VALIDATION STUDY OF THE TACTICAL-TECHNICAL AND SOCIAL COMPETENCIES OF FOOTBALL PLAYERS SCALE

Remzija Šetić, Jadranka Kolenović – Đapo, Munir Talović

Abstract

The aim of this paper is to assess the validity and reliability of the Tactical-Technical and Social Competencies of Football Players Scale (TTSCS). Overall 166 football players (N=81 seniors and 85 juniors) from several BiH Premier League clubs took part in the study. The average age of participants was M=21.14 (SD=4.91); the average age for junior players was M=17.23 (SD=0.49), while for seniors it was M=25.15 (SD=4.21). Principal component analysis revealed four factors which explain 78.78% of variance of specific competencies of football players. In accordance with item grouping, the first factor was labeled attacking tactical-technical competencies (ATTC); the second was labeled defensive-tactical competencies (DTC); third was labeled technical competencies (TC), while the fourth factor was labeled social competencies (SC). Instrument reliability was assessed on the basis of the internal reliability coefficient. Alpha coefficient values for the entire scale and for individual subscales are very high. Criterion validity of the TTSCS was assessed on the basis of its correlation with a measure of football players' self-efficacy. Correlations between self-efficacy and three competency measures range from moderate to low. In other words, there was no correlation only between self-efficacy and technical competencies scale. Results indicate that the TTSCS possesses adequate metric characteristics and can be used as a measure of specific player competencies.

Keywords: competencies, self-efficacy, metric characteristics, football players

INTRODUCTION

From a structural point of view, football belongs to the category of complex sport activities in the sports classification, as it includes adopting and developing a large number of various technical elements within the given tactical plans, as well as the ability for mutual cooperation of team members. This implies that success in football involves the interaction of several factors. As noted by Petric (1981), Jerkovic and Barisic (1993), these factors are constituted by the wide domain of knowledge and abilities: technical-tactical knowledge during the competition (competition efficiency), specific abilities, basic motoric abilities, functional abilities, morphological structure and cognitive-conative ability. Therefore, football dynamics corresponds to such a complex structural game and exposes players to the unexpected and complex situations (Samija and Bosnar, 2010). However, football players' efficiency does not only depend on their technical-tactical abilities, but also on some psychological factors (motivation, attention, attributions, self-esteem, self-efficiency, team social climate), as well as on numerous unpredictable situational factors.

Economists of sport report about the interesting findings regarding factors which yield to the sports performance. According to González-Gómez and Picazo-Tadeo (2010), studies of athletes' efficiency valuations (mostly football players) have been done in various approaches so far. Some authors analyzed specific players' efficiency (Mazur, 1994, Torgler and Schmidt, 2007), while others measured coaches' efficiency with respect to the team characteristics (Hofler and Payne, 1997; Hadley, Poitras, Ruggiero and Knowles, 2000). More specific, they measured football players' efficiency by analyzing offensive versus defensive play style.

From the 1970's to nowadays, scientists in the field of sports psychology mostly build their theories on the cognitive models of self-confidence (e.g. Albert Bandura's socio-cognitive model, Harter's theory of competence motivation, Nicholson's theory of the perceived abilities, Vealey's model of sports self-confidence). This paradigm is today present in the Self-determination Theory. All these theories are based on the similar self-confidence model (Cox, 2005), which has been proven as a good predictor of the athletes' success (Arkes and Garskeu, 1982). Among all self-confidence concepts, the most explored in the sports studies is the concept of self-efficiency (Feltz, 1988). Feltz (1988) notes that Bandura's micro analytical approach includes several different aspects of cognitive assessment of self-efficiency: self-assessment of the abilities in specific domain of activity, under different levels of task demands in that domain and in different situational circumstances within it. Despite this broad approach, the measure of the general self-efficiency has not been proven as a good predictor of sport efficiency, since studies on it show different inconsistencies in results. For example, Martin and Gill (1991) affirmed a high correlation between self-efficiency and sports performance (r=0.79). In some other studies this correlation was extremely low (r=0.1) and in the third group of studies (McAuley, 1985, McCullagh, 1987), it was not found at all (as cited in Moritz, Feltz, Fahrbach and Mack, 2000). Meta-analysis done by Moritz et al. (2000), which included 45 correlation studies, showed a moderate correlation between self-efficiency and sport performance (r=0.38). In another meta-analysis, done

by Feltz and Lirgga (2001), this correlation was low (r=0.26), while the correlation between sports performance and specific measures of self-efficiency was average (r=0.43).

All presented data indicate that self-confidence in its broader sense, which refers to self-efficiency and competencies as its base, is very important variable that explains the athletes' efficiency. Competencies relate to a set of knowledge, skills, abilities and attitudes that affect the estimation on self-value, which consequently affects on the success in any field of life. As noted by Helson and Stewart (1994, as cited in Larsen and Buss, 2007), competencies include a set of characteristics such as following: goal orientation, organization, efficiency, convenience, clear thinking, realism, precision, maturity and self-performance. In the model of competence motivation, Harter (1978) states that all human beings are motivated to be competent in all spheres of their lives. This disposition is not per se; it requests of the individual to invest an additional efforts in order to achieve specific skill. In this way one develops the sense of self-efficiency (an individual's assessment of his/her own ability to organize and execute certain actions needed to achieve the desired outcomes, Bandura, 1986) and the experience of personal competence. The foundation of the Harter's model points to the justification of competency testing (whereby accurate assessment of personal skills is very important), in order to develop the perceived skill to an advanced level through the adequate training.

There is a big number of instruments developed to measure self-confidence in sports. Vealey (1986) developed three instruments: (1) Scale to assess general sports self-confidence; (2) Scale to assess a state of sports self-confidence; (3) Questionnaire to assess competitive orientation. In our speaking area Samija and Bosnar (2011) created Scale for measuring self-efficiency in football players. Modeled on this scale, Samija, Sporis and Samija (2016) developed Scale for measuring self-efficiency in swimmers. Ponezic, Ivanov, Prorokovic and Cubela (1999) conducted a survey in order to check the structure of the scale created to assess self-efficiency for regular physical exercise and a scale that assesses self-efficacy for maintaining a healthy diet in the student population. However, considering the demands of modern sport, it is necessary to replicate the existing instruments and to develop new measures that will exclusively be in the function of developing and improving the existing athletes' skills and knowledge.

Since football is a specific sport and its game system is very flexible, today researchers focus on a certain conception which gives sense to the game and to the joint playing of the team, instead on focusing on the game with a strict players' disposition and roles. Disposition and roles mainly depend on the position of the ball and its moving during the attack and defence. Tempo of the game is also faster, which can be seen in the quick switches between the phases of attack and defence. These are the reasons the top football nowadays needs players who are able to play in every position other than goalkeepers'. No matter if we speak of the phases of the attack or defence, all players of one team participate in each part of the game (Makek, 2016). A football game contains four game phases and the belonging sub phases (Basic, Barisic, Jozak and Dizdar, 2015): attack phase, defence phase, phase of transition from defence to attack (transition on the winning ball) and phase of transition from attack to defence (transition on the lost ball). The idea of constructing the scale to assess tactical-technical and social competencies is based on the football principle of notational analysis, which corresponds to the earlier noted phases. The elements of each phase of the football game are defined according to the principles of the notational analysis and with a assistance of the coaches of the clubs that play in Bosnia and Herzegovina Premier League.

The aim of this article is to assess the validity and reliability of the Tactical-technical and Social Competencies of Football Players Scale. In general, in the study is examined if this scale measures expected main phases of the football game and in which degree the scale of competence skills correlates with the estimated self-efficiency.

METHOD

Participants

Overall 166 football players from six Bosnia and Herzegovina Premier League teams participated in the study. Players included in the study compete in either BH Premier League or BH Junior Premier League. From the whole example, 81 players compete in BH Premier League in four clubs: *FC Zeljeznicar* from Sarajevo, *FC Radnik* from Bijeljina, *FC Mladost* from Doboj Kakanj and *FC Krupa* from Krupa on Vrbas. The number of Junior Premier League players in the study was 85 and they play for the following four clubs: *FC Zeljeznicar* form Sarajevo, *FC Sarajevo* from Sarajevo, *FC Mladost* from Kakanj and *FC Sloboda* from Tuzla. The study involved football players of all positions in the team, other than goalkeepers. The average age of the participants is M=21.14 years (SD=4.91). The average age of the seniors is M=25.15 (SD=4.21) and juniors is M=17.23 (SD=0.49).

Measuring instruments

General Information Questionnaire

General Information Questionnaire was designed for this study. It included questions referring to the players' age, selection (juniors/seniors), club they play for, length of playing in the current club, playing position and the length of training football (the length of overall football experience).

Tactical-technical and Social Competencies of Football Players Scale (TTSCS)

Tactical-technical and Social Competencies of Football Players Scale (Setic, Kolenovic-Djapo and Talovic, 2016) was also developed for this study. It contains 42 items characteristic for four phases of a football game: attack, transition on the lost ball, transition on the winning ball and defense. Participants were asked to mark the level of their success on each of these items on the scale from 1 to 7 (1-bad performance, 7-excellent performance). The result is calculated as a linear combination of answers given on each item. Speaking of the subscales, it is notable that none of them has the same number of items. Subscale that refers to the elements of game in the phase of attack has 17 items, one that refers to the transition on the lost ball has 6 items, one that refers to the winning ball has 5 items and the subscale of the defense phase has 14 items. The cause of this uneven number of items is in the core structure of the football game, where the phases of attack and defense are more demanding and last longer compared to the other two phases. The transition phases last two or three seconds and therefore require fewer elements of the football game. The items typical for the subscale "attack phase" are: *"I am successful in double passes*" and *"I receive and carry the ball under the pressure of the opponent players".* An example of an item in the subscale "transition on the winning ball" is "*I carry the ball until the attack condition is secured".* In the subscale "defense", some of the items are: "*I cover the opponent players"; "I recognize the moment of seizing the ball and react properly*"; *"I make an immediate pressure* to the opponent player close to a ball". The last subscale, "transition on the lost ball" includes, among the others, the following item: *"I come in time and set up a basic defense formation".* An item that appears in all the subscales is *"I timely communicate with my team players during the game (I am good at verbal and nonverbal communication)".*

Internal reliability coefficient for the whole instrument is high (α =0.986). Calculated reliability coefficients for the TTSCS subscales are also high as follows: subscale "attack phase": α=0.962; "transition on the winning ball": α=0.925; "transition on the lost ball": α=0.966; "defense phase": α=0.943.

Self-efficiency in Football Players Assessment Scale

Self-efficiency in Football Players Assessment Scale (Samija and Bosnar, 2010) includes 21 items pertaining to the assessment of the performance of certain actions during football games evaluated by the participants on the five-tier scale of the Likert type, where a higher result indicates a higher self-efficiency level. In spite of the satisfying metric characteristics, the scale does not differentiate players with lower perceived self-efficiency well enough. Authors Samija and Bosnar (2010) explain this phenomenon through the partly homogenous sample they used fr the validation (which mostly included juniors and cadets). An exapmple of an item in this scale is: "*I do not give up on dribling either when I'm nervous and badly moody".* Authors report about a high internal reliability coefficient of the scale (α=0.841). This coefficient is also high in our study (α=0.894).

Procedure

The survey was conducted individually. The participants were given general and specific instructions about the way of answering questions given in the scales. Each participant coded his questionnaires and filled them in after the instruments were introduced. The questionnaires were completed in a paper-pencil method and the filling time was not limited. It lasted 15 minutes in average.

RESULTS

Construct validity of the instrument for the assessment of the tactical-technical and social competencies in football players is verified by factor analysis. In order to check the suitability of the correlation matrix for carrying out the factor analysis, the Kaiser-Meyer-Olkin test and the Bartlett spherical test were conducted. The value of the Kaiser-Meyer-Olkin test of the sample adequacy is 0.964, which indicates our data were suitable for the factor analysis conduction. The Bartlett's spherically test, determined by calculating an approximate hi-square, is 8799.273 and it is statistically significant at 99.9%, which indicates that data are suitable to factorization, and rejects the assumption about the equality of correlation matrices and identity matrices.

An explanatory factor analysis was performed using the method of the principal components. On the set of manifest variables using the Kaiser-Gutmann criterion, four components with characteristic roots greater than 1 have been determined. Factor structure with Varimax rotation explains 78.78% of the total variance. Table 1 shows the factors' saturation, the distribution of individual subscales by the components obtained, the values of the characteristic roots, and the percentages of the explanation of the variance of each component after applying the Varimax rotation. The resulting factor structure is interpretable and consistent with the expected.

The first factor includes items from the attack domain and the transition on the winning ball. It is therefore called *attacking tactical-technical competence (ATTC*). It encompasses skills and abilities needed in the attack phase, which includes skills such as playing long passes, achieving goals, ability to carry the ball until the "space" for the attack is opened. This factor explains 26% of the variance.

The second factor explains 21% of the variance and includes items from the domain of defense and the transition on the lost ball, and is called *defensive*

tactical competence (DTC). This factor includes abilities such as: strictly covering an opponent's player, reducing the opponent's space for action, maintaining a defensive pressure (making pressure on an opponent's ball carrier or player near the ball).
The third factor includes items from the defense domain and one item from the domain of the attack. Due to the content of the particles that describe the situation of direct contact with the opponent in the defense phase, it is named *technical competence in the duel (TCD*). This factor explains 19% of the total variance and includes items related to success in an aerial duel, blocking the opponents'' shots, breaking the ball in the duel.
The fourth factor includes items that relate to communication in all phases of the football game, as well as items that describe co-operation with matchmakers. Therefore, this factor is called *social competence (SC)* and it explains 12% of the variance.
When it comes to factors loading of the items, the following results were obtained: 16 items have the primary factor saturation by the first factor, 13 items have the primary factor saturation by the second factor, eight items have the primary saturation with the third factor, and five particles are primarily saturated with the fourth factor (Table 1). Loadings for the first factor range from 0.56 to 0.82, for the second factor from 0.52 to 0.70, for the third factor from 0.64 to 0.81 and for the last one from 0.65 to 0.74.
Some particles are also saturated by other factors, especially those related to defensive tactical competences (for example, the item *"I play quick pass to use badly organized opponent's defense*". In fact, the claims of the second and third factors relate mostly to the defense phase and the transition phase on the lost ball.
Criterion validity of the scale for measuring the competence skills is verified on the basis of an external criterion which refers to the assessment of the self-efficiency specific to football. The correlation between these two variables was calculated by Pearson's correlation coefficient. The moderate correlation between the measure of the self-efficiency and the subscale attacking tactical-technical competency ($r=0.249$, $p>0.01$) was determined. A low but statistically significant correlation ($r=0.198$, $p>0.05$) was obtained between self-efficacy and social competences. Between the self-efficacy and technical competence correlation was not found.

DISCUSSION AND CONCLUSIONS

The aim of this paper was an assessment of the validity and reliability of the Tactical-Technical and Social Competencies of Football Players Scale (TTSCS). In order to assess factor structure of the scale, factor analysis was conducted on the items of the scale. It was done by the principal components analysis on the overall sample junior and senior football players. Obtained data indicate an existence of four factors, which explain 78.78% variance of the competence skills of the football players. Since the items grouped in four interpretable factors, they were named as follows: *attacking tactical-technical competencies (ATTC); defensive-tactical competencies (DTC); technical competencies (TC), social competencies (SC).* As presented in Table 1, the greatest percentage of the overall variance is explained by the ATTC and DTC, which is in accordance with two main styles of the football game: attacking and defensive game style. The third factor is called technical competencies (TC) and it refers to the universal skills and abilities for the main phases of the game, attack and defense. This is due to the modern football characteristics, since it became a flexible game where every player, other than goalkeeper, can and should switch positions depending on the set tactics (which can also be changed during the game, depending of the result). This means every player, despite of the primarily defined position, has to have abilities and have technical knowledge which are needed in all ninety minutes of a game. Fourth factor, social competencies (SC) explains less percentage of the variance (Table 1); yet it is significant, which is reasonable since football belongs to the group of team sports.
Reliability of the instrument is assessed by the calculating the internal reliability coefficient, which was high ($\alpha=0.986$). Its subscales have reliability as follows: attacking technical-tactical competencies: $\alpha=0.970$; defensive tactical competencies: $\alpha=0.982$; tactical competencies in duel: $\alpha=0.943$; social competencies: $\alpha=0.970$.
The results of the correlational analysis indicate that the greatest correlation is between the subscale ATTC and the measure of self-efficiency. This suggests that players who are more efficient in the game perceive their selves more efficient. Also, the higher an assessment of the defensive competencies is, the higher is a result on the self-efficiency scale. Having in mind the limitations of the correlation studies, these results can be also interpreted vice versa. Here is important to stress that the self-assessment scales in football players include their attitudes both towards their success in defense and in attack. Future research should question the multidimensionality of this self-efficiency scale, which is indicated by the content of its items.
In the end, as suggested by Harter (1978), competencies in the first place need to be examined because of their motivational strength, which influences development of the self-efficiency or self-confidence, in the broader sense. In the case of our study, it is about the sports self-confidence, which Vealey (1986, p.222) defined as „an individual's belief in his or her capabilities to be successful in sports". Very important role in the develop-

ment of self-confidence (which we proved is saturated by competencies and self-efficiency) is played by the coaches. This leads to the conclusion that the realistic players' self-assessment of their competencies can be a useful information to the coaches, in the way of giving them an insight in the value of the adequate approach and connection between „good technical-tactical-physical preparation and self-confidence" (Balent, Sasek and Kobilsek, 2017, p.79).

In spite of the satisfactory psychometric characteristics of the scale for assessing competencies among football players, future researches should involve a greater number of social-competence-related items, since football is a team sport which depends a lot on the intergroup interaction. It is also necessary to include particles related to cognitive factors: perception and attention. Though the subscale defensive-tactical competencies contains some items which include perception (for example, „I come in time and set up a basic defense formation“).

In order to have a more objective picture of the knowledge, skills and abilities of football players, it is important for coaches to evaluate competencies of the players and to check the degree of agreement between self-assessment and real assessment. Just like any other scale of self-efficiency, the scale for competitive skills assess should be adjusted for other sports (and include tactical-technical elements specific for them).

Considering the satisfactory metric characteristics of the Tactical-technical and Social Competencies in Football Players Scale, it can and should be used in future studies. However, these future studies need to replicate the presented one, to modify the scale with the above-mentioned recommendations and to expand the obtained findings on other samples.

Although we observe the football game globally, it is difficult to make the final conclusions without taking into account the situational factors (which is sometimes impossible with regard to the dynamics of football games). In fact, according to Birman (2011, p.240), soccer is a complex sport, and "seizure of the ball may be the result of a bad position in the game, but it can also be a feature of a fantastic defensive defeat."

Table 1: Factor structure of the Tactical-technical and Social Competencies of Football Players Scale's items after Varimax rotation

Items	Components			
	attacking tactical-technical competences	defensive tactical competences	technical competences in the duel	social competences
I play back pass (I assist in scoring).	.826			
I am good at dribbling.	.809			
I score.	.801			
I receive and carry the ball under the pressure of the opponent players.	.759			
When it comes to shooting, I can evaluate the situation well enough.	.758			
Leading the ball	.746			
I play without hesitation.	.699			
I play quick pass to use badly organized opponent's defense	.683	.405		
I carry the ball until the attack condition is secured.	.667			
I shoot center shots and long passes.	.666			
I make long passes.	.662		.423	
I am efficient in fainting.	.662	.433		
I play on time (I quickly circulate the ball).	.622			.411
I make long passes.	.619			
I show to the carriers.	.587	.586		
I create a space for showing myself and the other players.	.562	.522		.416
I make pressure to the opponent players near the ball.		.707	.464	
I can reduce opponents' attack space.		.702	.423	
I make pressure to the opponent carriers.		.671	.494	
I move towards the ball when it is in the opponents' possession.	.418	.662	.431	

I come in time and set up a basic defense formation.		.661		
I recognize the moment of seizing the ball and react properly.		.657	.403	
I recognize and play the ball pressing.	.400	.653	.415	
I make an immediate pressure to the player with a ball.	.416	.652	.426	
I make an immediate pressure to the opponent player close to a ball.	.471	.651		
I cover the opponent players.		.618	.482	
I come behind the ball in time.		.604		.448
I show in front of the ball.		.593	.433	
I cover my team's pitch.	.473	.522		
I am successful at the aerial duel.			.813	
I save balls with sliding tackle.			.761	
I win balls in duels.			.735	
I am successful in flick header.			.735	
I take away balls with sliding tackle.			.733	.408
I obstruct the opponents' shooting.			.703	
I win ball in duels.		.426	.695	
I am successful at man-to-man duel.		.481	.647	
I timely communicate with my team players during the game (I am good at verbal and non-verbal communication).				.740
I timely communicate with my team players during the game (I am good at verbal and non-verbal communication).				.697
I timely communicate with my team players during the game (I am good at verbal and non-verbal communication).		.409		.695
I timely communicate with my team players during the game (I am good at verbal and non-verbal communication).	.401			.686
I cooperate with my team mates from other positions.	.498	.436		.569
Eigen value	10.884	8.861	8.032	5.312
% of the explained variance	25.914	21.097	19.123	12.649

REFERENCES

1. Arkes, H.R., Garaske, J.P. (1982). *Psychological theories of motivation* (2nd ed.). Monterey, CA: Brooks/Cole Publishing Company.
2. Balent, B. Sasek, H., Kobilsek, A. (2017). *Psihološka znanja i alati u sportskoj praksi PRIRUČNIK ZA TRENERE* (in press).
3. Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ:Prentice Hill.
4. Basic, D., Barisic, V., Jozak, R. and Dizdar, D. (2015). *Notacijska analiza nogometnih utakmica*. Zagreb: Leonardo media.
5. Bierman, C. (2011). *Fudbalska matrica*. *Beograd*: Laguna.
6. Cox, R.H. (2005). *Psihologija sporta: koncepti i primjena*. Jastrebarsko: Naklada Slap.
7. González-Gómez, F., Picazo-Tadeo, A.J. (2010). Can we be satisfied with our football team? Evidence from Spanish professional football. *Journal of Sports Economics, 11*, 418-442.
8. Hadley, L.; M. Poitras; J. Ruggiero and S. Knowles (2000) "Performance evaluation of National Football League teams", *Managerial and Decision Economics, 21*, 63-70.
9. Harter, S. (1978). Effectance motivation reconsidered: Towards a developmental model. *Human Development, 21*, 34-64.
10. Hofler, R.A. and J.E. Payne (1997) .Measuring efficiency in the National Basketball Association. *Economic Letters, 55*, 293-299.

11. Feltz, D.(1988) Self-confidence and sports performance. *Exercise and Sport Sciences Reviews*, 1988; 16, 423-457.
12. Jerkovic, S., Barisic, V. (1993). Kanonička povezanost nekih situacijsko motoričkih varijabli i uspjeha u nogometnoj igri. *Kineziologija*, *25*., 1 – 2, 63 – 69.
13. Larsen, R., Buss, D.M. (2007). *Psihologija ličnosti: područja znanja o ljudskoj prirodi*. Jastrebarsko: Naklada Slap.
14. Makek, I. (2016). Razvoj funkcionalnih sposobnosti prema senzitivnim obilježjima mladih nogometaša. *Neobjavljeni diplomski rad*. Kineziološki fakultet Sveučilište u Zagrebu.
15. Martin, J.J., Gill, D.L. (1991). The relationship among competive orienatation, sport-confidence, self-efficacy, anxiety, and performance. *Journal of Sport and Exercise Psychology*, 13, 149-159.
16. Mazur, M.J. (1994). Evaluating the relative efficiency of baseball players, in Data Envelopment Analysis: theory, methodology and application, (Eds.) A. Charnes, W.W. 24 Cooper, A.Y. Lewin and L.M. Seiford, Boston. Kluwer Academic Publishers, 369- 391.
17. Moritz, S. E., Feltz, D. L., Fahrbach, K. R., Mack, D. E. (2000). The relation of self-efficacy measures to sport performance: A meta-analytic review. *Research Quarterly for Exercise and Sport*, *71,* 280-294.
18. Penezic, Z., Ivanov, L., Prorokovic, A. Cubela, V. (1999) Različiti aspekti samoefikasnosti: Provjera skala i relacije s nekim sociodemografskim značajkama. *XIV. dani Ramira Bujasa : sažeci priopćenja* / Buško, Vesna ; Ivanec, Dragutin (ur.). - Zagreb : Filozofski fakultet, Odsjek za psihologiju ; Hrvatsko psihološko društvo, 39.
19. Torgler, B., Schmidt, S.L. (2007) "What shapes player performance in soccer? Empirical findings from a panel analysis", *Applied Economics, 39*, 2355-2369.
20. Samija, K., Bosnar, K. (2011). Konstrukcija skale za procjenu samoefikasnosti nogometaša. U V. Findak (ur.), *Zbornik radova 20. ljetne škole kineziologa Republike Hrvatske* «Dijagnostika u područjima edukacije, sporta, sportske rekreacije i kineziterapije», Poreč, 21.-25. lipnja, 2011. (str. 258-262). Zagreb: Hrvatski kineziološki savez.
21. Samija ,I, Sporis, G, Samija, K. (2016). Self-efficacy scale construction and validation in swimming. *Acta Kinesiologica, 10* , 1: 33-37.
22. Vealey, R .(1986). Conceptualization of sport-confidence and competitive orientation. Preliminary investigation and instrumental development. *Journal of Sport Psychology*, *8*, 221-246.

AUTHORS INFORMATION

Remzija Šetić
JU Dom zdravlja Kantona Sarajevo, Centar za mentalno zdravlje Stari Grad
+387(0)61 357 333
e-mail: rsetic@yahoo.com

Jadranka Kolenović-Đapo
Filozofski fakultet u Sarajevu
+387(0)61 031 549
e-mail: jadranka.kolenovic-djapo@ff.unsa.ba

Munir Talović
Fakultet sporta i tjelesnog odgoja u Sarajevu
+387(0)62 888 028
e-mail: mtalovic@hotmail.com