

# Assessment of stress coping strategies of handicapped sportsmen based on different variables

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## Abstract

This study aims to evaluate stress coping strategies of handicapped sportsmen based on certain demographic variables. A total of 261 licensed and active sportsmen, 204 male and 57 female, who are undergoing regular training from different branches of sports including amputee football, wheelchair basketball, swimming and other fields participated in this research. "Stress Coping Strategies Scale" which was developed by Lazarus & Folkman and adapted to Turkish by Şahin & Durak was used in this research. Whitney U test and Kruskal Wallis H test was used for statistical analysis of data collected. As a result of this research, it was understood that handicapped sportsmen moderately used confident attitude, desperate attitude, submissive attitude, request for social support and optimistic attitude. It was also understood that stress coping strategies of handicapped sportsmen who participated in the research have significant differences based on their age, gender, branch of sports and years spent doing sports ( $p < 0.05$ ). As a result, we might suggest that age, gender, branch of sports and years spent doing sports are important factors that affect the stress coping strategies of sportsmen.

**Keywords:** Handicapped sportsmen, sports, stress coping.

## INTRODUCTION

Being handicapped is identified as being unable to fulfill the tasks and responsibilities due to certain physically hindered abilities (23). According to another definition, being handicapped is defined as "social disadvantages based on physical damages on human body". As one might understand from this definition, handicapped individuals are disadvantageous in social life. Disadvantages encountered in social life is causing handicapped people to be labeled as a marginal group in the society (35). Nowadays, most of the people in the society is being prejudiced against handicapped people and they do not consider the difficulties faced by those people (24). Physically handicapped, hearing impaired and visually impaired people are among the most frequent types of handicaps (7). Although these people are different in terms of the level of disabilities, each handicapped person encounters a lot of handicaps in their lives. For that reason, handicapped people are among the people who experience stress the most in the society.

Conceptually, stress is defined as "physical or emotional reaction of the individual against a physical or psychological" (25). Generally, stress is a psychological situation which disturbs the balance of a person. Negative affects of stress show itself psychologically or physiologically. In addition to this, people might experience some behavior problems due to stress (22). Insomnia, sleepiness, hyperphagia, inappetency, alcohol and cigarette consumption and dysphasia are among the major symptoms of stress (18,32).

Modern society era is sometimes referred to as the era of depression. Because changes occurring in the modern society causes serious psychological problems. For that reason, the concept of stress became a part of our daily lives and the concept of stress became relevant to people from all different groups of ages (22). Thus, a major part of the society started living in stress (6). Due to these aspects, stress is being known as the disease of the 21st century (18).

Among the major factors that cause stress in human beings are personal traits and social or environmental factors. Some organizational factors

also contribute to stress for people who are actively working (22). People might react differently against a factor causing stress. Character of a person is said to be the most important factor in terms of determining the type of reaction triggered against stress. In addition; attitude of mind, socio-cultural environment, social sharing and economical situation also triggers reactions against stress (5). Due to the fact that stress is present at all parts of our lives, stress coping strategies and stress management is the thing that matters the most (10). Stress coping strategies are being referred to as "stress management styles" of a person (2), and stress coping is defined as the cluster of protective and preventive skills to maintain mental health. Focusing styles of people towards psychological problems are significantly important in terms of developing stress coping skills (5). Although people use many methods to cope with stress, stress coping strategies are sometimes useful for managing stress, however sometimes they fail (13).

There are many factors that affect the stress coping strategies of people. Demographic features are among the most important of these factors. Conducted studies reveal that demographic features have different effects on stress coping strategies (31,20). However, it is suggested that there are limited numbers of studies on stress coping strategies of handicapped sportsmen (18).

As in people who are not disabled, sport has a great importance in terms of supporting social development (27,12,15), improving overall healthcare (1), supporting physical development (9,14), improving overall life quality (11) and improving self-care skills (17) of handicapped people. Nonetheless, pursuant to a literature research, it has been understood that there are limited numbers of findings on stress coping strategies of handicapped sportsmen in researches on these this topic. In this context, this research aims to assess stress coping strategies of handicapped sportsmen based on different variables.

## MATERIAL & METHOD

### Research Group

A total of 261 licensed and active sportsmen, 204 male and 57 female, who are undergoing regular training from different branches of sports including amputee football, wheelchair basketball, swimming and other fields participated in this

research. Handicapped sportsmen who participated in the research are randomly picked from a pool of handicapped people who involved in different branches of sports in sports clubs located in Istanbul.

### Data Collection

A survey consisting of two parts was used as a data collection tool in this research. First section of the survey includes four questions designated to determine demographic features of participants. These questions aim to determine the following variables: age, gender, branch of sports and years involved in sports. Second section of the survey includes the scale designated to diagnose stress coping strategies of sportsmen. "Stress Coping Strategies Scale" from "Ways of Coping Inventory" which was developed by Lazarus and Folkman and adapted to Turkish language was used in this research. As a result of factor analyses conducted, this scale is evaluated under two topics; "problem oriented" and "emotion oriented". Effective problem oriented approaches have three sub-dimensions: "confident attitude", "optimist attitude" and "request for social support" whereas ineffective emotion oriented approaches have two sub-dimensions: "lack of self-confidence" and "submissive attitude" (21). Turkish adaptation was done by Şahin & Durak, 1995 (15,28). Two methods are used in terms of scoring the scale consisting of 30 questions. Optimist Attitude, Confident Attitude and Request for Social Support sub-dimensions should be grouped under a single topic to determine the total score of "Effective Coping Strategies" and Desperate Attitude and Submissive Attitude sub-dimensions should be grouped under another topic to determine the total score of "Ineffective Coping Strategies" according to purpose of this study. Scores pertaining to each sub-dimension was also calculated separately and scores of that respective sub-dimension was also available. It has been also understood that higher the scores of sub-dimensions, the more this person uses the respective coping strategy. Lowest and highest scores of sub-dimensions are as follows: Confident Attitude 0-21 points, Optimist Attitude 0-24 points, Request for Social Support 0-15 points, Desperate Attitude 0-12 points, and Submissive Attitude 0-18 points (33).

### Statistical Analysis

Analysis of collected data was conducted using SPSS 22.0 program. Before making comparisons

between scores of sub-dimensions of Stress Coping Strategies Scale based on demographic variables, One Sample Kolmogorov-Smirnov test was used to determine whether data collected from the scale had normal distribution. As a result of the test conducted, it has been understood that scores of sub-dimensions of the scale did not have normal distribution. For that reason, non-parametric analysis methods were used to compare data of sub-dimensions based on demographic variables. Mann Whitney U test was conducted for comparison between genders of participants and Kruskal Wallis H test was used for comparisons between age groups, branch of sports and years spent doing sports. In case the results of Kruskal Wallis H test indicated significant difference, Mann Whitney U Test was used to determine which group caused the significant difference. Significance level of Mann Whitney U test and Kruskal Wallis H test were designated as  $p < 0.05$ . Table 1 includes findings on reliability coefficients of sub dimensions used in the data collection scale.

Table 1. Cronbach alpha values related to stress coping strategy scale.

Sub dimensions	Item count	Cronbach's Alpha
Confident attitude	7	.669
Desperate attitude	8	.819
Submissive attitude	6	.748
Optimist attitude	5	.697
Requesting social support	4	.792
Total scores	30	.801

## RESULTS

33.3% of participants were between 17-18, 31.8% of them were between 25-32, 24.1% was between 33-40 and %10.7% were above 40 years of age. 78.2% of participants were male and 21.8% were female. Majority of the participants (69.0%)

play wheelchair basketball. 39.1% of participants spent 1-5 years, 26.1% spent 6-10 years, 14%, spent 11-15 years, 9.2% spent 16-20 years and 11.5% spent 20+ years doing sports.

Table 2. Descriptive statistics related to demographic information of participants.

Variables	Sub variables	f	%
Age groups	17-24 age	87	33.3
	25-32 age	83	31.8
	33-40 age	63	24.1
	40+ age	28	10.7
Gender	Male	204	78.2
	Female	57	21.8
Branches	Amputee Football	38	14.6
	Wheelchair Basketball	180	69.0
	Swimming	25	9.6
	Other	18	6.9
Age of Sports	1-5 years	102	39.1
	6-10 years	68	26.1
	11-15 years	37	14.2
	16-20 years	24	9.2
	20+ years	30	11.5

In the analysis of the Table 3, due to the fact that scores between 1-4 points were regarded as average scores, it has been understood that participants scored average scores in all sub-dimensions of Stress Coping Strategy Scale.

Table 3. Descriptive statistics related to scores of participants on sub dimension of stress coping strategy scale.

Sub Dimension	N	Lowest	Highest	Mean	SD
Confident attitude	261	2	4	2.88	.508
Desperate attitude	261	1	4	2.44	.675
Submissive attitude	261	1	4	2.43	.686
Optimist attitude	261	1	4	2.79	.504
Requesting social support	261	1	4	2.78	.502

Table 4. Comparison of stress coping strategies of participants based on gender.

Sub Dimensions	Gender	N	Mean	Mean of Ranks	Sum of Ranks	U	p
Confident attitude	Male	204	2.83	122.66	25023.0	4113.0	.001
	Female	57	3.06	160.84	9168.0		
Desperate attitude	Male	204	2.39	125.04	25509.0	4599.0	.016
	Female	57	2.65	152.32	8682.0		
Submissive attitude	Male	204	2.41	128.29	26172.0	5262.0	.272
	Female	57	2.52	140.68	8019.0		
Optimist attitude	Male	204	2.79	129.28	26372.5	5462.5	.482
	Female	57	2.80	137.17	7818.5		
Requesting social support	Male	204	2.78	131.85	26898.0	5640.0	.727
	Female	57	2.77	127.95	7293.0		

In the analysis of the Table 4, it has been understood that confident attitude and desperate attitude scores of participants did display significant difference between each other and findings of this study indicates that confident attitude and desperate attitude scores of female

participants were higher ( $p < 0.05$ ). However, it has been also understood that submissive attitude, optimist attitude and request for social support sub-dimension scores of stress coping strategies did not display significant difference ( $p > 0.05$ ).

Table 5. Comparison of stress coping strategies of participants based on age groups.

Sub Dimensions	Age groups	N	Mean	Mean of Ranks	X <sup>2</sup>	p
Confident attitude	17-24 age	87	2.78	117.43	7.830	.050
	25-32 age	83	2.86	126.86		
	33-40 age	63	2.98	145.21		
	40+ age	28	3.02	153.48		
Desperate attitude	17-24 age	87	2.37	120.83	14.602	.002
	25-32 age	83	2.51	137.36		
	33-40 age	63	2.30	116.55		
	40+ age	28	2.82	176.29		
Submissive attitude	17-24 age	87	2.30	116.22	11.592	.009
	25-32 age	83	2.54	141.85		
	33-40 age	63	2.34	122.11		
	40+ age	28	2.73	164.75		
Optimist attitude	17-24 age	87	2.73	121.98	6.600	.086
	25-32 age	83	2.74	123.93		
	33-40 age	63	2.87	141.09		
	40+ age	28	2.95	157.29		
Requesting social support	17-24 age	87	2.73	122.90	1.730	.630
	25-32 age	83	2.80	133.57		
	33-40 age	63	2.79	134.53		
	40+ age	28	2.85	140.61		

Table 6. Comparison of stress coping strategies of participants based on years spent doing sports.

Sub-Dimensions	Years Spent Doing Sports	N	Mean	Mean of Ranks	x <sup>2</sup>	p
Confident attitude	1-5 yıl	102	2.79	116.71	26.248	.000
	6-10 yıl	68	2.79	118.67		
	11-15 yıl	37	2.86	125.61		
	16-20 yıl	24	3.15	172.65		
	20+ yıl	30	3.20	180.88		
Desperate attitude	1-5 yıl	102	2.28	110.45	26.828	.000
	6-10 yıl	68	2.48	133.68		
	11-15 yıl	37	2.41	127.92		
	16-20 yıl	24	2.51	141.21		
	20+ yıl	30	2.93	190.43		
Submissive attitude	1-5 yıl	102	2.27	112.08	25.109	.000
	6-10 yıl	68	2.46	132.98		
	11-15 yıl	37	2.39	125.69		
	16-20 yıl	24	2.48	141.13		
	20+ yıl	30	2.94	189.28		
Optimist attitude	1-5 yıl	102	2.71	118.65	16.185	.003
	6-10 yıl	68	2.72	120.35		
	11-15 yıl	37	2.83	135.86		
	16-20 yıl	24	2.96	152.35		
	20+ yıl	30	3.03	174.05		
Requesting social support	1-5 yıl	102	2.77	131.39	10.776	.029
	6-10 yıl	68	2.69	115.98		
	11-15 yıl	37	2.71	119.82		
	16-20 yıl	24	3.00	166.44		
	20+ yıl	30	2.91	149.15		

Table 5. Comparison of stress coping strategies of participants based on sports branch.

Sub Dimensions	Branches	N	X	Mean of Ranks	x2	P
Confident attitude	Amputee Football	38	2.52	76.03	26.205	.000
	Wheelchair Basketball	180	2.97	143.69		
	Swimming	25	2.77	118.72		
	Others	18	2.91	137.22		
Desperate attitude	Amputee Football	38	2.49	133.80	7.903	.048
	Wheelchair Basketball	180	2.49	137.36		
	Swimming	25	2.25	105.74		
	Others	18	2.15	96.56		
Submissive attitude	Amputee Football	38	2.46	132.68	22.305	.000
	Wheelchair Basketball	180	2.53	141.44		
	Swimming	25	1.84	68.08		
	Others	18	2.23	110.44		
Optimist attitude	Amputee Football	38	2.61	97.74	12.858	.005
	Wheelchair Basketball	180	2.87	141.60		
	Swimming	25	2.63	114.54		
	Others	18	2.64	118.08		
Requesting social support	Amputee Football	38	2.59	106.57	6.575	.087
	Wheelchair Basketball	180	2.83	138.42		
	Swimming	25	2.70	119.90		
	Others	18	2.76	123.81		

In the analysis of the Table 5, it has been understood that optimist attitude and request for social support scores did not display significant statistical difference based on age groups ( $p>0.05$ ), however; it was also understood that confident attitude, desperate attitude and submissive attitude scores displayed significant statistical difference based on age groups ( $p>0.05$ ).

In the analysis of the Table 6, it has been understood that there was a significant statistical difference between all sub-dimensions of participants based on years spent doing sports ( $p<0.05$ ).

In the analysis of the Table 5, it has been understood that the sub-dimension of request for social support did not display significant differences based on branch of sports participants involved in ( $p>0.05$ ), however means of other sub-dimensions displayed significant differences based on branch of sports participants involved in ( $p<0.05$ ). Difference displayed in the sub-dimension of confident attitude is due to the fact that mean of participants who are involved in other sports are higher than participants involved in amputee football. Difference displayed in the sub-dimension of desperate attitude is due to the fact that mean of participants who are involved in amputee football

and wheelchair basketball are higher than participants involved in swimming and other sports. Difference displayed in the sub-dimension of submissive attitude is due to the fact that mean of participants who are involved in amputee football and wheelchair basketball are higher than participants involved in swimming. Difference displayed in the sub-dimension of optimist attitude is due to the fact that mean of participants who are involved in wheelchair basketball are higher than participants involved in amputee football.

## DISCUSSION

As a result of this research, it was understood that handicapped sportsmen moderately used confident attitude, desperate attitude, submissive attitude, request for social support and optimist attitude. According to these findings, it has been understood that sportsmen who participated in this research did not have a dominant/prevalent method used as a stress coping strategy however they used each of the methods at certain frequencies. In the analysis of research findings in literature, it has been understood that people used more than one method to cope with stress (2,16,19). The fundamental reason behind the fact that people use more than one method to cope with stress might be due to the fact that people have different

personality traits. A study conducted by Aydın & İmamoğlu (2001) suggests that education level, cultural background and personality factors were important determinants for the method used by a person as a stress coping strategy. Another reason people use more than one method to cope with stress is that neither of these methods provide a definite solution for coping with stress (5). According to Hamarta et al. (2009), it is impossible for any of the stress methods to provide a definite solution against stress. For that reason, people using more than one methods to cope with stress is an expected outcome (13).

Research findings found in literature indicate that gender has various effects on stress coping strategies of sportsmen, just as in sedentary people (4,8,29,30,34). It has been understood that frequency of using submissive attitude, optimist attitude and request for social support in sportsmen who participated in this research did not display significant difference based on gender. However, it was also understood that female athletes used confident attitude and desperate attitude more frequently when compared to male athletes. In a similar research by Alıncak (2012) conducted on sportsmen, it has been understood that male athletes have a tendency to display a more positive and optimist approach and to provide calmer and realistic solutions to incidents when compared to female athletes, in addition they also proved efforts to evaluate the importance of the problem and the solution options while they strived for active and reasonable solutions (12). Another study conducted by Taş (2010) suggests that male participants have a higher tendency to share their problems with others and ask help from others when compared to females (29). Another study by Hosseinalipour (2015) conducted on athletes who are college students suggests that stress coping strategies of sportsmen did not display significant difference based on gender (16).

The fundamental reason behind the fact that gender affects stress coping strategies might be due to the fact that stress factors are different for male and female athletes and in addition, male and female athletes have different psychological mind sets. Research findings on literature also supports this finding. A study conducted by Kaya et al. (2007) indicated that psychological traits of female and males are different and they developed different stress coping strategies parallel to this

hypothesis (20). Another similar study conducted by Temel et al. (2007) suggests that psychological traits of individuals is an important factor on determining their stress coping strategies (31).

It has also been understood that frequency of using confident attitude, optimist attitude and request for social support in sportsmen who participated in this research did not display significant statistical difference based on age groups. According to findings of this study, it has been understood that the difference in “desperate attitude” sub-dimension was due to the fact that sportsmen in 40+ age group had a higher average when compared to participants in 17-25, 25-32 and 33-40 age groups; and it has been also understood that the difference in “submissive attitude” sub-dimension was due to the fact that sportsmen in 25-32 age group had a higher average when compared to 17-24 age group and that sportsmen in 40+ age group has a higher average when compared to 17-24 group and 33-40 age group.

As it is known to everyone, evaluation of the importance of the problem and the solution options, tendency to come up with a planned and cautious solution and to provide an active, reasonable and conscious effort to solve the problem is increasing with age. In addition, having a more tolerant and optimist perspective and providing calm and realistic solutions to problems is being preferred more frequently with age (29). However, as a result of this study it might be concluded that the underlying reason why sportsmen use more passive strategies to cope with stress as they age might be due to the facts that problems related to being handicapped increase with age and that family elders, who reduce their dependency on others, are no more there.

It has been understood that stress coping strategies of sportsmen who participated in this research did not differ significantly. According to findings of this study it has been understood that frequency of the use of confident attitude, desperate attitude, submissive attitude, optimist attitude and request for social support increase as the years spent doing sports increases. According to this finding, it might be concluded that years spent doing sports is a factor which directly affects the stress coping strategy. According to Taş (29), individuals who regularly participate in sportive activities are more successful at coping with stress when compared to sedentary people. It has been

indicated that the underlying reason for this was the fact that participating sportive activities regularly positively contributes to psychological recovery/refreshment.

It has been understood that request for social support levels of sportsmen who participated in this research did not differ significantly based on the branch of sports they participated however, it has also been understood that other stress coping strategies differ significantly based on the branch of sport they participated. According to findings of this study, it has also been understood that individuals who participated in other branches of sports preferred confident attitude more when compared to sportsmen playing amputee football, wheelchair basketball and swimming sports. It was also understood that desperate attitude was preferred the most by amputee football and wheelchair basketball players as a stress coping strategy. In addition, it was also understood that submissive attitude, optimist attitude and request for social support was preferred more frequently by wheelchair basketball players when compared to sportsmen participating in swimming and amputee football.

In a similar study conducted on sportsmen, it has been understood that stress coping strategies of sportsmen who participated in individual sports displayed some differences when compared to sportsmen who participated in team sports. That study also revealed that unconfident attitude and submissive attitude were preferred more by sportsmen who participated in individual sports however optimist attitude and request for social support were preferred more by individuals who participated in team sports (3). The fundamental reason behind the fact that stress coping strategies of sportsmen differ based on branch of sports they participated might be due to the fact that characteristics of each sports is different from one another. Hence, it might be concluded that contribution of each branch of sport is different not only in terms of physical and physiological but also in terms of psychological aspects. According to Salar et al. (2012), effects of sports on psychological traits and personal development might differ based on the branch of sports the individual participates. Branch of sports might have different effects on psychological or emotional status of the person due to certain psychological aspects it has (e.g. motivation, individual struggle, teamwork,

concentration etc.). For instance, psychological and emotional aspects of individuals who participate in team sports might be different from individuals who participate in individual sports. In addition, team sports helps individuals socialize, establish good communications with others, winning or losing together with others, being part of teamwork and cooperate while individual sports contribute to development of will power, self transcendence, self-challenging and self-confidence (26).

Type and level of stress encountered by sportsmen are different in each branch of sports. Because each branch of sport has different stress triggering factors. This might cause the sportsmen to develop different stress coping strategies based on the branch of sport they are participating. In a research conducted on this subject, the correlation between stress coping strategies and stress triggering factors were analysed. As a result of the study, it was understood that stress triggering factors were significant determinants on stress coping strategies of individuals (18).

As a result, it has been understood that stress coping strategies of different handicap groups varied based on their age groups, genders, years spent doing sports and branch of sports participated. It has also been understood that findings of this study is parallel to findings in literature. The fundamental reason behind the fact that stress coping strategies differ based on gender might be due to the fact that male and female sportsmen have different psychological traits. The fundamental reason behind the fact that stress coping strategies differ based on age groups might be due to the fact that dependancy of sportsmen increase with their age.

The fundamental reason behind the fact that stress coping strategies differ based on branch of sports participated might be due to the fact that stress triggering factors differ based on the branch of sport. In addition, the fundamental reason behind the fact that stress coping strategies differ based on years spent doing sports might be due to the fact that regular involvement in sport activities positively contribute to mental health. Following conclusions are reached upon evaluation findings of the study and respective literature:

1. New studies on stress coping strategies of handicapped sportsmen participating in different branches of sports shall be made. Wider sample

groups might especially contribute to conclusion of broader and more reliable findings.

2. New experimental studies with experiment groups and control groups using preliminary testing module on how participation in sports affects stress coping strategies of handicapped people might be conducted.

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