#### INTJORASS (2023) 7(1): 6-17 RESEARCH ARTICLE DOI: 10.46463/ijrss.1281670

: 2023



# To Examine the Work Engagement and Psychological Flexibility Levels of University Stuff Who Participate in Yoga Activities as A Recreational Experience

Rumevsa ALPER<sup>1</sup>  $\bigcirc$  • Zekive BASARAN<sup>2</sup>  $\bigcirc$ 

<sup>1</sup> Duzce University, Faculty of Sport Sciences Faculty, Duzce-Turkey, <u>rumeysaalper@duzce.edu.tr</u> <sup>2</sup> Kocaeli University, Faculty of Sport Sciences, Kocaeli-Turkey <u>zekiye.basaran@kocaeli.edu.tr</u>

Corresponding Author: <u>rumeysaalper@duzce.edu.tr</u>

#### Please cite this paper as follows:

Alper, R., Başaran, Z. (2023). To Examine The Work Engagement And Psychological Flexibility Levels of University Stuff Who Participate In Yoga Activities As A Recreational Experience. International Journal of Recreation and Sport Science, 7(1), 6-17. https://doi.org/10.46463/ijrss.1281670

#### **Article History**

Received. 12.04.2023 Accepted: 15.06.2023 Available online: 20.12.2023



## ABSTRACT

The aim of this research is to examine the work engagement and psychological flexibility levels of university stuff who participate in yoga activities. In this study, a random design with pretest-posttest control group, which is one of the real experimental designs, was used. The sample of the study consisted of 24 female staff working at the university. There were 13 female in the experimental group and 11 female in the control group. Data collection tools to be used in the research are Utrecht Work Engagement Scale and Psychological Flexibility Scales. The study lasted for 12 weeks. Data were analyzed with SPSS program, Wilcoxon and Correlation tests were applied. As a result, there is a significant difference between the participants in the experimental groups Psychological Flexibility pretest and post-test scores. (p<.05). There was no significant difference between the participants in the experiment groups Work Engagement pre-test and post-test scores. It can be said that regular yoga practices can have positive effects on psychological flexibility as well as increase work engagement. Longer and more frequent applications are recommended.

Keywords: Yoga, Work Engagement, Psychological Flexibility

#### INTRODUCTION

The word yoga simply means "getting together, putting it together." (Desikachar, 2019). It's an ancient philosophy that contains health and wellbeing (Desikachar, 2005). The goal of yoga is to make consciousness whole. Yoga includes eight branches (Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi) that start with applications that include breathing techniques and physical postures and lead to spiritual liberation (Büssing et al., 2012). Thanks to yoga, it is possible to explore the feeling of integrity, inner peace and freedom. Yoga is open to everyone, although India is a philosophy that comes out and it has a universal approach that does not belong to any culture (iyengar, 2020). Studies (Biman et al., 2021; Birdee

et al., 2008; Cocchiara, 2019; Gothe et al., 2019; Dağaşan, 2019; Fields, 2001; Puerto Valencia et al.,2019; Wadhen & Cartwright, 2021; Young-Sook Yook, Soo-Jin Kang & InKyoung Park, 2017) reveal the physical, mental and emotional benefits of yoga and meditation practices. General well-being, coping with stress, improvements in mood, physical health and brain health are some of these benefits and demonstrates that yoga can be used for therapeutic purposes. Yoga has thus become a popular practice that can be used as auxiliary therapy (Büssing et al., 2012). In particular, it can be used to improve the professional performance of working individuals, increase their participation in activities in the work environment and reduce depression (Schmid et al., 2019). While work stress and exhaustion are one of today's common discomfort (De Bruin, Formsma,



Frijstein & Bögels, 2017), it is possible to avoid or reduce these discomfort through yoga and meditation practices (De Bruin, Formsma, Frijstein & Bögels, 2017; Ross & Thomas, 2010; West et al., 2004). It has been revealed that the general health (Dağaşan, 2019), job satisfaction and life satisfaction levels (Duyan, 2008) of individuals who participate in yoga exercises are positively affected. In another study, it was found that there was a positive relationship between yoga exercises, perception of well-being and quality of life (Güler, 2010). In addition to being an important part of maintaining general health and well-being, practicing yoga is a system that can help protect mental health and the musculoskeletal system (Birdee, 2008). Consciously applied yoga practices can reduce the effects of stress by showing a relaxing effect, bring the nervous system to a balanced state and provide psychological flexibility (Benson, 1975; cited in Jeter, 2015). Psychological flexibility can be defined as a conscious human being touching the present moment and acting in accordance with individual values. Helps people learn how to do their jobs more effectively (Bond, Hayes & Barnes-Holmes, 2006). Psychological flexibility includes many talents such as adapting, changing the structures of thought and behavior, maintaining balance in life (Kashdan & Rottenberg, 2010). Being able to exhibit flexible behavior in difficult conditions is very important for a healthy functioning. Psychological flexibility is especially beneficial in the face of stress-inducing difficulties that we encounter on our way to our goal (Doorley, 2020). Psychological flexibility also has a positive relationship with mindfulness (Silberstein, 2012). Mindfulness means unprejudiced attention and is about staying in the moment (Kabat-Zinn, 2015). Psychological flexibility is positively associated not only with professional performance but also with job satisfaction, self-compassion, and well-being (Bond, Hayes, & Barnes- Holmes, 2006; Kashdan & Rottenberg, 2010; Yadavaia, Hayes, & Vilardaga, 2014). In a study, it was mentioned that psychological flexibility can increase work engagement by positively affecting performance in the workplace (Yang, Ma, Wang, Chen, Xie & Chang, 2022). The fact that individuals enjoy their work, concentrate on their work and feel energetic while working is related to their work commitment (Salanova et al., 2000; cited in Eryılmaz & Doğan, 2012). Individuals who can focus on their work are more likely to be lively, positive, self-sacrificing, creative and productive. Job opportunities can also affect individuals' commitment to their jobs (Atesoğlu & Erkal, 2018; Bakker & Demerouti, 2008; Schaufeli et al., 2002). There are also studies showing that there is a relationship between work engagement and being healthy. According to these studies, the

health status of individuals who are engaged in their work is better than those who are not. (Demerouti et al., 2001; Hakanen, Bakker & Schaufeli, 2006; Schaufeli et al., 2008). Similarly, there are studies that reveal the positive effect of individuals' wellbeing on their commitment to work. (Savrun, 2019). In addition, participation in physical activity is one of the factors that positively affect work engagement (Kiema-Junes et al., 2022). Thanks to yoga and mindfulness practices applied together, employees can not only reduce their work stress, but also learn to cope with the demands at work more easily (Torre et al., 2020; Della Valle et al., 2020). In addition, the professional performance and psychological wellbeing of the employees can be positively affected (Trent et al., 2019). Yoga exercises differentiate from other types of exercise with the benefits it provides in its spiritual aspects, coping, stress management, mind-body interaction. Therefore, yoga practices have a holistic approach that includes much more than poses (Cagas, Biddle & Vergeer, 2022). Because of all of these aspects of yoga, it has become a question of whether it will have an impact on emotional situations such as psychological flexibility and work engagement. Especially after pandemic, the fact that yoga is one of the most appropriate exercises for individuals to feel both physically and spiritually good (Nagarathna et al., 2021; Mendo et al., 2022) is the main reason why yoga exercises are preferred in this study. The reasons, such as the researcher herself being a certified yoga instructor, limited exercise opportunities, and the demands of the participants are in the direction of static exercise, have also made yoga preferable. Therefore, in this study "To Examine The Work Engagement And Psychological Flexibility Levels of University Stuff Who Participate In Yoga Activities As A Recreational Experience" is aimed.

# METHOD

In this study, a random design with pretestposttest control group, which is one of the real experimental designs, was used. Experimental research is the research in which the most precise results are obtained among scientific methods In this design, firstly, two groups, experimental and control groups, are formed from the previously determined sample group. Dependant variable measurements of both groups are taken. Independent variable is applied to the experiment group. Finally, the same dependent variable measurements are taken again from both groups (Büyüköztürk et al., 2016). This study aims to examine the levels of work engagement and psychological resilience of university staff who participate in yoga activities as a recreational experience.

Hypotheses:

H1. There is a difference between the psychological flexibility pre-test and psychological flexibility post-test scores of the participants in the experimental group.

H2. There is a difference between job commitment pre-test and job commitment post-test scores of the participants in the experimental group.

The sample of the study consisted of 24 female academic and administrative staff working at Düzce

University. Participants were reached by easy sampling method. In this sampling method, people close to the researcher and easily accessible are included in the sample. (Baştürk & Taştepe, 2013). The announcement was made with the permission of Düzce University Rectorate. People who want to participate in the study have reached the researcher and they are informed about the work. Study is started after their approval has been received. The distribution of the participants according to different variables is given below (Table 1)

Variables	Subcategories	Frequency (f) (Experimental	Percent (%) (Experimental	Frequency (f)	Percent (%) (Control)
		)	)	(Control)	<b>x</b>
	20-30	2	15,4	2	18,2
<b>A a a</b>	31-40	7	53,8	6	54,6
Age	41-50	4	30,8	3	27,3
	Total	13	100,0	11	100,0
	High school	-	-	2	18,2
Education	graduates				
Status	Degree graduates	4	30,8	2	18,2
	Postgraduates	9	69,2	7	63,6
	Total	13	100,0	11	100,0
	Biochemistry	1	7,7	2	18,2
	Education	4	30,8	1	9,1
	Hospital	1	7,7	1	9,1
	Business	1	7,7	-	-
Duty Unit	Engineering	1	7,7	1	9,1
Duty Unit	Rectorate	1	7,7	-	-
	Health Service	2	15,4	-	-
	Sport Sciences	-	-	5	45,5
	Foreign Language	2	15,4	1	9,1
	Total	13	100,0	11	100,0
Maulting	Academic	7	53,8	7	63,6
Working	Administrative	6	46,2	4	36,4
Position	Total	13	100,0	11	100,0
	0-1 year	-	-	1	9,1
Tarma	2-5 years	3	23,1	2	18,2
Term of	5-10 years	1	7,7	1	9,1
Office	10 years and above	9	69,2	7	63,6
	Total	13	100,0	11	100,0
Vere	Yes	3	23,1	1	9,1
Yoga	No	10	76,9	10	90,9
Experience	Total	13	100,0	11	100,0

Table 1. Frequency and Percentage Distribution of Participants' Demographic Information

When Table 1 is examined, it is seen that more than half of the participants in the experimental group are in the 31-40 age group (53.8%), which constitutes the middle age group. It was seen that the 41-50 age group (30.8%) took second place and the 20-30 age group (15.4%) took the last place. When the education level is considered, the rate of undergraduate graduates is 30.8%, while postgraduate graduates constitute the majority with 69.2%. In terms of their duty unit, it was determined that the personnel of the faculty of education took the first place (30.8%), while the personnel of the health services and foreign language departments (15.4%) took the second place. These people 53.8% are academic staff, 46.2% are administrative staff. The vast majority of them are working for 10 years or more (69.2%). Only 3 of them (23.1%) had previous yoga experience.

Participants in the control group are mostly between the ages of 31-40 (%54.6). When the education level is considered, the rate of high school graduates is %18.2, the rate of undergraduate graduates is 18.2% and postgraduate graduates constitute the majority with 63.6%. In terms of their duty unit, it was determined that the personnel of the Sport Sceiences departments took the first place (45.5%), while the personnel of the Biochemistry departments (18.2%) took the second place. These people 63.6% areacademic staff, 36.4% are administrative staff. The vast majority of them are working for 10 years or more (63.6%). Only one of them had previous yoga experience.

#### **Data Collection**

The data of the research were obtained from the participating personnel working at Düzce University in the spring semester of the 2021-2022 academic year. Pre-tests were applied at the beginning of the study and post-tests were applied at the end of the study. The data were obtained by filling in a face-to-

face environment. Hatha yoga practices were performed for 12 weeks. Hatha yoga is generally a type of yoga comprised of asana (yoga poses), pranayama (breathing techniques) and meditation practices (Riley, 2004). These practices were performed with a certified yoga instructor for 60-90 minutes once a week. 12-weeks hatha yoga program is listed in the table below (Table 2)

Breathing

Wooko	Deces	Breathing
Weeks	Poses	Techniques
1	Warm up, Surya Namaskar (3 Reps), Balasana, Savasana, Pratyahara	Sama Vritti Pranayama
2	Warm up, Surya Namaskar (2 Reps), Utkatasana, Vrksasana, Trikonasana, Setu Bandha Sarvangasana, Ardha Chandrasana, Parsvottanasana, Janu Sirsasana, Anjaneyasana, Baddha Konasana, Ananda Balasana, Savasana, Pratyahara	Sama Vritti Pranayama
3	Warm up, Chandra Namaskar, Salabhasana, Chaturanga Dandasana, Bhujangasana, Bitilasana Marjaryasana, Ardha Pincha Mayurasana, Utthita Hasta Padangusthasana, Vrksasana, Vasisthasana, Halasana, Savasana, Pratyahara	Nadi Shodhana Pranayama
4	Warm up, Surya Namaskar, Utkatasana, Parivrtta Utkatasana, Bitilasana Marjaryasana, Purvottanasana, Navasana, Vrksasana, Vasisthasana, Dhanurasana, Uttanpadasana, Savasana, Pratyahara	Bhramari Pranayama
5	Warm up, Chandra Namaskar, Bhujangasana, Anjaneyasana, Parsvottanasana, Paschimottanasana, Utthan Pristhasana Kapotasana, Salabhasana, Ustrasana, Dhanurasana, Upavistha Konasana, Balasana, Halasana, Baddha Konasana, Ananda Balasana, Savasana, Pratyahara	Nadi Shodhana Pranayama
6	Warm up, Surya Namaskar Vrksasana, Utkatasana, Vrksasana, Trikonasana, Setu Bandha Sarvangasana, Ardha Chandrasana, Parsvottanasana, Janu Sirsasana, Anjaneyasana, Baddha Konasana, Ananda Balasana, Savasana, Pratyahara	Bhramari Pranayama
7	Warm up, Surya Namaskar, Salabhasana, Chaturanga Dandasana, Bhujangasana, Bitilasana Marjaryasana, Ardha Pincha Mayurasana, Vasisthasana, Utthita Hasta Padangusthasana, Halasana, Savasana, Pratyahara	Bhastrika
8	Warm up, Chandra Namaskar, Utkatasana, Parivrtta Utkatasana, Bitilasana Marjaryasana, Purvottanasana, Navasana, Vrksasana, Vasisthasana, Dhanurasana, Uttanpadasana, Savasana, Pratyahara	Shiitali Kumbhaka
9	Warm up, Surya Namaskar, Bhujangasana, Anjaneyasana, Parsvottanasana, Paschimottanasana, Utthan Pristhasana, Upavistha Konasana, Salabhasana, Ustrasana, Dhanurasana, Balasana, Ananda Balasana, Halasana, Kapotasana, Vrksasana, Savasana, Pratyahara	Ujjayi
10	Warm up, Surya Namaskar, Salabhasana, Chaturanga Dandasana, Bitilasana Marjaryasana, Purvottanasana, Navasana, Vrksasana, Vasisthasana, Dhanurasana, Halasana, Savasana Savasana, Pratyahara	Bhastrika
11	Warm up, Chandra Namaskar, Utkatasana, Parivrtta Utkatasana, Bitilasana Marjaryasana, Purvottanasana, Navasana, Vrksasana, Vasisthasana, Dhanurasana, Uttanpadasana, Savasana, Pratyahara	Nadi Shodhana Pranayama
12	Warm up, Surya Namaskar, Salabhasana, Bitilasana Marjaryasana, Purvottanasana, Navasana, Vrksasana, Vasisthasana, Dhanurasana, Uttanpadasana, Halasana, Savasana, Pratyahara	Ujjayi

## Data Collection Tools

Personal information form developed by the researchers, Utrecht Work Engagement Scale and Psychological Flexibiliy Scale were used as data collection tools in our study.

## Psychological Flexibiliy Scale

It was developed by Francis, Dawson and Golijani-Moghaddam (2016). It was adapted into Turkish by Karakuş and Akbay (2020). Psychological Flexibiliy Scale is a 7's Likert type and consists of five sub-dimensions. These are, behavior (1, 7, 9, 13, 16, 19, 21, 26, 27, 28), be in the moment (8, 14, 18, 20, 22, 23, 25), acceptence (2, 3, 5, 6, 24), contextual personality (4, 10, 12) and dissociation (11, 15, 17). Items 2, 3, 5, 6, 8, 18, 20, 22, 23, 24 and 25 are reverse scored. In the study, the Cronbach Alpha internal consistency coefficient of the Psychological Flexibility Scale was calculated as .79. The lowest score that can be obtained from the scale is 28, and the highest score is 196. High scores from each subscale in the evaluation of scale items reflect high psychological flexibility. In this study, the Cronbach Alpha coefficient was determined as 0.703 (Karakuş & Akbay, 2020).

## Utrecht Work Engagement Scale

Utrecht Work Engagement Scale (UWES): UWES was develeped by Schaufeli et al. (2002) to measure employee engagement. It was adapted into Turkish by Eryılmaz and Doğan (2012). The reliability of UWES-TR was examined by internal consistency and testretest methods. Accordingly, the Cronbach alpha reliability coefficient calculated for the entire scale was .94. Scale has 3 subdimensions. These are, Vigor (1,4,8,12,15,17) Dedication (2,5,7,10,13) and Absorption (3,6,9,11,14,16). The reliability coefficients obtained for the subdimensions were calculated as .87 for the "Vigor" sub-dimension, .87 for the "Dedication" sub-dimension, and .84 for the "Absorption" sub-dimension. There is no reverse item in the scale. High scores from the scale indicate high work engagement. The lowest possible score is 17, and the highest score is 85 (Eryılmaz & Doğa, 2012). In this study, the Cronbach Alpha coefficient was determined to be 0.878 in total, 0.687 in the Vigor Sub-Dimension, 0.759 in the Dedication Sub-Dimension, and 0.847 in the Absorption Sub-Dimension.

## Analysis of Data

The data obtained from the scales were analyzed with the SPSS 22 package program. Frequencies and percentages were taken for personal information, and descriptive statistics were made for other data. Cronbach Alpha coefficients were calculated for reliability. Wilcoxon test, one of the nonparametric tests, was applied to the data that did not show normal distribution. Spearman correlation test was used to examine the relationship between the two variables. Statistical significance level was accepted as p<0.5.

#### RESULTS

The participants' work engagement and psychological flexibility data are given in the tables below (Table 3).

Scales	Pre-	Pre-Test		Post- Test		xon
Scales	x	SD	Х	SD	Z	р
Psychological Flexibility Scale Total Score	126,53	13,37	145,38	13,94	-3,061	0,02
Behavior Sub-Dimension	61,92	5,46	64,00	4,06	-1,791	0,07
Be in the moment Sub- Dimension	33,61	6,15	37,38	4,11	-1,609	0,10
Acceptence Sub-Dimension	12,23	5,61	16,30	6,71	-2,482	0,01
Contextual personality Sub- Dimension	12,30	5,72	14,30	3,63	-1,179	0,23
Dissociation Sub-Dimension	10,84	3,78	13,38	4,31	-1,379	0,16

Table 3. Comparison of Participants in The Experimental Groups Pre-Test and Post-Test Data Means of the Psychological Flexibility Scale

When Table 3 is examined, it is seen that there is a significant difference (p=0.02, p<0.05) between the psychological flexibility levels of the participants and their pretest and posttest "total" scores. Post-test averages are higher than pre-test averages. This significant statistical difference was also determined in the "acceptance sub-dimension" (p=0,01, p<0,05). There is no significant difference in other dimensions (p>0.05).

Tablo 4. Comparison of Participants in The Control Groups Pre-Test and Post-Test Data Means of the Psychological Flexibility Scale

Casles	Pre-	Pre-Test		Post- Test		Wilcoxon	
Scales	x	SD	Х	SD	Z	р	
Psychological Flexibility Scale Total Score	128,00	13,06	130,54	17,07	-,952	,341	
Behavior Sub-Dimension	54,18	13,16	53,90	12,74	-,179	,858	
Be in the moment Sub-Dimension	34,72	7,28	33,90	7,70	-,742	,458	
Acceptence Sub-Dimension	16,18	7,46	16,54	8,48	-,422	,673	
Contextual personality Sub- Dimension	12,54	5,33	13,36	5,12	-,841	,400	
Dissociation Sub-Dimension	10,36	3,85	12,81	5,28	-1,863	,063	

When Table 4 is examined, it has been determined that there is no significant difference between the psychological flexibility

levels of the participants in the control group and their pretest and posttest "total" scores

Table 5. Comparison of Pre-Test and Post-Test Data Means of the Participants in The Experimental Groups Utrecht Work Engagement Scale

Scales	Pre-	Pre- Test		Post-Test		xon
Stales	х	SD	Х	SD	Z	р
Utrecht Work Engagement Scale Total Score	63,53	10,564	66,61	5,909	-1,534	0,12
Vigor	21,30	4,289	22,61	2,902	-1,379	0,16
Dedication	20,61	3,330	21,46	2,025	-1,029	0,30
Absorption	21,61	4,925	22,53	2,875	-0,457	0,64

When Table 5 is examined, it has been determined that there is no significant difference between the pre-test and post-test "total" and sub-dimension scores according to the participants in the experimental groups Work Engagement levels (p>0.05). However, when the averages are considered, total score

(X=63.53/66.61) and vigor (X=21.30/22.61), dedication (X=20.61/21.46) and absorption (X=21.61/22.53) sub-dimensions were determined to increase.

Tablo 6. Comparison of Pre-Test and Post-Test Data Means of the Participants in The Control Groups Utrecht Work Engagement Scale

Scales	Pre-	Pre- Test		Post-Test		Wilcoxon	
Scales	Х	SD	Х	SD	Z	р	
Utrecht Work Engagement Scale Total Score	63,00	8,41	59,72	6,11	-1,402	,161	
Vigor	21,63	3,29	20,54	2,46	-1,706	,088	
Dedication	19,81	2,75	18,81	2,08	-1,497	,134	
Absorption	21,54	3,64	20,36	3,61	-1,018	,309	

When Table 6 was examined, it was determined that there was no significant difference between the pretest and posttest

"total" and sub-dimension scores according to the levels of Work Engagement of the participants in the control group (p>0.05).

Table 7. The Relationship Between the Participants in The Experimental Groups Work Engagement
and Psychological Flexibility Data

		Pre-Test		Post-Test	
		Psychological	Pre-Test	Psychological	Post-Test
		Flexibility Total	Work Engagement	Flexibility Total	Work Engagement
Scales		Score	Total Score	Score	Total Score
Pre-Test	rho	1,000	,642*	,419	,340
Psychological	р		,018	,155	,256
Flexibility	Ν	13	13	13	13
Total Score					
Pre-Test	rho	,642*	1,000	,426	,596*
Work	р	,018		,147	,031
Engagement	Ν	13	13	13	13
Total Score					
Post-Test	rho	,419	,426	1,000	,753**
Psychological	р	,155	,147		,003
Flexibility	Ν	13	13	13	13
Total Score					
Post-Test	rho	,340	,596*	,753**	1,000
Work	р	,256	,031	,003	
Engagement	Ν	13	13	13	13
Total Score					

When Table 7 is examined, it is seen that there is a statistically significant relationship (p=0.018, p<0.05) between the work engagement pretest and the psychological flexibility pretest. A significant relationship was also determined between the work engagement post-test and the psychological flexibility post-test. (p=0,003, p<0,01). Again, while a significant relationship was found between the work engagement pre-test and the work engagement post-test (p=0.031, p<0.05), there was no relationship between the psychological flexibility pre-test and posttest.

Tablo 8. The Relationship Between the Participants in The Control Groups Work Engagement and Psychological Flexibility Data

<u>i sychological i</u>		Dutu			
		Pre-Test		Post-Test	
		Psychological	Pre-Test	Psychological	Post-Test
		Flexibility	Work Engagement	Flexibility Total	Work Engagement
Scale	S	Total Score	Total Score	Score	Total Score
Pre-Test	rh	1	,331	,734	-,133
Psychological	0				
Flexibility	Total p	•	,320	,010	,697
Score	Ν	11	11	11	11
Pre-Test	rh	,331	1	,375	,472
Work Engage	ment <u>o</u>				·
Total Score	р	,320		,256	,143
	Ν	11	11	11	11
Post-Test	rh	,734	,375	1	,068
Psychological	0				-
Flexibility	Total p	,010	,256		,843
Score	Ň	11	11	11	11
Post-Test	rh	-,133	,472	,068	1
Work Engage	ment o		-		
Total Score	р	,697	,143	,843	
	Ň	11	11	11	11

According to Table 8, there is a significant relationship between the psychological flexibility pretest and posttest of the participants in the control group (p=0.01; p<0.05), while there is no significant relationship between work engagement and psychological flexibility data.

#### DISCUSSION

The personnel who participated in this applied study, which was conducted to examine the work engagement and psychological flexibility levels of university personnel participating in yoga activities as a recreational experience, are between the ages of 20-50. They are personnel with mostly undergraduate and graduate education, most of whom work at the university for 5-10 years.

The success and happiness of the personnel at work depends on being satisfied with the environment they are in as well as achieving their goals. Recreational activities are activities that help people relax and make them look at life more positively. This is related to the perception of events and is also related to psychological flexibility.

Considering that psychological flexibility is the behavior of the individual in accordance with the moment she is in (Karakuş & Akbay, 2020), thoughts and actions that transition from negativity to positivity make life more livable.

It is stated that psychological flexibility has a significant effect on life satisfaction (Mutlu & Tasa, 2022) and the level of psychological flexibility of individuals also differ according to the level of happiness they perceive themselves and to have a clear purpose in life. (Demirci, Serek & Ersanlı, 2017).

In our study, no significant difference was found between the pre-test scores and the post-test scores of psychological flexibility levels of the control group. In the experimental group, it was determined that there was a statistically significant difference between the pre-test scores and the posttest scores of psychological flexibility levels. This difference was determined in the "acceptance subdimension". Post-test averages are higher than pretest averages. There is no significant difference in other dimensions. The reason for the significant difference in the "acceptance" sub-dimension may be due to the fact that the sense of acceptance is supported by yoga activities. Acceptance is a skill that is emphasized in yoga (Riley, 2004; Valante & Marotta, 2005). There are also studies that overlap with this research.

In Wendling's (2012) study, it was observed that the psychological flexibility scores of individuals who practice meditation regularly are higher than those who do not. In the studies of Yaşar and Aydoğdu (2022), it was stated that the negative effect of rumination on solution-oriented thinking in female teachers can be reduced through psychological flexibility. In Koç's (2017) study, it was shown that the organizational commitment levels of research assistants affect their psychological well-being.

In our study, it was determined that there was no significant difference between the pre-test and the post-test scores and sub-dimension scores according to both group levels of Work Engagement (p>0.05). However, when the averages of the experimental group scores are considered, total score (X = 63.53/66.61) and vigor (X = 21.30/22.61), dedication (X=20.61/21.46) and absorption (X= 21.61/22.53) sub-dimensions were increased. It can be said that the yoga activity has positive effect on the employees. The fact that the activities can continue more in terms of frequency and duration suggests that the result may increase its positive effect. In this case; It can be said that the establishment of a recreational activity environment that allows the employees to relax will increase their level of work engagement and create a positive environment.

It is stated that recreational activities have positive effects on work performance, that individuals participating in sports and social activities are relieved by getting away from work stress (Tezcan, 2007), and the level of emotional commitment of individuals within the institution increases as leisure time increases (Soyer, 2020). Mercanoğlu's (2019) study revealed that the workplace recreation program has a positive and great effect on employee productivity. In Bayraktar's (2017) study, it was determined that recreational activities have a positive effect on job satisfaction dimensions, and there is a significant relationship between job satisfaction and organizational commitment. In the study of Ayar (2021), it was seen that the organizational citizenship behaviors and organizational commitment of individuals participating in workplace recreation activities positively affect their organizational commitment. In the studies of Ayyıldız, Duran and Karakucuk (2021), it was stated that the recreation-oriented work efficiency of municipal employees is high and certain variables change this level.

Savrun (2016) conducted a study involving 308 tennis coaches. As a result of his study, it was reported that there were significant relationships between psychological well-being and work engagement dimensions, and that the psychological well-being of tennis coaches had a positive effect on work engagement.

In our study, while there was no significant relationship between work engagement and psychological flexibility data in the control group, there was a statistically significant relationship

(p=0.018, p<0.05) between the work engagement pre-test and the psychological flexibility pre-test in the experimental group. A significant relationship was also determined between the work engagement post-test and the psychological flexibility post-test (p=0,003, p<0,01). Again, a significant relationship was found between the work engagement pre-test and the work engagement post-test (p=0.031, p < 0.05), while no correlation was found between the psychological flexibility pre-test and post-tests. However, a significant relationship (p=0.01; p<0.05) was found between the psychological flexibility pre- test and post-tests of the control group. It is thought that the reason for the relationship between the psychological flexibility pretest and the posttest is due to the absence of a factor affecting psychological flexibility. For this reason, it is possible that the results were close to each other.

## CONCLUSION

As a result of our study, it was determined that yoga practices had a positive effect on the psychological flexibility levels of university staff. A difference significant was found between psychological flexibility pre-test and psychological flexibility post-test. This difference is in favor of the post-test. In this context, we can emphasize that the psychological flexibility levels of the participants increased positively. On the other hand, although there was no significant difference on work engagement levels, an increase was observed in all dimension averages. Based on this, we can say that if the frequency or duration of yoga experiences is increased, significant results can be obtained on work engagement. In conclusion, it is understood that yoga practices as a recreational experience have beneficial effects on employees. It is recommended that such activities should be done more frequently and for longer periods of time, as well as diversifying them with different activities.

#### **Conflict of Interest**

No potential conflict of interest was reported by the authors.

## Ethical Approval

Approval for this study was obtained from Kocaeli University Social Sciences and Humanities Scientific Research and Publication Ethics Committee (decision dated 29/03/2022 and numbered 2022/04).

## REFERENCES

Alpar, R. (2018). Uygulamalı istatistik Ve Geçerlik-Güvenirlik: Spor, Sağlık Ve Eğitim Bilimlerinden Örneklerle. (5.Baskı). Detay Yayıncılık: Ankara.

- Ateşoğlu, U. L., & Erkal, S. (2018). Çalışanların işe Bağlılık Durumlarının Bazı Demografik Değişkenlere Göre incelenmesi. Kongre Tam Metin Kitabı, 104. III. Uluslararası Al- Farabi Sosyal Bilimler Kongresi. 9-11 Kasım 2018, Ankara.
- Avery, T., Blasey, C., Rosen, C., & Bayley, P. (2018). Psychological flexibility and set-shifting among veterans participating in a yoga program: a pilot study. Military medicine, 183(11-12), e359-e363. https://doi.org/10.1093/milmed/usy045
- Ayar, H. (2021). iş Yeri Rekreasyonunun Örgütsel Vatandaşlık ve Örgütsel Bağlılık Düzeylerine Etkisi. Kilis 7 Aralık Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi, 5(2): 170-179. https://dergipark.org.tr/en/pub/besbid/issue/ 67297/1022697
- Ayyıldız Durhan, T. & Karaküçük, S. (2021). Rekreasyon Odaklı Çalışan Verimliliğinin Belediye Çalışanları Perspektifinden Değerlendirilmesi. Gazi Beden Eğitimi ve Spor Bilimleri Dergisi Gazi Journal of Physical Education and Sports Sciences 2021, 26(2), 219-234. https://dergipark.org.tr/en/pub/gbesbd/issue /61222/823107
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. Career Development International, *13*(3), 209-223. <u>https://doi.org/10.1108/1362043081087047</u> <u>6</u>
- Baştürk, S. & Taştepe, M. (2013). Evren ve örneklem. S. Baştürk (Ed.) Bilimsel Araştırma Yöntemleri, Ankara: Vize Yayıncılık.
- Bayraktar, U. (2017). Konaklama işletmelerinde Çalışanlara Yönelik Rekreatif Faaliyetlerin Çalışanların iş Tatmini ve Örgütsel Bağlılığına Olan Etkisi. Basılmamış Yüksek Lisans Tezi, Kırklareli Üniversitesi Sosyal Bilimler Enstitüsü Turizm işletmeciliği Anabilim Dalı, Kırakkale. https://hdl.handle.net/20.500.11857/841
- Benson, H. (1975). The relaxation response. New York: William Morrow.
- Biman, S., Maharana, S., Metri, K. G., & Nagartna, R. (2021). Effects of yoga on stress, fatigue, musculoskeletal pain, and the quality of life among employees of diamond industry: A new approach in employee wellness. Work, (Preprint), 1-16. https://doi.org/10.3233/WOR-213589
- Birdee, G. S., Legedza, A. T., Saper, R. B., Bertisch, S. M., Eisenberg, D. M., & Phillips, R. S. (2008). Characteristics of yoga users: results of a national survey. Journal of general internal medicine, 23(10), 1653-1658. <u>https://doi.org/10.1007/s11606-008-0735-5</u>

- Bond, F. W., Hayes, S. C., & Barnes-Holmes, D. (2006). Psychological flexibility, ACT, and organizational behavior. Journal of Organizational Behavior Management, 26(1-2), 25-54. 4. https://doi.org/10.1300/j075v26n01\_02
- Büssing, A., Khalsa, S. B. S., Michalsen, A., Sherman, K. J., & Telles, S. (2012). Yoga as a therapeutic intervention. Evidence-Based Complementary and Alternative Medicine, 2012: 1. https://doi.org/10.1155/2012/165410
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2016). Bilimsel Araştırma Yöntemleri. 22. Baskı. Ankara: Pegem Akademi.
- Cagas, J. Y., Biddle, S. J., & Vergeer, I. (2022). Why do people do yoga? Examining motives across different types of yoga participants. *International Journal of Sport* and Exercise Psychology, 1-21. https://doi.org/10.1080/1612197X.2022.209 0987
- Cocchiara, R. A., Peruzzo, M., Mannocci, A., Ottolenghi, L., Villari, P., Polimeni, A., ... & La Torre, G. (2019). The use of yoga to manage stress and burnout in healthcare workers: a systematic review. Journal of clinical medicine, 8(3), 284. https://doi.org/10.3390/jcm8030284
- Collins, A. L., Sarkisian, N., & Winner, E. (2009). Flow and happiness in later life: An investigation into the role of daily and weekly flow experiences. Journal of happiness studies, 10(6), 703-719. https://doi.org/10.1007/s10902-008-9116-3
- Dağaşan, C. (2019). Hatha yoga egzersizlerinin masa başı çalışan kadınlarda esneklik, postür bozukluğu ve yaşam kalitesi üzerine etkisinin incelenmesi (Master's thesis, Sağlık Bilimleri Enstitüsü). https://acikbilim.yok.gov.tr/handle/20.500.1 2812/328434
- De Bruin, E. I., Formsma, A. R., Frijstein, G., & Bögels, S. M. (2017). Mindful2Work: effects of combined physical exercise, yoga, and mindfulness meditations for stress relieve in employees. A proof of concept study. *Mindfulness*, 8, 204-217. https://doi.org/10.1007/s12671-016-0593-x
- Della Valle, E., Palermi, S., Aloe, I., Marcantonio, R., Spera, R., Montagnani, S., & Sirico, F. (2020). Effectiveness of workplace yoga interventions to reduce perceived stress in employees: A systematic review and meta-analysis. Journal of functional morphology and kinesiology, 5(2), 33. https://doi.org/10.3390/jfmk5020033
- Demerouti, E., Bakker, A. B., De Jonge, J., Janssen, P. P., & Schaufeli, W. B. (2001). Burnout and engagement at work as a function of demands

and control. Scandinavian journal of work, environment & health, 279-286. <u>https://www.jstor.org/stable/40967145</u>

- Demirci Serek, Ö. & Ersanlı, K. (2017). Üniversite Öğrencilerinde Yaşamın Anlamı ile Psikolojik Esneklik Arasındaki ilişki. Turkish Studies. 12(4): 143-162. http://dx.doi.org/10.7827/TurkishStudies.10 053
- Desikachar, T.K.V. (2005). The yoga of healing: exploring yoga's holistic model for health and well being. International Journal of Yoga Therapy. 15(1): 17–39. https://doi.org/10.17761/ijyt.15.1.p501I3353 5230737
- Desikachar, T.K.V. (2019). Yoganın Kalbi: Kişisel Bir Yoga Pratiği Geliştirmenin Yolları. Panama Yayıncılık: Ankara.
- Doorley, J. D., Goodman, F. R., Kelso, K. C., & Kashdan, T. B. (2020). Psychological flexibility: What we know, what we do not know, and what we think we know. Social and Personality Psychology Compass, 14(12): 1-11. <u>https://doi.org/10.1111/spc3.12566</u>
- Duyan, E. C. (2008). *Çalışma yaşaminda yoga: Iş tatmini ve stres yönetiminde etkileri üzerine bir araştirma* (Order No. 28742358). Available from ProQuest Dissertations & Theses Global. (2597462634). Retrieved from <u>http://acikerisim.uludag.edu.tr/jspui/handle/</u> <u>11452/4459</u>
- Eryılmaz, A. & Doğan, T. (2012). iş Yaşamında Öznel iyi Oluş: Utrecht işe Bağlılık Ölçeğinin Psikometrik Niteliklerinin incelenmesi. Klinik Psikiyatri Dergisi, 15(1). <u>https://www.klinikpsikiyatri.org/jvi.aspx?pdi</u> <u>r=kpd&plng=tur&un=KPD-31384</u>
- Fields, G. (2001). Reviews: Religious Therapeutics: Body and Health in Yoga, Ayurveda, and Tantra. International Journal of Yoga Therapy, 11(1), 107-111. https://doi.org/10.17761/ijyt.11.1.n4258662 046278x2
- Gothe, N. P., Khan, I., Hayes, J., Erlenbach, E., & Damoiseaux, J. S. (2019). Yoga effects on brain health: A systematic review of the current literature. Brain Plasticity, 5(1), 105-122. <u>https://doi.org/10.3233/BPL-190084</u>
- Güler, M. M. (2010). Yoga egzersizlerinin, *çalışanlarda esenlik ve yaşam kalitesi üzerine etkisi* (Order No. 28527515). Available from ProQuest Dissertations & Theses Global. (2582833276). Retrieved from <u>https://www.proquest.com/dissertations-</u> <u>theses/yoga-egzersizlerinin-çalışanlarda-</u> <u>esenlik-ve/docview/2582833276/se-2</u>
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. Journal of school psychology, 43(6),

495-513. https://doi.org/10.1016/j.jsp.2005.11.001

- iyengar, B.K.S. (2020). Hayata Işık: Bütünlüğe, iç Huzura ve Nihai Özgürlüğe Götüren Yoga Yolculuğu. Omega Yayınları: istanbul.
- Jeter, P. E., Slutsky, J., Singh, N., & Khalsa, S. B. S. (2015). Yoga As A Therapeutic intervention: A Bibliometric Analysis Of Published Research Studies From 1967 To 2013. The Journal of Alternative and Complementary Medicine, 21(10), 586-592. https://doi.org/10.1089/acm.2015.0057
- Kabat-Zinn, J. (2015). Mindfulness. Mindfulness, 6(6), 1481-1483. <u>https://doi.org/10.1007/s12671-015-0456-x</u>
- Karakuş, S., & Akbay, S. E. (2020). Psikolojik Esneklik Ölçeği: Uyarlama, Geçerlik ve Güvenirlik Çalışması. Mersin Üniversitesi Eğitim Fakültesi Dergisi, 16(1), 32-43. https://doi.org/10.17860/mersinefd.665406
- Kashdan, T. B., & Rottenberg, J. (2010). Psychological Flexibility As A Fundamental Aspect Of Health. Clinical Psychology Review, 30, 865–878. https://doi.org/10.1016/j.cpr.2010.03.001
- Koç, M. (2017). Hacettepe Üniversitesi'nde Çalışan Araştırma Görevlilerinin Psikolojik iyi Oluş Düzeylerinin Yordanması. Yayınlanmamış Yüksek Lisans Tezi, Hacettepe Üniversitesi Eğitim Bilimleri Psikolojik Danışma ve Rehberlik Bilim Dalı, Ankara. Retrieved from http://hdl.handle.net/11655/26256
- La Torre, G., Raffone, A., Peruzzo, M., Calabrese, L., Cocchiara, R. A., D'Egidio, V., ... & YOMIN Collaborative Group. (2020). Yoga And Mindfulness As A Tool For influencing Affectivity, Anxiety, Mental Health, And Stress Among Healthcare Workers: Results Of A Single-Arm Clinical Trial. Journal of Clinical Medicine, 9(4), 1037. https://doi.org/10.3390/jcm9041037
- Mendo, B., Gonçalves, M., Lopes, L., Matos, L. C., & Machado, J. (2022). Can Yoga, Qigong, and Tai Chi Breathing Work Support the Psycho-Immune Homeostasis during and after the COVID-19 Pandemic? A Narrative Review. In *Healthcare* (Vol. 10, No. 10, p. 1934). MDPI.

https://doi.org/10.3390/healthcare10101934

- Mercanoğlu, A.O. (2019). işyeri Rekreasyonunun Çalışan Verimliliğine Etkisi. Yayınlanmamış Doktora Tezi, Eskişehir Anadolu Üniversitesi Sosyal Bilimler Enstitüsü, Spor Yöneticiliği Anabilim Dalı, Eskişehir. Retrieved from https://hdl.handle.net/11421/26195
- Mutlu, S. & Tasa, H. (2022). Psikolojik Esneklik, Kişilerarası Reddedilme Duyarlılığı ve Yaşam Doyumu Arasındaki ilişki. Aydın insan ve Toplum Dergisi, 8 (1), 41-67. Retrieved from

https://dergipark.org.tr/en/pub/aitdergi/issu e/71503/1106900

Nagarathna, R., Anand, A., Rain, M., Srivastava, V., Sivapuram, M. S., Kulkarni, R., ... & Nagendra, H. R. (2021). Yoga practice is beneficial for maintaining healthy lifestyle and endurance under restrictions and stress imposed by lockdown during COVID-19 pandemic. *Frontiers in Psychiatry*, *12*, 613762.

https://doi.org/10.3389/fpsyt.2021.613762

- Puerto Valencia, L. M., Weber, A., Spegel, H., Bögle, R., Selmani, A., Heinze, S., & Herr, C. (2019). Yoga in the workplace and health outcomes: a systematic review. Occupational Medicine, 69(3), 195-203. https://doi.org/10.1093/occmed/kgz033
- Riley, D. (2004). Hatha yoga and the treatment of illness. *Alternative therapies in health and medicine*, *10*(2), 20-25.
- Ross, A., & Thomas, S. (2010). The health benefits of yoga and exercise: a review of comparison studies. *The journal of alternative and complementary medicine*, *16*(1), 3-12. <u>https://doi.org/10.1089/acm.2009.0044</u>
- Salanova, M., Schaufeli, W. B., Llorens Gumbau, S., Silla, P., & Grau Gumbau, R. M. (2000). Desde el burnout al engagement: Âż una nueva perspectiva? Journal of Work And Organizational Psychology, 16(2), 117-134.
- Savrun, D. M. (2019). *Tenis antrenörlerinin iyi oluş* (well-being) durumlarının Iş bağlılığına etkisinin incelenmesi (Order No. 28635518). Available from ProQuest Dissertations & Theses Global. (2606866411). Retrieved from https://www.proquest.com/dissertationstheses/tenis-antrenörlerinin-iyi-oluş-wellbeing/docview/2606866411/se-2
- Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. Journal of cross-cultural psychology, 33(5), 464-481.
- Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2008). Workaholism, burnout, and work engagement: three of a kind or three different kinds of employee wellbeing?. Applied psychology, 57(2), 173-203. <u>https://doi.org/10.1111/j.1464-0597.2007.00285.x</u>
- Schmid, A. A., Van Puymbroeck, M., Fruhauf, C. A., Bair, M. J., & Portz, J. D. (2019). Yoga improves Occupational Performance, Depression, And Daily Activities For People With Chronic Pain. Work, 63(2), 181-189. https://doi.org/10.3233/WOR-192919
- Silberstein, L. R., Tirch, D., Leahy, R. L., & McGinn, L. (2012). Mindfulness, Psychological Flexibility And Emotional Schemas. International Journal of Cognitive

Therapy, 5(4), 406-419. https://doi.org/10.1521/ijct.2012.5.4.406

- Soyer, A. (2020). Serbest Zaman ilgilenimi ile Örgütsel Bağlılık Arasındaki ilişki: Yerel Yönetimlerde Bir Araştırma. Yayınlanmamış Tezsiz Yüksek Tezi, Sakarya Uygulamalı Bilimler Üniversitesi Lisansüstü Eğitim Enstitüsü, Beden Eğitimi e Spor Anabilim Dalı, Sakarya. Retrieved from <u>https</u> ://hdl.handle.net/20.500.14002/758
- Tezcan, N. (2007). Rekreasyon etkinliklerinin çalışanların performansları kzerine etkilerinin incelenmesi kocaeli trakya birlik örneği (Order No. 29157638). Available from ProQuest Dissertations & Theses Global. (2689288702). Retrieved from https://www.proquest.com/dissertationsthes es/rekreasyonetkinliklerininçalışanların/docvie w/2689288702/se-2
- Trent, N. L., Borden, S., Miraglia, M., Pasalis, E., Dusek, J. A., & Khalsa, S. B. S. (2019). Improvements in psychological and occupational well-being following a brief yogabased program for education professionals. Glob Adv Health Med, 8(3): 21–7. https://doi.org/10.1177/2164956119856856
- Valente, V., & Marotta, A. (2005). The impact of yoga on the professional and personal life of the psychotherapist. *Contemporary* Family *Therapy*, 27, 65-80. https://doi.org/10.1007/s10591-004-1971-4
- Wadhen, V., & Cartwright, T. (2021). Feasibility and outcome of an online streamed yoga intervention on stress and wellbeing of people working from home during COVID-19. Work, 69(2), 331-349. https://doi.org/10.3233/WOR-205325
- Wendling, H. M. (2012). The relation between psychological flexibility and the buddhist practices of meditation, nonattachment, and self-compassion (Order No. 3516032). Available from ProQuest Dissertations & Theses Global. (1033048568). Retrieved from https://www.proquest.com/dissertationsthes es/relationbetweenpsychologicalflexibility/doc view/1033048568/se-2
- West, J., Otte, C., Geher, K., Johnson, J., & Mohr, D. C. (2004). Effects of Hatha yoga and African dance on perceived stress, affect, and salivary cortisol. *Annals of Behavioral Medicine*, *28*(2), 114-118. <u>https://doi.org/10.1207/s15324796abm2802</u> <u>6</u>
- Yadavaia, J. E., Hayes, S. C., & Vilardaga, R. (2014). Using acceptance and commitment therapy to increase self-compassion: A randomized controlled trial. Journal of Contextual Behavioral Science, 3(4), 248–257. https://doi.org/10.1016/j.jcbs.2014.09.002
- Yang, Y., Ma, A., Wang, L., Chen, H., Xie, M., & Chang, H. (2022). Psychological flexibility and

work engagement among Chinese nurses: Mediating role of self-compassion and negative emotions. https://doi.org/10.21203/rs.3.rs-1605227/v1

- Yaşar, S., & Aydoğdu, F. (2022). Kadın öğretmenlerde ruminasyon ile çözüm odaklı düşünme arasındaki ilişkide psikolojik esnekliğin aracı rolü. Humanistic Perspective, 4 (1), 126-145. <u>https://doi.org/10.47793/hp.1037046</u>
- Young-Sook Yook, Soo-Jin Kang & InKyoung Park (2017) Yeni bir spor ve farkındalık yogasını birleştiren fiziksel aktivite müdahalesinin ergenlerde psikolojik özellikler üzerindeki etkileri, International Journal of Sport and Exercise Psychology, 15:2, 109-117. https://doi.org/10.1080/1612197X.2015.106

https://doi.org/10.1080/1612197X.2015.106 9878