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METHODOLOGICAL PSYCHOLOGICAL INTERVENTION WITH FOOTBALL TRAINERS TO IMPROVE COACHING COMPETENCE PERCEIVED BY ATHLETES, SATISFACTION WITH COACH, ENJOYMENT AND INTENTION OF PERSISTING

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Abstract

Objectives: The purpose of the study was to assess the effect of a coaching intervention on soccer athletes' perceptions of the coaches' competencies, enjoyment, satisfaction, and intention to persist in the sport. Equipment and methods:The research was conducted on a sample of 105 young football players aged 10 to 15, drawn from 6 clubs:FC Maribor-Slovenia, FC Pelister-Macedonia, FC Gorica-Croatia, FC Graficar-Serbia, FC Doboj-BiH, FC Zeleznichar-Sarajevo. Focused on coacheffectiveness, coaches from EG received a 12-hour training program.Self-report questionnaires were administered to the athletes both at the beginning and the end of the intervention. The correlation of scales and subscales in the initial and final measurements was determined by Pearson correlation coefficients. The effects of the intervention program (differences between the initial and final measurement) were determined by t-tests for dependent samples. Results: The results showed significant changes in competence for game strategy (t = 29,20; p = 000), technical competence (t = 10, 06; p = 002), character building competence (t = 9.65; p = 002) and enjoyment (t = 7.11; p = 008). Thus, these types of interventions are effective for improving and maintaining over time variables related to athletes' perception of their coaches' competency, enjoyment and character building competence.

Key words: Association football, character building, coach effectiveness, motivation, youth sport

Introduction

Extracurricular sports activity is one of the most ways for encouraging physical activity among young people. A number of studies to date have identified the impact of certain intervention programs with methodological and motivational strategies conducted by the coach in order to improve the success among young people, but many of those interventions have been without an appropriate theoretical framework [1]. Additionally, many of these papers focus on determining the impact of the variables that are related to the athletes (i.e. motivation, engagement, satisfaction ...), without taking into consideration the athletes' perceptions of the coach's behavior. In this regard, in this research, an intervention was conducted to improve the coach's competence, through the methodological strategies of the trainers 'efficiency models, [2] assessing the effectiveness of the program based on the athletes' perception of their coach and the actual results of the coach [3-5].

So far, the intervention programs for promoting coach competence have been based on a variety of theoretical approaches, from motivational theories such as the Self-Determination Theory SDT [6] and the Achievement Goal Theory (AGT). [7,8], to theories focused on coach effectiveness [2], such as Coach Effectiveness Training CET [3–5].

Embedded in SDT and AGT, the Adolescent Physical Activity Promotion project [9], implemented in five European countries, aimed to provide trainers with a range of strategies for performing more supportive behaviors and reducing behavioral control, improving the motivational processes and well-being of young athletes [9]. Specifically, the control motivational climate created by coaches is negatively related to the

athlete's health index and optimal functioning, while the supportive motivational climate has a positive effect on the athlete [10]. Pulido et al. [11], developed an intervention program based on the Theory of Self-Determination to enhance the sports commitment of young players by developing strategies to promote autonomy, competence and the need for connection.

The results of the research showed a decrease in the ability and behavior that prevents the perceived connection in the subjects from the experimental group (EG), while the need for competence and the need for connection increased significantly.

Intrinsic motivation decreased in both groups, but this decrease was much greater in the control group (CG). A similar study was conducted by Reynders et al. [12] in which they investigated the effect of intervention by young coaches. As reported by the athletes, multi-level modeling showed that the athletes lead by the coaches in the experimental group (EG), compared to those of lead by the coaches in the control group (KG), perceived their coach as more autonomous, more structured and less chaotic than from the initial to the final measurement, and these effects were more pronounced in team sports. Furthermore, the athletes lead by the coaches in the experimental group (EG) stated that they are more autonomously motivated and more engaged compared to those lead by the coaches in the control group (KG).

As part of Coach Effectiveness Training (CET), various intervention programs were developed that used different strategies to improve coach behavior [1]. Most of the interventions used a combination of training techniques, such as behavioral techniques, cognitive behavioral therapy, educational training, and role-playing [1,13,14]. These interventions use a similar training protocol, providing a series of strategies for coaches that have been applied in group meetings. Three interventions had a control group (CG) without treatment, one intervention had a control group (CG) representing placebo, and this one had two hours of injury prevention training [15]. Only a few interventions explored players' perceptions of their coach's behavior in relation to CET guidelines [3–5]. The results showed that the trainers from the experimental group received better grades in adaptive behaviors and lower grades in non-adaptive behaviors compared to the trainers in the control group. However, despite being CET-based, in these intervention programs, the improvement of specific factors of coaching competence was not evaluated.

Based on CET, Myers et al. [16] developed a tool for assessing coaches' competencies. Specifically, Myers et al. [17] defined coaching competence through five characteristics: (i) influencing of players' psychological mood and skills (i.e. motivational competence); (ii) positively affects the development of player's character through sport (i.e. character building competence); (iii) guides players during matches (i.e. competence for game strategy), and; (iv) gives instructions and diagnoses players during training (technical competence). In that sense, the coach with a higher degree or level of each of these competencies will be perceived as a better coach, and thus will achieve more adaptive behavior in the players. In fact, the coaching competence experienced by the athlete is associated with higher levels of coach satisfaction, higher levels of effort, commitment, enjoyment, prosocial behavior and cohesion, and lower levels of conflict in different sports contexts [18–22].

The variables used to evaluate the effectiveness of the programs vary, and they may include anxiety, self-esteem, fear of failure, or motivational orientations [23]. However, few studies have focused on coach satisfaction or enjoyment, although they have been identified as a key element in maintaining regular physical activity [24]. Most interventions based on Self-Determination Theory (SDT) aimed to improve the various cognitive, affective, and behavioral outcomes of athletes, but they did not examine changes in players' perceptions of their coaches. Despite the importance of behavioral and cognitive modifications to coaches, changing players' perceptions of their coaches is even more important, because coaches are traied with methodological resources to encourage players to continue to be committed to the sport. SDT [6] distinguishes between two broad interpersonal styles (i.e. support and prevention styles) that are relevant to the motivation and well-being of athletes [25,26]. These styles are reflected in a set of different behaviors when adopted by individuals in a position of authority or leadership. Coaches could create an effective training environment by incorporating strategies such as enabling athletes to choose and provide opportunities, [27] promoting a clear structure during training and giving them plenty of time to succeed. They can also provide positive feedback or encourage skills improvements, [28] they can promote cooperative and interdependent tasks and begin to show that they care for their athletes [29]. Conversely, coaches could also adopt a training style characterized by the use of control, rewards, and demands, [30] highlighting mistakes and expressing doubts about athletes' abilities or behaving coldly and distant [28]. In this sense, the interpersonal style of coaches can affect athletes' perceptions of coaching competence, satisfaction with the head coach, enjoyment and intention to persevere in the sport.

Purpose of the research

This study contributes to new knowledge in the scientific literature related to intervention programs focused on coach effectiveness. As confirmed in the literature, there are several studies in which methodological intervention programs based on the theory of Self-Determination Theory (SDT) have been applied for different variables related to the coach and the athlete. Most intervention programs did not have their theoretical basis or the intervention only assessed the effect of the players without taking into account the benefits for the coaches.

Therefore, the main purpose of this study is to analyze the effect of an intervention or module focused on the effectiveness of the coach in terms of coaching competence perceived by athletes, athletes' satisfaction with their coaches, enjoyment and intention to stay in football. Coaching as a fundamental factor in shaping a player's personality or creating life champions. The main hypothesis of this study is that, following the coach training program, the experimental group will show higher levels of coaching competence perceived by athletes, coach satisfaction, enjoyment and intention to continue training football.

Methods of work

Sample of respondents

The research was conducted on a sample of 105 young football players aged 10 to 15, drawn from 6 clubs:FC Maribor-Slovenia, FC Pelister-Macedonia, FC Gorica-Croatia, FC Graficar-Serbia, FC Doboj-BiH, FC Zeleznichar-Sarajevo.

Instruments

Coaching competency. The coaching competence that athletes perceive is assessed using the Sport Athletes' Perceptions of Coaching Competency Scale (APCCS IIHST). The scale consists of 15 statements (items) that begin with the basic phrase "How competent is your head coach in his or her ability. . . "And it assesses four dimensions of the coaching competence that the athlete perceives: motivation competence (4 claims: e.g. " ... help athletes maintain self-confidence"), strategic competence for the game (4 claims: e.g. "... to make critical decisions during a match"), technical competence (4 claims: e.g., ". ... demonstrates skills in his sport") and building competence character (3 claims: for example, "... instills an attitude of respect for others"). The rating scale ranges from 1 (completely incompetent) to 5 (fully competent). In the research so far, the scale has shown good validity and reliability.

Satisfaction with the head coach. Players' perceptions of their satisfaction with the coach were assessed using the Satisfaction with the Head Coach Scale (SHC-S). The scale consists of three statements (items): How much do you like playing for your coach? If you could play next year, would you like to have the same coach again? and How much your coach knows about the sport. The scale is of the Likert type, fifth degree where the scoring ranges from 1 (very little) to 5 (very much).

Enjoyment. The enjoyment dimension was assessed using an adapted instrument for assessing sporting satisfaction in physical education teaching. The original words referring to physical education were changed (e.g, "Normally, I have fun during physical education classes" was replaced by "Normally, I have fun during training"). The instrument (scale) consisted of 5 items. The scale is of the Likert type, the fifth degree which ranges from 1 (I do not agree at all) to 5 (I completely agree).

Intention to persist. The intention to persevere in the football game was assessed by asking an ad hoc question: "How long do you think you will be in this sport? with four answer options: 1 (less than a year); 2 (between one and two years); 3 (between three and four years); and 4 (more than four years).

Procedure

The researchers held meetings with the clubs to seek cooperation and provide information to the coaches. After receiving permission from the clubs and confirmation that the coaches have the right to participate in the research, the managers, coaches and athletes were informed. Before collecting the data, the purpose of the research was explained to the participants and what their participation would mean. The procedure was divided into the following steps: 1. Analysis of previous researches; 2. Basic data collection (survey and testing); 3. Training program for coaches; 4. Monitoring the program in practice; 5. Collection and analysis of data after the program is completed; 6. Evaluation of manual data.

Initial data were collected at the beginning of the camp which was held in Zlatibor. Then followed the training of the coaches for the new Module and of course their transfer to the players. Final data were collected 6 months after the start of the intervention. Additionally, in both measurements (initial and final),

the coaches were asked to stay at a certain distance from the children when filling in the questionnaires, so that their presence would have less impact on the children's answers. The questionnaire took 15-35 minutes to complete depending on the age of the players.

Training program (Module)
The training program and the first session for the coaches started in Belgrade and Doboj. The second session will be conducted on the first day in Zlatibor. It will be divided into two parts:
1. Contextualization and theoretical framework (one session);
2. Methodological and motivational strategies with activities and general examples (two sessions);

This intervention will be conducted by university professors, experts in the field of sports psychology research and pedagogy.
The first session started in Belgrade where the theoretical framework for the following points was set
- The sports triangle or the relations between the athlete, the coach and the parent,
- The developmental changes in athletes between the age of 7-11,11-15,15-18
- Motivational interventions
- Comunicational skills

The second session will be for coaches, it will be held in Zlatibor and it will be about methodological and motivational interventions
- Setting goals
- Discipline
- Confidence
- Encouraging individual performance (technique......)
- Encouraging football intelligence
- Developing team mentality
- Developing a belonging to a group
- Trust in the coach
- Respect, fair-play
- Positive communication (verbal and nonverbal)
- Pleasure, enjoyment and happiness

The third session for the coaches will be to conduct this training in their own clubs for the next three months.
- The coaches will be contacted by phone, video calls, cameras...

After the end of the three months follows a reevaluation.

Statistical analysis
First, the basic descriptive statistical parameters (arithmetic mean and standard deviation) were calculated for all variables. Interconsistency of scales and subscales (reliability) in the initial and final measurements was determined by Cronbach's alpha coefficients. The correlation of scales and subscales in the initial and final measurements was determined by Pearson correlation coefficients. The effects of the intervention program (differences between the initial and final measurement) were determined by t- tests for dependent samples. The data were processed with the statistical package SPSS for Windows Version 26.0.

Results
Table 1 shows the basic descriptive statistical parameters and internal consistency (Cronbach's alpha) of all variables. The coefficients of internal consistency (Cronbach's alpha) for all scales and subscales show satisfactory values in the initial measurement (Cronbach's alpha ranged from .70 – .84) and in the final measurement (.70 – .87) with all values above .70 . [44].
The correlation analysis of scales and subscales in the initial measurement is shown in Table 2. From the overview of the table it can be seen that in the initial measurement most variables are positively related. A low statistically significant positive correlation was found between the variable competence for motivation and the variables competence for game strategy, technical competence and satisfaction with the coach, then between the variable competence for game strategy and character building and the intention to persevere character building, enjoyment and intention to persevere, between variable character building and enjoyment, between variable enjoyment and intention to persevere.

Table 1. Basic statistics and internal consistency (reliability) of the variables

	Mean	SD	*a*	Mean	SD	*a*
Coach competence						
Motivation	4.75	0.31	0.70	4.68	0.42	0.72
Game strategy	4.25	0.34	0.79	4.53	0.40	0.81
Tech	4.35	0.40	0.82	4.54	0.46	0.82
Character building	4.45	0.37	0.76	4.65	0.52	0.74
Satisfaction with the coach	3.67	0.60	0.84	3.70	0.49	0.87
Enjoyment	4.65	0.48	0.71	4.80	0.27	0.70
Intention to persevere	3.85	0.51	-	3.77	0.61	-

Table 2. Intercorrelation between variables in the initial measurement

	1	2	3	4	5	6	7
Motivation	1,000						
Game strategy	, 348 **	1,000					
Tech	, 397 **	, 134	1,000				
Character building	-, 071	, 258 **	, 230 *	1,000			
Satisfaction with the coach	, 255 **	, 138	, 153	-, 088	1,000		
Enjoyment	, 151	, 018	, 262 **	, 319 **	-, 187	1,000	
Intention to persevere	, 140	, 222 *	0.30 **	, 140	, 170	, 350 **	1,000

Table 3. Intercorrelation between variables in the final measurement

	1	2	3	4	5	6	7
Motivation	1,000						
Game strategy	, 501 **	1,000					
Tech	, 336 **	, 243 *	1,000				
Character building	, 368 **	, 455 **	, 385 **	1,000			
Satisfaction with the coach	, 040	, 040	, 119	, 155	1,000		
Enjoyment	, 127	, 117	, 115	, 235 *	, 243 *	1,000	
Intention to persevere	, 260 **	, 220 *	, 240 **	, 770 **	, 190 *	, 350 **	1,000

The correlation analysis of the scales and subscales in the final measurement is shown in Table 3. From the overview of the table it can be seen that in the final measurement most of the variables are positively related. A statistically significant positive correlation was established between the four scales to assess the coach's competence and intention to persevere. Also, a statistically significant correlation was found between subscale character building and coach satisfaction with the variable enjoyment. A statistically significant correlation was found between the subscales of motivation, game strategy, technique and character building, as well as between the variable enjoyment and intention to persevere.

Table 4. Differences in variables between initial and final measurement

	Initially		Final		t-test	sig
	Mean	SD	Mean	SD		
Coach competence						
Motivation	4.75	0.31	4.68	0.42	1.89	, 170
Game strategy	4.25	0.34	4.53	0.40	29.20	**, 000**
Tech	4.35	0.40	4.54	0.46	10.06	**, 002**
Character building	4.45	0.37	4.65	0.52	9.65	**, 002**
Satisfaction with the coach	3.67	0.60	3.70	0.49	0.14	, 714
Enjoyment	4.65	0.48	4.80	0.27	7.11	**, 008**
Intention to persevere	3.85	0.51	3.77	0.61	1.95	, 185

Graph 1. Overview of the arithmetic means of the variables in the initial and final measurement
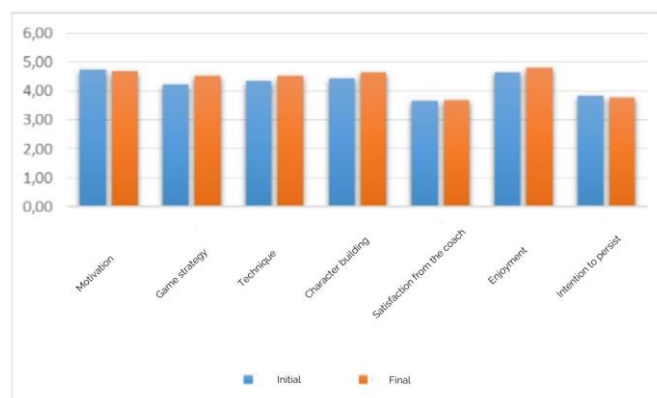
In order to determine whether there are statistical differences between the initial and final measurement, t-tests for dependent samples were applied. From the review of arithmetic means and the level of statistical significance (Table 4) it can be seen that statistically significant differences are determined in the variables competence for game strategy (t = 29,20; p = 000), technical competence (t = 10, 06; p = 002), character building competence (t = 9.65; p = 002) and enjoyment (t = 7.11; p = 008).

Discussion

The main purpose of this study was to analyze the effect of an intervention program focused on the effectiveness of the coach in terms of coaching competence perceived by athletes, athletes' satisfaction with the coach, enjoyment and intention to persevere. After the intervention, the results showed a positive trend (showed statistical or increased mean results). Specifically, according to our hypothesis, the intervention program caused significant changes in players' perceptions of game strategy, technique, character-building competencies, and enjoyment. Related to the research of Gonza 'lez-Ponce et al. [20] noting that coaching competence perceived by athletes decreased during a season, in our study all four factors of coaching competence increased or remained unchanged. In other words, the communicative and structural strategies learned by coaches to motivate, correct technical and tactical errors, and build the character of their players have led to greater coaching competence for the athlete.

Although several studies have found that some variables of group dynamics (i.e. role clarity, team cohesion, and collective effectiveness) deteriorate during the season from a player perspective, [46] in the intervention program used in this research has not found a significant reduction in coaching competence perceived by the athlete, as found in some previous research [20]. Specifically, no changes were found in the motivational competence perceived by athletes after the intervention. This may be due to the fact that motivational training is influenced by the top-down effect between motivation at the contextual and situational level proposed by Vallerand [47], for example, the level of self-determined motivation of players. If the players' training is externally motivated - for example the initial goals set at the beginning of the season are not achieved, this may explain why the coach could not improve his competence in all variables, so the tendency of the variables indicates that the intervention had positive results.

However, according to the results after the intervention in the final measurement, the players reported (although not statistically significant) less satisfaction from the coach. Similar results were obtained in a study by Gonzalez Ponce et al., [20] which found that there was a general deterioration in attitudes toward the coach during the season. In addition, many other factors, such as personal development, job security, conflict between work and personal life, and pressures from the club's management to achieve the set goals [4], or some situational factors (e.g., loss in the last match), can affect the satisfaction of the players from the coach during the season.

On the other hand, the results of the research indicate that after the intervention there was an increase in enjoyment. This variable may be closely related to intrinsic motivation. Similar results were obtained by Reynders et al. [12] in his research. In addition, given that no significant differences were found after the intervention in the coaching motivation competence, it can be considered that the methodological and motivational strategies developed during the training program increased the players' enjoyment. Namely,

despite the fact that the players did not perceive their coaches as more competent to motivate them, they still think that the training tasks or training are more pleasant. This variable can have a key impact on players in their decision to devote more time to an activity, developing more self-determined motivation and greater adherence to their practice [11].

However, given the changes that have been made to the variable with a view to persisting, the key may not always be to try to increase this variable, but to ensure that the values of this variable obtained in the initial measurement are maintained during the current season and further. Thus, interventions with coaches could make the reduction of the values of this variable be gradual or over time maintain the initial values.

Conclusion

The findings of this study provide some evidence of the effects of intervention programs with young players to improve or maintain relevant physical activity variables. Due to the high values recorded at the beginning of the measurement, it would be advisable to conduct initial measurements and find out which teams really need intervention programs of this type to optimize the motivational variables. Namely, this type of program is also effective in maintaining the optimal level of variables related to success in a given sport. Therefore, we must take into account that the age range for this study included young athletes whose age ranges from 10 to 15 years. Potentially, there may be developmental confusion in the sense that younger players may need / want different coaching behavior from older players. Finally, interventions with young athletes are necessary to reduce drop-out rates and to change the purely competitive and uneducated / formative approach to the sport that is sometimes taught at these ages.

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