Analysis of the behavior of volleyball coaches of youth female categories

Jéssica Santos Ferreira Prazeres[1] [iD], Luísa Helena Silva[1] [iD], Leandro Vinhas de Paula[1] [iD],
Juliana Otoni Parma[2] [iD], Mateus Graçano Hamdan[3] [iD], Renato Melo Ferreira[1]* [iD]

ABSTRACT

In this study, we aimed to analyze the behavioral profile of volleyball coaches of youth categories from both the athletes' and the coaches' perspectives. One hundred ten athletes and 18 head coaches and assistant coaches who participated in the 2018 clubs' Brazilian volleyball championship (Campeonato Brasileiro Interclubes de Voleibol) filled the athlete and coach version, respectively, of the Brazilian version of the Coach Behavior Scale for Sport. The reporting of the goal-setting dimension was not aligned between coaches and athletes ($z = 17$, $p = 0.012$, $d = 0.78$), while no differences were found for the other dimensions (physical training and planning, technical skills, mental preparation, personal rapport, and negative rapport). The mismatch between the perceptions of coaches and athletes for the goal-setting dimension may be related to an underestimation or overestimation by coaches or athletes of the team's potential and inadequate coach-athlete communication. Coaches should manage their behavior to clearly state for the athletes their personal and collective goals, avoiding frustration, and promoting more commitment with the set goals, increasing the team's chances of success.
KEYWORDS: Coach behavior, Leadership, Volleyball.

INTRODUCTION

In modern volleyball, the role of each player in the game system is specialized. Each player position (setter, outside hitter, middle hitter, opposite hitter, and libero) demands a specific training program that matches the players' characteristics and the tasks performed during the game (Marques Junior, 2013). For instance, the setter stands out as a cognitive player, with technical, tactical, and psychological skills that usually outperform those of other positions, linking the coach's instructions to the plays executed during the game (Matias & Greco, 2016). Considering these particularities, the coach's role lays in planning teaching/learning situations according to the needs of her/his players, setting team and individual goals, and providing meaningful feedback during the game and the practice contexts (Cheuczuk et al., 2016).

Recently, federations and confederations have focused on promoting high-level coaching qualifications, given the

coach's relevance to athletes' expertise and development (Salmela & Moraes, 2003; Vieira et al., 2015). The coach's role is not restricted to teaching and improving motor skills, and it also includes educating and developing athletes in the social and personal spheres since they directly influence those who are led by them (Salmela & Moraes, 2003). In the present study, we consider the Coaching Model (Côté et al., 1995), which highlights the relation between the central (organization, training, and competition) and peripheric (athlete's and coach's personal characteristics, and contextual factors) components of sports performance. In this framework, the coach's characteristics, the focus of this study, are defined by her/his sources of satisfaction, personal approach to coaching, and evolution of knowledge (Côté et al., 1995). In the swimming context, Ferreira et al. (2012) showed that coaches with more sports success better motivate their teams and provide feedback. To maximize collective performance,

[1]Escola de Educação Física, Universidade Federal de Ouro Preto, EEF-UFOP, Ouro Preto, Brasil
[2]Performance and Exercise Psychophysiology Lab, School of Kinesiology, Auburn University, Auburn, AL
[3]Olympico Club, Belo Horizonte, Brasil
*Corresponding author: Laboratório de Atividades Aquáticas – LAQUA, Escola de Educação Física, Universidade Federal de Ouro Preto, EEF-UFOP, Rua Dois, 110, Ouro Preto – MG, CEP 35400-000, Brasil E-mail: renato.mf@hotmail.com

coaches identify individual or group weaknesses to improve upon them in an orderly manner, optimizing both team's performance and personal skills (Chelladurai, 1990).

In team sports, similar coach characteristics, such as outstanding technical and tactical knowledge, recurrent motivation, and leadership, maximize the chance of achieving a successful coaching career (Hampson & Jowet, 2012). In volleyball, specifically, Zanetti et al. (2008) identified paramount coach characteristics, such as being patient, motivator, persistent, and experienced. Furthermore, Nascimento Junior et al. (2019) show that an optimal coach-athlete relationship enables the athlete to have better focus and individual development, leading to improved team's focus and performance. These results highlight the great role of the coach-athlete relationship for the athlete's development, affecting the multi-annual development of her/his sports career (Ferreira et al., 2012).

Leadership is the ability to influence people to work together to reach common goals and objectives, which is affected by various factors related to the characteristics of the leaders and the ones of those led by them, and to the situational context (Brandão & Valdés, 2005). These factors determine the leadership style to be adopted, whether democratic or autocratic. While the democratic style is people-oriented and encourages others' actions and ideas, the autocratic style is task-oriented and centers power around the leader (Weinberg & Gould, 2017). Effective leadership may impact team members, both positively and negatively. The former is related to providing feedback in the appropriate moments, motivating team members, and setting real and achievable goals. The negative impact, by its turn, is related to making the athletes overly activated before a match, providing improper feedback, and dismissing an athlete from the team after an unplanned outcome, harming the cooperative behavior of the athletes and affecting their sports performance (Brandão & Carchan, 2010; Lameiras et al., 2017).

Assessing the alignment between the self-perception of the coach and the athletes' perception of the coach behavior is of great importance, especially in youth categories, considering that performance on games and championships are partially dependent on this synergy, as suggested by Brandão and Carchan (2010). By analyzing professional adult players, they showed that, for 75% of the athletes, exerting the proper leadership type influences positively and directly their game performance. Also, Nascimento Junior et al. (2019) assessed state-level young volleyball players and suggested that the optimal coach-athlete relationship promotes better development of skills crucial to sports performance. After an extensive bibliographic review, we could not find any articles with the same thematic of coaching behavior on top-level female youth volleyball players, which justified the study's realization (theory and practice).

Given that the coach behavior and the perception of the athletes of this behavior likely interfere with the team's performance, in this study, we aimed to analyze the behavioral profile of volleyball coaches of female youth categories, comparing it to the perception of athletes of different playing positions. This type of information may underly the improvement of factors (e.g., coping), that influence the development of a multi-annual sports career (Pires et al., 2016). Besides, identifying coaches' behavioral profiles and their influences on their athletes can help coaches adopt optimal behavior, promoting their maximal performance. We hypothesize that the coach behavior is perceived similarly by coaches and athletes, regardless of the athlete's playing position.

METHOD

This is a quantitative, exploratory and cross-sectional study.

Participants

We assessed 11 teams, with 110 female volleyball players of youth categories [mean (M) age = 16.27, standard deviation (SD) = 0.77]: 30 middle hitters, 21 setters, 13 liberos, 21 opposite hitters, and 25 outside hitters, with experience [(mean exp = 5,18, SD = 2,11)], and a minimum of 6 months training with the same coach and team, and 18 head coaches and assistant coaches [(M age = 44.33, SD = 9.46)] of teams that participated in the 2018 clubs' Brazilian volleyball championship U18 (Campeonato Brasileiro Interclubes de Voleibol Sub-18).

With a mean sports experience of 20.38 years (SD = 9.33) and a mean of 20.05 years (SD = 9.28) of work in the area of volleyball, the majority (17) of the coaches and assistants hold an undergraduate degree in physical education/sports science, with 5 of those holding a graduate degree. They coach teams of different age categories and report a mismatch between the actual number of hours per week of training (M = 16.70, SD = 8.83) and the number of hours per week that they would like to spend with their teams (M = 20.05, SD = 5.70). All head coaches and assistant coaches have state- or national-level success experiences, with about one-third of them holding an international title. Almost all of them consider their successes in championships as the main accomplishments of their careers.

All coaches and athletes were informed about the objectives, relevance, and methodological procedures adopted in this study. The consent form was signed, and all data were

collected in the championship's host club or at the hotel. The performance in the games could interfere in the study; therefore, all data collection happened before the first round of the championship. Instructions were given individually for each coach and athlete at the moment of data collection; anyone was able to quit the research at any time, without any penalty, and, if they wished, they could also leave any of the questions blank.

This study was approved by the ethics committee from Universidade Federal de Ouro Preto (protocol number: 2.966.208).

Procedures

The coach version (ECT-T) and athlete version (ECT-A) of the Brazilian version of the Coach Behavior Scale for Sport (CBS-S) were used (Silveira, 2005; Moraes et al., 2010; Lobo et al., 2005). The instruments are composed of two parts: anamnesis (age, sex, team, player position, years of experience in this sport) and evaluation of the coach's behavior according to the coach's or athlete's perspective. The latter part is composed of 6 dimensions, distributed in 40 questions each, wherein the frequency of specific behaviors is assessed with a 7-points Likert scale, in which 1 represents "never", and 7 represents "always" (Table 1).

Statistical analysis

The descriptive statistics of each dimension (PT, TS, MP, GS, PR, NR) for each instrument (ECT-T and ECT-A) and for each playing position are described in Tables 2 and 3, respectively. Normality and homogeneity were tested using Shapiro-Wilk (PT, $w=0.771$, $p<0.001$; TS, $w=0.705$, $p<0.001$; MP, $w=0.932$, $p<0.001$; GS, $w=0.795$, $p<0.001$; PR,

Table 1. ECT-A and ECT-T dimensions, definitions, and items composing the instruments.

Dimension	Definition	Items
Physical Training and Planning (PT)	Physical training and planning provided by the coach for practice and competition contexts;	1 – 7
Technical Skills (TS)	Feedback, demonstration and instructions, and advice given by the coach;	8 – 15
Mental Preparation (MP)	Coach involvement in helping the athletes become tougher, more focused, and confident;	16 – 20
Goal Setting (GS)	Coaching involvement in the identification, development, and monitoring of athletes' goals;	21 – 26
Personal Rapport (PR)	Coach is approachable, available, and understanding;	27 – 32
Negative Rapport (NR)	Coach's behavior, such as yelling when in rage, instilling of fear, disregarding of athletes' opinions.	33 – 40

Table 2. Descriptive analysis of the coach behavior scale from the perspectives of the athletes (ECT-A) and coaches (ECT-T) who participated in the 2018 clubs' Brazilian volleyball championship.

Scale		Dimensions					
		PT	TS	MP	GS	PR	NR
[ECT-A]	[$\dot{x} \pm sd$]	5.67±0.75	5.85±0.42	5.25±0.90	5.06±0.57	5.31±0.67	2.94±0.55
	[CV%]	12.75%	6.62%	11.26%	9.82%	12.81%	19.58%
	[Md]	5.96	6.00	5.49	5.06	5.21	2.88
	[Variance]	0,54	0,15	0,38	0,26	0,45	0,32
	[Skewness]	-0,35	1,39	0,63	3,14	1,06	3,33
	[Kurtosis]	-0,82	-0,88	0,15	0,97	0,00	0,78
	[Min; Max]	4,38;6,54	5,07;6,48	4,40;6,62	4,30;6,29	3,98;6,43	1,90;4,18
[ECT-T]	[$\dot{x} \pm sd$]	5.31±2.02	5.99±0.75	5.49±1.07	5.74±0.66	5.48±0.79	2.58±0.92
	[CV%]	40.02%	12.77%	16.99%	10.68%	12.75%	36.24%
	[Md]	6.21	6.12	5.90	5.91*	5.33	2.31
	[Variance]	4.52	0.57	0.92	0.39	0.47	0.81
	[Skewness]	0.26	0.26	2.83	1.41	-0.74	1.97
	[Kurtosis]	-1.13	-0.91	-1.62	-1.05	-0.40	1.21
	[Min;Max]	1.00;7.00	4.38;6.71	3.40;6.60	2.17;4.50	4.17;6.17	1.50;4.50

*represents a significant difference between coaches` and athletes` perspectives ($p < 0.05$).

w=0.797, p<0.001; NR, w= 0.801, p<0.001) and Bartlett's tests (PT, χ^2=117.35, p<0.001; TS, χ^2=135.81, p<0.001; MP, χ^2=6.654, p=0.24; GS, χ^2=137.74, p<0.001; PR, χ^2=137.18, p <0.001; NR, χ^2=123.53, p<0.001), respectively.

Association and agreement were assessed with Spearman and Kendall tests, respectively. To test the alignment of perceptions reported in each instrument we used the Wilcoxon signed-rank test. To compare medians in each dimension among playing positions, we used the Kruskal-Wallis non-parametric test. We used r and ε^2 scores as the effect-size for Wilcoxon signed-rank test (small, 0.10 < r < 0.30; medium, 0.30 < r < 0.50; large, $r \geq 0.50$; range, 0 to 1) and

Table 3. Descriptive analysis of the coach behavior scale, athlete's version (ECT-A) for each playing position (libero, setter, opposite hitter, outside hitter, and middle hitter).

Playing positions		Dimensions					
		PT	TS	MP	GS	PR	NR
Libero	[$\bar{x}\pm sd$]	5.72±0.83	5.86±0.76	5.37±1.30	5.12±1.00	5.07±1.34	3.19±1.09
	[CV%]	14.51%	12.96%	24.20%	19.53%	26.42%	34.16%
	[Md]	6.14	5.75	5.6	5.00	6.00	2.62
	[Variance]	1.19	1.31	1.51	1.97	1.61	0.51
	[Skewness]	-0.48	-0.18	-0.78	0.63	0.07	1.08
	[Kurtosis]	-0.31	0.01	0.39	0.08	-0.39	1.31
	[Min;Max]	4.29;7.00	3.75;7.00	4.20;7.00	2.50;7.00	3.33;7.00	2.00;4.38
Setter	[$\pm sd$]	5.61±1.13	5.62±1.10	5.15±1.82	4.84±1.16	5.10±1.48	2.82±0.98
	[CV%]	20.14%	19.57%	35.33%	23.96%	29.01%	34.75%
	[Md]	5.85	5.87	5.6	4.83	5.33	2.63
	[Variance]	1.29	1.21	3.32	1.35	2.19	0.96
	[Skewness]	0.89	0.14	0.52	-0.33	-0.71	-0.29
	[Kurtosis]	-1.08	-0.80	-1.01	0.08	-0.50	0.43
	[Min;Max]	3.00;7.00	2.88;7.00	1.20;7.00	2.50;6.83	2.17;7.00	1.25;4.75
Opposite hitter	[$\pm sd$]	6.16±1.09	5.93±1.15	5.71±1.23	5.28±1.40	5.86±1.27	2.79±0.71
	[CV%]	17.69%	19.39%	21.54%	26.51%	21.67%	25.44%
	[Md]	5.84	6.13	5.4	5.33	5.55	2.37
	[Variance]	1.28	0.91	1.94	1.63	1.87	1.62
	[Skewness]	1.00	0.60	-0.79	-0.60	-0.32	1.60
	[Kurtosis]	-1.09	-0.88	-0.34	-0.35	-0.70	1.33
	[Min;Max]	2.71;7.00	3.38;7.00	2.60;7.00	2.50;7.00	2.50;7.00	1.25;6.25
Outside hitter	[$\bar{x}\pm sd$]	5.61±1.13	5.88±0.95	5.13±1.39	4.97±1.28	5.27±1.37	2.74±1.27
	[CV%]	20.14%	16.15%	27.09%	25.75%	25.99%	46.35%
	[Md]	6.13	6.12	5.6	5.16	6.00	2.87
	[Variance]	1.48	1.01	2.67	1.67	1.44	0.63
	[Skewness]	2.99	0.51	0.04	-0.43	-0.14	-0.93
	[Kurtosis]	-1.75	-1.09	-0.93	-0.42	-0.73	0.02
	[Min;Max]	2.14;7.00	3.50;7.00	1.60;7.00	2.17;7.00	2.67;7.00	1.38;4.25
Middle hitter	[$\pm sd$]	5.77±1.22	5.85±1.00	5.18±1.64	5.18±1.29	5.75±1.20	2.80±0.79
	[CV%]	21.14%	17.09%	31.66%	24.90%	20.86%	28.21%
	[Md]	5.78	5.88	5.4	5.08	5.41	3.12
	[Variance]	0.69	0.58	1.69	0.99	1.80	1.19
	[Skewness]	-0.38	0.38	-0.29	0.11	-0.52	-0.98
	[Kurtosis]	-0.44	-0.58	-0.62	-0.15	-0.61	-0.04
	[Min;Max]	3.71;7.00	4.00;7.00	2.20;7.00	2.83;7.00	2.00;6.83	1.13;4.88

Kruskal-Wallis non-parametric test (small, $0.10 < \varepsilon^2 < 0.30$; medium, $0.30 < \varepsilon^2 < 0.50$; large, $\varepsilon^2 \geq 0.50$; range, 0 to 1), respectively (Tomczak & Tomczak, 2014). We set the α level at .05 for all analyses. All analyses were conducted in the R software, version 3.3.0 (cran.r-project.org).

RESULTS

A large difference between coach`s and the athletes` perspectives was found for the goal setting dimension (GS, $z = 17$, $p = 0.01$, $r = 0.78$), while no differences were found for the other CBS-S dimensions (PT, $z = 44$, $p = 0.64$, $r = 0.14$; TS, $z = 44$, $p = 0.65$, $r = 0.14$; MP, $z = 37$, $p = 0.32$, $r = 0.31$; PR, $z = 46$, $p = 0.76$, $r = 0.09$; NR, $z = 70$, $p = 0.13$, r = 0.48). In general, a low to moderate relative instability in ECT-A and low for ECT-T (CV% = 0 - 10% low; 10 to 20% moderate; and 20 to 30% high relative instability of the response) was verified in the different dimensions for the observed responses. Additionally, in both instruments, there was an asymmetry of the probability distribution curve on the left and right when examining the responses obtained (Skewness> 0, so the distribution has a heavier right tail; Skewness <0, so the distribution has a heavier left tail, both denote an asymmetric curve, on the other hand Skewness = 0, so the distribution is approximately symmetric). The descriptive statistics for each of the 6 dimensions from the coaches` and athletes` perspectives (ECT-T and ECT-A, respectively) are shown in Table 2 and Figure 1.
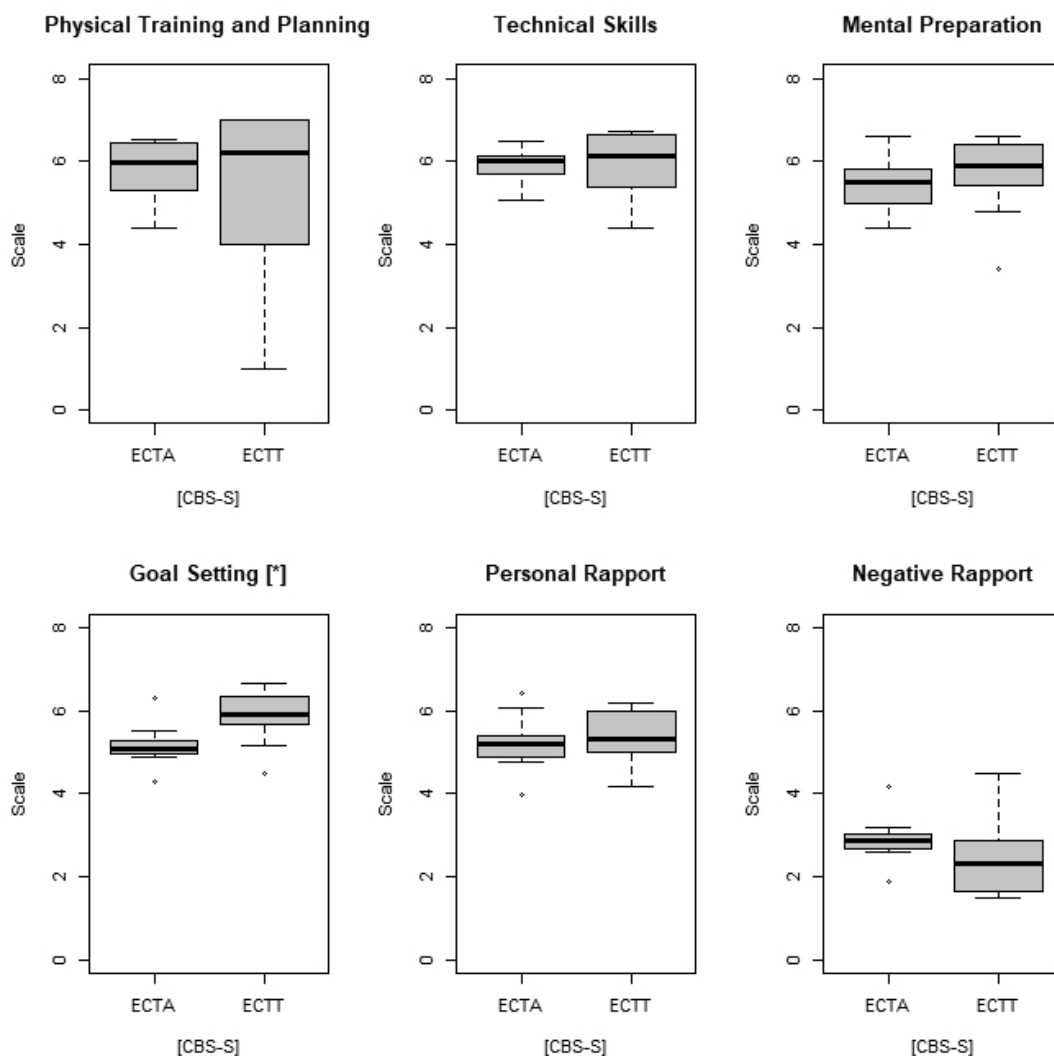
Figure 1. Median values of the dimensions physical training and planning, technical skills, mental preparation, goal setting, personal rapport, and negative rapport from the coaches` (ECT-T) and athletes (ECT-A) perspectives. *represents a significant difference between coaches` and athletes` perspectives ($p < 0.05$).

Regarding the perspectives of athletes of different playing positions, no differences among them were found for any CBS-S dimension (PT, $\chi^2_{4,0.05}$ = 3.20, p = 0.52, ε^2=0.02; TS, $\chi^2_{4,0.05}$ = 0.91, p = 0.92, ε^2=0.01; MP, $\chi^2_{4,0.05}$ = 1.13, p = 0.88, ε^2=0.01; GS, $\chi^2_{4,0.05}$ = 1.49, p = 0.82, ε^2=0.01; PR, $\chi^2_{4,0.05}$ = 6.08, p = 0.19, ε^2=0.05; NR, $\chi^2_{4,0.05}$ = 4.19, p = 0.38, ε^2=0.04). In summary, when examining the responses obtained in ECT-A, there was a relative variability from moderate to high and at least some degree of asymmetry in the distribution of data for each dimension by position. The descriptive statistics for each dimension according to each playing position are shown in Table 3.

The assessment of the degree of the association and agreement between the two instruments did not show any relation between the answers given by athletes and coaches in any of the CBS-S dimensions (association - PT, ρ =-0.01, p =0.97; TS, ρ =0.05, p = 0.89; MP, ρ = -0.40, p = 0.25; GS, ρ = 0.03, p = 0.93; PR, ρ = -0.15, p = 0.66; NR, ρ = -0.06, p = 0.85; agreement - PT, τ =-0.02, p =0.92; TS, τ =0.13, p = 0.59; MP, τ = -0.31, p = 0.20; GS, τ = 0.01, p = 0.99; PR, τ = -0.02, p = 0.42; NR, τ = -0.07, p = 0.78).

DISCUSSION

In this study, we aimed to analyze the behavioral profile of volleyball coaches of female youth categories, comparing the perspectives of coaches and athletes of different playing positions. The main results indicate a significant difference in the perceptions of the coach behavior between coaches and athletes in the goal-setting dimension.

The CBS-S scale has been widely used in other countries and contexts (Carlsson & Lundqvist, 2016; Jain et al., 2018), reflecting its value and effectiveness for behavioral evaluation of coaches. For instance, Jain et al. (2018) identified a synergy between the perception of coach and athletes of the coach behavior in several dimensions, including goal setting, highlighting the importance of synergy for sports performance. The results found by Rocchi and Pelleteir (2018) point in the same direction since they show that coaches who report their own behavior more positively than their athletes do lead to frustration and fewer experiences of success for the athletes. As shown in the current study, for volleyball athletes of female youth categories, except for the GS dimension, no significant differences between athletes' and coaches' perceptions of coach behavior were found for the PT, TS, MP, PR, and NR dimensions. These dimensions will be separately discussed for a deeper understanding of their effects on performance.

Physical Training and Planning (PT)

Although the coaches participating in this study do not interfere in this dimension very often, given the presence of athletic trainers in their staff, the athletes perceive this dimension similarly to their coaches. This is a positive result, considering that coach behavior can cause increased lesion rates if associated with elevated training loads (Ekstrand et al., 2018). Physical training is an important dimension of the Coaching Model (Côté et al., 1995) since the training organization aims to develop skills determinants of sports performance like strength and resistance. The training load is distinct among playing positions in volleyball, with the outside hitters having higher sprint and jump demands than players of other positions (Horta et al., 2019), for instance. No difference among playing positions was reported, suggesting an appropriate distribution of training load according to each player's specificities.

Technical Skills (TS)

The similar perception of coach behavior between coaches and athletes and among players of different positions found in this study for the TS dimension support the common role of volleyball coaches of youth categories of enhancing learning by developing coordination and technical and tactical skills through pedagogical methods (Lanes et al., 2018). As with Physical Training and Planning, the Coaching Model (Côté et al., 1995) shows that perfecting the technique, along with other dimensions, allows a complete development of the athlete. In youth categories, the better the general technical-tactical performance, the better their development, promoting success (Porath et al., 2016).

Mental preparation (MP)

During matches and championships, athletes face many stress sources, such as opponents and crowds (Weinberg & Gould, 2017). Thus, mental preparation is posed as an important tool for coaches since their emotional behavior significantly influences the match outcome (Donohue et al., 2018). Given that mentally strong athletes are more prone to succeed (Orlick, 2016), the alignment between coaches' and athletes' perceptions found in this study is desired. Coaches are usually in charge of promoting the team's mental preparation, even though it comes from their training pedagogy, rather than explicit and intentional work (Gilbert, 2017).

Goal setting (GS)

There is a significant difference between the coaches' perception of their own behavior and the perception of the athletes of the coach behavior in this dimension, albeit no

difference among playing positions was found. This result suggests a lack of alignment between coaches and athletes regarding the team's goals. Coaches may be overestimating or underestimating their athletes' potential, setting incompatible collective goals, which could encourage athletes to ditch team goals for personal goals.

The goal-setting dimension is related to the involvement of the coach in the identification, development, and monitoring of athletes' goals (Lobo et al., 2005). According to Weinberg and Gould (2017), GS may be divided into short- and long-term goals, for which the coach must establish the best plan of action to achieve them, assessing their development periodically. Bieleke et al. (2019) showed that coaches nurtured motivation in their athletes, improving their serving technic and efficiency by establishing individual and collective goals for their teams.

The theoretical implications are related to the difference between coach behavior perceived by coaches and perceived by athletes, interfering with communication and leadership skills (Noce et al., 2009). This can also negatively influence the practice organization of training and competitions (Côté et al., 1995). The level of the competition and the level of the athletes must be considered when setting team goals. A mismatch between the coach's expectations and athletes' expectations has practical implications since frustration and conflicts can be expected if the final outcome is worse than expected. Setting clear goals allow coaches to self-regulate and to regulate the expectations of their athletes (Gollwitzer & Sheeran, 2016) since it increases athletes' commitment to the goal set, facilitating adjustments of goals and plans of action throughout the process, and avoiding an early dropout from the sport due to frustration (Nicholls et al., 2016).

Personal rapport (PR)

Coaches can provide feedback and information suitable to each athlete based on their interpersonal relationship, creating a positive practice environment, and establishing trust between coaches and athletes (Forlenza et l., 2018). For young athletes, trust and credibility optimize the coach-athlete relationship, making them better embrace individual and collective goals (Cheuczuk et al., 2016), leading to better sports development and a smoother transition to older categories. Therefore, coaches and athletes must share the same perception of coach behavior in the personal rapport domain.

Negative Rapport (NR)

The use of negative feedback, yelling, disregarding athletes' opinions, and instilling fear in athletes reflects an autocratic and transactional leadership style by the coach (Weinberg & Gould, 2017). This coaching style entails inappropriate behavior by the athletes during the game, resulting in adverse outcomes. Therefore, a similar perception of the coach behavior in this dimension by coaches and athletes is paramount for efficient regulation of the behavior of the coach, avoiding possible negative effects on the team's performance. Such as found in this study, there is a trend for an inverse relation between PR and NR, and for preference for a democratic coaching style, as well as for the use of a positive personal rapport (Misasi et al., 2016).

The ideal feedback (positive or negative) is one of the essential factors for success in sports affecting the multi-annual development of the athlete's career; according to Côté et al. (1995), is the alignment between coach's and athletes personal characteristic (peripheral components of a model), which will impact positively in the organization of training and competition (central components).

Two possible limitations of this study are: 1) most of the teams have athletic trainers in their staff, which might have made the athletes direct their responses for the PT dimension to them, even though we instructed participants to direct all their answers to the head coach. We tried to mitigate this possibility by directly addressing this information in the instructions given to the athletes; 2) volleyball teams do not include an equal number of athletes of each playing position, which might have biased our results. It is possible that, if the same number of athletes of each playing position was included, we could have found a difference in the reporting of the PT and PR dimensions among playing positions since a marginal significance was found. Future studies should use samples with the same number of athletes for each playing position. Also, the coaches' behavioral profile should be associated with their coaching and leadership style.

CONCLUSION

Taken together, the results of this study suggest that the coaches' self-perception and the athletes' perception of the coach's behavior are not different from each other for all the dimensions assessed, except for the goal-setting dimension. The perception of coach behavior does not differ among playing position. The mismatch found for the goal-setting dimension might result in frustration, decreased performance, and suboptimal development of the athletes' potential. This study's results should assist volleyball coaches of youth categories to reflect on their behavior and be more assertive in the development of young athletes' sports career. Personal, achievable, and task-oriented goals should be developed for each athlete, avoiding an early drop out of the sport.

ACKNOWLEDGMENTS

REFERENCES

Bieleke, M., Kriech, C., & Wolff, W. (2019). Served Well? A Pilot Field Study on the Effects of Conveying Self-control Strategies on Volleyball Service Performance. *Behavioral Sciences, 9*(9), 93. https://doi.org/10.3390/bs9090093

Brandão, M. R. F., & Carchan, D. (2010). Comportamento preferido de liderança e sua influência no desempenho dos atletas. *Revista Motricidade, 6*(1), 53-69.

Brandão, M. R. F., & Valdés, H. (2005). La utilización de estratégias motivacionales por los entrenadores: Un aporte de la psicología del deporte. In: Roffé, M., & Ucha, F. G. (Eds), *Alto rendimiento, psicología y deporte: Tendencias actuales* (pp. 115-130). Buenos Aires, Argentina: Lugar Editorial.

Carlsson, A., & Lundqvist, C. (2016). The Coaching Behavior Scale for Sport (CBS-S): A psychometric evaluation of the Swedish version. *Scandinavian Journal of Medicine & Science in Sports, 26*(1), 116-123. https://doi.org/10.1111/sms.12359

Chelladurai, P. (1990). Leadership in sports: A review. *International Journal of Sport Psychology, 21*(4), 328-354.

Cheuczuk, F., Ferreira, L., Flores, P. P., Vieira, L. F., Vieira, J. L. L., & Nascimento Junior, J. R. A. (2016). Qualidade do relacionamento do treinador-atleta e orientação às metas como preditores de desempenho esportivo. *Psicologia: Teoria e Pesquisa, 32*(2), 1-8. https://doi.org/10.15900102-3772e32229

Côté, J., Salmela, J. H., Trudel, P., Baria, A., & Russel, S. J. (1995). The coaching model: a grounded assessment of expert gymnastic coaches' knowledge. *Journal of Sport and Exercise Psychology, 17*(1), 1-17. https://doi.org/10.1123/jsep.17.1.1

Donohue, B., Gavrilova, W., Galante, M., Gavrilova, E., Loughran, T., Scott, J., … Allen, D. L. (2018). Controlled evaluation of an optimization approach to mental health and sport performance. *Journal of Clinical Sport Psychology, 12*(2), 234-267. https://doi.org/10.1123/jcsp.2017-0054

Ekstrand, J., Lundqvist, D., Lagerbäck, L., Vouillamoz, M., Papadimitiou, N., & Karlsson, J. (2018). Is there a correlation between coaches' leadership styles and injuries in elite football teams? A study of 36 elite teams in 17 countries. *British Journal of Sports Medicine, 52*(8), 527-531. https://doi.org/10.1136/bjsports-2017-098001

Ferreira, R. M., Penna, E. M., Costa, V. T., & Moraes, L. C. C. A. (2012). Nadadores medalhistas olímpicos: contexto do desenvolvimento brasileiro. *Motriz: Journal of Physical Education, 18*(1), 130-142.

Forlenza, S. T., Pierce, S., Vealey, R. S., & Mackenzie, J. (2018). Coaching Behaviors that Enhance Confidence in Athletes and Teams. *International Sport Coach Journal, 5*(3), 205-212.

Gilbert, J. N. (2017). Sport psychology teaching approaches for high school coaches and their student-athletes. *Journal of Physical Education, Recreation & Dance, 88*(2), 52-58. https://doi.org/10.1080/07303084.2016.1260076

Gollwitzer, P. M., & Sheeran, P. (2016). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology, 38*(6), 69-119. https://doi.org/10.1016/S0065-2601(06)38002-1

Hampson, R., & Jowet, S. (2012). Effects of coach leadership and coach-athlete relationship on collective efficacy. *Scandinavian Journal of Medicine & Science in Sports, 24*(2), 454-460. https://doi.org/10.1111/j.1600-0838.2012.01527.x

Horta, T. A. G., Bara Filho, M., Coimbra, D. R., Werneck, F. Z., & Miranda, R. (2019). Perfil da carga de treinamento no voleibol de alto rendimento: um estudo de caso. *Revista Brasileira de Ciências no Esporte, 41*(4), 419-426. https://doi.org/10.1016/j.rbce.2018.06.008

Jain, T., Sharma, R., Singh, A., & Mehta, K. (2018). The Coaching Behavior Scale for Sport (CBS-S): Factor structure examination for elite Indian sportsperson. *Indian Journal of Positive Psychology, 9*(1), 1-8.

Lameiras, J., Martins, B., Lopes-de-Almeida, P., & García-Mas, A. (2017). Athletes Perception of Coaches' Leadership Style and Tendency to Cooperate among Competitive Teams. *Acción Psicológica, 14*(1), 79-92. https://doi.org/10.5944/ap.14.1.19264

Lanes, B. M., Marques Filho, C. V., Oliveira, R. V., & Ribas, J. F. M. (2018). Praxiologia motriz: novas proposições para o treinamento dos jogos esportivos coletivos. *Revista Motrivivência, 30*(54), 308-325. https://doi.org/10.5007/2175-8042.2018v30n54p308

Lôbo, I. L. B., Moraes, L. C. C. A., & Nascimento, E. (2005). Processo de validação da escala de comportamento de treinadores: versão atleta (ECT-A). *Revista Brasileira de Educação Física e Esporte, 19*(3), 255-65. https://doi.org/10.1590/S1807-55092005000300008

Marques Junior, N. K. (2013). Evidências científicas sobre os fundamentos do voleibol: importância desse conteúdo para prescrever o treino. *Revista Brasileira de Prescrição e Fisiologia do Exercício, 7*(37), 78-97.

Matias, C. J. A. S., & Greco, P. J. (2016). Atribuição dada pelo levantador em sua organização ofensiva ao papel do treinador: da base ao alto nível do voleibol. *Revista Brasileira de Ciências do Esporte, 38*(4), 392-399. https://doi.org/10.1016/j.rbce.2016.02.010

Misasi, S. P., Morin, G., & Kwasnowski, L. (2016). Leadership: Athletes and coaches in sport. *The Sport Journal, 19*(July, 1st).

Moraes, L. C. C. A., Medeiros Filho, E. S., Lobo, I. L. B., & Silveira, D. R. (2010). Escala do comportamento do treinador: versão treinador (ECT-T) e versão atleta (ECT-A): o que o treinador diz é confirmado pelos seus atletas? *Revista Brasileira de Educação Física e Esporte, 24*(1), 37-47. https://doi.org/10.1590/S1807-55092010000100004

Nascimento Junior, J. R. A., Fiorese, L., Vieira, J. L. L., Ferreira, L., Cheuczuk, F., Jowett, S., Fortes, L. de S., & Vissoci, J. R. N. (2019). Coach-athlete relationship and collective efficacy in volleyball: Is the association explained by athletes' goal orientations? *Motricidade, 15*(2–3), 1–11. https://doi.org/10.6063/motricidade.14147

Nicholls, A. R., Levy, A. R., Carson, F., Thompson, M. A., & Perry, J. L. (2016). The applicability of self-regulation theories in sport: Goal adjustment capacities, stress appraisals, coping, and well-being among athletes. *Psychology of Sport Exercise, 27*(1), 47-55. https://doi.org/10.1016/j.psychsport.2016.07.011

Noce, F., Costa, T., & Lopes, M. (2009). Liderança. In: Samulski, D. (Org.). *Psicologia do esporte: conceitos e novas perspectivas* (pp. 295-334). Barueri: Manole.

Orlick, T. (2016). *In pursuit of excellence* (5ª ed.). Champaign, IL: Human Kinetics.

Pires, D. A., Bara Filho, M. G., Debien, P. B., Coimbra, D. R., & Ugrinowitsch, H. (2016). Burnout e coping em atletas de voleibol: uma análise longitudinal. *Revista Brasileira de Ciências no Esporte, 22*(4), 277-281. https://doi.org/10.1590/1517-869220162204158756

Porath, M., Nascimento, J. V. D., Milistetd, M., Collet, C., & Oliveira, C. C. D. (2016). Nível de desempenho técnico-tático e a classificação final das equipes catarinenses de voleibol das categorias de formação. *Revista Brasileira de Ciências do Esporte, 38*(1), 84-92. https://doi.org/10.1016/j.rbce.2015.10.012

Rocchi, M., & Pelletier, L. (2018). How does coaches' reported interpersonal behavior align with athletes' perceptions? Consequences for female athletes' psychological needs in sport. *Sport, Exercise, and Perform Psychology, 7*(2), 141-154. https://doi.org/10.1037/spy0000116

Salmela, J. H., & Moraes, L. C. C. A. (2003). Development of expertise: The role of coaching, families, and cultural contexts. In: Strakes, J.

L., Ericsson, A. K. (Eds), *Expert performance in sports: Advances in research on sport expertise* (pp. 275-293). Champaign, IL: Human Kinetics.

Silveira, D, R. (2005). *Processo de Validação da Escala de Comportamento de Treinadores-Visão Treinadores (ECT-T)* [Dissertação de Mestrado em Ciências do Esporte]. Escola de Educação Física, Fisioterapia e Terapia Ocupacional da Universidade Federal de Minas Gerais, Belo Horizonte.

Tomczak, M., & Tomczak, E. (2014). The need to report effect size estimates revisited: An overview of some recommended measures of effect size. *Trends in Sport Sciences, 21*(1), 19-25.

Vieira, J. L. L., Ferreira, L., Cheuczuk, F., Flores, P. P., Vissoci, J. R. N., Rocha, F. F., ... Vieira, L. F. (2015). Impact of coach-athlete relationship on the collective efficacy of young volleyball players. *Revista Brasileira de Cineantropometria & Desempenho Humano, 17*(6), 650-660. https://doi.org/10.5007/1980-0037.2015v17n6p650

Weinberg, R. S., & Gould, D. (2017). *Fundamentos da psicologia do esporte e do exercício* (6ª ed). Porto Alegre: Artmed.

Zanetti, M., Lavoura, T., Botura, H., & Machado, A. (2008) O Técnico ideal sob o olhar de atletas de voleibol infanto-juvenis. *Coleção Pesquisa em Educação Física, 7*(1), 363-368.