Physical Activity, 16. https://doi.org/10.1186/s12966-019-0790-9

Pronk, N. P., Martinson, B., Kessler, R. C., Beck, A. L., Simon, G. E., & Wang, P. (2004). The association between work performance and physical activity, cardiorespiratory fitness, and obesity. Journal of occupational and environmental medicine, 46(1), 19-25. https://doi.org/10.1097/JOM.0000000000001167

Proper, K. I., van Oostrom, S. H., & Hildebrandt, V. H. (2022). Effectiveness of workplace interventions to promote physical activity: A systematic review. *British Journal of Sports Medicine, 56*(10), 587-595.

Puciato, D., & Rozpara, M. (2021). Physical activity and socio-economic status of single and married urban adults: a cross-sectional study. PeerJ, 9. https://doi.org/10.7717/peerj.12466

Rapp, I., & Schneider, B. (2013). The impacts of marriage, cohabitation and dating relationships on weekly self-reported physical activity in Germany: a 19-year longitudinal study. Social science & medicine, 98, 197-20. https://doi.org/10.1016/j.socscimed.2013.09.024

Ratey, J. J., & Hagerman, E. (2018). *Spark: The revolutionary new science of exercise and the brain*. Little, Brown Spark.

Reed, J., & Buck, S. (2015). The effect of regular aerobic exercise on positive-activated affect: A meta-analysis. *Psychology of Sport and Exercise, 16*(3), 103-111.

Robbins, S.P. and Judge, T.A. (2018) *Essentials of organizational behavior*. 14th Edition, Pearson Education, Inc., London.

Rosenthal, R., & Rubin, D. B. (2003). Requivalent: A simple effect size indicator. Psychological Methods, 8(4), 492–496. https://doi.org/10.1037/1082-989X.8.4.492

Sáez, I., Solabarrieta, J., & Rubió, I. (2021). Motivation for Physical Activity in University Students and Its Relation with Gender, Amount of Activities, and Sport Satisfaction. Sustainability. https://doi.org/10.3390/SU13063183

Safi, A., Cole, M., Kelly, A., & Walker, N. (2021). An Evaluation of Physical Activity Levels amongst University Employees. Advances in Physical Education, 11, 158-171. https://doi.org/10.4236/APE.2021.112012

Safi, A., Cole, M., Kelly, A., Zariwala, M., & Walker, N. (2022). Workplace Physical Activity Barriers and Facilitators: A Qualitative Study Based on Employees Physical Activity Levels. International Journal of Environmental Research and Public Health, 19. https://doi.org/10.3390/ijerph19159442

Sjøgaard, G., Christensen, J. R., Justesen, J. B., Murray, M., Dalager, T., & Fredslund, G. H., et al. (2016). Exercise is more than medicine: The working age population's well-being and productivity. *Journal of Sport and Health Science*, 5(2), 159–165. https://doi.org/10.1016/j.jshs.2016.04.004

Smith, J. & Jones, M. (2015). *The Relationship Between Workload and Job Performance*. Organizational Behavior Journal.

Szarek, S., Bombiak, E., & Wysokińska, A. (2024). The Role of Physical Activity in the Improvement of Well-being - the Case of University Staff. Journal of Modern Science. https://doi.org/10.13166/jms/188741

Thomas, P., Richards, E., & Forster, A. (2022). Is Marital Quality Related to Physical Activity Across the Life Course for Men and Women?. Journal of Aging and Health, 34, 973 - 983. https://doi.org/10.1177/08982643221083083

Wang, X., Yang, X., Nasiruddin, N., Wei, S., Dong, D., & Samsudin, S. (2024). Social Support and Physical Activity in College and University Students: A Meta-Analysis. Health Education & Behavior, 51, 533 - 543. https://doi.org/10.1177/10901981231216735

Warburton, D.E.R. & Bredin, S. S. D. (2021). Health benefits of physical activity: A systematic review of current evidence. *Current Opinion in Cardiology, 36*(5), 541-550. https://doi.org/10.1097/HCO.0000000000000437

Wong, C., Kwok, R., & Zhang, S. (2023). mHealth application as physical activity intervention: a case study on physical activity, emotional exhaustion, and work performance. Journal of Information Technology Case and Application Research, 25, 58 - 85. https://doi.org/10.1080/15228053.2023.2186673

World Health Organization (2024). *Physical activity guidelines for adults*. Geneva: WHO Press.

Yıldız, N. T., & Kocaman, H. (2023). An Investigation into the Relationships Between Physical Activity Level, Burnout, Job Satisfaction, Quality of Life and Sociodemographic Factors in Academicians. Ahi Evran Medical Journal, 7(3), 331-339. https://doi.org/10.46332/aemj.1230539

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