



# The Effect of Motivation to Participate in Sport on Prosocial and Antisocial Behaviors in Individuals with Physical Disabilities

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## Abstract

**Background:** This cross sectional study was conducted to analyse the level of motivation and prosocial as well as antisocial behaviors of the individuals with physical disabilities who do sports, to evaluate whether their motivational states were related with prosocial and antisocial behaviors, and to determine if the type of disability affect their motivation or prosocial and antisocial behaviors.

**Method:** The research was conducted on 688 individuals who do sports and have physical disabilities in various regions of Turkey in 2020. Motivation Scale for Sports Participation of People with Disabilities (MSSPPD), Prosocial and Antisocial Behavior in Sport Scale (PABSS) were used as data collection tools in this research.

**Results:** Motivation to participate in sports level of the individuals with physical disabilities was quite high. Their prosocial behavior towards their teammates and opponents was high, while their antisocial behavior towards teammates and opponent team players was low. When subjects' motivations were examined according to the type of disability, motivation levels of individuals with orthopedic and visual disabilities were higher than those of individuals with hearing disabilities.

**Conclusion:** As a result, individuals with disabilities need strong motivation to participate in sport programs and this improves them behaviourally. As their motivation for participation in sport increased, their prosocial behaviors were positively affected, and their antisocial behaviors decrease.

**Keywords:** Physical disabilities; Motivation; Behaviors

## Introduction

Sport is considered as an effective instrument supporting physical and physiological reactions (1-3) and enabling individuals to create social ties (4) with their environments. For this reason, The WHO recommends that healthy or individuals with disabilities perform at least 150 min of moderate to severe or 75 min of high-severe physical activity per week (5). However, individuals with disabilities do not spare enough time to physical

activity (6). The main reason why people with disabilities were unable to participate in physical activity is that they experience hearing, vision or movement restrictions. Restrictions lead pressure on individuals with disabilities (7, 8). For this reason, the psychological or physical difficulties that individuals with disabilities who do sport face can cause some changes in moral behavior. Moral values are vital for the proper functioning



of society. Thoughts, feelings and behaviors should be organized according to moral values. In this regard, sport as a socialising area has an important role in this regard (9). Human behavior can vary according to the environment they are in and the roles they take. Prosocial and antisocial concepts are important in assessing moral rupture in sport (10). Prosocial behavior refers to actions intended to help and benefit someone else (11), while antisocial behavior refers to conscious actions aimed at making someone else worse (12). The desire to compete and win inherent in sport, causes athletes to exhibit prosocial or antisocial behavior (13), on the other hand the environment (14) in which sport was performed and the motivational climate (15) change prosocial and antisocial behavior in healthy individuals. However, the impact on individuals with disabilities who do sport was not clearly known.

Motivation, which is effective on human behavior, is also expressed as the driving force that enables individuals to take action (16). Motivation is needed to be active in sport (17). Although motivation was cited as a necessary factor for starting and maintaining physical activity in individuals with disabilities (18) more information was needed about what affects motivation in participation in sport (19). Therefore, motivational levels of individuals with disabilities who do sport should be identified if there were positive or negative behaviors caused by motivation they should be determined.

The motivational variables of individuals in terms of prosocial and antisocial behaviors in sport should be taken into account, such studies on individuals with physical disabilities are almost non-existent (20). Therefore, the first aim of the study was to determine the motivation level and the levels of prosocial and antisocial behavior of individuals with physical disabilities in sport, the second aim was to assess whether their motivational status was related to prosocial and antisocial behavior, and the third aim was to determine whether the type of disability affects motivation or prosocial and antisocial behavior.

## **Materials and Methods**

### ***Study Group and Procedure***

Subject Information Form, MSSPPD and PABSS were used as data collection instruments in the study. Questionnaires were applied to 750 individuals with physical disabilities who actively participate in sports in various regions of Turkey in the 19-50 age group in 2020. However, 688 reliable subjects in PABSS and 661 in MSSPPD were taken into consideration. Of the individuals enrolled in the study, 500 people (72.7%) were male and 188 (27.3%) were female. 242 (35.2%) of the participants were orthopedic disabilities, 208 (30.2%) were visual impaired, and 238 (34.6%) were hearing impaired. 65.4% of the participants were born with disability and 34.6% were subsequently disabled. 20.4% of individuals with disabilities were involved in sports between 1-3 yr, 50.3% for 4-6 yr, 21.9% for 7-10 yr, 7.0% for 11-20 yr, and 0.4% for more than 20 yr. 26.9% of them train 2 days a week, 35.2% 3 days a week, 16.6% 4 days a week, and 21.3% 5 days or more. Permission was obtained from the Social Sciences and Humanities Scientific Research and Publication Ethics Board of Uşak University, with 10/07/2020 date and 2020-95 number. Athletes were informed about the scale and tests to be applied and their written approval was obtained. The data was collected by expert interviewers trained in this field in a quiet and convenient environment with face-to-face interviewing technique. Subjects were informed about the study and their oral approval was received. They were encouraged to express their thoughts and informed that their answers will be kept as private. Besides, it was emphasized that they can have a short break time and continue when they feel themselves ready or they can leave the study if they were not able to finish the questionnaire due to any problem.

### ***Scales***

#### ***Motivation Scale for Sports Participation of People with Disabilities (MSSPPD)***

The scale consists of 22 items and three sub-dimensions. Articles 1-12 measure intrinsic motivation; articles 13-17 extrinsic motivation, and articles 18-22 amotivation dimension. Questionnaire was prepared on 5-point Likert scale with anchors of 1 and 5. If score was close to 5, their level of motivation to participate in sports was high, but if it was close to 1, it was low. Amotivation subsample was scored reversely (21). Cronbach  $\alpha$  Coefficient values of the internal consistency for MSSPPD including 22 items was analysed and it was measured as 0.888.

### *The Prosocial and Antisocial Behavior in Sport Scale (PABSS)*

It was developed by Kavussanu and Boardley (22). It was adapted into Turkish by Balçıklanlık (23). It included 20 items and 4 subsamples. Scale included subsamples of prosocial behavior toward teammate (4 items; 1,8,12,15), prosocial behavior toward opponent (3 items; 4,6,10), antisocial behavior toward teammate (5 items; 3,7,11,14,18) and antisocial behavior toward opponent (8 items; 2,5,9,13,16,17,19,20). It was 5 point Likert Scale. It was desired that prosocial behaviors mean was higher than 3 and antisocial behaviors mean was lower than 3 (22,23). Cronbach  $\alpha$  Coefficient value for the internal consistency of the PABSS including 20 items was measured as 0.873.

### *Statistical Method*

SPSS (Chicago, IL, USA) 21.0 program was used in order to analyse the data. Descriptive statistics were given as number, percentage, mean and standard deviation. Data were analysed whether they were normally distributed. For multiple comparisons in MSSPPD and PABSS One-Way Anova test and Tukey as Post-hoc test were used. In order to identify correlations between factors in the scales Pearson Correlation Coefficient Test was implemented. Significance level was accepted as  $P < 0.05$ .

### *Results*

Motivation to participate in sports level of the individuals with disabilities who participated in the study was high. When sub-dimensions were examined, the internal motivation dimension, the external motivation dimension and the non-motivational dimension were quite high. Mean score of subsample of prosocial behavior towards teammate of individuals with disabilities was higher than the prosocial behavior towards the opponent, while mean score of antisocial behavior towards teammate was lesser than antisocial behavior towards the opponent (Table 1).

**Table 1:** Motivation to participate in sport and behavior scale in sport likert scores

<i>Variable</i>	<i>N</i>	<i>M±SD</i>
Motivation to Participate in Sport Overall	661	3.53±0.96
Intrinsic Motivation	661	3.86±0.78
Extrinsic Motivation	661	3.50±0.90
Amotivation	661	3.65±1.17
Prosocial Teammate	688	3.06±1.40
Prosocial Opponent	688	2.93±1.48
Antisocial Teammate	688	2.18±1.13
Antisocial Opponent	688	2.09±1.13

When level of participation in sports according to types of disability was analysed, overall and intrinsic motivation, extrinsic motivation, amotivation,

subsample score of individuals with visual and orthopedic disabilities was significantly higher than hearing impairments ( $P < 0.05$ ). According to sport

behavior levels in antisocial teammate and sub-samples, score of individuals with hearing disabilities was meaningfully higher than individuals with

orthopedic and visual disabilities ( $P<0.05$ ; Table 2).

**Table 2:** Comparison of motivation and sport behavior levels by type of disability

<i>Variable</i>	<i>Type of Disabil-</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
Intrinsic Motivation	Orthopedic	231	3.96	0.77	36.949	0.000 *
	Visual	200	4.12 <sup>a</sup>	0.60		
	Hearing	230	3.53 <sup>c</sup>	0.81		
Extrinsic Motivation	Orthopedic	231	3.57	0.88	5.323	0.005 *
	Visual	200	3.60 <sup>a</sup>	0.84		
	Hearing	230	3.34 <sup>c</sup>	0.94		
Amotivation	Orthopedic	231	3.86 <sup>ab</sup>	1.13	22.826	0.000 *
	Visual	200	3.88 <sup>a</sup>	1.13		
	Hearing	230	3.24 <sup>c</sup>	1.15		
MSSPPD Total	Orthopedic	231	3.62	1.01	15.037	0.000 *
	Visual	200	3.72 <sup>a</sup>	0.92		
	Hearing	230	3.26 <sup>c</sup>	0.89		
Prosocial Teammate	Orthopedic	242	3.03	1.48	1.520	0.219
	Visual	208	3.20	1.49		
	Hearing	238	2.97	1.23		
Prosocial Opponent	Orthopedic	242	2.95	1.53	0.036	0.965
	Visual	208	2.92	1.61		
	Hearing	238	2.92	1.30		
Antisocial Teammate	Orthopedic	242	2.09 <sup>b</sup>	1.16	6.926	0.001 *
	Visual	208	2.04	1.13		
	Hearing	238	2.40 <sup>a</sup>	1.08		
Antisocial Opponent	Orthopedic	242	1.97 <sup>b</sup>	1.13	13.015	0.000 *
	Visual	208	1.88	1.13		
	Hearing	238	2.38 <sup>a</sup>	1.07		

\*Significance level is  $P<0.05$ . a,b,c: Different letters represent the difference between groups. MSSPPD Total: Overall Motivation to Participate in Sport

When the correlation between MSSPPD and PABSS was analysed, it was seen that there was weak positive correlation between MSSPPD sub-dimension 1 and PABSS Sub Dimension 1 and 2, weak negative correlation between PABSS Sub Dimension 3 and 4. There was also weak positive correlation between MSSPPD Sub Dimension 2 and PABSS Sub Dimension 1 and 2. The correlation between MSSPPD Sub Dimension 3 and

PABSS Sub Dimension 1 and 2 was weak positive and the correlation between PABSS Sub Dimension 3 and 4 was weak negative. The correlation between MSSPPD Sub Dimension 4 and PABSS Sub Dimension 1 and 2 was moderate positive, and the correlation between 3 and 4 was weak positive ( $P<0.05$ ; Table 3).

**Table 3:** Correlation between motivation to participate in sport and behaviors in sport

<i>Variable</i>		<i>Prosocial Teammate</i>	<i>Prosocial Opponent</i>	<i>Antisocial Team-mate</i>	<i>Antisocial Opponent</i>
Intrinsic Motivation	r	.393**	.284**	-.023	-.115**
	P	.000	.000	.549	.003
	n	661	661	661	661
Extrinsic Motivation	r	.192**	.225**	.030	.009
	P	.000	.000	.435	.826
	n	661	661	661	661
Amotivation	r	.313**	.200**	-.112**	-.193**
	P	.000	.000	.004	.000
	n	661	661	661	661
MSSPPD Total	r	.586**	.502**	.251**	.180**
	P	.000	.000	.000	.000
	n	688	688	688	688

\*\* Correlation is two sided, significant level is 0.01. MSSPPD Total: Overall Motivation to Participate in Sport

## Discussion

Motivation and desire for success were seen as essential for participation in physical activity. In as much as our urges to participate in physical activity and behavior changes do not occur in us without motivational request (24, 25) In addition, motivation has important role on ensuring the continuity of the sport (26) because as time progresses, motivation falls and the desire to play sports decreases (27). Intrinsic motivation was the most effective factor in participation in physical activities (28). When our study results were examined, the motivation of individuals with physical disabilities to participate in sports was quite high. When the subsamples were analysed, it was seen that the highest level was in the intrinsic motivation dimension, then the extrinsic motivation dimension follows it (Table 1). In order to ensure their commitment to sport and to continue their sporting lives both intrinsic and extrinsic motivations must be kept strong and supported (26). It was as important for their mental health as for their physical health (29). Family and coach were the main factors that motivate individuals who do sport (30). In this respect, awareness of families and coaches should be raised and the necessity to motivate the disabled person who do sports should be explained well.

The positive or negative behavior of athletes towards others and themselves was not new. A study (31) on sports psychology has raised a number of views on how moral behavior in sport should be evaluated. Findings in the study revealed prominently that how individuals with disabilities who do sports treat each other. According to the results, prosocial behaviors of the individuals with disabilities towards their teammates and opponents were quite good, and they rarely behave in antisocial way (Table 1). The fact that the study conducted by Graupensperger et al (31) indicated the prosocial behavior toward teammates was associated with less antisocial behavior toward opponents was important to support our study results. Doing sport for long periods increase prosocial behavior (32). High prosocial behavior level was also interpreted as individuals enjoy sport and it positively affects their performance (33).

Analysing the relation between subjects' motivation to participate in sport and prosocial and antisocial behaviors in sports, there was negative correlation between intrinsic motivation and amotivation, while it was positive between general motivation and prosocial behaviors (Table 3). In other words, behaviors such as not being motivated or desire to win can negatively affect



antisocial behavior. Prosocial behavior in their exercises was directly related to enjoying their activities and performing well (34). In another study, prosocial behavior was associated with the task being performed (35). In the same study, it was remarked that there was reverse correlation between antisocial behavior and the task performed and burnout feeling (35). It can be inferred that if they were successful or they perform the task they were assigned they show prosocial behaviors to teammates when the opponent was successful they reveal antisocial behavior due to burnout feeling. In addition it must be kept in mind that the motivational atmosphere created by coaches, behavior of teammate towards himself and opponent, and oral and physical reaction of the opponent towards himself and teammate may change prosocial and antisocial behaviors. (15, 36, 37).

Motivation level of individuals with orthopedic and visual disabilities was higher than individuals with hearing disabilities, however in antisocial behaviors level of individuals with hearing disabilities was higher than those ( $P < 0.05$ ; Table 3). It indicated that individuals with hearing disabilities motivate less but show more antisocial behaviors. Lack of hearing causes delays in speech for this reason they reveal more behavior problems (38,39). Thus, it leads them to have peer problems more (40). Studies on individuals with visual (41) and orthopaedic disabilities (42,43) indicated that they can be as active as their peers if they were motivated and the necessary atmosphere created. Taking into consideration the psychological states of the individuals with visual disabilities, there was no significant difference between them and the others (44). In addition, it was also emphasized that socialization level of individuals with visual disabilities was high and they respect more to opponents (45). This indicated that individuals with visual disabilities were motivated to do sports and behave healthily as much as normally developing individuals. A recent study has made on individuals with visual, hearing and physical disabilities in terms of analysing their motivation to participate in sport (46) and it was observed that the lowest level of motivation

belongs to the individuals with hearing disabilities. For this reason, factors that decrease motivation of the individuals with hearing disabilities and reasons that cause them to behave antisocially must be identified and eliminated.

## Conclusion

Participation of the individuals with disabilities in sport develop them physically, socially and behaviourally. It was critical that individuals develop their moral values and regulate their thoughts, feelings and behaviors independently according to these moral values. The importance of raising the athlete's awareness about his own abilities plays a key role for motivation. Individuals with high motivation showed more prosocial behaviors, while individuals with low motivation showed more antisocial behavior. This was important because it showed that motivation was effective in prosocial and antisocial behaviors. Findings of the study were significant and it may contribute to the studies in the future. However, it was a great obstacle that how prosocial and antisocial behaviors change was not known exactly. As a result, latitudinal and longitudinal studies were so vital to obtain more meaningful results.

## Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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## Conflict of interest

The authors declare that there is no conflict of interest.

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