

## The levels of coping with stress of women participating in sports activities

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**Abstract.** The study aimed to examine the coping with stress levels of women participated in sports activities. *Material and Method.* The universe of this study consisted of women participating in sports activities organized within the scope of the "Mother City" project implemented in Kocaeli. The sample consisted of 171 women who regularly participate in these sports activities. The coping with stress scale developed by Moos (1993) and prepared specifically for adults to measure coping with stress levels was used. Besides, an information form containing demographic characteristics was used. In this study, SPSS statistical 21.0 package program was used to analyse the data obtained through the personal information form. Frequency and percentage analyses were used to determine the descriptive characteristics of the women participating in the study. Mean and standard deviation analyses were used to determine women's coping with stress levels. Moreover, Mann-Whitney U, Wilcoxon and nonparametric correlation analyses were used to examine the differentiation of coping with stress levels according to their descriptive characteristics. The significance level in the study was accepted as 0.05. *Results.* Significant differences were found in the scale total scores of women participated in sports and positive evaluation, guidance and support seeking and solving-problems sub-dimensions ( $p < 0.05$ ). Significant differences were found in the scale total score and sub-dimensions according to education level ( $p < 0.05$ ). A highly positive relationship was found between age, the total and sub-dimensions of the coping with stress scale ( $p < 0.05$ ). According to marital status, a significant difference was found in the total score and positive evaluation and solving-problem sub-dimensions of the scale ( $p < 0.05$ ). There was a significant difference in support seeking sub-dimension according to drug use status ( $p < 0.05$ ). No significant difference was found in scale total score and sub-dimensions according to the duration of doing sports ( $p > 0.05$ ).

**Key words:** *women, physical activity, stress levels.*

### Introduction

Physical activities have been classified by many scientists. Physical activities are classified according to where the activity has performed. Work, transportation, sports, personal care, leisure time, home and activities around the home are common classifications (1,2) Different classifications such as sportive exercise training, leisure activities, competitive sports and recreational activities can be made (3).

The World Health Organization (WHO) defines health as a state of complete physical, mental, emotional and social well-being. Sedentary life primarily affects people negatively physically. This situation negatively affects the person both physically and mentally. Today, women stay away from sports and exercise for various reasons, which triggers problems (4). It is stated that sports and physical exercises can cause an increase in self-confidence (5,6), help to get away from negative thoughts (7,8), regular sleep (9) and facilitate adaptation to stress (10). While women are dealing with housework, they always do the same movements. These movements sometimes negatively affect their posture. In this situation, it becomes difficult to maintain body posture (11). In order to maintain body posture, a balanced and regular diet, as well as a lifestyle with regular exercise habits, is required (12). As a result, it has been determined that regular and conscious sports activity reduces the rate of obesity, including high blood pressure, cardiovascular diseases, some types of cancer, and the risk of developing various chronic diseases and death from these diseases (13). A passive lifestyle is one of the main factors that play a role in the recent deterioration of physical, social and psychological health and decrease in productivity. It has been observed that stress-induced self-overload causes health deterioration (14). Another benefit of participating in sports activities is that it increases self-confidence and reduces stress and depression (15). Since the time that a person devotes to exercise is the time that the individual devotes to himself, it increases one's tolerance to life. The person will be happy because they will feel more vigorous and energetic, and this will prepare the

ground for a good mood. Thus, positive thinking will increase and protect from stress (16). Body smoothness and awareness improves due to weight reduction. Being at peace with one's body also increases self-confidence. This is even more important in women. Thanks to the mass physical activity activities, the communication power of the people increases and their socialization increases. Thus, their adaptation to the social environment becomes easier. It can prevent depression by providing positive thinking with its dominance over stress and anxiety (17, 18). In the literature, there are many studies on physical activities. In the world and Turkey, men are more interested in sport and physical activities than women (19). This study was planned to examine the psychological breakdowns experienced by unemployed housewives at home, with their participation in physical activity and levels of coping with stress. In this context, this study aims to examine the coping with stress levels of women who participated in sports activities.

It is thought that the results obtained in the study will contribute greatly to the determination of the coping with stress levels of women participating in physical activity and will be important for sports science literature. Sports activities can be offered as a suggestion after the pandemic for housewives who experience stress at home, especially during the pandemic COVID-19.

### Material and Method

*Research Model.* In the study, a descriptive survey method was used to reveal the current situation. "It was a research model that aimed to define individuals, events or objects as it existed, in its conditions and as it was a situation that existed from past to present" (20). The universe of the study consisted of women participating in physical activities organized within the "Mother City" project implemented in Kocaeli. Its sample consisted of 171 women who regularly participate in these physical activities. Women with a condition that would prevent physical activity were excluded from the study.

*The Coping with Stress Scale.* To measure coping with stress of the adults, coping with stress scale developed by Moos (1993) was used. Moos tested the validity and reliability of the scale on men and women separately. According to the results of the reliability analysis of the coping with stress scale on women, Cronbach Alpha coefficients were calculated as 0.64 for the logical analysis sub-dimension, 0.71 for the positive evaluation sub-dimension, 0.60 for guidance and support search sub-dimension, and 0.63 for the solving-problem sub-dimension. The scale consisting of 24 items was formed in 5-point Likert type and the answer options were scored as 1-Never, 2-Rarely, 3-Sometimes, 4-Mostly, 5-Always.

*Personal Information Form.* The personal information form applied to the participants was created by the researcher. The personal form consisted of 7 questions about age, educational status, marital status, do you have children, how many children you have, how long have you been doing sports, are you using drugs chronically, what kind of drugs are you using?

*Data Collection.* Questionnaires were handed out and women participants were asked to fill in. Necessary permissions were obtained for the questionnaires to be conducted. Questionnaires were applied to all women in the sample group, but not to women who did not want to participate. The questionnaires of the participants who did not fill in demographic information and scale questions were not evaluated.

*Data Analysis.* In this study, IBM SPSS Statistics 21 package program was used for the analysis of the data collected through the questionnaire. Frequency and percentage analysis were used to determine the descriptive characteristics of the women participating in the study. Mean and standard deviation analyses were used to determine the coping with stress levels of women. Mann-Whitney U, Wilcoxon and Nonparametric correlation analysis were used to examine the differentiation of coping with stress levels according to their descriptive characteristics. The significance level in the study was accepted as .05.

### Results

Research results were given below. The demographic characteristics of the women participating in sports activities were given in table I. When Table II was examined, it was determined that the lowest score that can be obtained by logical analysis sub-dimension was 12 points and the higher score was 30 points, and women had a high level of logical analysis ( $23.85 \pm 3.48$ ). It was determined that the lowest score that obtained by positive evaluation sub-dimension was 13 points and the higher point was 30, and they had a high level of positive evaluation ( $24.09 \pm 3.77$ ).

Besides, it was determined that the lowest score that obtained by guidance and support seeking sub-dimension was 11 points and higher was 30 points, and they had a high level of support seeking ( $21.22 \pm 4.41$ ). In the solving-problem sub-dimension, it was determined that the lowest point they obtained was 14

points and the higher was 30 points, and they had a high level of solving-problem ( $24.73 \pm 4.08$ ). For the total of the scale, it was determined that the lowest score was 60, the highest score was 120 points on 120 points, and they have a high level of coping with stress ( $93.90 \pm 12.59$ ).

**Table I.** Descriptive statistics regarding demographic characteristics of participants

		n	%
Age (years)	18-24	18	10.5
	25-31	20	11.7
	32-38	31	18.1
	39-45	43	25.1
	46 and above	59	34.5
Marital status	Married	142	83.0
	Single	20	11.7
	Widow	9	5.3
Educational status	Primary school	67	39.2
	Middle School	22	12.9
	High school	52	30.4
	University	25	14.6
	Postgraduate	5	2.9
How long have you been doing sports?	0-1 year	91	53.2
	1-2 years	44	25.7
	2-3 years	16	9.4
	3 years and above	20	11.7
Are you using drugs chronically?	Yes	73	42.7
	No	98	57.3
Drug type	Non-using	91	53.2
	Blood pressure	25	14.6
	Diabetic	8	4.7
	Psychological	8	4.7
	Other	39	22.8
How many children you have?	None	19	11.1
	1 child	48	28.1
	2 children	62	36.3
	3 children and above	42	24.6
	Total	171	100.0

**Table II.** Coping with Stress Scale Descriptive Statistics

	n	Min.	Max.	X	SD
Logical analysis	171	12.00	30.00	23.85	3.48
Positive evaluation	171	13.00	30.00	24.09	3.77
Guidance and support seeking	171	11.00	30.00	21.22	4.41
Solving-problem	171	14.00	30.00	24.73	4.08
Coping with stress total	171	60.00	120.00	93.90	12.59

Table III was examined, a high level of positive relationship was found between age, the total and sub-dimensions of the stress coping scale ( $p < 0.05$ ).

**Table III.** Correlation Analysis of the Coping with Stress Scale According to Age

	1	2	3	4	5	6	
Age	r	1.000					
	p	.					
Logical analysis	r	.182*	1.000				
	p	.017	.				
Positive evaluation	r	.249**	.579**	1.000			
	p	.001	.000	.			
Guidance and support seeking	r	.352**	.453**	.330**	1.000		
	p	.000	.000	.000	.		
Solving-problem	r	.419**	.606**	.626**	.573**	1.000	
	p	.000	.000	.000	.000	.	
Coping with stress total	r	.382**	.784**	.751**	.771**	.879**	1.000
	p	.000	.000	.000	.000	.000	.

A significant difference was found in the total score, positive evaluation, and solving-problem sub-dimensions of the scale according to marital status ( $p < 0.05$ ) (table IV). Table V shows a significant difference was found in the scale total score and sub-dimensions according to the educational status ( $p < 0.05$ ).

**Table IV.** Results of coping with stress according to marital status of women participated in physical activity

	Marital status	n	Mean Rank	Chi-Square	df	Asymp. Sig.
Logical Analysis	Married	142	85.80	3.327	2	.189
	Single	20	75.80			
	Widow	9	111.83			
Positive Evaluation	Married	142	87.69	7.065	2	.029
	Single	20	62.58			
	Widow	9	111.33			
Guidance and support seeking	Married	142	88.15	2.772	2	.250
	Single	20	68.78			
	Widow	9	90.28			
Solving-problem	Married	142	89.08	9.375	2	.009
	Single	20	55.75			
	Widow	9	104.56			
Coping with stress Total	Married	142	88.23	7.388	2	.025
	Single	20	60.38			
	Widow	9	107.72			

**Table V.** Results of coping with stress according to the educational status of women participated in physical activity

	Educational Status	n	Mean Rank	Chi-Square	df	Asymp. Sig.
Logical analysis	Primary school	67	94.79	12.265	4	.015
	Middle School	22	93.61			
	High school	52	68.92			
	University	25	97.52			
	Graduate	5	54.70			
Positive Evaluation	Primary school	67	101.04	16.116	4	.003
	Middle School	22	94.68			
	High school	52	71.31			
	University	25	77.18			
	Graduate	5	43.20			
Guidance and support seeking	Primary school	67	110.02	35.726	4	.000
	Middle School	22	87.48			
	High school	52	56.13			
	University	25	86.44			
	Graduate	5	66.00			
Solving-problem	Primary school	67	108.03	26.238	4	.000
	Middle School	22	78.16			
	High school	52	66.48			
	University	25	83.32			
	Graduate	5	41.70			
Coping with stress total	Primary school	67	109.09	32.525	4	.000
	Middle School	22	86.48			
	High school	52	60.28			
	University	25	85.92			
	Graduate	5	42.40			

Table VI shows a significant difference was found in the scale total score, positive evaluation, support seeking and solving-problem sub-dimensions by age ( $p < 0.05$ ).

When table VII was examined, no significant difference was found in the scale total score and sub-dimensions according to the duration of doing sports ( $p > 0.05$ ). A significant difference was found in the sub-dimension of guidance and support seeking according to drug use status ( $p < 0.05$ ) (table VIII).

**Table VI.** Analysis Results of Coping with Stress According to Age of Women participating in the Physical Activity

	Age (years)	n	Mean Rank	Chi-Square	df	Asymp. Sig.
Logical analysis	18-24	18	80.53	7.939	4	.094
	25-31	20	61.38			
	32-38	31	81.92			
	39-45	43	89.22			
	46 and above	59	95.81			
Positive Evaluation	18-24	18	80.78	15.306	4	.004
	25-31	20	61.80			
	32-38	31	81.45			
	39-45	43	76.95			
	46 and above	59	104.78			
Guidance and support seeking	18-24	18	66.31	28.679	4	.000
	25-31	20	41.45			
	32-38	31	78.74			
	39-45 y	43	98.07			
	46 and above	59	102.13			
Solving-problem	18-24	18	71.28	35.589	4	.000
	25-31	20	42.20			
	32-38	31	69.34			
	39-45	43	91.52			
	46 and above	59	110.07			
Coping with stress total	18-24	18	70.25	30.277	4	.000
	25-31	20	42.03			
	32-38	31	75.74			
	39-45	43	91.37			
	46 and above	59	107.19			

**Table VII.** Results of coping with stress according to the duration of exercising in physical activity of women

How long have you been doing sports	n	Mean Rank	Chi-Square	df	Asymp. Sig.	
Logical analysis	0-1 years	91	85.01	2.241	3	.524
	1-2 years	44	83.44			
	2-3 years	16	79.94			
	3 years and above	20	100.98			
Positive Evaluation	0-1 years	91	85.62	3.399	3	.334
	1-2 years	44	87.30			
	2-3 years	16	68.56			
	3 years and above	20	98.85			
Guidance and support seeking	0-1 years	91	83.77	2.651	3	.449
	1-2 years	44	92.99			
	2-3 years	16	71.97			
	3 years and above	20	91.98			
Solving-problem	0-1 years	91	83.10	4.098	3	.251
	1-2 years	44	83.43			
	2-3 years	16	83.34			
	3 years and above	20	106.95			
Coping with stress total	0-1 years	91	84.11	3.396	3	.335
	1-2 years	44	86.78			
	2-3 years	16	73.75			
	3 years and above	20	102.68			

**Table VIII.** Results of coping with stress according to drug use of women participating physical activity

Are you using drugs chronically?		n	Mean Rank	Sum of Ranks	z	Asymp. Sig.
Logical analysis	Yes	73	83.17	6071.50	-.647	.517
	No	98	88.11	8634.50		
Positive evaluation	Yes	73	81.76	5968.50	-.971	.332
	No	98	89.16	8737.50		
Guidance and support seeking	Yes	73	96.19	7022.00	-2.330	.020
	No	98	78.41	7684.00		
Solving-problem	Yes	73	91.38	6670.50	-1.232	.218
	No	98	81.99	8035.50		
Coping with stress total	Yes	73	88.67	6473.00	-.609	.542
	No	98	84.01	8233.00		

### Discussion and Conclusion

When the general results of the study were examined, a high level of positive relationship was found between age and the total and sub-dimensions of the coping with stress scale. If the result of one variable was increased, it can be said that result of the other variable increase or decrease in parallel. A significant difference was found in the total score, positive evaluation, and solving-problem sub-dimensions of the scale according to marital status. The source of the difference was found to be among the widow-married, widow-single, married-single participants. A significant difference was found in the scale total score and sub-dimensions according to the educational status. A significant difference was found in the scale total score and positive evaluation, support seeking and solving-problem sub-dimensions by age. No significant difference was found in the total score and sub-dimensions of the scale according to the duration of the participants' exercise. A significant difference was found in the sub-dimension of seeking support according to the participants' drug use.

Different approaches can be developed in the regulation of the exercises of drug users. Çetinkaya (16) suggested that the priority of coping with stress was growth-maturation by going through a certain process for women between the ages of 35-45 who have gained the habit of exercising. So, in order to cope with stress, a certain period of time must pass first, and in this time, the individual must mature due to the events he/she experienced. It was commented that another stress coping feature, which was equally important with the growth and maturation of the individual, was planned behaviour (21). When the difference in terms of gender in the use of the strategy of coping with stress was examined, it was found that female athletes mostly use planned behaviour, growth and maturation (22).

Bulut (2013) found that working women showed more mental problems than men, but there was a significant difference in the use of ways to coping with stress (23). This study identified options for overcoming these moments such talking to a person about a situation that caused the stress, being together with family and friends in fun environments, engaging in hobbies, sports activities or relaxation techniques. Similarly, many studies revealed that regular sports were effective in preventing depression and anxiety (24-25).

Verbrugge (1983) identified options for overcoming an event or situation such as going over an event or situation and talking to a person about a situation that caused stress, trying not to think about an event or situation that caused stress, being together with family and friends in fun environments, engaging in hobbies (24). While the most common ways of coping with stress were sports activities and finding something to solve the problem, the least common items in physical education teachers to cope with stress were to apply relaxation techniques and pray and wish good things to happen. This result was in contrast with the results obtained from the study. On the other hand, sports activities in ways of coping with stress, doing different things to feel better, etc. have encountered that they applied with methods (25). Similarly, many studies revealed that regular sports were effective in preventing depression and anxiety (26, 27).

As a result, the levels of coping with stress of women participated in sports activities differed according to socio-demographic characteristics. Necessary measures should be taken locally and generally to engage women in more sports and physical activity. For the mental illnesses prevention after the COVID-19 pandemic, will be necessary to increase physical activities in the form of non-drug treatment and to encourage the women to practice the sports and physical exercise.

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