
PSYCHOLOGICAL CHARACTERISTICS OF YOUNG TENNIS PLAYERS; CORRELATION WITH FEEDBACK AND COACHING LEADERSHIP STYLE

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Abstract

Success in sports is defined not only by motor skills and level of training practice, but also by a large number of mental characteristics. The purpose of this paper is to determine the level of psychological skills of young tennis players and their relations with coaching feedback and leaders' behaviour. The research included 36 participants (16 sportsmen and 20 sportswomen). Measuring instruments used in the research were: The Psychological Skills Inventory for Sports, Coaching Feedback Questionnaire and Leadership Scale for Sport. There were significant differences in psychological characteristics of athletes depending on their age, gender and town where they practice. Furthermore, there was a significant correlation between certain psychological characteristics of athletes and the feedback by coaches and coaching leadership style.

1. Introduction

At top-level sport during competitive performance athletes, especially top-level athletes, are constantly facing performance under high pressure, therefore it is not surprising that particularly their psychological characteristics are often decisive factors which in such circumstances contribute to victory or defeat. Respectively these are the characteristics by which more successful athletes differ from their less successful teammates, or opponents (Mooris, 2000). Numerous studies that have researched the psychological characteristics of athletes at all levels, from recreational level to top-level sport, found significant differences in the studied characteristics between top-level and amateur athletes (Bois et al., 2009; Mondrono & Guillen, 2011; Faubert & Sidebottom, 2012; Gevorki et al., 2013). According to the results of research conducted by Mahoney, Gabriel & Perkins (1987), top-level athletes showed greater motivation for success in sports which they are engaged in,

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had higher self-esteem, while lower levels of anxiety than athletes who are not competing at the top-level. Also, differences in psychological characteristics between athletes who engage in individual and athletes involved in team sports have been determined.

Research in the field of sport psychology that studies the role of coaches is based on the assumption that behaviour, or in other words the coaching leadership, directly affects the performance and behaviour of athletes as well as their psychological and emotional wellbeing (Mann, 2009). Barrow (1977), according to Mann, (2009) defines leadership as a behavioural process of impact of an individual and group oriented toward pre-established goals. Therefore coach's behaviour, leadership style and training techniques need to improve the athlete's performance in the best possible way, but at the same time they must have a positive impact on his/her psychosocial status.

This theory is confirmed also by the results of some studies carried out so far in the field of sport, which examined the behaviour of trainers as a factor affecting the motivation of athletes. For example, Vallerand and Pelletier (1985), and Pelletier and Vallerand (1985) conducted research on adolescent swimmers to determine the relationship between the behaviour of coaches (establishing control or creating independence) and the perceived competence of athletes and their intrinsic motivation. The results of these studies showed that athletes, whose coaches focus more on creating independence with athletes, achieved better results on a scale of perceived competence and intrinsic motivation than athletes, who were trained by coaches who are more focused on making control over athletes.

Black & Weiss (1992) also explored the relationship between the behaviour of coaches and perceived competence and intrinsic motivation in young athletes (10-18 years). The results showed that specific feedback which a coach indicates to athletes during training or competition has a significant impact on their perception of competence and intrinsic motivation. Although some significant differences by gender and age groups of respondents have been identified, general conclusion was that the athletes whose coaches provided positive feedback, encouraged them and provided information on how the performance should look like, achieved higher scores on scales of perceived competence, perceived success and intrinsic motivation than the athletes whose coaches provided fewer of these positive feedbacks (Amorose & Horne, 2000).

The aim of this study was to determine the psychological characteristics of young tennis players and their connection with the coaches' feedback and coaching leadership style.

2. Material and methods

The sample of respondents consisted of 36 young athletes aged 10 to 17 years, of which 16 boys and 20 girls (18 tennis players from clubs in the city of Mostar area and 18 from the Medugorje tennis club). Subsamples of examined athletes were formed by gender, age and city where they train to study the differences between the specified groups. By gender groups of boys (N=16) and

girls (N=20) were formed, by age groups of athletes younger than 12 years (N=17) and older than 12 years (N=19) and by the city of training group of athletes from Mostar (N=18) and group of athletes from Međugorje (N=18).

The study used three measuring instruments:

- Croatian Youth Version of the Psychological Skills Inventory for Sports is based upon the Dutch version of the Psychological Skills Inventory for Sports (PSIS–Youth) and contains 44 5-point Likert type items, distributed over the same 6 scales: Motivation (8 items), Confidence (8 items), Anxiety Control (8 items), Mental Preparation (6 items), Team Emphasis (7 items) and Concentration (7 items). It is important to note that psychological dimension "concentration" is scaled inversely, and therefore lower numerical value denotes better achievement. (Elferink-Gemser, Visscher and Lemmink, 2002).

- Coaching Feedback Questionnaire - CFQ contains sixteen items, representing different feedback patterns all of which are measured twice. Following desired behaviours the three response patterns are a) praise/reinforcement, b) non-reinforcement, c) reinforcement plus technical instruction which is a category not present in the CBAS. The five response patterns following unsuccessful outcomes/behaviours are d) mistake-contingent encouragement, e) ignoring mistakes, f) corrective instruction, g) punishment and h) corrective instruction plus punishment.

- The Leadership Scale for Sports (LSS) is a questionnaire made up of 40 items that are divided into 5 subscales. 13 items relate to Training and Instruction, 9 items relate to Democratic Behaviour, 5 items relate to Autocratic Behaviour, 8 items relate to Social Support, and 5 items relate to Positive Feedback.

The obtained data were processed using software STATISTICA (data analysis software system) version 7, StatSoft, Inc. (2004). We calculated descriptive statistical parameters of psychological characteristics of athletes, coaches' feedback and coaching leadership style. To determine the relation between psychological characteristics of athletes and coaches' feedback and coaching leadership style, Pearson's correlation coefficient was calculated, and for determining differences in psychological characteristics of athletes the T-test for independent samples was used. The differences and correlations were considered significant if p value was less than 0.05.

3. Results and Discussions

It was assumed that psychological characteristics of players are significantly associated with coaches' feedback and coaching leadership style and that the tested tennis players differ significantly in psychological characteristics by gender, age and city of training.

Table 1 shows the results of all athletes in tested psychological characteristics.

Table 1 Descriptive statistics of psychological characteristics of respondents

Variable	N	MEAN	MIN	MAX	SD
Motivation	36	3.89	2.00	5.00	0.78
Self-confidence	36	3.74	2.62	4.87	0.59
Anxiety	36	2.96	1.12	4.750	0.89
Psychological preparation	36	2.90	1.00	4.67	1.03
Concentration	36	3.25	1.29	5.00	0.78

From Table 1 it is evident that the most prominent characteristics of young tennis players are motivation and self-confidence, while psychological preparation and anxiety are on the lowest level.

Table 2 shows the results of coaches' feedback that is the answers which respondents recorded according to the frequency of responses from their coaches that suggested good or bad performance.

Table 2 Descriptive statistics of coaches' feedback

Variable	N	MEAN	MIN	MAX	SD
Supporting good execution	36	4.54	3.00	5.00	0.60
Ignoring good execution	36	1.47	1.00	3.00	0.75
Compliment for good execution accompanied with a technical advice	36	4.24	1.50	5.00	0.87
Encouragement for committed errors	36	2.15	1.00	3.50	0.66
Ignoring errors	36	1.81	1.00	5.00	1.11
Instructions for error correction	36	1.47	1.00	3.00	0.60
Shouting because of an error	36	3.83	2.00	5.00	1.08
Shouting accompanied with instructions for error correction	36	2.74	1.00	5.00	1.20

From Table 2 it is evident that high scores were recorded in positive coaches' feedback and in complimenting good execution accompanied with additional technical advice for further use, while in ignoring good execution variable much lower average results were recorded. The most common feedback that coaches indicate to athletes for poor performance is shouting because of a committed error and shouting accompanied with technical instructions for error correction in the next execution, while the rarest feedback that coaches indicate to athletes for poor performance are instructions for error correction and ignoring errors, where the lowest results were recorded.

Table 3 shows the results of coaching leadership style in sports.

Table 3 Descriptive statistics of coaching leadership style

Variable	N	MEAN	MIN	MAX	SD
Training and instruction	36	4.07	3.23	5.00	0.43
Democratic behaviour	36	3.63	2.67	5.00	0.51
Social support	36	3.45	2.00	4.25	0.52
Positive feedback	36	4.35	3.40	5.00	0.48
Autocratic behaviour	36	2.78	1.25	3.75	0.54

The displayed table shows that coaches in the process of leadership are mostly focused on training and providing instruction and positive feedback, while autocratic leadership style is used and implemented the least.

Pearson's correlation coefficients were calculated to determine the relation between psychological characteristics of athletes and coaches' feedback and coaching leadership styles. It was found that none of the psychological characteristics of athletes has significant correlation with feedback that coaches indicate to athletes to perform well ($p > 0.05$). Between feedback where coach gives instructions to correct the error and psychological characteristics of anxiety ($r = -0.38$) and concentration ($r = -0.48$) there was a significant negative correlation detected, while a significant positive correlation was determined between the feedback „shouting because of an error“ and the characteristic „psychological preparation“ ($r = 0.35$). With the analysis of correlation of psychological characteristics of athletes with coaching leadership style several significant correlation coefficients were determined. Thus, the coaching leadership style which is aimed at training and giving instructions is positively related to psychological characteristics of anxiety ($r = 0.40$) and psychological preparation ($r = 0.40$); democratic leadership style is significantly positively correlated with anxiety ($r = 0.49$), psychological preparation ($r = 0.40$) and concentration of athletes ($r = 0.49$). Giving positive feedback is significantly related with anxiety of athletes ($r = 0.37$), while autocratic leadership style is significantly correlated with self-confidence ($r = 0.39$) and concentration of athletes ($r = 0.36$).

Table 4 Differences in psychological characteristics by gender, city of training and age

	Differences in psychological characteristics by gender				Differences in psychological characteristics by city of training				Differences in psychological characteristics by age			
	AS M	AS F	t	p	AS MO	AS ME	t	p	AS <12	AS >12	t	p
Motivation	4.30	3.56	3.21	0.00*	4.32	3.47	3.92	0.00*	4.29	3.54	3.26	0.00*
Self-confidence	3.74	3.74	-0.01	0.99	3.69	3.79	-0.49	0.63	3.86	3.64	1.13	0.27
Anxiety	2.96	2.97	-0.03	0.98	3.14	2.79	1.17	0.25	2.95	2.98	-0.10	0.92
Psychological preparation	3.23	2.64	1.75	0.09	3.33	2.47	2.74	0.01*	3.23	2.61	1.84	0.07
Concentration	3.26	3.24	0.09	0.93	3.40	3.09	1.23	0.23	3.23	3.26	-0.14	0.89

The T test for independent samples was used to determine differences in psychological characteristics between athletes of different ages, gender and cities in which they are training (Table 4), and it was found that under all three criteria subsamples significantly differ in motivation ($p=0.00$), and significantly higher results were achieved by male players compared to female players, athletes who train in Mostar compared to athletes who train in Međugorje and athletes younger than 12 years in comparison to athletes older than 12 years. Regarding the city of training also differences in psychological preparation of athletes were detected, in which athletes who train in Mostar achieved significantly better results ($p=0.01$).

4. Conclusions

The conducted study demonstrates the important role of coaches in the formation of psychological characteristics of athletes, in other words young tennis players are subjected to significant influence by coaches' behaviour, feedback and leadership style that coaches carry out. It was also found that athletes significantly differ by gender and age in only one psychological characteristic, while regarding the city of training differences were determined in two psychological characteristics of athletes. It can therefore be concluded that in the formation of psychological characteristics of athletes situational factors play a bigger role than dispositional factors, thus the environment in which a young tennis player is living it represents a significant impact. This conclusion should serve as a guideline for working with young athletes and consider that a sport is also an educational tool which not only affects the physical abilities of athletes but also the psychological characteristics and overall personality. The emphasis of working with young athletes should in no way be only to improve physical abilities and achieve results, but especially to reach the harmonious development of all athlete's qualities and abilities, both physical and mental, by providing them an environment in which children will want to stay as long as possible and thus continue to play sports. This is only possible in the way of constant motivating and encouraging athletes to stimulate their motives, which will not only assist them in carrying out quality training tasks, but also enable them to highly enjoy sports activities.

References

1. AMOROSE, A.J., HORN, T.S. (2000). *Intrinsic Motivation: Relationship with Collegiate Athletes' Gender, Scholarship Status, and Perceptions of Their Coaches' Behavior*. Journal of Sport & Exercise Psychology, 22(1), 63-84;
2. BLACK, S.J., WEISS, M.R. (1992). *The Relationship Among Perceived Coaching Behaviors, Perceptions of Ability, and Motivation in Competitive Age-group Swimmers*. Journal of Sport & Exercise Psychology, 14, 309-325;
3. BOIS, J.E., SARRAZIN, P.G., SOUTHON, J., and BOICHE, J.S.C. (2009). *Psychological Characteristics and Their Relation to Performance in Professional Golfers*. The Sport Psychologist, 23, 252-270;
4. ELFERINK-GEMSER, M.T., VISSCHER, C., & LEMMINK, K.A.P.M. (2002). *De Psychological Skills Inventory for Sports, aangepast voor Nederlandse jeugd*

- (*PSIS-jeugd*): *psychometrische eigenschappen*, The Psychological Skills Inventory for Sports Adapted for Dutch Youth (PSISYouth): Psychometric Characteristics]. Internal publication, Groningen: Center for Human Movement Sciences, University of Groningen, The Netherlands.
5. FAUBERT, J., SIDEBOTTOM, L. (2012). *Perceptual-Cognitive Training of Athletes*. Journal of Clinical Sport Psychology, 6, 85-102.
 6. GEVORKI, H., GEVORKI, E., and SAMADI, H. (2013). *Comparing of Mental Toughness and Mental Health of Professional and Amateur Athletics*. International Journal of Basic Sciences & Applied Research, 2(6), 583-588.
 7. MAHONEY, M.J., GABRIEL, T.J., and PERKINS, T.S. (1987). *Psychological Skills and Exceptional Athletic Performance*. Sport Psychologist, 1, 181-199.
 8. MANN, M. E. (2009). *Burnout, Motivation, and Perceived Coaching Behavior in Female Intercollegiate Athletes: Assessing Relationships over a Competitive Season*. Miami: Miami University, Department of Kinesiology and Health.
 9. MONDRONO, C., GUILLEN, F. (2011). *Anxiety Characteristics of Competitive Windsurfers: Relationships with Age, Gender and Performance Outcomes*. Journal of Sport Behavior, 34(3), 281-294.
 10. MOORIS, T. (2000). *Psychological Characteristics and Talent Identification in Soccer*. Journal of Sports Sciences, 18, 715-726.
 11. PELLETIER, L.G., VALLERAND, R.J. (1985). *Effects of Coaches' Interpersonalbehavior on Athletes' Motivational Level*. Paper presented at the annual conference of the Canadian Society for Psychomotor Learning and Sport Psychology, Montreal.
 12. VALLERAND, R.J., PELLETIER, L.G. (1985). *Coaches' Intepersonal Styles, Athletes Perceptions of Their Coaches' Styles, and Athletes' Intrinsic Motivation and Perceived Competence: Generalization to the World of Swimming*. Paper presented at the annual conference of the Canadian Society for Psychomotor Learning and Sport Psychology, Montreal.