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STRESS COPING RELATIVE TO COMPETITIVE EXPERIENCE OF HANDBALL PLAYERS

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Abstract

The aim of this study is to examine differences in stress coping between handball players of different competitive experience. The sample consists of 127 handball players from 10 clubs in Serbia, 83 of whom are males and 44 are females. All participants are divided in three groups, which are formed according to their competitive experience: *up to 5 years* (n = 42), *up to 10 years* (n = 58), *over 10 years* (n = 26), 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. The findings indicate that there are significant differences in stress coping between handball players with different levels of competitive experience (p = .021); the longer the competitive experience, the more efficient stress coping is. As regards the findings of previous studies and the specificity of handball, this paper provides possible explanation of obtained results and their implementation in everyday activities of athletes and coaches.

Keywords: stress coping, handball players, competitive experience

Introduction

Competitive experience is related to the way which athlete is coping with stress. Moreover, there is an attitude that bigger competitive experience leads to efficacious ways of stress coping. Self-efficacy and level of competitive state anxiety are some of the ways of stress coping (Feltz, 2007; Hanton, 2008), which has been explored in recent decades, following the context of sport participation at different levels of competition. Previous findings of self-efficacy and the level of competitive state anxiety have shown, that, there is an inversely proportional relation between these two indicators of stress coping (Treasure, Monson & Lox, 1996).

Relations between self-efficacy and experience of athletes were confirmed in research done by Haney and Long (Haney & Long, 1995). There are several studies regarding self-efficacy which found significant differences between experienced and inexperienced athletes (Martin & Gill, 1991; Fitzsimmons, Landers, Thomas & Van Der Mars, 1991; Thomas, 1994). However, these studies suggest how big self-efficacy could be regarding

inexperienced athletes. There is also one study which proves no significant differences (Shelangoski, 2013) in self-efficacy, due to competitive experience.

The level of competitive state anxiety of athletes at different levels of competition, indicates in most studies that there are significant differences in the competitive experience of athletes (Neil, Mellalieu, Fletcher, 2008; Rokka, Mavridis, Bebestos & Mavridis, 2008; Fernandes, Nunes, Vasconcelos-Raposo, Fernandes, 2015). However, a study conducted by Gould, Petlichkoff & Weinberg (1984) indicates that there are significant differences in the level of competitive state anxiety in female volleyball players regarding their competitive experience.

Rokka and colleagues (Rokka, 2008) explored the domain of coping with stress in handball players of different competitive experience, and found that there are significant differences between handball players in the level of competitive state anxiety, where handball players with competitive experience from 4 to 6 years had lower scores on the scale of competitive anxiety, compared to handball players with 1-3 years of competitive experience.

Methods

Total sample consists of (n = 127) handball players, (n = 83) whom are male players and (n = 44) female handball players, from senior squads. Research included 10 clubs from Serbia (6 male clubs, and 4 female clubs). All participants are divided in three groups, which are formed according to their competitive experience: *up to 5 years* (n = 42), *up to 10 years* (n=58), *over 10 years* (n=26), with an assumption that there are no significant differences between male and female handball players (p = .909).

A General Self-Efficacy Scale questionnaire (SGSE) was applied (Schwarzer, Jerusalem, 1981; cited in Weinman, 1995). The questionnaire consists 10 items which are related to optimistic Self-beliefs in coping with stressful situations. Reliability of questionnaire according to Cronbach alpha is between .76 and .90 according to several studies (Cable & Judge, 1994; Earley & Lituchy, 1991; Gardner & Pierce, 1998; Riggs & Knight, 1994; Schaubroeck & Merritt, 1997; Smith & Foti, 1998) (Chen, 2001).

A one time study included 10 clubs from Serbia, as follows: *RK „Jugovi“ Ka , Rk Žabalj, Rk Jabuka, Žrk „Dinamo“ Pan evo, Žrk „Radni ki“ Obrenovac, Rk „Radni ki“ Obrenovac, Žrk „Radni ki“ Ka arevo, Žrk „Proleter“ Zrenjanin, Rk „Proleter“ Zrenjanin and Rk Voždovac Beograd.*

We used *IBM SPSS statistics* for statistical analysis, which implied *Shapiro-Wilk normality test*, and *Kruskall-Wallis test* and *Mann-Whitney test* to test differences between groups.

Results

Regarding the fact that there are no significant differences related to gender (p=.909), nor between participants of different level of competition (p=.500), the presentation of results is

based on the sample of a homogenous group, so that differences in self-efficacy beliefs were analyzed through competitive experience only.

Table 1. *Test of normality by groups according to competitive experience.*

	up to 5 years	up to 10 years	over 10 years
	N=42	N=58	N=26
	p	p	p
self-efficacy	.012	.028	.006

Legend: Shapiro-Wilk test of normality, statistical significance p 0.05

As we noticed from the results in Table 1. there are significant deviations from normal distribution in all three groups of participants.

Table 2 shows the values of *Kruskall-Wallis test* by groups in coping with stress according to competitive experience. The figures in columns show *Mean Ranks* values for each group.

Table 2. *Kruskall-Wallis test between groups according to competitive experience.*

	up to 5 years	up to 10 years	over 10 years	Kruskal–Wallis
	N=42	N=58	N=26	N=126
	Mean Ranks	Mean Ranks	Mean Ranks	p
self-efficacy	51.50	66.97	75.13	.021

Legend: Kruskal-Wallis test between groups, statistical significance on p 0.05

The results in Table 2 indicate that there are significant differences between groups in stress coping based on their competitive experience.

Table 3 shows median values for each of three groups, based on self-efficacy scores.

Table 3. *Median values in self-efficacy for each group according to competitive experience.*

	up to 5 years	up to 10 years	over 10 years
	Median	Median	Median
self-efficacy	3.20	3.30	3.45

Progressive fall of median values in self-efficacy scores is noticed, starting from the group with the most competitive experience, *over 10 years*, towards the group with the least competitive experience, *up to 5 years*.

The exact differences between groups were analyzed using Mann-Whitney test to analyze differences between two groups. Tables 4 and 5 present values of Mann-Whitney test of differences between groups in stress coping based on their competitive experience.

Table 4. *Mann-Whitney test in self-efficacy between two groups according to competitive experience.*

	up to 5 years	over 10 years	Mann-Whitney
	N=42	N=26	N=68
	Mean Ranks	Mean Ranks	p
self-efficacy	51.50	75.13	.017

Legend: Mann-Whitney test between two groups, statistical significance on p 0.05

Table 5. *Mann-Whitney test in self-efficacy between two groups according to competitive experience.*

	up to 5 years	up to 10 years	Mann-Whitney
	N=42	N=58	N=100
	Mean Ranks	Mean Ranks	p
self-efficacy	42.98	55.95	.027

Legend: Mann-Whitney test between two groups, statistical significance on p 0.05

Tables 4 and 5 show that there are significant differences in stress coping between handball players with competitive experience up to 5 years and up to 10 years, as well as between the ones who compete up to 5 years and over 10 years.

Discussion

Results of this study indicate that there are significant differences between handball players relative to their competitive experience ($p=.021$). In comparison with the previous findings, concerning self-efficacy (Martin, 1991; Fitzsimmons, 1991; Thomas, 1994), it must be noticed that previous studies made their assumption about inexperienced athletes based on the scores showed by experienced athletes. The term competitive experience in the analyzed research by Shelagonski (2014) where groups were compared relative to their competitive experience in terms of hours practicing during and out of training sessions. However, in our study, competitive experience means the competitive experience acquired in competition only.

Studies about the level of competitive state anxiety which found significant differences in levels of competitive state anxiety based on the competitive experience of athletes (Mellalieu, 2004; Neil, 2008; Rokka, 2008; Fernandes, 2015) included differently split of groups by competitive experience, regarding the median position (Mellalieu, 2004; Neil, 2008; Fernandes, 2015), as well as by groups from 1 to 3 years and from 4 to 6 years (Rokka, 2008). However, in our study the total sample is split in three instead of two groups by their competitive experience. Results of previous findings relative to competitive state anxiety and results of our study, showed that there is a clear difference between experienced and inexperienced athletes. Data from Table 5 showed that there are no significant differences between groups with competitive experience up to 10 years and over 10 years, which means that there is a clear limit between the two groups based on their competitive experience, up to 5 years group and over 5 years group. Results which were found in Rokka's study (2008), according to distribution of groups, indicate that after 4 years of competition, a handball player develops efficient ways of stress coping, in terms of the competitive state anxiety. Hence, Gould's (1984) study indicates that no significant differences were shown in the level of competitive state anxiety based on competitive experience of female volleyball players, even though we must notice that Gould defined experience as years of training volleyball.

At the end, 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 in exploring the effect of competitive experience on self-efficacy, which could help explore the differences in stress coping of handball players. However, these results drew attention to the field of research in sport science dealing with psychological aspects of training in competitive sport.

References

- Chen, G., Guly, S., Eden, D. (2001) Validation of New General Self – Efficacy Scale. *Organizational Research Methods*, 4, 62.
- Feltz, D. L. (2007). Efficacy belief in sport: research on athletes, teams, and coaches. *Research Quarterly for Exercise and Sport*, 78, A2–3.
- Fernandes, M.G., Nunes, N. A. S., Vasconcelos-Raposo, J., Fernandes, M. H. (2015) Factors influencing competitive anxiety in Brazilian athletes. *Revista Brasileira de Cineantropometria Desempenho Humano*, 1, 706-714.
- Fitzsimmons, P.A., Landers, M.D., Thomas, R.J. & Van der Mars H. (1991) Does Self-Efficacy Predict Performance in Experienced Weightlifters? *Research Quarterly for Exercise and Sport*, 62, 424-431.
- Gould, D., Petlichkoff, L., Weinberg, R. (1984) Antecedents Of, Temporal Changes In, And Relationships Between CSAI-2 Subcomponents. *Journal of Sport Psychology*, 6, 289-304.

- 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.
- Martin, J.J., Gill, L.D. (1991) The Relationships Among Competitive Orientation, Sport-Confidence, Self-Efficacy, Anxiety, and Performance. *Journal of Sport & Exercise Psychology, 13*, 149-159.
- Hanton, S., Neil, R., Mellalieu, S., Fletcher, D. (2008) Competitive experience and performance status: An investigation into multidimensional anxiety and coping. *European Journal of Sport Science, 8(3)*, 143-152.
- Rokka, S., Mavridis, E., Bebestos, K., Mavridis, K (2008) Competitive State Anxiety among Junior Handball Players. *Scandinavian Journal of Medicine and Science in Sport, 42*, 148-153.
- Shelangoski, B.L. (2014) Self-Efficacy in intercollegiate athletics, *Journal of Issues in Intercollegiate Athletics, 7*, 17-42.
- Thomas, G. R. (1994) Self-Confidence and Baseball Performance: A Casual Examination of Self-Efficacy Theory. *Journal of Sport and Exercise Psychology, 1994*, 16,381-399.
- 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.
- Weinman, J., Wright, S., & Johnston, M. (1995) *Measures in health psychology: A user's portfolio. Causal and control beliefs*. Windsor, UK: NFER-NELSON.