Original Article

Differences between tactical/technical models of coaching and experience on the instructions given by youth soccer coaches during competition

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Abstract:

The aim of this study was to compare the instructions that coaches deliver to their youth soccer players in competition, depending on their experience and model of coaching. The non-probabilistic sample was made up by 10 volunteer youth soccer male coaches (from 25 to 44 years old, and from four to 15 years of experience in soccer). Eighteen coaches of several Andalusian soccer clubs were interviewed, and finally 10 of them were willing to participate in the study. One regional competition match for each coach was recorded, which was a total of 10 matches and 932 minutes analyzed. The young players who participate in this study were between 14 to 18 years old, and they were a total of 125. Qualitative (inducing thematic categories from the transcribed instructions) and quantitative (comparing the independent variables) methodologies were used. Twenty-three categories grouped in seven dimensions were identified. The results showed that the experience and the model of coaching (tactical approach or technical approach) have an influence on coaches' instructions to their players in competition, mainly in emotional and tactical dimensions. The appearance of non-desirable instructions in the youth soccer setting was discovered, with higher frequency in less experienced and technical coaches. Some recommendations to change these results are suggested.

Key Words: Youth- qualitative analysis- positive youth development- coaching

Introduction

The majority of the youth population practices some sport discipline in scholar ages. This is, among other reasons, because adolescence is a vital time for students to seek out belonging and social interaction (Donaldson & Ronan, 2006), and it is natural that many young people will be attracted to sport participation. From 35-45% to 65-70% of Spanish youth aged between 14 to 18 years old, the same age as the participants of this study, are involved in Organized Sports Activities (Consejo Superior de Deportes, 2011). This means between three and four million young Spanish people are active in sports. In particular, according to the data of the Royal Federation of Spanish Soccer, the number of youth signed up for soccer programs is over half a million (around 700.000).

One of the keys of continuity in youth sport practices is the interaction with their coaches. It has been confirmed as a strong determinant in continued sport participation (Horn, 2002; Turman, 2003). Coaches, even more than teachers, could foster positive environments for youth in the sport context, due to the intrinsic motivation that exists around this activity for children. However, the coaches can produce the opposite effect by showing non-desirable behaviors (Raakman, Dorsch, & Rhind, 2010).

Instructions have been defined as one of the most important aspects of the coach's behavior in the relationship between coach and athlete (Horton, Baker, & Deakin, 2005). The content of the instructions and the way in which they are delivered are the main ways to influence the players (Keegan, Harwood, Spray, & Lavalley, 2009). Nevertheless, these instructions depend on the personal characteristics of the coach and also on his behavioral model in his interaction with the players (Vaněk, 1984).

On one hand, it is confirmed that the experience that coaches have in sport training has a great influence on the type of relationship they have with their athletes and on the instructions that they deliver to them. In general, a coach's higher experience implies a higher learning and a better adaptation of their players, as well as a more satisfactory personal experience in the sport (Schempp, McCullick, & Mason, 2006). The less experienced coaches are centered on the behavior and control of their athletes, whereas experts increase the time involved in applying learning tasks and leave more time to players to practice and improve their abilities, centered on decision-making in the game (Jiménez, Lorenzo, & Ibáñez, 2009). Therefore, the accumulated experience of the coaches throughout their years of training is a decisive factor in their professional development

(Culver & Trudel, 2006). The experience as coach and as a player helps them better understand the thinking and concerns of the players during the competition (Trudel, 2006), and it may have an influence on their instructions.

On the other hand, the model of coaching used by coaches during the learning and training process also has an influence on the interaction between coach and athlete (Viciana & Zabala, 2004). Essential characteristics of each model, such as the organization and structure of the tasks, just like the instructions that coaches deliver to their players during competition and training, are different from one model to another. There are two main trends in the classification of coaching models in literature. The first, is centered on decision-making and tactic learning, called the tactical model, tactical games, game sense, conceptual-based games or teaching games for understanding (Griffin, Brooker, & Patton, 2005); and the second is centered on the coach, content and technical abilities of the players (technical model).

The tactical model approach (TAM) is a student-centered model that emerged from the situational learning theory in physical education applied to sport (Kirk & McPhail, 2002). The coaches are based on learning by the guiding and discovery of solutions throughout the game, so as to develop them in a great variety of play contexts. Their way to achieve strategy learning is to promote the participation and to positively motivate the responses of the players. This is a reflection model where the players need to investigate the best solutions of a motor problem, depending on the factors of the context. This model develops “smarts” players who are able to apply their skills in a variety of performance situations, making them more responsible (Holyoak, 1991). On the other hand, the technical model approach (TEM) is centered on content and coach direction and control, representing the traditional way to teach or train in a sport center. The coaches focus their instructions on the demonstration and prescription, providing the learner with a visual or criterion model for the desired movement pattern and the way (speed, form and accuracy) to carry it out (Hodges & Franks, 2002). The situations employed to learn usually are closed and instructional. The motivation is oriented to avoid inadequate responses, and for this reason, the instructions are usually more negative than in a tactical model.

Due to the interaction between players and coaches being bidirectional (Smoll & Smith, 1989), the influences between the model of coaching and the essential instructions of that model also influence the behavior and the comprehensive training of the players. Essentially, models centered on higher emotional support and less psychological pressure about the mistakes made by the players in competition are related to higher intrinsic motivation (Weiss & Fretwell, 2005), higher perception of competence (Fredricks & Eccles, 2002) and enjoyment of the athletes (Leff & Hoyle, 1995).

As the majority of the previous studies about coaches' behavior and instructions have been carried out using certain observational systems of behavior (Sousa, Cruz, Torregrosa, Vilches, & Viladrich, 2006) and questionnaires (Guivernau & Duda, 2011), we proposed to realize our study with a different methodology from the beginning. Using as a data source the own instructions of coaches in competition, researches created a system of categories induced from the transcription of these instructions to analyze possible differences between more and less experienced coaches, and between those who had a TAM approach and TEM approach model of coaching during competition. This methodology gives a different way to approach the same focus of research as other studies, but using the whole communication of youth soccer coaches in competition instead of opinions collected through a survey, giving higher reliability and from a necessary perspective.

The aim of our study was to compare the content of the instructions that coaches deliver to their youth soccer players depending on their experience and model of coaching. The hypothesis, due to evidence stated from the studies above, was that more experienced coaches will have a higher frequency of desirable categories of instruction (more positive and more centered on learning and the team [collective] game) than less experienced coaches. Equally possible, coaches with a tactical model approach would be centered on reflexive and strategic questions of the game, supporting their interventions in the positive motivation of the athletes. However, coaches with a technical model approach would be centered on an instructive model and in error correction, supporting their instructions in a less positive motivation.

Method

Participants

The sample, non probabilistic (Hernández-Sampieri, Fernández-Collado, & Baptista, 2003), was made up by 10 volunteer youth soccer male coaches. Eighteen coaches of several Andalusian soccer clubs were interviewed, and finally 10 of them were willing to participate in the study. This is because there is certain reticence to this kind of study, where the coaches feel that they are being evaluated or spied on in their management of the team. Regarding the aim of the study, we were talking to the coaches about the procedure we were going to use, recording their instructions in competition, and providing feedback to them in order to improve the quality of these instructions throughout the following competitions. One regional competition match for each coach was recorded, which was a total of 10 matches and 932 min. analyzed. The young players who participate in this study were between 14 to 18 years old, and they were a total of 125.

A brief initial interview was applied to know the main characteristics of each participant coach, which we show in Table 1: age, model of coaching-teaching (TAM approach or TEM approach), experience in soccer

coaching, and age of their players. The coaches were 25-44 years old, they had between 4-15 years of experience in coaching, and five of them had a TAM approach style of communication with their athletes and the other five had a TEM approach.

Table 1. Characteristics of the coaches of the sample

Coach	Age (years)	Model of coaching	Experience coaching (years)	of Players age (years)
1	44	Tactical model	15	14-15
2	31	Tactical model	8	14-15
3	35	Tactical model	11	14-15
4	25	Technical model	4	16-18
5	29	Technical model	5	14-15
6	37	Tactical model	10	14-15
7	27	Technical model	5	14-15
8	40	Technical model	7	16-18
9	41	Tactical model	12	14-15
10	39	Technical model	6	16-18

Instruments

In order to analyze the coaches' instructions, a mutually exclusive thematic categories system was created, following a deductive-inductive process. It was carried out according to the procedures consigned by the grounded theory (Glasser & Strauss, 1967; Holton & Glaser, 2012). Based on previous research in volleyball and basketball, to make contact with the thematic instructions of the coaches (Moreno & Del Villar, 2004; Sáenz-López, Ibáñez, Giménez, Sierra, & Sánchez, 2005), we designed a new system of categories adapted to the instructions of youth soccer coaches. Afterwards, the categories' system from the transcriptions of the coaches' instructions obtained during the competitions were induced in the following phases (Goetz & Lecompte, 1984; Miles & Huberman, 1984): (a) read the whole text; (b) define thematic categories induced from the text; (c) discussion with experts in soccer and qualitative data analysis (two national soccer coaches, two experts in qualitative data analysis and the main researcher of this study); (d) reconceptualization, refining or changing the categories (suppressing, adding, and modifying the definition of the categories emerged); (e) coding a partial text (to discuss the problems with the coding and to come to an agreement for the final coding: second depuration of the categories' system); (f) establishing a final system of categories to apply; (g) and coder training (two sessions were realized to reach a good reliability intra-coder).

The categories' system was composed by 23 thematic categories grouped into six dimensions. We checked the stability of the codification using the categories' system by a unique experienced coder throughout two analyses of 100 text lines chose randomly from the instructions of the coaches. These codifications were made separately one week apart. The agreement of the coding was up 90% (Anguera, 1988).

The first dimension was called *Emotional* and was composed by seven categories: (a) positive motivation (the coaches try to reinforce the behavior of their players during the competition with the aim to cheer up their mood and provide positive feedback), (b) negative motivation (the coaches try to contain non desirable behaviors of their players or condemn explicitly their actions), (c) complaints (the coaches regret or complain about actions of the game, and usually were accompanied by negative assessment), (d) swearwords (the coaches say profanities during the match), (e) tolerance (the coaches call for calmness in the players in order to promote correct actions and thinking), (f) incite aggressions (the coaches demand that the players take physical actions against the opposite players, fostering certain aggressiveness during the game), (g) responsibility (the coaches ask to their players to be responsible in their actions and promote reflection about the consequences that they cause).

The second dimension was called *Technique* and it was composed by two categories: (a) kicking (the coaches refer to a technical kicking action that the players would do or could have done in other way), (b) general technique (all the references that the coaches made about any other aspect refer to technique).

The third dimension was related to *Tactic*. The emergent categories within this dimension included: (a) support (the coaches refer to actions that their players should do in order to help other team mates), (b) movements (the coaches ask their players to move across the field), (c) positioning (the coaches ask their players to change to a better position on the field), (d) incite reflection (the coaches request that their players reflect on their actions during the game, promoting reasoning ability regarding the game conditions), (e) covering (the coaches refer to this tactical action in defense, which is related to the forward player), (f) outside (references of the coach related to the outside actions), (g) attention (the coaches ask to their players to be always ready, to act and to pay attention to the actions of the game and to the movements of the rest of the players), (h) other

strategies (any other instruction delivered by the coaches referring to group strategies of the team and not included in the above categories).

The next dimension, *Physical effort*, has only one category with the same name, in which the coaches demand from the players a high level of mobility on the field, in order to increase the level of physical effort.

A fifth dimension was called *Officials references* and it was composed by two categories: (a) accept referee's decisions (the coaches express positive comments to the referee's decisions during the game and demonstrate their agreement with them), and (b) protest referee's decisions (the coaches declare explicitly their disagreement with the decisions made by the referee during the game).

The sixth dimension was called *Other aspects of the game*, that included two categories: (a) time (references made by the coaches regarding to the time of the match), and (b) result (the coaches address a player or the whole team referring to result of the match).

Finally, a category called *Not related to match* was created to include all the coaches' comments addressing other members of the bench or even to the public not related to the match.

Two video cameras, and a wireless microphone to record the audio (coaches' voices) were also used to register the instructions of the coaches during the competitions. The video cameras helped us to code a thematic category in case of doubt during the coding, because sometimes the instructions were accompanied by a gesture or movements that clarified the meaning of the "short words" they delivered to the players (e.g., the words "come on" could mean positive motivation or a physical effort solicitation to the players, and if it's companied by a thumb up the meaning was positive motivation, but if it was companied by a emphatic (vigorous/firm) movements of the arm indicating movements and speed to act, it was coded as physical effort).

Design and variables of the study

On one hand, we used an interpretative-descriptive design with a measurement of each coach analyzed in depth, and using the categories' system described above. This phenomenological and interpretative design allowed us to make a structure of the complex knowledge that is an essential characteristic of human thinking (Erickson, 1989). At the same time, the interpretation of the qualitative data that belongs to this paradigm allows us to discover facts that are hidden within the technical labor of the coaches throughout the content analysis of their instructions. On the other hand, a comparative design between coaches with different sample characteristics (model of coaching and experience in soccer coaching) was also used.

Therefore, the variables used in this study were: (a) the 23 categories of the system described above as dependent variables, and (b) the model of coaching (TEM approach or TAM approach) used by the coaches with their team, and the experience (less experienced coaches with less than 10 years of experience, and more experienced coaches with 10 or up to 10 years of experience) as independent variables.

Procedure

This study was realized during the regional soccer season in four phases: the first one from September to December, in which the clubs and coaches were contacted to confirm their participation and collaboration in this research. The researchers were introduced themselves with the intention of realizing a study of youth sport and we committed to keeping the anonymity in it. Afterwards, we asked to the coaches to participate in the study and asked their permission to enter in their training sessions and to record the instructions during the competition.

In the second phase, from January to June, we made the data collection. To avoid the influence of the measurement instruments (video camera and microphone) on the coaches, we repeated the protocol of measurement throughout five training sessions before the competition.

From July to December we transcribed and coded the data with the software *Analysis Qualitative Data 5.7* for Windows. We recorded and transcribed one match each coach, with the objective to have a variety of data belonging to different coaches, with different characteristics of experience and model of teaching-coaching. This allows us to have at the end a mean of data closer to the variety of situations that define this stage of youth soccer practice. At the same time, we had the special features of each of the ten coaches studied to associate with the type of communication that they developed with their players during the game.

In the fourth phase we realized the analysis of the data collected. This analysis was carried out according to Miles and Huberman (1984). We reduce the whole data into representative codes of the thematic categories from the transcribed texts, using the instruction of the coach as unit of analysis.

Statistical analysis

Frequency counts analysis of the categories through the software *Analysis Qualitative Data five 5.7* for windows was realized. An inferential statistic (chi square analysis) in order to compare the grouped coaches of the sample according to the independent variables (model of coaching and years of experience) was also applied, using the SPSS version 15.0 for Windows (SPSS® Inc., Chicago, IL). The statistical significance level was set at $p < 0.05$.

Results

Frequency means, minimums and maximums, and chi square tests results for each category that emerged from the content analysis of the coaches' instructions in competition are presented in Table 2 (comparing less and more experienced coaches) and Table 3 (comparing coaches with a TAM approach and coaches with a TEM approach).

Table 2. Descriptive and comparative results of the frequency of categories depending on the experience of the coaches of the sample

Dimensions	Instructions	Experience of coaching				Chi-square test	
		< 10 years (n=6)		≥ 10 years (n=4)		χ^2	<i>p</i>
		<i>f</i>	Range	<i>f</i>	Range		
<i>Emotional</i>	Positive motivation	164.7	82-214	215.7	206-226	6.827	.009
	Negative motivation	44.8	20-70	16.2	7-24	13.787	<.001
	Complaints	166.8	118-205	85.5	48-132	25.993	<.001
	Swearwords	153.2	108-216	50.0	18-98	52.261	<.001
	Tolerance	28.3	6-44	40.5	28-58	2.449	.118
	Incite aggression	6.3	2-16	.5	0-2	3.571	.059
	Responsibility	3.8	0-7	10.0	2-16	2.571	.109
<i>Technique</i>	Kicking	72.8	25-112	54.7	13-90	2.531	.112
	General techniques	56.8	30-90	29.2	2-47	9.116	.003
<i>Tactic</i>	Support	31.0	15-42	58.7	48-72	8.711	.003
	Movements	225.2	201-288	274.0	252-302	4.812	.028
	Positioning	50.7	38-70	49.7	36-61	.010	.921
	Incite reflection	26.8	17-44	41.2	28-60	2.882	.090
	Covering	88.2	59-110	81.7	62-105	.212	.645
	Outside	34.2	22-41	22.2	10-39	2.571	.109
	Attention	33.0	23-44	28.0	18-42	.410	.522
	General strategy	32.7	27-42	18.0	11-28	4.412	.036
<i>Physical Effort</i>	Physical effort	197.2	165-255	187.7	172-201	.210	.646
<i>Other aspects of the game</i>	Time	29.8	26-40	11.5	5-23	7.714	.005
	Result	18.3	8-28	10.5	4-21	1.690	.194
<i>Officials references</i>	Accept referee's decisions	1.3	0-4	2.2	0-5	.333	.564
	Protest referee's decisions	85.2	56-112	47.5	12-89	10.293	.001
<i>Not related to match</i>	Not related to match	48.7	28-67	34.0	24-44	2.711	.100

Note: *f* = refers to the mean of the frequency of the number of times that the categories appear in the instructions of that group of coaches during the match.

Table 2 shows that experienced coaches had statistically significant higher values of positive motivation than less experienced coaches ($p = .009$). Meanwhile, less experienced coaches had significant higher values of negative motivation, complains, and swearwords ($p < .001$), as well as a marginally significant higher frequency of incite aggression ($p = .059$). However, for tolerance and responsibility categories statistically significant differences were not found ($p > .05$).

The instructions related to general techniques during the match, belonging to technique dimension, were also found different, in favor of less experienced coaches (general techniques $p = .003$). In the tactic dimension some of the categories that compose it were found different: support to other mates of the team ($p = .003$); movements ($p = .028$); and general strategy ($p = .036$), having significantly higher values within more experienced coaches. Positioning, incite reflection, covering, outside, and attention showed no differences ($p > .05$). There was no difference in physical effort's instructions ($p > .05$), but yes in the references to the time of the game ($p = .005$) and in the protests that the coaches made to the officials ($p = .001$), in both cases with higher values for less experienced coaches.

Table 3 shows the main results regarding the model of coaching approach. The same as the experience variable, emotional dimension had the main changes. Five of the seven categories were different between coaches with a TAM or TEM approach. The positive motivation category was significantly more frequent in coaches with a TAM approach ($p = .009$). Whereas negative motivation ($p = .001$), complains ($p < .001$), swearwords ($p < .001$) and incite aggression ($p = .034$) had significant higher values for coaches with a TEM approach.

Table 3. Descriptive and comparative results of the frequency of categories depending on the model of coaching used by the coaches of the sample

Dimensions	Instructions	Model of coaching				Chi-square test	
		Tactical model (n=5)		Technical model (n=5)		χ^2	Sig.
		<i>f</i>	Range	<i>f</i>	Range		
<i>Emotional</i>	Positive motivation	210.2	188-226	160.0	82-214	6.757	.009
	Negative motivation	20.2	7-36	46.6	20-70	10.881	.001
	Complaints	96.8	48-142	171.8	110-205	20.911	<.001
	Swearwords	62.0	18-110	161.8	108-216	44.643	<.001
	Tolerance	40.8	28-58	25.6	6-44	3.358	.067
	Incite aggression	1.2	0-4	6.8	2-16	4.500	.034
	Responsibility	8.4	2-16	4.2	0-7	1.333	.248
<i>Technique</i>	Kicking	54.2	13-90	77.0	25-112	4.038	.044
	General techniques	29.4	2-47	62.2	31-90	11.967	.001
<i>Tactic</i>	Support	55.4	42-72	28.8	15-40	8.048	.005
	Movements	265.6	232-302	223.8	201-288	3.600	.058
	Positioning	52.2	36-62	48.4	38-70	.610	.689
	Incite reflection	41.8	28-60	23.4	17-30	5.554	.018
	Covering	81.4	62-105	89.8	59-110	.474	.491
	Outside	23.8	10-39	35.0	22-41	2.051	.152
	Attention	28.0	18-42	34.0	23-44	.581	.446
	General strategy	19.8	11-28	33.8	27-42	3.630	.057
<i>Physical Effort</i>	Physical effort	183.2	165-201	203.6	168-255	1.140	.286
<i>Other aspects of the game</i>	Time	14.8	5-28	30.2	26-40	5.000	.025
	Result	13.6	4-26	16.8	8-28	.290	.590
<i>Officials references</i>	Accept referee's decisions	2.0	0-5	1.4	0-4	.333	.564
	Protest referee's decisions	49.2	12-89	91.0	68-112	12.600	<.001
<i>Not related to match</i>	Not related to match	37.2	24-50	48.4	28-67	1.424	.233

Note: *f* = refers to the mean of the frequency of the number of times that the categories appear in the instructions of that group of coaches during the match.

The two categories belonging to the technique dimension (kicking and general techniques) were also more frequently used by coaches with a TEM approach ($p = .044$ and $p = .001$, respectively). On the other hand, two of the seven categories belonged to tactic dimension: support ($p = .005$), and incite reflection during the game ($p = .018$) were significantly different and higher within coaches with a TAM approach. Even the categories of movements and general strategy were almost different ($p = .058$; $p = .057$) in favor of coaches with a TAM approach as well. Positioning, covering, outside and attention were not different regarding the model of coaching ($p > .05$).

The references to time ($p = .025$) within other aspects of the game dimension, and the protests to the decisions made by the referee ($p < .001$) within officials references dimension were found different and higher for coaches with a TEM approach. The categories of time and acceptance of referee's decisions were not different ($p > .05$).

Discussion

The amount of accumulated experience and the form of teaching-coaching used during the training sessions by youth soccer coaches affect the type of instructions they deliver in competition. This result is in agreement with the conclusions provided by Keegan, Harwood, Spray, and Lavallee (2009) and Vaněk (1984), who established the influence of personal characteristics of coaches on the manner in which they develop communication with their players. We have verified this influence in our research starting from the data collected in the field, confirming the relationship between the experience of coaching, the model of coaching, and the instructions delivered by coaches in competition (Culver & Trudel, 2006; Viciania & Zabala, 2004). Moreover, we confirmed the sense of the hypothesis made in the light of the literature reviewed. More experienced coaches and coaches centered in a TAM approach showed higher frequencies of desirable categories (in order to improve the learning process, the effectiveness of that learning, and to increase the benefits derived

from the psychological point of view) than less experienced coaches and those who were centered in a TEM approach of coaching. These results are mainly reflected in the emotional dimension and in the categories of the sport group (technique and tactic dimensions).

The *emotional* dimension was the more affected group of the categories depending on the independent variables we took into account (experience and model of coaching). Experienced coaches and coaches within the TAM approach are centered in a positive motivation, and they revealed a more positive character during their instructions (lower frequency of the categories such as swearwords, complains, and even incite aggressions). Other research had confirmed the relationship between experience of coaching and these coaches' emotional stability, which is perceived by the athletes showing higher values of likeability and lower levels of stress (Alexander, 2008). On the other hand, as we predicted in our hypothesis, a negative motivation predominated within coaches with the TEM approach, centering their emotional feedback in correcting the technical errors of the players during the game. Moreover, higher levels of frequency in non-desirable categories (swearwords, complains and incite aggressions) appear as typical behaviors of less experienced coaches and the TEM approach coaches. Due to the results of this study, it seems that coaches within a TEM approach tend to have a tense emotional situation in competition. Even the dimension of *Officials references* confirms this finding because the TEM approach coaches showed significant higher frequencies of protests to the referees' decisions during the game. These negative emotional responses of the coaches toward the different situations in competition and the way they perform them could have an influence on players' motivation (Keegan, Spray, Harwood, & Lavalley, 2010), and it supposes a negative transmission of values (Brustad, 1993). Moreover, those instructions create an emotional climate around sporting involvement that affect the players' behavior (Keegan, Spray, Harwood, & Lavalley, 2010), inciting them to act in a bad way during the game. It has been studied by other researchers introducing the concept of "background anger" within the youth sport environment, where the presence of a verbal conflict between two or more adult individuals, observed by children as bystanders, could cause negative behaviors and emotional instability (Omli & La Voi, 2009). Moreover, worrisome studies state that the aggressive behaviors of children could continue (Farrington, 1991), and that their environment affects this continuity during their adult life (Eron & Huesmann, 1990).

Regarding the sport categories (*technique* and *tactic* dimensions), coaches who had a TEM approach had a higher frequency of teaching kicking and general techniques, demonstrating during the competition the essential focus of their teaching style. Coaches within the TAM approach of teaching showed higher frequency of categories corresponding to the tactic dimension, which is also related to the way of teaching they use during their training sessions. Recent evidences have stated that team sports based on the interaction of many factors during the game (e.g., positions of the mates and opponents, the ball, distances, pass lines or group actions) are more effective to be taught in an problem-solving way, instead of being centered in technique and the demonstration of several closed patterns of movements (Williams & Hodges, 2005). Categories such as incite reflection of the plays during the game or general strategies are good examples of this finding. It is confirmed that coaches with a TAM approach of coaching are promoting the correct instructions and verbal information during competition to increase the benefits to the sport learner, and to avoid constraining the learning process of the sport. This is based on the principle that it is more effective for the learners to see and understand the effects of the movements, passes and kicking, than to focus on a particular pattern of movement (Hodges, Hayes, Eaves, Horn, & Wiliams, 2004).

According to the dimension of the *Officials references*, as we commented above, less experienced coaches and those who use the TEM approach, showed higher levels of protests to referees' decisions during the game. This negative behavior is considered as the typology of an example of "coaching transgressions style" (Raakman, Dorsh, & Rhind, 2010) and could cause the players to reproduce those behaviors and to be more likely to aggress, if they think their coach supports these kinds of actions (Givernau & Duda, 2002). Although teaching and coaching are parallel functions with differences between them, the educational side of both of these professions should be coordinated and should be working in the same direction, even more so when coaches are training with school aged players (Bergmann, 2000; Staffo, 1992). Therefore, coaches need to become aware of this situation in order to change these indexes of non-desirable instructions in the future. We have the expectation of modifying these non-desirable behaviors from studies that have already changed the behavior of coaches with experimental interventions, improving the enjoyment and experiences of their players (Mora, Cruz, & Torregrosa, 2009; Sousa, Cruz, Torregrosa, Vilches, & Viladrich, 2006).

The abstraction level of the thematic categories induced from the coaches' instructions presumes a subjective process that depends on the researcher. The systematic process carried out to induce the category system was based on the explicit themes that appear in the coaches' instructions, avoiding the interpretation of the researcher in order to minimize the error (Goetz & Lecompte, 1984; Miles & Huberman, 1984). Nevertheless, during this process there is always a prior cognitive and conceptual component of the researcher, which affects the categories definition. Therefore, more than a limitation of this study, we consider it as an essential component of this methodology, of which we need to be aware. On the other hand, although the size of the sample is limited, Sherman and Hassan (1986) noted that within the behaviors and instructions of the sample

there is always a general component that has certain stability, which is useful for us to conclude in our findings.

Conclusions

The findings of our study showed that the experience of coaching and the model of coaching approach (tactical or technical) have an influence in coaches' instructions to their players in competition. We discovered the appearance of non-desirable communications in all coaches (although less experienced and TEM approach coaches had a higher frequency of them) to their athletes in the youth soccer setting, which we need to change in the future. These instructions build a negative atmosphere that operates as a predictor of violent behavior (Pelegrín Muñoz, 2002). Focusing on discussing and reasoning the moral issues that could help make them aware of this problem, enables coaches and players to practice different situations in pre-service training (e.g., within stressed contexts, public pressure and unfavorable scores). In light of the findings of this study, supplementing the pre-service training with peer coaching (with more experienced coaches), and training them in a tactical model approach (centered in the experiences of their players, promoting the knowledge and reflection of the game, and making the youth soccer players autonomous in their sport and moral decision-making) could be an effective starting point. Future studies that take into consideration interventions in order to modify the coaches' instructions are required.

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References

- Alexander, A. (2008). *Coaching influences on motivation, stress, and personality as perceived by student-athletes*. University of Tennessee: Chattanooga.
- Anguera, M. T. (1988). *Observación en la escuela* [Observation in school]. Barcelona: Graó.
- Beergmann, S. (2000). An examination of the relationship between coaching and teaching. *Quest*, 52(1), 79-88.
- Brustad, R. (1993). Youth in sport: Psychological considerations. In R. Singer, M. Murphey & L. K. Tennant (Eds.), *Handbook of research in sport psychology* (pp. 695-717). New York: Macmillan.
- Consejo Superior de Deportes (2011). *Estudio de los hábitos deportivos de la población escolar en España* [Study of sporting habits of schoolchildren in Spain]. Ministerio de Educación, Cultura y Deporte. URL (last checked 29 June 2013) https://sede.educacion.gob.es/publiventa/descargas.action?f_codigo=14797&codigoOpcion=3
- Culver, D. M., & Trudel, P. (2006). Cultivating coaches' communities of practice. In R. Jones (Ed.), *The Sports Coach as Educator: Re-conceptualising sports coaching* (pp. 97-112). London: Routledge.
- Donaldson, S., & Ronan, K. (2006). The effects of sports participation on young adolescents' emotional well-being. *Adolescence*, 41(162), 369-389.
- Erickson, F. (1989). Qualitative methods in research on teaching. In M. C. Witrock (Ed.), *Handbook of Research on Teaching 3rd ed.* (pp. 119-161). New York: Mcmillan.
- Eron, L. D., & Huesmann, L. R. (1990). The stability of aggressive behavior: Even unto the third generation. In M. Lewis & S. M. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 147-156). New York: Plenum.
- Farrington, D. P. (1991). Childhood aggression and adult violence: Early precursors and later life outcomes. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 5-30). Hillsdale, NJ: Erlbaum.
- Fredricks, J. A., & Eccles, J. S. (2002). Children's competence and value beliefs from childhood through adolescence: Growth trajectories in two male-sex-type domains. *Dev Psychol*, 38(4), 519-533.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of Grounded Theory: Strategies for qualitative research*. New York: Aldine.
- Goetz, J. P., & LeCompte, M. D. (1984). *Ethnography and qualitative design in educational reseach*. New York: Academic Press.
- Griffin, L. L., Brooker, R., & Patton, K. (2005). Working toward legitimacy: Two decades of teaching games for understanding. *Phys Educ Sport Pedagog*, 10(3), 213-223.
- Guivernau, M., & Duda, J. L. (2002). Moral atmosphere and athletic aggressive tendencies in young soccer players. *J Moral Educ*, 31(1), 67-85. doi: 10.1080/03057240120111445
- Hernández Sampieri, R., Fernández Collado, C., & Baptista, P. (2003). *Metodología de investigación* [Research methodology]. México: McGraw Hill.
- Hodges, N. J., & Franks, I. M. (2002). Modeling coaching practice: The role of instruction and demonstration. *J Sports Sci*, 20(10), 1-19.
- Hodges, N. J., Hayes, S. J., Eaves, D., Horn, R., & Williams, A. M. (2004). Teaching soccer skills through ball-trajectory matching strategies. *J Sports Sci*, 22(6), 567-568.

- Holton, J. A., & Glaser, B. G. (Eds.) (2012). *The Grounded theory review methodology reader: Selected papers 2004-2011*. Mill Valley, CA: Sociology Press.
- Holyoak, K. (1991). Symbolic connectionism: Toward third generation theories of expertise. In K. A. Ericsson & J. Smith. (Eds.), *Toward a general theory of expertise* (pp. 301-336). Cambridge: Cambridge University Press.
- Horn, T. S. (2002). *Advances in Sports Psychology*. Champaign, Illinois: Human Kinetics.
- Horton, S., Baker, J., & Deakin, J. (2005). Experts in action: A systematic observation of 5 national team coaches. *Int J Sport Psychol*, 36, 299-319.
- Jiménez, S., Lorenzo, A., & Ibáñez, S. (2009). Development of expertise in Spanish elite basketball coaches. *Rev Int Cienc Deporte*, 17(5), 19-32.
- Keegan, R. J., Harwood, C. G., Spray, C. M., & Lavalley, D. E. (2009). A qualitative investigation exploring the motivational climate in early career sports participants: Coach, parent and peer influences on sport motivation. *Psychol Sport Exerc*, 10(3), 361-372.
- Keegan, R., Spray, C., Harwood, C., & Lavalley, D. (2010). The motivational atmosphere in youth sport: Coach, parent, and peer influences on motivation in specializing sport participants. *J Appl Sport Psychol*, 22(1), 87-105.
- Kirk, D., & MacPhail, A. (2002). Teaching games for understanding and situated learning: Rethinking the Bunker-Thorp model. *J Teach Phys Educ*, 21(2), 117-192.
- Leff, S. S., & Hoyle, R. H. (1995). Young athletes' perceptions of parental support and pressure. *J Youth Adolescence*, 24(2), 187-203.
- Miles, M., & Huberman, A. (1984). *Qualitative data analysis*. London: SAGE Publications.
- Mora, A., Cruz, J., & Torregrosa, M. (2009). Effects of a training program in communication styles of basketball coaches. *Rev Psicol Deporte*, 18(suppl.), 299-302.
- Moreno, M. P., & Del Villar, F. (2004). *El entrenador deportivo. Manual práctico para su desarrollo y formación* [The sports coach. Practical guidelines for the development and training]. Barcelona: INDE Publicaciones.
- Omlil, J., & La Voi, N. M. (2009). Background anger in youth sport: A perfect storm? *J Sport Behav*, 32(2), 242-260.
- Pelegrín Muñoz, A. (2002). Conducta agresiva y deporte [Aggressive behavior and sport]. *Cuad Psicol Deporte*, 2(1), 39-56.
- Raakman, E., Dorsch, K. & Rhind, D. (2010). The development of a typology of abusive coaching behaviours within youth sport. *International J Sport Sci Coach*, 5(4), 503-515.
- Sáenz-López, P., Ibáñez, S. J., Giménez, J., Sierra, A., & Sánchez, M. (2005). Multifactor characteristic in the process of development of the male expert basketball player in Spain. *Int J Sport Psychol*, 36(2), 151-171.
- Schempp, P. G., McCullick, B., & Mason, I. S. (2006). The development of expert coaching. In R. Jones (Ed.), *The sports coach as educator: Re-conceptualising sports coaching* (pp. 145-161). London: Routledge.
- Sherman, M., & Hassan, J. (1986). Behavioral studies in youth sport coaches. In M. Piéron & G. Graham (Eds.), *The 1984 Olympic Scientific Congress Proceedings (Vol. VI)*. Champaign: Human Kinetics.
- Smoll, F., & Smith, R. (1989). Leadership behaviors in sport: A theoretical model and research paradigm. *J Appl Soc Psychol*, 19(18), 1552-1551.
- Sousa, C., Cruz, J., Torregrosa, M., Vilches, D., & Viladrich, C. (2006). Evaluación conductual y programa de asesoramiento personalizado a entrenadores (PAPE) de deportistas jóvenes [Behavioral assessment and individual counseling programme for coaches of young athletes]. *Rev Psicol Deporte*, 15(2), 263-278.
- Staffo, D. (1992). Clarifying physical education teacher-coach responsibilities: A self-analysis guide for those in dual roles. *Phys Educator*, 49(1), 52-56.
- Trudel, P. (2006). What the coaching science literature has to say about the roles of coaches in the development of elite athletes. *International J Sports Sci Coach*, 1(2), 127-130. doi: 10.1260/174795406777641221
- Turman, P. D. (2003). Coaches and cohesion: The impact of coaching techniques on team cohesion in the small group sport setting. *J Sport Behav*, 26(1), 86-103.
- Vaněk, M. (1984). *Psychologie sportu* [Sport psychology]. Prague: Olympia.
- Viciano, J., & Zabala, M. (2004). El papel educativo y la responsabilidad de los entrenadores deportivos. Una investigación sobre las instrucciones a escolares en fútbol de competición. *Rev de Educ*, 335, 163-187.
- Weiss, M. R., & Fretwell, S. D. (2005). The parent-coach/child-athlete relationship in youth sport: Cordial, contentious, or conundrum? *Res Q Exerc Sport*, 76(3), 288-305.
- Williams, A. M., & Hodges, N. J. (2005). Practice, instruction and skill acquisition in soccer: Challenging tradition. *J Sport Sci*, 23(6), 637-650.