

# Investigation of life satisfaction and work stress in employees doing office exercise

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**Summary.** *Study Objectives:* This study aims to examine the life satisfaction and work stress level of employees who do and do not do office exercises. *Methods:* A total of 97 office workers including the experimental (n: 40) and the control group (n: 57) participated in the study. Participants implementing a diet program were not included in the study. Working at Mugla Sıtkı Koçman University with an average age of  $41,61 \pm 9,46$ . 15-20 minutes of the office exercise program was applied to the experimental group 3 days a week “The Satisfaction with Life Scale (SWLS)” and “Job Stress Scale” were used to determine the work stress level of office workers. The normality of the data was tested with the Kolmogorov Smirnov Test before the analyses. The Independent samples t-test was performed for normal distributed data. *Results:* As a result, a significant difference was found between life satisfaction and work stress pretest-posttest values of the employees doing office exercise. The level of work stress in the employees performing office exercise decreases. Work stress was lower in female employees than in male employees. Correlation was determined between office workers’ life satisfaction and work stress scores. *Conclusion:* As the satisfaction of office workers increased work stress decreased.

**Key words:** Office workers, exercise, life satisfaction, work stress.

## Introduction

Long term use of computers in office workers causes muscle and skeletal diseases due to repetitive and challenging movements such as gripping, holding, compression, stretching, bending and stretching in the muscles, tendons, nerves and soft tissues (1). The use of computer screens, keyboards and mouse increased the incidence of musculoskeletal diseases in the neck and upper extremities (2). Work intensity, heavy workload dissatisfaction with work, incompatibility with colleagues, working under pressure and over-responsibility cause work tension and cause musculoskeletal diseases (3). Apart from waist neck and upper extremity (wrist, hand, elbow and shoulder) diseases seen in employees. It is known for complaints such as headaches, weakness and fatigue in workers (4). Recent studies show that physical and psychosocial factors at work play an

important role in musculoskeletal diseases of the lower back, neck and shoulders (5). Work stress increases when one or both situations occur when the employee cannot adequately respond to the demands of the job and the expectations of the employee about the job and the facts differ significantly (6). Life satisfaction is the individual’s positive assessment and satisfaction following the standards and principles set by the individual (7). Therefore, as a result of the comparisons between the criteria that the individual expects, wants and deserves from life and the living conditions he/she is in. It is explained as an assessment of individuals’ lives (8). The positive or negative situations that the individual faces in both business and social life affect his pleasure or satisfaction. In this context life satisfaction is a synthesis of work and social life (9). However, nutritional levels are known to affect an individual’s life satisfaction and work stress. Demirel et al. (2014)

stated that it is common to resort to eating behavior to regulate his mood and emotions (10). This study aims to examine the work stress and life satisfaction level of the employees who do office exercise considering that office exercise application reduces work stress and increases life satisfaction.

## Methods

A total of 97 office workers including the experimental (n: 40) and the control group (n:57) participated in the study working at Muğla Sıtkı Koçman University with an average age of  $41,61 \pm 9,46$ , 15-20 minutes of the office exercise program was applied to the experimental group 3 days a week. In the office exercise application, the office exercise program recommended by the Ministry of Health was used. The exercise program applied to office workers is given in figure 1. In addition, since the effects of nutrition on life satisfaction and job stress are known, the participants were asked about any diet they applied. It was determined that the participants did not follow any diet program. Participants implementing a diet program were not included in the study. No exercise program was applied to the office workers forming

the control group “The Satisfaction with Life Scale (SWLS)” developed by Diener et al. (1985) (7) and the “Job Stress Scale” developed by House and Rizzo (1972) were used to determine the work stress level of office workers (11). In the office exercise practice, ten seconds should be waited for each exercise movement, it should be done 5 times.

## *Satisfaction with Life Scale*

The Satisfaction with Life Scale (SWLS) was developed by Diener et al. (1985) (7). This scale is a tool to evaluate global cognitive judgments of one’s life satisfaction rather than measuring either positive or negative affect. Applicants specify how much or to what extent they agree or disagree with each of the 5 items using a 7-point scale that ranges from 7 = strongly agree to 1 = strongly disagree. Additionally, test-retest correlation in an eight-week interval was found to be 0,82 for the scale. Dağlı and Baysal (2016) conducted the adaptation study of SWLS to Turkish and tested the validity of the adapted scale by its face validity. In addition to Dağlı and Baysal (2016) found the item-test correlation to range between 0,88 and 0,97 and a test-retest correlation of 0,92 in the three-week interval (12).



**Figure 1.** Office Exercise Movements (31)

### Job Stress Scale

Job Stress scale developed by House and Rizzo (1972) was used to measure work stress (11). This scale measures the psychological and psychosomatic symptoms associated with the stress that the employee experiences at work (13). The scale was adapted to Turkish by Efeoglu and Ozgen (2007) (14). In the scale consisting of seven questions the answers were taken on a 5-point Likert scale. In this study Cronbach's alpha coefficient for the job stress scale was calculated as 0,86.

### Statistical Analyses

All results are presented as the means  $\pm$  standard error of the mean (SEM). Statistical analyses were performed using SPSS. 21.0 (SPSS Inc. Chicago. IL. USA). The normality of the data was tested with the Kolmogorov Smirnov Test before analyses. The Independent t-test was performed for normal distributed data. For all statistical tests  $p < 0,05$  was considered statistically significant.

### Results

As seen in Table 1, there was no significant difference between the pre-test and post-test values of life satisfaction level and work stress in the control group ( $p > 0,05$ ). In the control and experimental groups there was a significant difference between the groups in terms of life satisfaction and work stress posttest results ( $p < 0,05$ ). A significant difference was found between life satisfaction and work stress pretest-posttest values in the experimental group where the office exercise program was applied ( $p < 0,05$ ). While the work stress pretest value of the experimental group was  $20,47 \pm 6,23$  it was determined as  $16,19 \pm 5,19$  at the end of the office exercises. It has been observed that the level of work stress decreases in employees doing office exercises.

As seen in Table 2, it was found that the level of life satisfaction did not differ significantly according to the gender variable ( $p > 0,05$ ). There was a significant difference between job stress and gender variable ( $p < 0,05$ ). While the job stress value was  $18,89 \pm 6,13$  for female employees, it was  $21,24 \pm 5,60$  for male 5,60 for male employees. It is seen that job stress is lower in female employees than in male employees.

**Table 1.** Comparison of life satisfaction and work stress pretest-posttest values in experimental and control groups

Variables	Groups	n	Mean	sd	t	p	
Life Satisfaction	Pre-test	Control Group	57	21.75	8.22	-2.711	.008
		Experimental Group	40	25.67	4.76		
	Post-test	Control Group	57	23.33	6.35	-2.712	.008
		Experimental Group	40	26.50	4.47		
Work Stress	Pre-test	Control Group	57	20.63	6.85	0.115	.909
		Experimental Group	40	20.47	6.23		
	Post-test	Control Group	57	21.10	4.70	4.302	.000**
		Experimental Group	40	16.19	5.19		

**Table 2.** Examination of life satisfaction and work stress by gender variable

Variables	Gender	n	Mean	sd	t	p
Life Satisfaction	Male	54	24.47	6.20	1.106	.270
	Female	43	23.41	7.04		
Work Stress	Male	54	18.89	6.13	-2.749	.007
	Female	43	21.24	5.60		

**Table 3.** Correlation analysis of life satisfaction and job stress of office workers participating in the research

Variables	Life satisfaction		
	<i>r</i>	<i>p</i>	<i>n</i>
Work Stress	-.317**	.000	97

As can be seen in Table 3 a significant negative relationship was found between the life satisfaction and job stress scores of the participants ( $r = -.317$ ;  $p < .05$ ). It is observed that as the life satisfaction of office workers increases work stress decrease.

## Discussion

In the study where the satisfaction and work stress of the employees performing office exercises are examined. There was no significant difference between the pre-test and post-test values of life satisfaction level and work stress in the control group. A significant difference was found between the groups in the comparison of experiment and control groups of life satisfaction and work stress posttest values ( $p < .05$ ). A significant difference was found between life satisfaction and work stress pretest-posttest values in the experimental group where the office exercise program was applied ( $p < .05$ ). It was observed that the level of work stress decreased in the employees doing office exercises due to exercise (Table 1). In the study of Valcour et al. (2007) as the working hours increase the result is that the work and family balance cannot be achieved (15). As a result, job satisfaction decreases and the level of work-family conflict increases. It was found that excessive workload negatively affects job satisfaction and life satisfaction in employees (16). The findings of the study by Vanishree (2014) show that overload work causes work stress among employees and leads to a decrease in their concentration, mental barriers and decision-making skills (17). It has been determined that physical activity has positive effects on life satisfaction (18). It was determined that the level of life satisfaction did not differ according to the gender variable. It was found that work stress showed a significant difference according to the gender variable ( $p < .05$ ). It is seen that female employees

have lower work stress than male employees (Table 2). It has been determined that employees experience burnout syndrome due to excessive workload and this increases the risk of losing mental health in employees (19). In addition, considering the researches in the field, it is known that one of the factors affecting life satisfaction is nutritional levels. In a study conducted on the subject, it was found that while students' consumption of high-quality and high-calorie foods increased their life satisfaction, their perception of themselves as being overweight decreased their life satisfaction. (20). It has been determined that excessive workload disturbs the employees affects their well-being (21). Job performance lowers the level of self-efficacy (22). Causing them to feel physically weak and tired (23). A meaningful correlation has been determined between office workers' life satisfaction and work stress scores. It was determined that as the life satisfaction of office workers increased work stress decreased (Table 3). In a study conducted for health professionals a correlation was found between quality of life and psychological stress level (24). In a study (25) it was determined that stress factors such as stress, workload, role conflict and insufficient reward system decrease job performance. A linear correlation was found between physical activity and health status. The increase in physical activity led to an increase in health status (26). In the study in which the correlation between work stress and life satisfaction was examined a positive correlation was found between workaholics and life satisfaction and work stress (27). In a study examining the correlation between work stress and life balance work performance it was found that there is a correlation between work stress and work performance and life balance (28). Some studies show that a high level of work stress leads to inadequate work performance (29,30). These study findings support our study.

## Conclusions

As a result, there was no significant difference between the control group employees' life satisfaction and work stress pre-test and post-test values. A significant difference was found between life satisfaction

and work stress pretest-posttest values in the experimental group where the office exercise program was applied to. It has been observed that the level of work stress decreases in the employees who do office exercise depending on the exercise. It was found that work stress varies significantly according to the gender variable. It is seen that work stress is lower in female employees than in male employees. A meaningful correlation has been determined between office workers' life satisfaction and work stress scores. It is determined that as the life satisfaction of office workers increases, work stress, decrease. As a suggestion at the end of the work it is recommended that office workers who have to work in the same position for a long time. Do regular office exercises in addition to ergonomic arrangements to reduce work stress and increase the level of life satisfaction.

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**Conflict of interest:**The author declares no conflict of interest

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