

## PSYCHOSOCIAL ASPECTS OF PLAYER'S ENGAGEMENT TO THE SITTING VOLLEYBALL

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### Abstract

The purpose of this study was to examine motivational factors for sitting volleyball participation among athletes with physical disability from the Balkan countries. The investigation aimed to determine what the most important motivational factors are and whether they differed by the age category, years of training and between players with congenital and acquired disability. Number of athletes participated in this study was 88 (M: 83 and F: 5). All of them were high level players and participated in International Sitting Volleyball Tournament in Banja Luka, Bosnia and Herzegovina, where the most of the research took place. They were with and without physical disabilities, in origin from Bosnia and Herzegovina, Serbia, Croatia, Slovenia and Greece. Athletes were asked to complete Sitting Volleyball Participation Survey, which is modified version of Disability Sport Participation Questionnaire. Descriptive statistics (frequencies) and Spearman's Correlation Coefficient from SPSS 16.0 for Windows were used for statistical analysis. The results showed that Socialization (78.8 %), Health (76.7 %) and Entertainment (76.7 %), were the three highest motivational factors for sitting volleyball participation. Fitness (74.4 %) and Sport Competition (69.0 %) were closely behind, whereas Rehabilitation (60.5 %) was the lowest motive for participation. Significant correlation ( $p \leq 0.01$ ) was found between the category of young adulthood and factors of socialization and rehabilitation. Significant correlation ( $p \leq 0.05$ ) was found between years of training and rehabilitation factor, as well as between injury age and factors of sport competition and fitness ( $p \leq 0.05$ ). In conclusion, the results of this study indicated that Socialization, Health Reasons and Entertainment were the three major factors of sitting volleyball participation, whereas Rehabilitation was the lowest factor. Therefore, coaches should create more competitive opportunities for athletes to increase competitive spirit, and at the same time create activities that are more interesting for athletes, to enjoy participation in this sport.

**Key words:** sitting volleyball, physical disability, motivation, activity participation

### Introduction

One of the sports which are being played from 1895 is volleyball, when American William G. Morgan invented the game as a combination of basketball and tennis. At present day, volleyball is the one of the most dynamic sports, which attracts huge masses of people all around the world to start playing this amazing sport (Vute, 2008). Volleyball for the disabled is composed of two forms, standing and sitting volleyball, and with its big simplicity presents great example of adaptation and implementation of the major team sport. There are no gender and age issues, because both sexes of various ages can play together, except at the some higher level competitions (Vute, 2008). Economy or accessibility of technology, approachability and adaptability of the court (i.e. lower net, smaller dimensions) allows people without and with various type of physical disability to play together, because when they sit down and get on the court, they are all the same, regardless to age, gender or (dis)ability (de Haan, 1989). A lot of research has been published about sport and physical activity motivation, but mostly among able bodied (Ryan & Deci 1990; Kohl & Hobbs 1998; Koivula, 1999; Kilpatrick et al. 2005; Ketteridge & Boshoff, 2008). Even though in last fifteen years people started to work in this field of study among disabled population, still much has to be done to determine patterns of participation.

Some people engage in sports because they want to compete, to prove themselves, to win and to achieve medals, others just want to have fun, keep their fitness and health, make friends and to go for a beer after the game (Vute, 2008). Reasons are various, and fortunately sport is suitable to meet everyone's needs. The purpose of this study is to examine psychosocial factors or predictors of players from Balkan countries to engage in sitting volleyball. This geographical area is specific because of the war situation who affected some Balkan countries 15 years ago.

It will be interesting to find out what the players from these countries consider as strong reasons to engage themselves in sport of sitting volleyball and will that results be similar with the results of previous studies about sport motivation among physically disabled athletes. This information could be valuable not only for coaches, but for teachers as well and all others who work with people with disabilities in different institutions. They can use it to create strategies and more appropriate programs which will be approachable and health beneficial for everyone. The relevance of this study is to find and define the determinants important for participation in sitting volleyball training and competition of recent high level sitting volleyball players.

## Methods

### Participants

The participants of this study were 88 athletes (5 females and 83 males) with the age span from 15 to 60 years of age. Seventy one of them were with physical disability and 13 were without disability. Four participants did not answer on the question about diagnosis. From the seventy one physically disabled athletes, sixty eight of them were with acquired and only three with congenital disability. Participants are grouped in the categories of young adulthood (15 – 30 years old), middle adulthood (30 - 45) and older adulthood (45 - 60). This research sample was drawn from national clubs of Bosnia and Herzegovina, Croatia, Serbia, Slovenia and Greece.

### Instrument

The instrument we used is a modified version of Disability Sport Participation Questionnaire, constructed by Great Britain Wheelchair Basketball Association, in collaboration with The Loughborough National Sports Development Centre and International Wheelchair Basketball Federation. Questions in the survey are divided in the domain of personal data (including gender, age, occupation, info about diagnosis, and major reasons why have they chosen sitting volleyball), Details about sitting volleyball involvement (when they have started, who introduced them, context of finding about the sport, initial difficulties, years of training), and Data about training (level of the competition, trainings per week, individual trainings, place of the training, transport they use, potential injuries). The purpose of our questionnaire is to use information to develop a profile of the sitting volleyball athletes and their participation patterns so that it can produce more effective sitting volleyball development programs and to use this information to increase the knowledge about the sport. Major factors for the Sitting volleyball participation were measured using the 4-point importance rating scale with answers from "Very important, Quite, Little and Not important at all". The survey was also translated into the Serbian language

### Research

Survey took place at the 8<sup>th</sup> International Sitting Volleyball tournament, "Banja Luka Open 2009", in Banja Luka, Bosnia and Herzegovina, with ten participating clubs from the host country, Serbia, Croatia, Slovenia and Greece. One hundred and twenty questionnaires were distributed among the athletes at this tournament and another 48 questionnaires has been sent by e mail to the sitting volleyball athletes from Bosnia and Herzegovina. The players proclaimed informed consensus to participate in questioning. There was no need for the written request. The questionnaire was applied in Serbian or English language. During two days of the tournament, together with returned questionnaires sent by e mail, we collected 88 filled questionnaires altogether, which is 59.5 % of returning rate.

### Data processing

Basic matrix for data input was made in SPSS 16.0 for Windows. *First:* Descriptive statistics – Frequencies and Percentages are carried out, to describe basic characteristics of the participant's answers. *Second:* To analyze the data Statistical Package for Social Sciences (SPSS Inc) was used, Version 16.0, for Windows. *Spearman Correlation Coefficient* was performed in a relation to motivational factors and only results with statistical significance had been shown.

## Results

Table 1 – Survey of the participants by factors of participation in sitting volleyball

	Very	Quite	Little	Not imp at
Sport	0.690	0.230	0.069	0.011
Health	0.767	0.151	0.070	0.012
Fitness	0.744	0.151	0.093	0.012
Socialization	0.788	0.188	0.012	0.012
Rehabilitation	0.605	0.185	0.148	0.062
Entertainment	0.767	0.174	0.047	0.012

\* imp – important

The participants had an option to rank following motivational factors within the questionnaire: Sport Competition, Health, Fitness, Socialization, Rehabilitation and Entertainment. Results showed that the important factors of motivation for sitting volleyball participation were Socialization, Entertainment, Health, Fitness, Sport Competition and Rehabilitation, from the most important to the least respectively (Table 1).

Table 2 – Survey on the introductory agents with the sitting volleyball

	Frequency	Percentage
Friend/sitting	59	67.0
Friend/volleyball	7	8.0
Acquaintance	7	8.0
Doctor	2	2.3
Therapist	3	3.4
Coach	1	1.1
Someone else	6	6.8
Information	3	3.4
Total	88	100.0

The biggest influence on the players to engage in the sitting volleyball had their friends who practice the same sport. Other factors haven't showed almost any influence.

### Correlation between young adulthood and socialization and young adulthood and rehabilitation

Positive correlation has been found between young adults and socialization factor ( $\rho = .296$ ;  $p \leq 0.01$ ), as well as between young adults and rehabilitation ( $\rho = .308$ ;  $p \leq 0.01$ ). Suggesting that as younger participants are, socialization and rehabilitation will be less important factor of their sitting volleyball participation (Table 3).

Table 3 - Correlation between young adulthood and socialization and young adulthood and rehabilitation

			Young Adulthood	Socialization	Rehabilitation
Spearman's rho	Young Adulthood	Correlation Coefficient	1.000	.296**	.308**
		Sig. (2-tailed)	.	.006	.005
		N	88	85	81

\*\* . Correlation is significant at the 0.01 level (2 -tailed)

*Correlation between years of training and rehabilitation factor*

Only correlation between rehabilitation factor and years of training in sitting volleyball was significant at the level of ( $p \leq 0.05$ ), and there was no other correlations found (Table 4). Association between these two variables was negative ( $\rho = -.256$ ), which means as longer individual is engaged in sitting volleyball, the rehabilitation factor will be less important.

Table 4 - Correlation between years of training and rehabilitation factor

			Years of training	Rehabilitation
Spearman's rho	Years of Training	Correlation Coefficient	1.000	-.256*
		Sig. (2-tailed)	.	.034
		N	73	69
	Rehabilitation	Correlation Coefficient	-.256*	1.000
		Sig. (2-tailed)	.034	.
		N	69	81

\*. Correlation is significant at the 0.05 level (2-tailed).

*Correlation between injury age and fitness and injury age and sport competition*

The second positive correlation has been found between injury age of the participants and sport competition ( $\rho = .246$ ;  $p \leq 0.05$ ), as well as injury age and fitness ( $\rho = .249$ ;  $p \leq 0.05$ ). Both correlations were positive, suggesting that if someone got injured relatively soon before he/she started to play sitting volleyball, sport competition and improvement of fitness assume to be highly ranked for this group of participants (Table 5).

Table 5 - Correlation between injury age and fitness and injury age and sport competition

			Injury age	Sport competition	Fitness
Spearman's rho	Injury age	Correlation Coefficient	1.000	.246*	.249*
		Sig. (2-tailed)	.	.048	.048
		N	65	65	64

\*. Correlation is significant at the 0.05 level (2-tailed).

**Discussion**

The purpose of this study was to investigate psychosocial factors influencing sitting volleyball participation among athletes, and to provide information about this attractive sport in the area where the sports for the disabled are still undeveloped. Results of this study highlighted factor of socialization as the most important factor of sitting volleyball participation. Closely behind were entertainment, health, sport competition, fitness and rehabilitation as the lowest ranked factor. Unlike our findings, some other studies (Dishman et, al. 1989, Brasile & Hedrick, 1991, Fung, 1992, Chen at, al. 2007) had shown that physical fitness is the most important for the sport participation among persons with physical disability. Chen at, al. (2007), have also found different results. In their research with physically disabled athletes from China, skill development was the leading reason for sport participation. This was during the preparations for the Paralympics Games in Beijing so they wanted to improve their skills in order to represent their country in the best light. In the study of Vute (1992) with sitting volleyball players, the most important factor of participation was desire for success. Kälbli et, al. (2006) and Kälbli (2008) have found that at the beginning of the sport career main motive for the athletes is desire for competition and participation at the Paralympics. All of the aforementioned studies had results different from ours. The reason our participant's prioritised socialisation for the sport participation might be in the fact that they are still on the margins of the society, excluded, without proper opportunity for self-actualization. Younger athletes from this study haven't put much emphasis on the socialization as a reason for the sitting volleyball engagement, and even less on the rehabilitation.

On the other hand, the participants from the category of older adulthood have put socialization on the very high place together with entertainment. The similar was indicated in the study of Kälbli (2008), where she found that at the beginning of the sport carrier athletes appreciate competition and later with age they participate in sports from health reasons. Athletes more experienced athletes, with the longer probation in the sitting volleyball, do not see rehabilitation as a reason they are playing. This might be because of years they spent in the sport and feel they are already rehabilitated enough. More than a half of the participants were introduced with sitting volleyball by a friend who played the sport. In a relation to that, negligible number of participants was introduced by therapists and doctors. It cannot be claimed that they have the greatest influence on the later sport participation, but considering the fact that they are the first who patient meet after the injury they should be more contributing factor. The limitation of this study was that almost half of the participants were from one country, which prevented us to make comparisons between countries and clubs.

Due to the small number of female athletes, athletes without disabilities, or those with congenital disabilities, we were also unable to make further comparisons. These limitations could serve as recommendations for the future studies in this area. They should include more athletes with various type of physical disability, from different sports, or who have or hadn't have reinjure sport experience. With a clear understanding of the physically disabled athletes', their sport participation patterns, coaches, teachers and other practitioners could effectively structure their training to meet the athletes' desires for achieving the training objectives.

### Conclusion

As a conclusion it could be noted that research on people with physical disabilities related to sport psychology is still at the pioneer stage.

The research attention on sports psychology has been extensively examined, but research on athletes with physical disability is very limited (Chen et al. 2007), especially research orientated on specific sports, such as sitting volleyball for example. Although this study had some limitation, the results are still important because little is known about motivation of the athletes with physical disabilities. With the development of the society, the physical disabled athletes should receive much desired attention from health care professionals, teachers, coaches and other pedagogical and sport workers. Therefore, the results of this study could provide implications for all who work with disabled how to effectively and purposefully meet the needs of individuals with physical disabilities. Coaches should create more competitive opportunities for athletes to increase competitive spirit, and at the same time create activities that are interesting for the participants.

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## PSIHOSOCIJALNI ASPEKT ANGAŽMANA IGRAČA U SJEDEĆOJ ODBOJCI

### Sažetak

Svrha ovog rada bila je ispitati motivacijske faktore za uključivanje u sjedeću odbojku među igračima sa tjelesnim invaliditetom iz zemalja Balkana. Ispitivanje je imalo za cilj utvrditi koji su najvažniji motivacijski faktori i postoje li razlike po uzrasnim kategorijama, godinama učešća u sportu i između igrača sa stečenim i urođenim invaliditetom. U studiji je sudjelovalo ukupno 88 sportaša (M: 83 i Ž: 5). Svi ispitanici su vrhunski igrači i sudjelovali su na Međunarodnom turniru u sjedećoj odbojci u Banjoj Luci, Bosna i Hercegovina, gdje je sproveden veći dio istraživanja. Igrači su bili sa i bez tjelesnog invaliditeta porijeklom iz Bosne i Hercegovine, Hrvatske, Slovenije, Srbije i Grčke. Sportaši su zamoljeni da popune Upitnik o učešću u sjedećoj odbojci koji je modificirana verzija Upitnika o učešću u sportu osoba sa invaliditetom. Za statističku analizu korišten je SPSS 16.0 za Windows, u okviru kojeg je izvršena deskriptivna statistika (frekvencije) i sproveden Spirmanov koeficijent korelacije. Rezultati su pokazali da su socijalizacija (78,8%), zdravlje (76,7%), i zabava (76,7%) tri najveća motivacijska faktora za učešće u sjedećoj odbojci. Fitnes (64,4%) i sportsko natjecanje (69%) su bili odmah iza po važnosti, dok je rehabilitacija (60,5%) bila najmanji motiv za sudjelovanje. Značajna korelacija ( $p \leq 0.01$ ) je nađena između kategorije mlađe odraslosti i faktora rehabilitacije i socijalizacije. Značajna korelacija ( $p \leq 0.05$ ) je takođe nađena između varijabli godina treninga u sjedećoj odbojci i faktora rehabilitacije, kao i između varijabli doba povrede i faktora sportsko natjecanje i fitnes ( $p \leq 0.05$ ). U zaključku, rezultati ove studije su pokazali da su socijalizacija, zabava i zdravlje tri glavna motivacijska faktora za sudjelovanje u sjedećoj odbojci, dok je rehabilitacija najmanje važan faktor. Prema tome, treneri trebaju kreirati više natjecateljskih mogućnosti za igrače u cilju povećanja natjecateljskog duha, a u isto vrijeme kreirati aktivnosti koje su zanimljive za igrače, da uživaju u učešću u ovom sportu.

**Key words:** sjedeća odbojka, fizička limitiranost, motivacija, aktivno sudjelovanje

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