

Effects of an Individualized Program on Coaches' Observed and Perceived Behavior¹

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EFFECTS OF AN INDIVIDUALIZED PROGRAM ON COACHES' OBSERVED AND PERCEIVED BEHAVIOR

KEYWORDS: Coaching, Counseling, Goal setting, Single-subject methodologies, Basketball.

ABSTRACT: The purpose of the present study is to evaluate an individualized intervention based on *Coach Effectiveness Training* (CET) principles, using a case study. Two basketball coaches selected 3 target behaviors to improve. Behavioral assessment revealed that Coach 1 achieved positive changes in all his 3 target behaviors. In turn, Coach 2 improved on 2 of his 3 target behaviors. Changes in coaches' behaviors were mostly perceived by players in the evaluation stage. Specifically, players' perceptions of Coach 1 showed an increase of General Encouragement and Mistake-Contingent Encouragement, and players of Coach 2 perceived a clear increase of General Encouragement, Reinforcement and Mistake-Contingent Technical Instruction. Results are discussed in line with CET principles and potential applications of our program are presented.

Across the world, structured after-school activities are becoming increasingly more common for adolescents and many of those adolescents invest most of their time in organized sport (Larson, Wilson, Brown, Furstenberg and Verma, 2002). Although coaches are considered a key figure in youth sport –because coaches' behaviors, attitudes, and values are imitated by their players, not only in sport settings but also in other contexts of players' lives– most children receive coaching from untrained amateur coaches (Boixadós, Cruz, Torregrosa and Valiente, 2004; Smoll and Smith, 2009).

Coach training programs represent a model for structuring youth sport setting. As stated by Cruz, Torregrosa, Sousa, Mora and Viladrich (2011), the United States of America was a pioneer country on developing intervention programs for coaches, such as the *American Coach/Sport Education Program* (ACEP/ASEP; Martens, 1987), the *National Youth Sports Coaches Association program* (NYSCA; Brown and Butterfield, 1992), the *Athletic Coaches Education* (PACE; Seefeldt, Clark and Brown, 2001) and the *Coach Effectiveness Training* (CET; Smith and Smoll, 1996). Some of these programs address general topics (e.g., teaching strategies, injury prevention) while others are more specific and focus on coach-athlete interactions, trying to promote a more positive sport experience for young athletes. Although some of the above-mentioned programs were designed to influence and improve coach-athlete interactions, the lack of information regarding its real impact on coaches is still one of their major criticisms.

Smith, Smoll and Curtis (1979) developed a pioneer program, named the *Coach Effectiveness Training* (CET), that tries to increase those coaching behaviors that are empirically related to positive athletes' outcomes, such as positive reinforcement, mis-

take-contingent encouragement, mistake-contingent technical instruction, and general encouragement, and to reduce those coaching behaviors related to negative evaluative reactions by athletes, particularly punishment and punitive technical instructions. Several interventions with the CET (Smith et al., 1979; Smoll, Smith, Barnett and Everett, 1993), the Spanish adaptation of CET (Cruz, 1994), the *Penn State Coach Training Program* (Conroy and Coatsworth, 2006), and a new adaptation of CET–known as the *Mastery Approach to Coaching* (MAC; Smith, Smoll and Cumming, 2007)– have been shown to produce salutary effects on a range of outcome variables in controlled experimental and quasi-experimental studies, including reductions in performance anxiety and stronger perceptions of coach-initiated mastery motivational climates (Coatsworth and Conroy, 2006; Cruz, 1994; Smith et al., 2007).

As Sousa, Smith, and Cruz (2008) have outlined “the CET and the Mastery Approach interventions occur in the form of a group-administered workshop that involves didactic instructions, modelling, and role-playing” (p. 260). Taking into account that those programs usually had not provided individualized behavioral feedback, these authors took a step forward and encouraged sport psychologists to adapt the coach behavioral guidelines to the individual evaluations assessed in the baseline stage. An exception had occurred in the initial evaluation study (Smith et al., 1979), where coaches received collective feedback concerning their behavioral profiles based on the *Coaching Behavior Assessment System* (CBAS; Smith, Smoll and Hunt, 1977). In three more recent studies (Mora, Cruz and Sousa, 2013; Sousa, Cruz, Torregrosa, Vilches and Viladrich, 2006; Sousa et al., 2008) the *Programa de Asesoramiento Personalizado a Entrenadores* (PAPE; *Individualized Program for Counseling*

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Coaches) was developed and implemented with soccer coaches in order to improve their communication style and the motivational climate created in their teams. A similar intervention was used in the *Program of Investigation of Forming Coaches* (Conde, Almagro, Saenz-Lopez and Castillo, 2009; Conde, Almagro, Saenz-Lopez Dominguez and Moreno-Murcia, 2010)

The rationale behind PAPE is that in applied settings, sport consultants frequently work with coaches on an individual basis rather than on the group workshop format that has been tested in previous CET studies. Individual consultation provides the opportunity to tailor the intervention to the specific goals and behavior patterns of each coach. In the study of Sousa et al. (2008), a case study approach was used to explore a new format for the CET and MAC interventions in which coaches worked with a sport psychology consultant on an individual basis and were permitted to choose their own behavioral goals, based on video feedback and on their own perceived needs and expectations. It seems reasonable to assume that under such circumstances, coaches would set down individual behavioral goals, would focus more closely on their own goals and would be more motivated to achieve them (Kyllo and Landers, 1995).

In fact, within a variety of contexts, including sports, goal setting has been used effectively to increase motivation and facilitate behavior change (Locke and Latham, 1990). Although many empirical studies of sport-related goal setting have been performed in laboratory settings, Weinberg and Weigand (1996) pointed out that ecological validity is enhanced when goal setting is conducted in a naturalistic context (i.e., real setting) as the actual level of personal involvement in the goal setting process and in performance-related outcomes is likely to be high.

In sport-related research on goal setting, athletes have typically been the focus of study (Kyllo and Landers, 1995). However, less attention has been directed to the use of goal setting to help coaches behave more effectively, particularly in the area of youth sport. This is somewhat puzzling, because the influence of coaches and physical education teachers on their athletes' and students' psychosocial outcomes (e.g., self-esteem, enjoyment, adaptive and social behaviors) is well established (Boixadós et al., 2004; Smoll et al., 1993). These results, along with the meta-analytic finding by Kyllo and Landers (1995) that self-selected goals are associated with especially strong goal setting outcomes, suggest the desirability of studying coach-self-selected behavioral goals within a personalized coach-training format. That is, using an individual intervention based on PAPE, where each coach could choose the goals that appear relevant to him and his team in order to increase coach effectiveness.

The present study proposes a behavioral intervention that takes up the torch of those previous studies that highlighted the need for a more individualized interventions. In this line, our Individualized Program for Counseling Coaches (PAPE) follows the principles of CET (Smith et al., 1979) and MAC (Smith et al., 2007) and analyzes the effects of the program on coaches' communication style, players' perceptions of coaches' behaviors, coaches' self-perceptions, and players' perceptions of coach-created motivational climate. Specifically, our intervention includes a common part with two basketball coaches and an individual session with each coach where they are able to set their own goals based on their baseline behavioral profiles. This study enhances previous research through: (a) the greater individualization of the intervention and the assessment, comparing the results at two time points (i.e., baseline and

evaluation stages) following a case study methodology (e.g., Smith, 1988); (b) the observation of both practices and games; (c) the implementation of the intervention to a different sport (i.e., basketball); and (d) the application to an older and more competitive team (i.e., > 18 years old, semi-professional).

Method

Participants

Two male basketball coaches and 20 male basketball-players from a sports club in the south-east of Spain participated voluntarily in this study. The criteria followed to select both coaches included having long-term experience in basketball and interest in obtaining further coaching qualifications. Coach 1, aged 26, was playing with the club first team in the Spanish semi-professional Basketball League (*Liga EBA*). Coach 1 had six years of coaching experience, an academic background in law and was studying a course to obtain the level I Spanish accreditation as a basketball coach. Coach 2 was 41 years old. He had 17 years of experience as a coach, having trained school and senior basketball teams. He was in his second year with the senior team, which played at the second most competitive level in Spain. He had an academic background in administrative studies and the level I Spanish accreditation as a basketball coach.

The 20 basketball players were enrolled in Coach 1's and Coach's 2 teams: A team of young players aged between 14 and 15 ($n = 12$, $M = 14.66$, $SD = 0.12$) and a senior team ($n = 8$, $M = 25$, $SD = 2.93$).

Instruments

Observational instrument

The *Coaching Behavior Assessment System* (CBAS; Smith et al., 1977) is a behavioral assessment instrument used to observe and code coaches' behaviors during practices or matches. This behavioral coding system assesses 12 observed behavioral categories (see Smith et al., 1977 and Sousa et al., 2006, for a definition of the CBAS categories).

Questionnaires

The Spanish adaptation (Sousa, Smith and Cruz, 2008) of *CBAS Coach-Perceived Behaviors Scale* (CBAS-CPBS; Smith et al., 1979) measures coaches' self-perceptions concerning how frequently they behave in a specific manner. The answers were reported on a 7-point scale ranging from 1 (*never*) to 7 (*almost always*). Example of item is: "Do you encourage your players when they make a mistake such as missing a free-throw, losing a ball...?".

The Spanish adaptation (Sousa, Smith and Cruz, 2008) of the *CBAS Player Perceived Behavior Scale* (CBAS-PBS; Smith et al., 1979) measures athletes' perceptions of the coaching behaviors assessed with the CBAS. Each of the CBAS categories is defined in a narrative description based on the CBAS training manual and athletes indicate how frequently their coach behaves in that manner in a specific situation. Example of item is: "Does your coach encourage you when you make a mistake, such as missing a free throw, losing a ball...?". The answers were reported on a 7-point scale (1 = *never* and 7 = *almost always*).

Procedure

Following institutional ethics approval, all of the participants were informed about the main goals of this research. All of them

were assured that the data would be treated with confidentiality. Participation was entirely voluntarily and coaches and players were informed that they could withdraw at any time during the course of the study.

The study was performed in three stages (see Figure 1): (a) baseline, (b) psychological intervention with Coach 1 and Coach 2, and (c) evaluation of the intervention.

Baseline

In the baseline stage the authors made four observations of each coach using the CBAS: two matches and two practices. These observations were carried out by a qualified observer trained in accordance with the CBAS manual. Both coaches completed the CBAS-CPBS questionnaire and the second author conducted an individual interview with each coach in order to ascertain their sport career, their evolution as a coach, their academic background, and their goals for the season. In addition, in this period, the athletes completed the CBAS-PBS questionnaire.

Intervention

In the second stage, the second author carried out a psychological intervention with both coaches. This intervention was conducted in three sessions and five steps: (a) guidelines for improving team motivational climate, (b) guidelines for improving the coach's communication style, (c) behavioral feedback, (d) self-selected goals, and (e) role-playing of target behaviors for change.

Step 1: Guidelines for improving the motivational climate of the team. This first session, lasting 60 min, was conducted with the two coaches together. Its aim was to teach them general aspects of motivation in sport that they could apply to their teams. The concepts of motivation, task and ego involvement and motivational climate were explained, emphasizing the coaches' influence on establishing a certain type of climate. The intervention was focused on enabling coaches to create a task-involving motivational climate. In order to foster this motivational climate, it was suggested that the coaches should use a series of behavioral guidelines based on different areas: Task, Authority, Rewards, Group, Evaluation, and Time, known as TARGET areas (see Ames, 1992, for more detailed information). In addition, each coach together with the psychologist chose in which of the TARGET areas would be working on during the next week. At the end of the session, each coach received a folder with an overview of the strategies explained in the session.

Step 2: Guidelines for improving the coach's communication style. The objective of a second 60-min session was to focus on fostering the coaches' communication skills. At the beginning, 10 min were dedicated to sharing their experiences in the application of the motivational guidelines proposed in the previous session. The objective of the session was then presented: To establish the differences between a positive and a negative communication style and to provide evidence supporting that a positive approach to learning sport skills brings more benefits to both young kids, as proposed by authors such as Smoll and Smith (1989), and senior players, as hypothesized in our study. The main content of the session was to offer coaches behavioral guidelines aimed at improving their communication skills. Those guidelines were based on five recommendations: (a) reactions to players' successes, (b) reactions to players' mistakes, (c) responses to

maintain order and discipline, (d) dealing with violation of team rules, and (e) creating a good atmosphere for learning. These behavioral guidelines were based on those of Smoll and Smith (2009).

Step 3: Behavioral feedback. This step was performed individually during the first 20 min of the third session with each coach. The main objective of this step was to increase each coach's awareness of their own behavior towards their players. To do this, the instructor presented data obtained in the baseline stage with graphics distinguishing between actions carried out by each coach in matches and in practices. The data were summarized according to the three behavioral dimensions resulting from factor analysis of the CBAS (Smith and Smoll, 1996): (a) Supportiveness; (b) Punitiveness; and (c) Instructiveness. After the presentation of the graphics, the researcher explained the behaviors that were appropriate and then should be maintained, followed by those behaviors that should be enhanced, explaining how to put them into practice and highlighting not only the importance of carrying them out, but also the beneficial effects they would produce in athletes.

Step 4: Self-selected goals. This 20-min step was designed in order to offer each coach the possibility of choosing his own behavioral objectives, with the advice of the psychologist, once he was aware of his previous behavior. According to Kyllö and Landers (1995) overall goal setting is most effective when individuals participate in setting their own goals. To do this, the sport psychologist explained some of the Weinberg and Gould's (2010) basic principles in goal setting: Goals should be specific, moderately difficult but realistic and recorded in writing. For each of these principles, the psychologist explained how to put them into practice and provided guidance on how to express the objectives efficiently. In this study, each coach selected the three CBAS behavioral categories that he wanted to change. Both coaches chose General Encouragement (EG). Mistake-contingent Encouragement (EM) and Punitive Technical Instruction (PTIM) were the other two categories selected by Coach 1 and Reinforcement (R) and Mistake-contingent Technical Instruction (TIM) the ones chosen by Coach 2.

Step 5: Role-playing. The objective of this step was to help coaches to change their behaviors and took place during the last 20 min of the session. Depending on the goals chosen by each coach, the second author had prepared comments based upon each coach's behavior (recorded in the baseline observation). Coaches were encouraged to self-evaluate their behaviors according to their own perception and were given some guidelines and reminders to facilitate the achievement of their goals.

Evaluation of the intervention

Program evaluation involved a comparison between baseline and evaluation results, using the same measures. Coaches were evaluated based on the behaviors observed in two games and two practices and data of the CBAS-CPBS questionnaire. Regarding the players, the evaluation included data of the CBAS-PBS.

Results

Coaches' Observed CBAS Behaviors

Behavioral data were collected from two coaches during a total of two complete 60 min practices and two matches of 40 min each. A mean of 194 behaviors were coded during each game and a mean of 209 behaviors during each practice for Coach 1.

Stage	Session	Description	Sample involved	Month
Baseline	--	Data collection (CBAS observations and CBAS-PBS / CBAS-CPBS questionnaires)	Players and coaches	January
	1	Step 1- Guidelines for improving the motivational climate of the team	Coaches (together)	March
Intervention	2	Step 2- Guidelines for improving the coach' communication style	Coaches (together)	
	3	Step 3- Behavioral feedback	Coaches (individually)	
		Step 4- Self-selected goals		
		Step 5- Role-playing		
Evaluation of intervention	--	Data collection (CBAS observations and CBAS-PBS / CBAS-CPBS questionnaires)	Players and coaches	June (end of the season)

Figure 1. Process followed in our study.

For Coach 2, a mean of 125 behaviors were coded during each game and a mean of 135 behaviors during each practice. A total of 2659 behaviors were observed. In this study, the results were analyzed separately for each coach by comparing his behaviors during the baseline period and the evaluation stage, distinguishing between the CBAS self-selected and non-selected behaviors.

Table 1 shows Coach 1's percentage of CBAS categories defined as target behaviors in the baseline and evaluation stages. After the intervention, Coach 1 met the established goals: He

substantially increased Mistake-Contingent Encouragement (EM) and General Encouragement (EG), both in practices and matches, and decreased Punitive Technical Instruction to Mistakes (PTIM) in both situations, especially in matches.

Table 2 illustrates Coach 2's percentage of his target behaviors. It is worth pointing out the considerable increase in Reinforcement (R) and General Encouragement (EG) after the intervention. On the other hand, the expected intervention effects were not found in Mistake-Contingent Technical Instruction (TIM).

		Baseline					Evaluation						
		Pr1	Pr2	M Pr1 + Pr2	Ma1	Ma2	M Ma1 + Ma2	Pr1	Pr2	M Pr1 + Pr2	Ma1	Ma2	M Ma1 + Ma2
Self-selected	EM	9.33	0	3.30	3.80	9.30	5.74	8.24	10.33	9.27	9.09	13.55	11.11
	EG	8	21.90	16.98	12.66	13.95	13.11	25.80	27.67	26.73	24.60	19.35	22.22
	PTIM	2.66	.51	1.41	15.82	10.46	13.93	0.72	1.11	.91	1.60	1.93	1.75
Non-selected	R	18.66	28.47	25	19.62	33.72	24.59	31.90	25.46	28.73	27.27	22.58	25.15
	TIM	14.66	18.98	17.45	0	0	0	8.60	12.91	10.73	8.56	5.81	7.31
	P	9.33	3.65	5.66	26.58	11.63	21.31	.72	2.21	1.45	5.88	6.45	6.14

Pr = Practice; Ma = Match; EM = Mistake-contingent Encouragement; EG = General Encouragement; PTIM = Punitive Technical Instruction; R = Reinforcement; TIM = Mistake-contingent Technical Instruction; P = Punishment. The dashed line separates between self-selected and non-selected target behaviors.

Table 1. Percentage of Coach 1 Self-selected and Non-selected Observed Behaviors, in the Baseline and the Evaluation Stage During Practices and Matches.

		Baseline					Evaluation						
		Pr1	Pr2	M Pr1 + Pr2	Ma1	Ma2	M Ma1 + Ma2	Pr1	Pr2	M Pr1 + Pr2	Ma1	Ma2	M Ma1 + Ma2
Self-selected	R	8.57	7.55	7.95	14.81	9.30	11.43	2.,95	24.53	23.43	26.73	23.19	24.69
	TIM	17.14	16.98	17.04	7.40	0	2.86	9.84	22.64	13.71	0	1.45	0.84
	EG	11.43	18.87	15.91	11.11	16.28	14.28	39.34	26.41	35.43	41.58	39.13	40.17
Non-selected	EM	0	0	0	11.11	0	4.28	1.64	1.89	1.71	8.91	3.62	5.86
	P	0	1.89	1.14	0	11.63	7.14	0	0	0	0	0	0
	PTIM	2.86	1.89	2.27	3.70	6.97	5.71	0	0	0	0	0	0

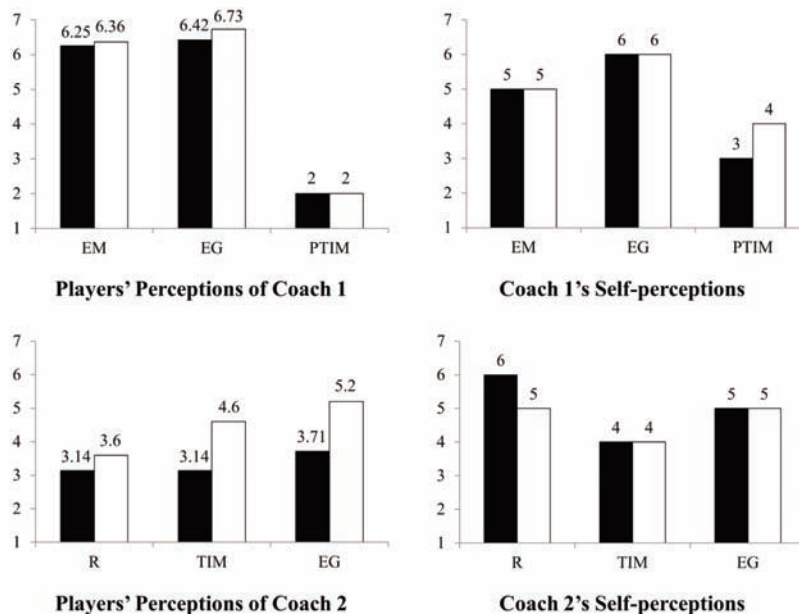
Pr = Practice; Ma = Match. R = Reinforcement; TIM = Mistake-contingent Technical Instruction; EG = General Encouragement; EM = Mistake-contingent Encouragement; P = Punishment; PTIM = Punitive Technical Instruction. The dashed line separates between self-selected and non-selected target behaviors.

Table 2. Percentage of Coach 2 Self-selected and Non-selected Observed Behaviors, in the Baseline and the Evaluation Stage During Practices and Matches.

Concerning non-target behaviors, substantial improvements should also be mentioned (see lower parts of Table 1 and Table 2, for Coach 1 and Coach 2 respectively). Coach 1 increased the frequency of R and TIM in matches and decreased Punitive responses (P) in both situations. This last category had a fairly high frequency of emission in the baseline. Referring also to non-target behaviors, after the intervention Coach 2 increased EM and decreased the two punitive categories (i.e., P and PTIM) to a zero value, both in practices and games.

Players' and Coaches' Perceptions of Coaching Behavior

The results of coaches' self-perceptions and the results of players' perceptions of target coaching behaviors were obtained through the CBAS-CPBS (Smith et al., 1979) and CBAS-PBS (Smith et al., 1979) respectively, in the baseline and in the evaluation stage (see Figure 2).



EM = Mistake-contingent Encouragement; EG = General Encouragement; PTIM = Punitive Technical Instruction; R = Reinforcement; TIM = Mistake-contingent Technical Instruction.

Figure 2. Players' perceptions and coaches' self-perceptions of the target behaviors.

The players' perceptions of Coach 1 showed that two of his target behaviors (EM and EG) increased at the evaluation stage. These results are consistent with the data collected with the CBAS observational instrument (see Table 1), since an increase in both categories occurred after the intervention, and thus indicated an attainment of the objectives. However, no change was found in Coach 1's self-perceptions of both EM and EG categories. In PTIM category, the players perceived that this coach's behavior was maintained at the same level after the intervention, while Coach 1 felt that this behavior increased after the intervention. These results are not consistent with the data collected from the observations coded with the CBAS, which showed that PTIM behavior decreased in the expected direction.

The results obtained regarding the target behaviors of Coach 2 showed that his players perceived a clear increase in all three target behaviors (R, TIM, EG) after the intervention stage. These results are consistent with the data collected with the behavioral assessment (see Table 2), with the exception of TIM behaviors. However, the coach perceived a decrease in the R emission frequency and no change in the other two target categories (TIM and EG).

Discussion

This research studied the effect of the *Individualized Program for Counseling Coaches* on observed, athlete-perceived, and coach-self-perceived behaviors, with the relevant characteristic that coaches decided the specific target behaviors they wanted to change, as did soccer coaches in Sousa et al.'s (2008) study. Our study also analyzed the changes appeared both in practices and matches between the baseline and the evaluation stages. Regarding the selected target behaviors, Coach 1 improved the three target behaviors, increasing EM and EG, and decreasing PTIM in practices and matches. On the other hand, Coach 2 improved in two of the three target behaviors, increasing the categories of support (i.e., R and EG), both in practices and matches.

The intervention had a greater impact than expected in both coaches since their behaviors also experienced positive changes in behavioral categories not previously selected as targets. These results show that both coaches integrated our guidelines to improve their communication style and motivational climate in their interactions with the players, allowing them to focus on a wide range of positive behaviors and not only on the selected target behaviors, in a similar manner to Soriano, Ramis, Cruz and Sousa (2014) with soccer coaches.

Regarding the coaches' non-target behaviors, Coach 1 increased R in practices and matches and TIM in matches. This last behavior was zero in the baseline stage. This coach also reduced the frequency of negative behavior P, both in practices and matches. In turn, Coach 2 increased EM in practices and matches, and decreased P and PTIM to zero in matches and practices after the intervention. These results are in line with those obtained in the study of Soriano et al. (2014) and Sousa et al. (2008) with soccer coaches. In their studies, those coaches that opted to reinforce and encourage also showed a decrease in punitive behaviors, although these behaviors had not been set as targets, as occurred with the coaches of our study. These results supported the idea that when coaches change a key behavior, it might also involve changes in other related behaviors. Thus, those coaches that become more positive also become less negative, reducing their punitive behaviors.

As can be observed, the two coaches of the study showed very positive results in the increase of supportive behaviors (R, EM, and EG) and the decrease of punitive behaviors (P, PTIM). Those results are similar to those found in the study by Sousa et al. (2008) and greater than those effects found in studies conducted using group interventions without setting individual target goals (Cruz, 1994; Smith et al., 1979). Thus, it could be assumed that these higher behavioral changes are attributable to the greater coaches' personal commitment to the achievement of the target goals set on with the psychologist.

The perceptions of players and the coach self-perception of the target behaviors showed a moderate overlap with the behavioral measures obtained with the observational instrument CBAS. The perceptions of players regarding the behaviors of their coaches were closer to the behaviors exhibited by both coaches than to the coaches' self-perception. A similar result was found in the study of Lemonidis et al. (2014) with elite basketball coaches. Thus, it seems relevant that coaches develop self-awareness of the coaching behaviors they exhibit. In our study, perceptions of the players concerning Coach 1 and Coach 2 matched with the observational measures in two of the three target behaviors. The perception of players regarding the behavior of their coaches was more positive after the intervention, perceiving improvements in almost all the target behaviors. This change was higher in Coach 2.

Limitations and Future Directions

Our study, based on single case approach, presents some limitations. First, it was not possible to infer causal relationships, because a pre-post design does not provide information about changes that occur spontaneously throughout the season. However, as Barker, Mellalieu, McCarthy, Jones, and Moran (2013) highlighted in their review of single case research in sport psychology, the A-B design remains an important tool to quantify intervention effectiveness in applied practice where removing intervention is neither appropriate nor feasible. Moreover, in order to overcome these limitations that could undermine internal validity Smith (1988) proposed that several measures should be included. Consequently, a total of four measures of each coach were used both in baseline and evaluation stages (two matches and two practices in each stage).

Second, this study assessed the effects of an intervention package that included motivational climate, communication style, and self-selected goals. Package interventions are practically appropriate, but due to their nature it could be difficult to draw causal inferences regarding which elements were most effective in highlighting changes in dependent variables, as noted among others by Barker et al. (2013) and Sousa et al. (2008).

Third, although the present research included an interview with coaches regarding the goals and procedures of the intervention, and the results of this interview highlighted that they considered the intervention very satisfactory, a more complete social validity assessment should be included in future studies. This social validation should comprise data from players and parents of young teams as it is recommended in previous studies (e.g., Langan, Blake and Lonsdale, 2013).

Four, our study was conducted over a season. Thus, the baseline assessment took place one month after the season started, when players had already met their coach, the intervention was performed in mid-season and the evaluation stage was carried out near the end of the season. The authors planned to make

observations in the following season, to analyze the effects of the intervention over time, because follow-up data would be of great interest. Unfortunately, this follow-up to evaluate the effects of program in the next season was not possible, due to coaches' mobility from their teams.

Acknowledging the limitations of the case study methodology, three main interests of this research should be outlined. First, the review of Barker et al. (2013) did not found any study in single-case research design that had included coaches. Second, the most remarkable feature of this study was the personalization of the interventions in which, in addition to the two sessions to improve the motivational climate and the coach's communication style, a

session was done individually with each coach that provided feedback on observed behaviors to guide them in self-election of three behavioral goals. As noted above, the change in these key behaviors favored a change in the other non-target behaviors. Third, these interventions with the PAPE could be applied to complement the ones carried out to improve task-involving motivational climates in the educational settings.

As a conclusion, the authors suggest that individualized interventions based on mastery approach, personalized goal setting, and the principles of coaching effectiveness training offer a novel approach that deserves future empirical studies in the field of sport and physical education.

EFFECTOS DE UN PROGRAMA PERSONALIZADO SOBRE LOS COMPORTAMIENTOS OBSERVADOS Y PERCIBIDOS DE LOS ENTRENADORES

PALABRAS CLAVE: Entrenamiento, Asesoramiento, Establecimiento de metas, Metodologías de caso único, Baloncesto.

RESUMEN: El objetivo del presente estudio es evaluar una intervención individualizada basada en los principios del *Coach Effectiveness Training* (CET) mediante un enfoque de estudio de caso. Dos entrenadores de baloncesto seleccionaron 3 conductas objetivo a mejorar. La evaluación conductual reveló que el Entrenador 1 consiguió cambios positivos en sus 3 conductas objetivo. Por su parte, el Entrenador 2 mejoró en 2 de sus 3 conductas objetivo. Estos cambios en la conducta de los entrenadores fueron mayoritariamente percibidos por sus jugadores en la fase de evaluación. Concretamente, las percepciones de los jugadores del Entrenador 1 mostraron un claro aumento de Ánimo General y Ánimo Contingente al Error, y las de los jugadores del Entrenador 2 una clara mejoría de Ánimo General, Refuerzo e Instrucción Técnica al Error. Los resultados se discuten en base a los principios del CET y se proponen potenciales aplicaciones de nuestro programa.

EFEITOS DE UM PROGRAMA PERSONALIZADO NOS COMPORTAMENTOS OBSERVADOS E PERCEBIDOS DOS TREINADORES

PALAVRAS-CHAVE: Treino, Aconselhamento, Definição de Objetivos, Metodologias de caso único, Basquetebol.

RESUMO: O objetivo do presente estudo é avaliar uma intervenção baseada nos princípios do *Coach Effectiveness Training* (CET) através de dois estudos de caso. Dois treinadores de basquetebol selecionaram 3 comportamentos - objetivo a melhorar. A avaliação comportamental revelou que o Treinador 1 conseguiu mudanças positivas nos 3 comportamentos - objetivo. O Treinador 2 melhorou em dois dos 3 comportamentos que definiu como objetivo. Estas mudanças nos comportamentos dos treinadores foram, na sua maioria, percebidos pelos seus jogadores na fase de avaliação. Concretamente, as percepções dos jogadores do Treinador 1 indicam um aumento evidente de Animo Geral e Animo após o Erro, e as percepções dos jogadores do Treinador 2 indicam uma clara melhoria de Animo Geral, Reforço e Instrução Técnica ao Erro. Os resultados são discutidos com base nos princípios do CET e são apresentadas propostas de potenciais aplicações do nosso programa de intervenção.

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