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Investigation of Mindfulness Levels of Individuals Playing Team and Combat Sports

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Abstract

In this study, it is aimed to examine the mindfulness levels of individuals who do team and fighting sports. The research was conducted using the descriptive survey model. While the universe of the research consists of active athletes in clubs affiliated to Provincial Directorates of Sports, the sample consists of a total of 748 athletes, 469 men and 279 women, selected by random sampling method in 2022 actively doing sports in different branches. The data were collected with the athlete's mindfulness scale, which was adapted into Turkish by Tingaz (2020). The collected data were analyzed with the SPSS 20 program. Percentage and frequency values were taken for the demographic variables of the participants, distributions for the fight and team sports branches. Since the data were not normally distributed, non-parametric test methods were used. Kruskal-Wallis H test was used for group comparisons and Mann-Whitney U tests were used for pairwise comparisons. There was no significant difference in the sub-dimensions of "awareness," "no judgment," "refocus" and "mindfulness" according to the gender and age variable of the athletes. When the level of conscious awareness is examined according to the type of sport; There is no significant difference in the level of "no judgment," "refocusing" and "mindfulness". In the "Awareness" sub-dimension of mindfulness, the difference was found to be significant in terms of sport type. When the mean rank in mindfulness and sub-dimensions is examined, the mean rank values in fighting sports are higher than in team sports. According to fighting sports branches, there is no significant difference in the sub-dimension of "no judgment". In the "Awareness" sub-dimension of conscious awareness, the difference was found to be significant according to fighting sports branches. As a result, when the fighting sports branches are examined, it has been determined that the Kickboxing branch has the highest average value of the group in mindfulness and sub-dimensions.

Keywords: Mindfulness, Individuals Playing Team, Team Sports, Fighting Sports, Sports Type

1. Introduction

1.1 Introduce the Problem

Sport is an educational and entertaining activity that can be done individually or collectively, has its own rules, helps to develop physical and mental abilities, and is generally competitive based (Morpa Spor Encyclopedia,

1997). Sports branches are categorized in many ways. The most widely known of these is "Team Sports and Individual Sports". Team sports are sports where teams of players who share the same goals face each other in competition. Fighting sports is the common name of sports branches that involve competition and are carried out within the framework of certain rules. It is the art of self-defense of athletes. Team sports and individual sports have many common goals and features, as well as important points of differentiation. These differences can be both physiological and psychological (Yarayan et al., 2018). Fighting sports (martial arts, martial arts), which attract attention among individual sports and are the subject of discussion, may require advanced physical and psychological characteristics, although the branches expressed as "martial arts" in English include close contact and hardness. Individual sports involving such close contact and hardness can have their own unique culture and characteristics. There is a struggle in every sport, but the struggle in martial arts is in a different dimension (Bowman, 2016).

Historically, mindfulness comes from the Buddhist philosophy of meditation. The word 'Sati' used in Pali, the ancient Buddhist written language, is known as mindfulness (Goldstein & Stahl, 2010). Sati, means mindfulness and remembering (Alidina, 2010). Mindfulness, which originates from the traditions of Asian thought, has been secularized and started to be used in many areas today (Zelazo & Lyons, 2012). Mindfulness is to increase awareness of the mind and body, to live here and now, to learn how to directly relate to life (Goldstein & Stahl, 2010). Mindfulness means paying attention to the purpose in the present moment with attitudes of compassion, curiosity, and acceptance. Being mindful, the person discovers how to live in harmony with the present moment rather than the sorrows and regrets of the past, the worries and worries of the future (Alidina, 2010). Mindfulness (awareness) prevents the person from getting out of autopilot and giving habitual responses (Gardner & Moore, 2007). The way out of autopilot is to be a moment-to-moment observer of one's own mental processes. In this way, the person can realize the fleeting nature of all these without integrating with his own feelings, thoughts and experiences. He can watch his body like a spectator watching television from outside, rather than being a part of the game. This allows the person to distance himself from his feelings and thoughts (Marchand, 2015). Mindfulness practices first focus on 'breathing'. Then, it includes being in harmony with what happens in the body and mind and being able to witness one's own experiences (Napoli, Krech, & Holley, 2005).

Mindfulness is defined as, "an open-hearted, moment-to-moment non-judgmental awareness" (Kabat-Zinn, 2005). Mindfulness contributes to both high levels of awareness and acceptance of in the moment reality (Kabat-Zinn, 1994). Aligned with the core tenant of mindfulness is the concept of acceptance, which can be conceptualized as "taking a stance of nonjudgmental awareness and actively embracing the experience of thoughts, feelings and bodily sensations as they occur" (Hayes et al, 2004). Mindfulness allows the individual to consider all internal and external information that is occurring which can ultimately allow them to experience a changed relationship to habitual reactions. For example, instead of athletes having intense fear before a competition, using avoidant thinking and not focusing on performance, athletes could notice fear and accept it. With such mindfulness attention, athletes would then be freed to focus their attention on task relevant cues (Gardner & Moore, 2007).

Schools have become a stressful environment that makes it difficult for students to learn due to high academic achievement expectations of administrators and teachers. Trying to learn in a stressful environment causes both the academic performance of students to decrease and their self-confidence to be damaged (Knothe & Marti, 2018). Mindfulness practices increase students' kinesthetic awareness and add meaning to their physical movements (Ennis, 2017). It enables students to avoid mechanical movements and get off the autopilot, transforming all movements into a more aware, natural and internal state (Lu, 2004). Physical education teachers are as concerned with the emotional health of students as they are concerned with their physical health. It is an important part of physical education that students become aware of their own emotions and learn to manage them ("School Specialty," 29 April 2020).

According to Martin and Ergas (2016), using mindfulness practices in physical education classes enables students to develop a more concrete understanding of the world. They understand, recognize, and manage their emotions and realize how their body relates to it. Body scanning practices, which are included in mindfulness practices, can be used for the body that begins to bore itself with increased feelings of stress and anxiety. This practice helps to

realize the tension in the body and brings positive developments in stress management. This can improve body flexibility (Knothe and Marti, 2018).

Mindfulness meditation has been demonstrated to be efficacious with a plethora of the non-sport clinical populations (Keng et al, 2011). There is a growing interest in the sport realm to use mindfulness interventions to ultimately contribute to sport performance. One reason may be that performance anxiety is a chronic, core challenge for sport psychologists to address with their athlete clients (Williams, 2010). Enhanced mindfulness, through mindfulness meditation practice, has been found to reduce many symptoms associated with anxiety (Baer, 2003) and mindfulness practice has been associated with the ability to let go of and decreased occurrence of negative thoughts (Frewen et al, 2008).

1.2 Importance of the Problem

Today, the widespread practice of fighting sports in our country has increased the interest in fighting sports. This interest has also increased scientific studies on fighting sports. Research on fighting sports and team sports is limited in our country. This research, which was carried out with the aim of examining the mindfulness levels of athletes who are engaged in team and fighting sports, can contribute to the limited literature and form a scientific basis for future research on similar subjects. Therefore, the research is considered to be important.

1.3 State Hypotheses and Their Correspondence to Research Design

Considering the above information and considering the unique structures of fighting sports among individual sports, the aim of this research is to examine the mindfulness levels of team and fighting athletes. In other words, it was tried to determine whether there was any difference between the branches. The following hypotheses were tested in the study. The following hypotheses were tested in the study. What is the mindfulness level of those who do team and fighting sports? Are there differences according to the branches? In this context, answers to the following problems will be sought; Is there a significant difference between the gender, age and mindfulness level of the athletes who are interested in team and fighting sports?

2. Method

The survey type descriptive research method was used in this study, which examines the athlete's mindfulness levels of active athletes engaged in team and fighting sports.

2.1 Participant (Subject) Characteristics and Sampling Procedures

The population of the research consists of active athletes working in clubs affiliated to the Provincial Directorates of Sports, while the sample consists of a total of 748 athletes, 469 men and 279 women, selected by random sampling method in 2022 actively doing sports in different branches.

2.2 Data Collection and Tools Used

The data was collected via Google Forms. Two different data collection tools were used in the study. In order to determine the demographic characteristics of active athletes (age, gender, branch in fighting and team sports), a Personal Information Form consisting of four questions created by the researcher was used. To determine the mindfulness levels of the participants, Thienot et al. (2014) developed by and adapted into Turkish by Tingaz (2020) Athlete Mindfulness scale was used. The scale consists of 3 sub-dimensions, Awareness (1-5), Non-Judging (6-10), and Refocusing (11-15) and a total of 15 items. The Cronbach's alpha internal consistency coefficient of the scale was calculated as .82.

2.3 Analysis of Data

Data analysis was performed with the SPSS Statistic 20 program. Percentage frequency values were taken for the demographic variables of the participants, distributions for the fight and team sports branches. Non-parametric test methods were used because the normal distribution and variance of the data showed heterogeneity in terms of groups. Kruskal-Wallis H test was used for group comparisons and Mann-Whitney U tests were used for pairwise comparisons. Statistical significance was accepted as 0.05.

3. Results

Table 1: Frequency distribution of socio-demographic characteristics

Socio-Demographic Characteristics	Frequency (n)	Percent (%)	
<i>Age</i>	7-14	271	36.2
	15-23	401	53.6
	24-30	35	4.7
	31-37	16	2.1
	38 years and older	25	3.3
	Total	748	100.0
<i>Gender</i>	Man	469	62.7
	Woman	279	37.3
	Total	748	100.0
<i>Fighting Sports</i>	Boxing	145	19.4
	Wrestle	46	6.1
	Judo	16	2.1
	Karate	38	5.1
	Kick box	14	1.9
	taekwondo	99	13.2
<i>Team Sport</i>	Basketball	53	7.1
	Football	268	35.8
	Handball	36	4.8
	Volleyball	33	4.4

When the demographic values in Table 1 are examined, 62.7% of the research consists of 469 people with men, 37.3% with 279 women and a total of 748 athletes. According to the age variable, 36.2% are 7-14 years old, 53.6% are 15-23 years old, 4.7% are 24-30 years old, 2.1% are 31-37 years old and 3% are It has been observed that 3 of them are athletes aged 38 and over. When fighting sports are examined; 19.4% were interested in boxing, 6.1% in wrestling, 2.1% in judo, 5.1% in karate, 1.9% in kickboxing and 13.2% in taekwondo. When team sports were examined, it was seen that 7.1% of them were interested in basketball, 35.8% in football, 4.8% in handball and 4.4% in volleyball.

Table 2: Comparison of athletes' mindfulness levels according to gender variable (Mann-Whitney U Test)

Factors	Gender	N	Mean Rak	U	Z	p
Awareness	Man	469	365.62	61263	-1.467	.142
	Woman	279	389.42			

Non-judgment	Man	469	367.51	62148	-1.15	.25
	Woman	279	388.25			
Refocus	Man	469	373.49	64950	-.167	.867
	Woman	279	376.2			
Mindfulness	Man	469	367.62	62198.5	-1.13	.258
	Woman	279	386.07			

In Table 2, there is no significant difference in the sub-dimensions of "Awareness", "Non-judgment", "Refocus" and " Mindfulness" according to the gender variable of the athletes ($p>0.05$).

Table 3: Comparison of athletes' mindfulness levels according to age variable (Kruskal-Wallis H Test)

Factors	Age	N	Mean Rak	X^2	sd	p
Awareness	7-14	271	365.03	2.12	4	.714
	15-23	401	375.64			
	24-30	35	387.77			
	31-37	16	420.31			
	38 age and older	25	410.86			
Non-judgment	7-14	271	356.39	5.504	4	.239
	15-23	401	385.83			
	24-30	35	418.57			
	31-37	16	368.31			
	38 age and older	25	331.24			
Refocus	7-14	271	387.81	3.858	4	.426
	15-23	401	368.42			
	24-30	35	375.91			
	31-37	16	289.72			
	38 age and older	25	380.04			
Mindfulness	7-14	271	366.97	2.022	4	.732
	15-23	401	378.32			
	24-30	35	413.94			
	31-37	16	354.03			
	38 age and older	25	352.68			

In the Kruskal-Wallis H test, which was performed to determine the significant difference in the mindfulness level and sub-dimensions of the athletes according to the age variable in Table 3, no significance was found in the sub-dimensions of "Awareness", "Refocusing", "Non-judgment" and "Mindfulness" ($p>0.05$).

Table 4: Comparison of athletes' mindfulness levels according to sports type (Mann-Whitney U Test)

Factors	Sports Type	N	Mean Rak	U	Z	p	
Awareness	Individuals	Playing	390	358.43	63542.5	-2.138	.033*
	Team						
Non-judgment	Fighting Sports		358	392.01	68203	-.546	.585
	Individuals	Playing	390	370.38			
	Team						
Refocus	Fighting Sports		358	378.99	68946	-.294	.769
	Individuals	Playing	390	372.28			
	Team						

	Fighting Sports	358	376.91			
Mindfulness	Individuals	Playing	390	367.03		
	Team				66895.5	-1.13
	Fighting Sports		358	382.64		.323

*p<0,05

In Table 4, when the level of mindfulness of the athletes according to the sport type variable is examined; There is no significant difference in the levels of "No Judgment", "Refocusing" and "Mindfulness" ($p>0.05$). In the "Awareness" sub-dimension of mindfulness, the difference was found to be significant in terms of sport type ($p<0.05$). When the mean rank in mindfulness and sub-dimensions is examined, the mean rank values in fighting sports are higher than in team sports.

Table 5: Comparison of mindfulness levels of athletes according to their fighting branches (Kruskal-Wallis H Test)

Factors	Fighting Sports	N	Mean Rak	X^2	sd	p
Awareness	Wrestling ^a	46	203.95	17.465	5	.004*
	Judo ^{a,b}	16	130.44			
	Karate ^{b,c}	38	206.89			
	Kickboxing ^{b,d}	14	238.75			
	Taekwondo	99	181.34			
	Boxing ^{c,d}	145	163			
Non-judgment	Wrestling	46	199.68	7.487	5	.187
	Judo	16	138.34			
	Karate	38	195.32			
	Kickboxing	14	214.11			
	Taekwondo	99	173.08			
	Boxing	145	174.54			
Refocus	Wrestling ^a	46	169.61	17.781	5	.003*
	Judo ^b	16	158.5			
	Karate ^{a,b,c,d}	38	222.07			
	Kickboxing ^{a,b,x,y}	14	260.93			
	Taekwondo ^{c,x}	99	171.54			
	Boxing ^{d,y}	145	171.37			
Mindfulness	Wrestling ^a	46	195.75	18.497	5	.002*
	Judo ^{a,b}	16	138.75			
	Karate ^{b,c}	38	212.12			
	Kickboxing ^{a,b,d,x}	14	260.25			
	Taekwondo ^d	99	173,25			
	Boxing ^{c,x}	145	166,77			

*p<0.05 a,b,c,d,x,y: Superscripts indicate within-group differences. There is a difference in the average scores with the same letters. The difference between the groups was determined with the Mann-Whitney U test in pairs.

It does not show a significant difference in the sub-dimension of " Non-judgment" according to the branches of fighting sports ($p>0.05$).

In the "Awareness" sub-dimension of mindfulness, the difference was found to be significant according to fighting sports branches ($H=17.465$; $p<0.05$). According to the results of the double test between the groups, a significant difference was found between Wrestling branch and Judo and Boxing branch, Judo branch and Karate and Kickboxing branches, Karate and Boxing branches and Kickboxing and Boxing sports branches.

The difference in the level of "mindfulness" according to fighting sports branches was found to be significant ($H=18.497$; $p<0.05$). According to the results of the pairwise test between the groups; A significant difference was found between Wrestling and Judo and Kickboxing, Judo and Karate and Kickboxing, Karate and Boxing, Taekwondo and Kickboxing, and Boxing and Karate and Kickboxing.

When the fighting sports branches are examined, it has been determined that the Kick Boxing branch has the highest rank average value of the group in mindfulness and sub-dimensions.

4. Discussion

This study was carried out to determine the level of mindfulness of the athletes who are engaged in team and fighting sports and to examine them in terms of different variables. When the analyzes were evaluated, there was no significant difference in the mindfulness levels of the athletes in the study group according to the gender and age variable, in the sub-dimensions of "Awareness", "Non-Judgement", "Refocus" and "Mindfulness". When the level of mindfulness is examined according to the type of sport; there is no significant difference in the level of "No Judgment", "Refocusing" and "Mindfulness". In the sub-dimension "Awareness" of mindfulness, the difference was found to be significant in terms of sport type. When the mean rank in mindfulness and sub-dimensions is examined, the mean rank values in fighting sports are higher than in team sports. According to fighting sports branches, there is no significant difference in the sub-dimension of "No Judgment". In the "Awareness" sub-dimension of mindfulness, a significant difference was found according to fighting sports branches. When the fighting sports branches are examined, it has been determined that the Kickboxing branch has the highest rank average value of the group in mindfulness and sub-dimensions. The findings obtained in the study are presented in detail below:

In the "Awareness" sub-dimension of mindful awareness, the difference was found to be significant according to fighting sports branches ($H=17.465$; $p<0.05$). According to the results of the double test between the groups, a significant difference was found between Wrestling and Judo and Boxing, Judo and Karate and Kickboxing, Karate and Boxing and Kickboxing and Boxing. In the "Refocusing" sub-dimension of mindfulness, a significant difference was found according to fighting sports branches ($H=17.781$; $p<0.05$). According to the results of the double tests between the groups, a significant difference was found between Wrestling branch and Karate and Kickboxing branches, Judo branch and Karate and Kickboxing branches, Karate and Taekwondo branches, Kickboxing and Taekwondo branches and Boxing and Karate and Kickboxing branches. The difference in the level of "Mindfulness" according to fighting sports branches was found to be significant ($H=18.497$; $p<0.05$). According to the results of the pairwise test between the groups; a significant difference was found between Wrestling and Judo and Kickboxing, Judo and Karate and Kickboxing, Karate and Boxing, Taekwondo and Kickboxing, and Boxing and Karate and Kickboxing. When the fighting sports branches are examined, it has been determined that the Kickboxing branch has the highest rank average value of the group in mindfulness and sub-dimensions.

Tingaz, et al. (2020) in the study results; the athletes with a history of injuring another athlete had a higher score average in impulsiveness scale. The total scores from the overall mindfulness inventory did not differ significantly based on the status of having injured another athlete. It was observed that the athletes who experienced severe injury had a lower score average in the overall impulsiveness scale compared to the athletes who experienced a moderate injury. No significant difference was observed in the score averages from the overall mindfulness scale based on injury severity. Among the most notable results of the present study are the positive relationship between motor impulsiveness and injury frequency and the negative relationship between mindfulness and the total of the impulsivity scale and all its sub-dimensions. According to Yahya et al. (2022); the higher the awareness, resilience, and perceived social support, the higher the perceived emotional well-being.

Tingaz, et al. (2020) who participated in the research in his studies three hundred sixty-three individual and team-sport athletes (63.9% male; 35.8% female; 0.3% non-binary, $Mage = 21.51$ $SD = 3.33$) participating in the study were asked to fill out the Mindfulness Inventory for Sport, the Self-Compassion Scale, and the Oxford Happiness Questionnaire. There were significant positive correlations between mindfulness, self-compassion, and happiness.

Structural equation modeling revealed that self-compassion did not have a moderator role in the relationship between mindfulness and happiness. On the other hand, self-compassion played a fully mediating role in the relationship between mindfulness and happiness in student-athletes. While these are correlational data that do not permit causal inferences, these findings raise the possibility, in this population, that advances a better understanding of the impact mechanism of mindfulness on happiness.

Tingaz, et al. (2020) in the study results; examined the mediating role of depression, anxiety, and stress in the relationship between mindfulness and self-rated performance. Three hundred sixty-three student-athletes (61.2% male, 38.2% female, Mage = 21.47, SD = 3.30) were asked to fill the Mindfulness Inventory for Sport (MIS), the Depression Anxiety Stress Scale-21 (DASS-21), and the Self-rated Performance Questionnaire. While mindfulness was positively related to athletic performance, it was negatively related to depression, anxiety, and stress. The relationship between mindfulness and athletic performance was partially mediated by depression, anxiety, and stress. While the cross-sectional design does not permit causal inferences, these findings raise the possibility, in this population, that mindfulness may positively affect perceived performance by reducing depression, anxiety, and stress.

According to the results of Vural and Okan (2021)'s study on mindfulness in shooting sports sports branches; it was determined that while there was a significant difference in mindfulness sub-dimensions within the groups according to the gender variable, there was no significant difference for the groups according to the national status. However, when the correlation analysis results according to the sports age variable were examined, it was determined that there were positive low-level significant relationships in the mindfulness total score and refocus sub-dimension.

According to the study results of Terzioğlu and Çakır (2020); in terms of mental skills, elite archers' scores in refocusing, competition planning, activation, and relaxation significantly increased on completion of the program. According to the findings that there was also a significant increase in archers' scores in four subscales of mindfulness: observe, acting with awareness, describe, and nonreactivity to inner experience. These results indicate that an 8-week mindfulness-based skill training program contribute to improvements in elite athletes' mental skills and mindfulness.

The purpose of Baltzell and Akhtar (2014) was to assess the impact of the mindfulness meditation training (MMT) program on positive and negative emotions, mindfulness, psychological well-being and life satisfaction of the athlete participants. The main findings indicated that MMTS positively enhanced mindfulness of the soccer players, the intervention group. In addition, MMTS may have served as a steadying influence given that the intervention group experienced no change in mean scores of positive and negative emotions. This is quite different than what happened with the team that continued to train as usual, with no intervention. The rowing team experienced no change in mindfulness and, at once, reported higher levels of negative emotions as assessed by the Positive Affect Negative Affect Scale (PANAS).

In the research of Tingaz et al. (2021), it was found that professional soccer players had higher mindfulness levels compared to amateur soccer players. It was observed that mindfulness levels differed in favor of soccer players who received mentorship or psychological performance counselling, performed mental training and had more experience in sports. It was also observed that attackers had higher mindfulness levels compared to midfielders.

Bulğay et al. (2020) evaluated the mindfulness levels of track and field athletes according to variables such as sports branch (sprints, middle distance, jumps and throws), gender, age, national athlete status, personal best grade and best grade; it was determined that the athletes with high performance had higher mindfulness levels. Additionally, it was found that the national athletes and the athletes with high training experience had higher mindfulness levels in different sub-dimensions and in terms of the gender variable, the mindfulness levels of the female participants were higher. It is also notable that the athletes who perform mental training had higher mindfulness levels compared to those who do not. In the evaluation based on branches, it was observed that the

sprinters were more competent in the refocusing sub-dimension compared to the athletes in all other branches. The findings obtained in the present study indicated that mindfulness can be affected by different variables.

As a result, in this study, it was seen that mindfulness may differ according to some variables. Kick boxing, which is one of the fighting sports branches, has the highest rank average value of the group in mindfulness and sub-dimensions. Self-defense sports enable people to think faster. In kick boxing, there are more sub-branches among other fighting sports branches. It is thought that mindfulness will be higher thanks to these sub-branches. Studies in this area may yield both similar results and different results. This situation can be explained by the fact that various factors vary according to time and conditions. Such studies can also be done as a relationship study on different branches and with different current scales.

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