

# The effect of regular recreational activities on adult women's stress, happiness, and life satisfaction levels

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**Abstract.** *Study Objectives:* The aim of this study was to determine the effect of regular 10-week recreational activities on stress, happiness, and life satisfaction of adult women. *Methods:* The sample of the study consisted of 199 volunteer adult women who regularly participated to recreational activities (swimming and fitness) organized by İstanbul Spor Inc. In sampling selection, the purposive sampling method was preferred. In addition to demographic variables, Perceived Stress, Oxford Happiness, and Life Satisfaction scales were used as measurement tools. IBM Statistics 24 was used in the analysis of the data obtained. In the analysis of the data showing normal distribution, the Paired samples t-test was used for comparing two measurement times and Two-way Repeated Measures ANOVA was used for comparison of repeated measures with demographic variables. In addition, the formula  $[\% \Delta = (\text{Post-Test} - \text{Pre-Test}) / \text{Pre-Test} * 100]$  was used to determine the effect of regular 10-week recreational activities on adult women's stress, happiness, and life satisfaction levels. *Results:* According to the main findings of the study, it was found that 10-week recreational activities reduced perceived stress levels of adult women by 33.57%, whereas happiness levels increased by 20.58% and life satisfaction levels by 14.39%. *Conclusion:* It was seen as a necessity to take part in regular recreational activities in order to get away from the stress of life and to live a happy life and to be satisfied with life. Thus, adult women can sustain a more effective life.

**Keywords:** Adult Women, Happiness, Life Satisfaction, Perceived Stress, Recreation

## Introduction

The first thoughts about the concept of recreation as old as human history began to appear in 300 BC. The first model studies on this concept were developed by the Greek philosopher Aristotle (1). As a result of the emergence of modern life with industrialization, people's leisure time periods was increased. In this context, the participation rate to recreational activities increased (2). Social and cultural life, which developed with industrial life, revealed self-centered living areas

in itself. The fact that the business life's compulsory, coordinated, prescriptive, organized, and ritual structure has caused the expect of business life to transform into industrial qualities principles (3). Recreational activities, which have become indispensable for modern societies today, started to feel their strength in every area of society, while some values such as hard work have gradually started to lose their importance (4). However, since ancient times, various gender restrictions have been made by communities on participation to recreational activities.

The concept of gender refers to cultural and psychological differences as well as biological differences between men and women. The social duties and responsibilities expected from women and men by society have been effective in the emergence of this concept (5).

Men and women acquire gender roles shaped by the impact of the family and social environment. Thus, while housework comes to the forefront for women, job roles are prominent in men in the family (6). According to Bourdieu (1978), women accepted this responsibility and devoted themselves to handle the needs of the household (7).

With the developments in the industry, the woman, as well as her housework, gained financial income for the first time by starting business life in the European countries in the 19th century (8). As a result of the researches, it has been shown that a working woman worked an average of ten and a half hours a day, spending an average of four hours on housework and other obligations, and for these reasons, only a small amount of time remained as leisure time. As a result, it is reported that it is normal for women to be under stress (9). Today, although women are increasingly taking part in business life, it is observed that most of their housework is above them. As a result of research conducted in Turkey, it has been determined that women have high rates of terminated sports and the reasons for them are early marriage, being a mother, and housework (5). In a study involving European countries, it was determined that the rate of participation in physical activity among university students studying in health sciences was higher among male students than woman students (10).

Although Turkey is a country that multi-faceted development, traditional structures and low living standards with the development of modern values and standards of living can be together. In this context, even if women's rights are expanded, the housework of women is higher than men due to traditional values (11). Because of these problems, problems in the family, work, or school life can disrupt the nervous system of women, hence can reduce their stamina, and can bring about serious physiological and psychological problems (12). A frequent state of exhaustion and nervousness also causes depression (13). The quality of

life, which is one of the life goals of people, is in an effort to deal with these negatives and to be satisfied with life. In addition, according to the World Health Organization, two factors that are essential for healthy living and improving the quality of life are healthy eating and physical activity (14). The main reason for the individual to participate to recreational activities for reasons such as health, pleasure or success is the motivation to gain life satisfaction (15,16). Since it gives people the opportunity to get away from the stressful environment and relationships, leisure time allows the person to cope with their problems and renewal. Through leisure activities, people are able to control themselves spiritually and thus benefit from coping with stress (17). The responsibilities of women in daily life may restrict their leisure activities. Even if women have difficulty in allocating time for themselves in their leisure time periods remaining from their home and work life, they tend towards recreational activities performed in leisure time to renew and improve their quality of life (18). It is also emphasized that sporting activities are the priority among these recreational activities (19).

Recently, "gender role equality" approaches provided positive effects in the sports fields and caused a great increase in the number of women participating in physical activities as sports and leisure activities (20). Tatar et al. (2009) emphasized the effect of physical activities on mental health by reporting the state of "feeling better" and "being more psychologically peaceful" at the beginning of the changes in the lives of women after starting sports (21). In this context, the purpose of this study was to determine the effects of regular recreational activities on stress, happiness, and life satisfaction levels of adult women.

## Material and Method

### *Research Model*

In this study, a longitudinal quantitative research method, one of the relational screening methods, was used. The longitudinal quantitative research method used to judge a sample obtained from the universe or the universe is a research model in which repeated

measurements are carried out at different times to examine the change depending on time (weeks, months and years) (22).

#### *Research Group*

Purposive sampling method was used to determine the research sample. At the beginning of the research, two hundred-twenty women participated to recreational activities regularly in the sports facilities of the Istanbul Metropolitan Municipality, Sports Istanbul Inc. Twenty-one women were not included in the study for various reasons (not doing regular recreational activities, abandoning recreational activity, pregnancy, etc.) and the study was completed with a hundred-ninety nine women.

#### *Data Collection Tools*

Data collection tools used in the research consist of four sections; "Personal information form", "Perceived Stress Scale", "Oxford Happiness Scale Short Form", and "Life Satisfaction Scale". A face-to-face survey method was used to obtain the data. In the study, data collection tools were applied to adult women two times before and after recreational activities. In addition, the legal permissions required to conduct this research were obtained from Spor İstanbul Inc. with the protocol number IK-361/2095.

#### *Personal Information Form*

The personal information form contains questions about the types of participation of adult female participants to recreational activities (individually or in groups), frequency of participation (2 or 3 times a week), and their ages. In addition, the median values were taken as reference in making the ages of adult women from continuous variables to the categorical variables.

#### *Perceived Stress Scale*

Perceived Stress Scale developed by Cohen, Kamarck, and Mermelstein (23) and adapted to the Turkish language by Eskin et al. (24) was used to

measure the stress levels of adult women. Perceived Stress Scale, consist of 14 items total, was in the form of 5 Likert-type as (1) Never agree, ....., (5) Totally agree. A total score of 0-56 was obtained from the scale, and the high total score indicates the high perceived stress level. The internal consistency coefficient of the original perceived stress scale was .84. In the current research, Cronbach's  $\alpha$  coefficients for the perceived stress scale were determined as .82 and .78 for the pre and post-tests, respectively.

#### *Oxford Happiness Scale (Short form)*

In order to measure the happiness levels of adult women, Oxford Happiness Scale (Short form) developed by Hills and Argyle (25) and adapted to the Turkish language by Doğan and Akıncı Çötök (26) was used. The original form of the scale consists of 8 items and a 6 point scale. However, in the adaptation to the Turkish language, the total correlation coefficient of item 4 was found to be low (.17) and was removed from the scale. In addition, by removed close answers to each other, the scale was arranged as 5-point Likert type (1), ....., Never Agree, (5) Totally Agree. The Turkish version of the Oxford happiness scale (Short form) was a 5-point Likert type with 7 items. Items 1 and 7 of the scale were created negatively and items 1 and 7 were reversed while calculating the level of happiness.

The lowest 7 points and the highest 35 points can be obtained from the scale and the happiness level of the individual can be evaluated according to the average of the score. The internal consistency coefficient of the Oxford happiness scale (Short form) adapted to Turkish by Doğan and Akıncı Çötök (2011) was reported as .74 and the retest reliability coefficient was .85 (26). Scale with the characteristic of being short and easily applied in the study of positive psychology has been often used in Turkey (27,28). In the current study, Cronbach's  $\alpha$  coefficients for the Oxford happiness scale (Short form) were determined as .79 and .71 for the pre and post-tests, respectively.

#### *Life Satisfaction Scale*

The Life Satisfaction Scale developed by Diener et al. (29) and adapted to Turkish culture by Bekmezci

and Mert (30) was used to determine the level of life satisfaction of adult women. The scale consists of (1) Strongly disagree, ....., (7) Strongly agree, 7-point Likert type and 5 items. The internal consistency coefficient of the scale was determined as .88. In the current study, Cronbach's  $\alpha$  coefficients for the Life Satisfaction Scale were determined as .78 and .70 for the pre and post-tests, respectively.

#### *Recreational activity programs*

In this study, adult women participated to recreational (swimming or fitness) activities organized by Istanbul Metropolitan Municipality, Sports Istanbul Inc. for 2 or 3 days a week for 10 weeks. At the beginning of recreational activities, they participated in activities for a total of 60 minutes in the range of 50-70% (low level) of the maximum heart rate for two weeks of adaptation. Adult women participated in a total of 60 minutes of activities in the range of 70-80% (medium level) of the maximum heart rate over the next 8 weeks. Moreover, each activity included 15 min warm-up phase 30 min main phase and 15 min cooling phase.

#### *Statistical analysis*

IBM SPSS Statistics 24 was used in the analysis of the research data. The normality test of the data was tested with Skewness and Kurtosis values. Parametric test techniques were used in the analysis of normally distributed data. Paired samples t-test was used to

determine the effect of 10-week regular recreational activities on stress, happiness, and life satisfaction levels of adult women. Two-way Repeated Measures ANOVA was used for repeated measurements to compare the categorical variables of the participants' demographic variables and the measurement times. The confidence interval was determined as 95% and significance was set at  $p < .05$ . Also, time-dependent changes between groups are calculated using the formula " $\% \Delta = (\text{Post-Test-Pre-Test}) / \text{Pre-Test} * 100$ " (31).

#### *Results*

When Table 1 was examined, it was determined that 10-week regular recreational activities statistically decreasing the perceived stress levels of adult women ( $p < .01$ ), while increasing their happiness and life satisfaction levels ( $p < .01$ ).

When Table 2 was examined, it was found that the perceived stress ( $F = 221.199$ ), happiness ( $F = 252.828$ ) and life satisfaction ( $F = 83.507$ ) levels of adult women showed a statistical difference between the pre and post-test according to the measurement times ( $p < .001$ ). According to these results, 10-week regular recreational activities were found to be more effective on young-aged women than middle and older-aged women. Perceived stress levels of young-aged women decreased by 38.46%, while happiness and life satisfaction levels increased by 25.96% and 17.91%, respectively. However, it was determined that the perceived stress, happiness, and life satisfaction levels did not differ statistically according to age groups

**Table 1.** Comparison of the results of regular recreational activities related to perceived stress, happiness and life satisfaction levels of adult women

Variables	Measurement Times	N	$\bar{x} \pm S.D.$	% $\Delta$	t	p
Perceived stress	Pre-test	199	28.15 $\pm$ 6.05	-33.57	15.216	0.001**
	Post-test		18.70 $\pm$ 5.68			
Happiness	Pre-test	199	22.84 $\pm$ 4.22	20.58	-16.177	0.001**
	Post-test		27.54 $\pm$ 3.51			
Life satisfaction	Pre-test	199	4.17 $\pm$ 1.02	14.39	-9.376	0.001**
	Post-test		4.77 $\pm$ .86			

\*\* $p < .001$ ;  $\bar{x}$ : Mean; S.D.: Standard Deviation

**Table 2.** Comparison of perceived stress, happiness and life satisfaction levels of adult women according to age groups and measurement times

Variables	Age Groups	N	Pre-test	Post-test	Total	%Δ	F	p
			$\bar{x} \pm S.D.$	$\bar{x} \pm S.D.$	$\bar{x} \pm S.E.$			
Perceived stress	Young-aged Women	60	29.82±6.17	18.35±5.65	24.08±0.50	-38.46	1.389	0.252
	Middle-aged Women	87	28.07±5.77	18.52±5.47	23.29±0.42	-34.02		
	Older-aged Women	52	26.37±5.92	19.42±6.10	22.89±0.54	-26.36		
	Total	199	28.15±6.05	18.70±5.68				
	F=221.199; p=0.001**							
Happiness	Young-aged Women	60	21.95±4.06	27.65±3.64	24.80±0.43	25.96	0.596	0.552
	Middle-aged Women	87	23.05±4.06	27.63±3.52	25.34±0.35	19.86		
	Older-aged Women	52	23.52±4.57	27.25±3.39	25.38±0.46	15.85		
	Total	199	22.84±4.22	27.54±3.51				
	F=252.828; p=0.001**							
Life satisfaction	Young-aged Women	60	4.02±0.92	4.74±0.84	4.38±0.11	17.91	1.567	0.211
	Middle-aged Women	87	4.14±0.95	4.71±0.77	4.42±0.09	13.76		
	Older-aged Women	52	4.39±1.21	4.88±1.01	4.64±0.11	11.16		
	Total	199	4.17±1.02	4.77±0.86				
	F=83.507; p=0.001**							

\* $p < .05$ ; \*\* $p < .01$ ;  $\bar{x}$ : Mean; S.D.: Standard Deviation; S.E.: Standard Error

( $p < .05$ ). In addition, the interaction between perceived stress ( $F = 3.834$ ;  $p = .023$ ) and happiness ( $F = 3.353$ ;  $p = .037$ ) between age groups and measurement times was statistically significant, whereas life satisfaction ( $F = 0.932$ ;  $p = .396$ ) related interaction was not found to be significant.

When Table 3 was examined, it was found that the perceived stress ( $F = 226.461$ ), happiness ( $F = 256.254$ ) and life satisfaction ( $F = 85.050$ ) levels of adult women showed a statistical difference between the pre and post-test according to the measurement times ( $p < .001$ ). According to these results, it was determined that 10-week regular recreational activities were found to be more effective on adult women who participated to recreational activities as groups than who participated to recreational activities as individual. Accordingly, the perceived stress level of adult women who participated to recreational activities as groups decreased by 35.93%, while happiness and life satisfaction levels increased by 21.91% and 16.42%, respectively. However, it was found that the perceived stress,

happiness, and life satisfaction levels did not differ statistically according to the type of participation to recreational activities ( $p < .05$ ). In addition, the interaction between perceived stress ( $F=1.709$ ;  $p= .193$ ), happiness ( $F= .938$ ;  $p= .334$ ), and life satisfaction ( $F=1.937$ ;  $p= .166$ ) between the type of participation and measurement times was not statistically significant.

When Table 4 was examined, it was found that the perceived stress ( $F = 111.744$ ), happiness ( $F = 132.286$ ) and life satisfaction ( $F = 47.610$ ) levels of adult women showed a statistical difference between the pre and post-test according to the measurement times ( $p < .001$ ). According to these results, it was found that perceived stress levels of adult women who performed regular recreational activities 3 times a week for 10 weeks decreased by 15.49%, whereas recreational activities performed 2 times a week increased the happiness and life satisfaction levels of adult women by 21.01% and 14.42%, respectively. However, it was found that the perceived stress, happiness, and life satisfaction levels did not differ statistically according to

**Table 3.** Comparison of perceived stress, happiness, and life satisfaction levels of adult women according to the type of participation to recreational activities and measurement times

Variables	Type of participation	N	Pre-test	Post-test	Total	%Δ	F	p
			$\bar{x} \pm S.D.$	$\bar{x} \pm S.D.$	$\bar{x} \pm S.E.$			
Perceived stress	Individual	90	27.93±5.25	19.38±6.15	23.65±0.41	-30.61	0.562	0.455
	Group	109	28.33±6.65	18.15±5.23	23.24±0.37	-35.93		
	Total	199	28.15±6.05	18.70±5.68				
						Groups X Times Interaction		
						F=1.709; p=0.193		
Happiness	Individual	90	23.14±4.35	27.53±3.85	25.34±0.35	18.97	0.341	0.560
	Group	109	22.59±4.11	27.54±3.23	25.06±0.31	21.91		
	Total	199	22.84±4.22	27.54±3.51				
						Groups X Times Interaction		
						F=0.938; p=0.334		
Life Satisfaction	Individual	90	4.20±1.15	4.70±0.95	4.45±0.08	11.90	0.052	0.820
	Group	109	4.14±0.90	4.82±0.77	4.48±0.08	16.42		
	Total	199	4.17±1.02	4.77±0.86				
						Groups X Times Interaction		
						F=1.937; p=0.166		

\* $p < .05$ ; \*\* $p < .01$ ;  $\bar{x}$ : Mean; S.D.: Standard Deviation; S.E.: Standard Error

**Table 4.** Comparison of perceived stress, happiness, and life satisfaction levels of adult women according to the frequency of participation to recreational activities and measurement times.

Variables	Frequency of participation	N	Pre-test	Post-test	Total	%Δ	F	p
			$\bar{x} \pm S.D.$	$\bar{x} \pm S.D.$	$\bar{x} \pm S.E.$			
Perceived stress	Two times a week	167	28.41±5.99	18.72±5.70	23.57±0.30	13.33	1.372	0.243
	Three times a week	32	26.78±6.23	18.59±5.68	22.69±0.69	15.49		
	Total	199	28.15±6.05	18.70±5.68				
						Groups X Times Interaction		
						F=0.788; p=0.376		
Happiness	Two times a week	167	22.70±4.28	27.47±3.52	25.08±0.25	21.01	1.044	0.308
	Three times a week	32	23.56±3.88	27.91±3.51	25.73±0.58	18.46		
	Total	199	22.84±4.22	27.54±3.51				
						Groups X Times Interaction		
						F=0.285; p=0.594		
Life Satisfaction	Two times a week	167	4.15±1.06	4.75±0.86	4.45±0.64	14.42	0.312	0.577
	Three times a week	32	4.24±0.81	4.84±0.86	4.54±0.14	14.31		
	Total	199	4.17±1.02	4.77±0.86				
						Groups X Times Interaction		
						F=0.002; p=0.966		

\* $p < .05$ ; \*\* $p < .01$ ;  $\bar{x}$ : Mean; S.D.: Standard Deviation; S.E.: Standard Error

the frequency of participation to recreational activities ( $p < .05$ ). In addition, the interaction between perceived stress ( $F = .788$ ;  $p = .376$ ), happiness ( $F = .285$ ;  $p = .594$ ), and life satisfaction ( $F = .002$ ;  $p = .966$ ) between the frequency of participation and measurement times was not statistically significant.

## Discussion

According to the main findings of the study, 10-week regular recreational activities were found to have a positive effect on the stress, happiness, and life satisfaction levels of adult women.

According to the secondary findings of the study, perceived stress levels of young adult women decreased by 38.46%, while happiness and life satisfaction levels increased by 25.96% and 17.91%, respectively. This result shows that there was a decrease in the level of stress in young-aged women compared to middle and older-aged women, whereas there are a higher increase in happiness and life satisfaction levels. When the literature is analyzed, it has been observed that individuals at young ages participate in more power-based sports activities, as age increases return to passive activities, and participation in sports activities decreases (32,33). One of the constraints that women face in their leisure time is that they cannot spare time for activities outside the home. One of the reasons is that it is child-care and another reason is not being raised with the sportive activity habit (34). In the study of Henderson (1990) found that women who do not have children participate more in leisure activities (35). Özdede et al. (2018) reported that single individuals participate in physical activity more than married individuals. This may be due to the fact that adult women in the study are more likely to have children at a later age (36). Despite these findings, Tatar et al. (2009) reported that as women get older, they do more sporting activities both in terms of being healthy and evaluating their leisure time (21).

People can participate to recreational activities as individually or groups. The current research results show that regular recreational activities carried out in groups contribute to a higher level of mental health than individual recreational activities. Accordingly, the perceived stress level of adult women acting in groups decreased by 35.93%, while happiness and life satisfaction levels increased by 21.91% and 16.42%, respectively. Recreational activities carried out by individuals in their leisure time constitute the base of the mass sport and are activities that appeal to all segments and ages that do not require special skills. Individuals generally carry out these activities in order to enjoy, have fun, socialize, and protect their health (37). Gül et al. (2019) emphasized in their research on academicians and students that academicians participate to recreational activities in order to be happier and students spend time with friends on the importance of

recreation in search of happiness and sociability (38). Recreational activities carried out in groups provide an important benefit in establishing new friendships and social relationships (39). This situation shows that individuals get more pleasure from the activities they perform in groups and reflect these positive effects on their lives.

Another variable examined in the research is the frequency of participation in these activities. Because the frequency of participation is directly proportional to the pleasure obtained from the job. In other words, if a person enjoys recreational activities, he/she will want to spend more time in these activities in his/her own life. According to the frequency of participation to recreational activities, it was determined that the perceived stress levels of adult women performing regular recreational activities three days a week decreased by 15.49%, whereas the happiness and life satisfaction levels of adult women who performed regular recreational activities two days a week increased by 21.01% and 14.42%, respectively. Saxena et al. (2005) reported that high levels of participation in physical activity are associated with a reduced risk of depression (40). Netz et al. (2008) reported that women who perform physical activity effectively increase their mental well-being (41). Ulutas (2019) reported that there was no significant difference between happiness and short or long periods of time devoted to recreational activities and stated that the level of satisfaction is more important than the duration of physical activity (42). In the study conducted by Eskiler, Yıldız, and Ayhan, (2019), it was reported that participation in sportive recreational activities had positive effects on individuals' mental health (43). Considering the results of the research, recreation activities performed three times a week may be due to the fact that women cause a greater decrease in their cortisol hormone levels compared to two times recreation activities, and therefore, it may result from stress levels being lower. On the other hand, regular recreational activities performed two times a week were found to provide higher levels of happiness and life satisfaction than physical activities performed three times a week. Due to the high responsibilities of women at home and in the workplace, it is thought that the 2-day activity may be due to their finding sufficient.

## Conclusion

As a result, it was seen as a necessity to take part in regular recreational activities in order to get away from the stress of life and to live a happy life and to be satisfied with life. Thus, adult women can sustain a more effective life. It is a fact that recreational activities have positive effects on human health. For this reason, it is thought that various opportunities should be developed for women, who have limited leisure time in terms of their responsibilities, to have a basic place in their lives in order to be more motivated and healthier towards life.

Home and family responsibility restricts the participation of both working women and non-working housewives in leisure activities. Therefore, there is a negative impact on women mentally. In order to prevent this situation, it is recommended to take measures to increase the participation of women to recreational activities.

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## Conflicts of Interest

The authors declare that there is no conflict of interest in this manuscript.

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