

GENERALIZED SELF-EFFICACY OF HANDBALL PLAYERS ACCORDING TO PLAYING POSITION IN THE TEAM

GENERALNA SAMOEFIKASNOST KOD RUKOMETAŠA U ZAVISNOSTI OD POZICIJE U TIMU

SUMMARY

The aim of this study is to determine statistic significant differences in self-efficacy of handball athletes according to their playing position. The sample consists of 127 handball players from 10 clubs in Serbia, 83 of them are males and 44 are females. All participants are divided in 4 groups (wing, back player, goalkeeper and line player), with an assumption that there are no significant differences between male and female handball players ($p = .909$). General Self-Efficacy Scale (SGSE; Schwarzer, & Jerusalem, 1981) is applied. Results indicate that there are no significant differences in self-efficacy beliefs in handball players according the playing position in the team ($p = .581$); handball players on each playing position in the team is equally assured in their skills, regardless the fact that the position activities will affect the outcome of the game. As regards the findings of previous studies and the specificity of handball, this paper provides possible explanation of the obtained results and their implementation in everyday activities of athletes and coaches.

Key words: *self-efficacy, playing position, handball players*

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INTRODUCTION

Every position in sport implies a sequence of specific situations that requires player's assurance that his abilities will influence successful outcome of the match. Regarding handball, it is known that each position in offense must have specific technical, physical and psychological demands (Clanton & Dwight, 1997). Thus, one of the psychological demands is self-efficacy which represents a player's assurance of his skills. According to Bandura (Bandura, 1997), self-efficacy directly affects performance of an athlete. Bandura indicates that self-efficacy is situational specific which implies that each position in handball, based on its specificity, demands a certain level of self-efficacy. Thus, there is positive linear relationship with levels of general self-efficacy and performance (Haney & Long, 1995). However, self-efficacy in sport (Feltz, 2007) represents a problem which has been explored in recent decades, following the context of sport participation at different levels of competition and different types of sports activities. There are several studies regarding self-efficacy according to playing position in the team (Weigand & Stockham, 2000; Michele, 2006). In a study with field hockey players, Weigand and Stockham (Weigand & Stockham, 2000) determined statistically significant differences in self-efficacy according to playing position in the team where players on defense and midfield positions had higher scores than players on positions in offense. However, Michele (Michele, 2006) in his doctoral thesis explored the university rugby player selections under 19 years and found statistically significant differences in self-efficacy between rugby players at different positions in the team. In such a way, the findings of Michele suggest that rugby players on playing positions of locks and back three had significantly lower self-efficacy scores compared to other positions. We also noticed that previous findings of self-efficacy and the level of competitive state anxiety have shown that these two indicators of stress coping are related (Treasure, Monson & Lox, 1996). Thus, the level of competitive state anxiety according to playing position in the team will also be discussed. The level of competitive state anxiety according to playing position in the team was the subject of several studies (Sewel & Edmondson, 1996; Guillen & Sanchez, 2009) whose findings showed relative opposition. In a study conducted by Guillen and Sanchez (Guillen & Sanchez, 2009), no significant differences were found in the level of competitive state anxiety between basketball players according to their playing position in the team. However, according to the study of Sewel and Edmondson (Sewel & Edmondson, 1996) with university football players and field hockey players, significant differences were found in the level of competitive state anxiety, since where the players on the goalkeeper positions and defense positions had lower levels of competitive anxiety comparing to those on other positions.

Main goal of this study is to determine statistic significant differences in generalized self-efficacy of handball athletes according to their playing position.

METHODS

The total sample consists of 127 athletes (83 male handball players and 44 female handball players), from senior squads. Research included 10 clubs in Serbia (6 male clubs, 4 female clubs). All participants are divided in four groups which were formed according to their playing position: *goalkeepers* (n=19), *backs* (n=48), *wings* (n=43), *line players* (n=17), according the gender: *males* (n=83) and *females* (n=44), and according their level of

competition: *Super League* (n=18), *Super B* (n=39), *First League* (n=53) and *Second League* (n=17).

A Generalized Self-Efficacy Scale questionnaire (SGSE) was applied (Schwarzer & Jerusalem, 1981; cited in Weinman, 1995). Questioner is Likert questionnaire, with 4 statements representing the degree of agreement or disagreement. The questionnaire consists of 10 items which are related to optimistic self-beliefs in coping with stressful situations. Reliability of the questionnaire according to Cronbach alpha is between 0.76 and 0.90 according to several studies (Cable & Judge, 1994; Earley & Lituchy, 1991; Gardner & Pierce, 1998; Riggs & Knight, 1994; Schaubroeck & Merritt, 1997; Smith & Foti, 1998; cited by Chen, Guly & Eden, 2001). Research was conducted in 10 handball clubs in Serbia. Clubs included in research are: *RK "Jugović" Kač*, *RK Žabalj*, *RK Jabuka*, *ŽRK "Dinamo" Pančevo*, *ŽRK „Radnički“ Obrenovac*, *RK „Radnički“ Obrenovac*, *ŽRK „Radnički“ Kačarevo*, *ŽRK „Proleter“ Zrenjanin*, *Rk „Proleter“ Zrenjanin i RK Voždovac Beograd*. The study includes a sample of independent variables: the position in the team (goalkeeper, external attacker, wing, pivot), while the predictor variable represented: self-efficacy (generalized self-efficacy).

We used IBM SPSS statistics software for statistical analysis, which implied Shapiro-Wilk normality test, also Mann-Whitney and Kruskal-Wallis test of differences between groups and to analyze them.

RESULTS

Regarding the fact there are no significant differences in self-efficacy between gender ($p=.654$) showed in Table 3, nor between participants of different level of competition ($p=.500$) presented in Table 4, the presentation of results is based on the sample of a homogenous group, so that differences in self-efficacy were analyzed through playing position only.

Table 1 Shapiro-Wilk normality test by groups according to playing position

	goalkeeper N=19	back N=48	wing N=43	line player N=17
	p	p	p	p
Self-efficacy	.184	.004	.185	.164

Legend: Statistical significance of Shapiro Wilk test of normality set on $p \leq 0.05$

Results in Table 1 indicate that there are significant deviations from normal distribution in group *backs*, while there are no significant deviations in other groups. Table 2 shows descriptive characteristics in self-efficacy according to the playing position.

Table 2 Descriptive characteristics according to playing position

	goalkeeper N=19		back N=49		wing N=43		line player N=17	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-efficacy	3.43	0,35	3.31	0.35	3.25	0,42	3.31	0.28

The results shown in Table 2, according to the arithmetic mean values in self-efficacy, indicate the similarities between the groups.

Tables 3 and 4, presents the results of differences analysis between groups according to gender and level of competition.

Table 3 Mann Whitney test between groups according to gender

	Males	Females	Mann-Whitney
	N=83	N=44	N=127
	Mean Ranks	Mean Ranks	p
Self-efficacy	62.94	66.00	0.654

Legend: Statistical significance of Mann Whitney test set on level $p \leq 0.05$

Table 4 Kruskal-Wallis test between groups according to level of competition

	Super League	Super B	First League	Second League	Kruskal Wallis
	N=18	N=39	N=53	N=17	N=127
	Mean Ranks	Mean Ranks	Mean Ranks	Mean Ranks	p
Self-efficacy	73,97	64,04	63,47	55,00	0,500

Legend: Statistical significance of Kruskal-Wallis test set on level $p \leq 0.05$

Results from Table 3 and 4 indicate there are no significant differences in self-efficacy beliefs between handball players, according to gender and level of competition. However, significance of these results will be included in further analysis, in order to isolate variable *playing position*.

Table 5 shows Kruskal-Wallis test results between groups in self-efficacy according to playing position. The figures in first column show Mean Ranks for each group.

Table 5 Kruskal-Wallis test between groups according to playing position

	goalkeeper	back	wing	line player	Kruskal Wallis
	N=19	N=49	N=43	N=17	N=127
	Mean Ranks	Mean Ranks	Mean Ranks	Mean Ranks	p
Self-efficacy	73,94	64,57	59,83	62,06	0,581

Legend: Statistical significance of Kruskal-Wallis test set on level $p \leq 0.05$

Results in Table 5 indicate that there are no significant differences in self-efficacy according to playing position in the team.

Table 6 shows median position in self-efficacy for each playing position in the team.

Table 6 Median values for each group in self-efficacy according to playing position

playing position	goalkeeper	back	wing	line player
	N=19	N=49	N=43	N=17
	Median	Median	Median	Median
Self-efficacy	3.40	3.30	3.30	3.40

Results from Table 6 show that median position is relatively identical for each playing position in the team.

DISCUSSION

Results of this study indicate that there are no significant differences in self-efficacy beliefs according to playing position of handball players ($p=.581$). However, results in our study are not consistent with previous studies which explored differences in self-efficacy according to playing position in the team (Weigand & Stockham, 2000; Michele, 2002). Moreover, we must indicate differences in dividing the groups. Weigand divided the groups by positions of *midfield*, *defense* and *offense*, as our study followed Bray, Balaguer and Duda (Bray, Balaguer & Duda, 2004) divide method, under the standpoint that higher self-efficacy improves a player's performance according to their playing position in the team predominantly in offensive tasks. Hence, our study used group split according to playing positions strictly in offense, except goalkeeper. In a study conducted by Michele (Michele, 2006), positions of locks and back three have significantly lower self-efficacy compared to other positions, but the author indicates that these positions have bigger impact on the outcome of the match. In our study, each position has equal impact on the outcome of the match.

Studies about the level of competitive state anxiety which found significant differences in the level of competitive state anxiety according to playing position in the team (Sewel & Edmonson, 1996, Guillen & Sanchez, 2009) are partially supported by the results from our study. According to Sewel research (Sewel & Edmonson, 1996) who found significant differences in the level of competitive state anxiety according to which goalkeepers had lower scores of competitive anxiety comparing to other positions. However, similarly with Weigand study (Weigand & Stockham, 2000), the total sample was divide in groups: *goalkeeper*, *defense*, *midfield*, *offense*. Regardless the difference in sample divide method, the results from our study indicate that there are no significant differences between goalkeepers and rest of the positions in self-efficacy. In a study conducted by Guillen and Sanchez (Guillen i Sanchez, 2009) results indicate that there are no significant differences ($p=.07$) in the level of competitive state anxiety according to playing position of basketball players. Though, their findings are in direct match with ours, we should indicate the differences in the sizes of total sample. Hence, the result would be different if their sample number would match similar number of our study.

CONCLUSION

We must point out that the limit of this study is the fact that some of the factors like personality traits or emotional status or interpersonal relations in the squad were not controlled to help explore the effect of playing position in the team on self-efficacy beliefs. However, these results indicate that according to each position in a handball team, is equally assured of their skills, regardless the fact that some positions can affect the outcome of the game. These results drew attention to the field of research in sport science dealing with psychological aspects of training in competitive sport. Thus, handball practitioners and players should strive to build up their situational specific self-efficacy beliefs regarding each position.

REFERENCE

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, USA: Freeman.
- Bray, S. R., Balaguer, I., & Duda, L.J. (2004). The Relationship of Task Self-Efficacy and Role Efficacy Beliefs to Role Performance in Spanish Youth Soccer. *Journal of Sports Sciences*, 22, 429-437.
<https://doi.org/10.1080/02640410410001675333>
PMid:15160596
- Chen, G., Guly, S., & Eden, D. (2001). Validation of New General Self – Efficacy Scale. *Organizational Research Methods*, 4, 62-83.
<https://doi.org/10.1177/109442810141004>
- Clanton, R., & Dwight, P.M. (1997) *Team Handball: Steps to Success*. Human Kinetics.
PMCID:PMC163723
- Feltz, D. L. (2007). Efficacy belief in sport: research on athletes, teams, and coaches. *Research Quarterly for Exercise and Sport*, 78, 2–3.
- Guillen, F., & Sanchez, R (2009) Competitive anxiety in expert female athletes: Sources and intensity of anxiety in national team and first division spanish basketball players. *Perceptual and Motor Skills*, 109, 407-419.
<https://doi.org/10.2466/pms.109.2.407-419>
PMid:20037995
- Haney, C. J., & Long, B. C. (1995). Coping effectiveness: A path analysis of self efficacy, control, coping and performance in sport competitions. *Journal of Applied Social Psychology*, 25, 1726-1746.
<https://doi.org/10.1111/j.1559-1816.1995.tb01815.x>
- Michelle, A. (2006) Sport psychological skills that distinguish between u/19 club rugby players of different participation levels and positional groups. Doctoral dissertation, North West University, RSA.
- Sewell, D.F., & Edmonson, A.M. (1996). Relationships between field position and pre-match competitive state anxiety in soccer and field position and pre-match competitive state anxiety in soccer and field-hockey. *International Journal of Sport Psychology*, 27(2), 159–172.
- Treasure, D.C., Monson, J., & Lox, C. (1996). Relationship between Self-efficacy, Wrestling performance, and Affect Prior to Competition. *Journal of Human Kinetics*, 10,73-83.
<https://doi.org/10.1123/tsp.10.1.73>
- Weigand, D.A., & Stockham, K.J. (2000). The Importance of Analyzing Position – Specific Self – Efficacy. *Journal of Sport Behavior*, 23, 61-69.
- Weinman, J., Wright, S., & Johnston, M. (1995). *Measures in health psychology: A user's portfolio. Causal and control beliefs*. Windsor, UK: NFER-NELSON.

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SAŽETAK

Cilj istraživanja je da se utvrdi da li postoje statistički značajne razlike u generalnoj samoefikasnosti kod sportista koji se bave rukometom u zavisnosti od njihove pozicije u timu. Uzorak ispitanika obuhvata 127 ispitanika, od toga 83 rukometaša i 44 rukometašice, iz 10 rukometnih klubova u Srbiji. Uzimajući u obzir da ne postoje statistički značajne razlike u generalnoj samoefikasnosti između ispitanika različitog pola ($p= 0,909$), ukupan uzorak je na osnovu varijable pozicija u timu podeljen u četiri grupe: golman ($n=19$), spoljni napadač ($n=48$), krilo ($n=43$), kružni napadač ($n=17$). U istraživanju je primenjena Skala generalne samo-efikasnosti (SGSE; Schwarzer & Jerusalem, 1981). Rezultati pokazuju da ne postoje statistički značajne razlike u generalnoj samoefikasnosti kod sportista u zavisnosti od njihove pozicije u timu ($p= 0,581$); svaka pozicija u timu je relativno jednako uverena u svoje sposobnosti, bez obzira da li će od nje da zavisi ishod utakmice. Polazeći od rezultata prethodnih istraživanja i specifičnosti rukometa, u radu se diskutuju moguća objašnjenja rezultata, odnosno njihovo značenje kod sportista i trenera u treningu i takmičenju.

Ključne reči: samoefikasnost, rukometaši, rukometašice, pozicija u timu.
