

# Perception of professional competence of Brazilian college coaches

## *Percepção de competência profissional de treinadores universitários brasileiros*

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**Abstract** – The aim of this study was to analyze the perceived level of professional competence of Brazilian college coaches, considering the type of sports discipline and professional development cycles. The target population consisted of 92 sport coaches of both genders from various regions of Brazil, who worked in team or individual sports. An adapted version of the Self-Perception of Competence Scale was used for data collection. Statistical analysis was performed by Chi-squared and Fisher's exact tests, adopting a level of significance of 5%. The coaches perceived themselves as competent in knowledge on the theory and methodology of sports training and sports biodynamics, as well as in the skills of sports planning and management. On the other hand, the coaches perceived fragility of knowledge on sports management and legislation. With respect to professional development cycles, more experienced coaches perceived themselves as more competent than those with a shorter coaching experience. When coaches of individual and team sports were compared, a significant difference ( $p = 0.04$ ) was only observed for knowledge on sports management and legislation, with coaches of team sports perceiving themselves as more competent. Further studies are needed to improve the basic and continuing education of Brazilian sport coaches, as well as to obtain a better understanding of the relationship between career development and the acquisition of professional skills.

**Key words:** Professional competence; Professional practice; Professional role; Physical education and training.

**Resumo** – O objetivo do estudo foi analisar o nível de competência profissional percebida de treinadores universitários brasileiros, considerando o tipo de modalidade desportiva de atuação e os ciclos de desenvolvimento profissional. A população-alvo foi composta por 92 treinadores desportivos, representantes das diversas regiões brasileiras, de ambos os sexos e com atuação em modalidades coletivas ou individuais. Na coleta de dados, foi empregada uma versão adaptada da Escala de Autopercepção de Competência. Para a análise dos dados, foi utilizado o teste exato de Fisher, adotando-se o nível de significância de 5%. Em síntese, as evidências encontradas revelaram que os treinadores afirmam dominar os conhecimentos relacionados à teoria e metodologia do treinamento desportivo e à biodinâmica do desporto, bem como a habilidade de planejamento e gestão desportiva. Por outro lado, constatou-se a fragilidade dos conhecimentos percebidos pelos treinadores relacionados à gestão e legislação do esporte. Quando considerados os ciclos de desenvolvimento profissional, observou-se que os treinadores mais experientes se perceberam mais competentes do que os com menor tempo de atuação. Na comparação entre os treinadores de modalidades individuais e coletivas, observou-se diferença significativa ( $p=0,04$ ) apenas nos conhecimentos sobre gestão e legislação do desporto, em que os treinadores de modalidades coletivas se perceberam mais competentes. Fica evidente a necessidade de realização de novos estudos, a fim de contribuir para a melhoria do processo de formação inicial e continuada de treinadores desportivos brasileiros, bem como de aprofundar a compreensão sobre a relação entre o desenvolvimento da carreira e a aquisição de competências profissionais.

**Palavras-chave:** Competência profissional; Educação física; Papel profissional; Prática profissional; Treinamento.

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## INTRODUCTION

Professional competence is defined as a set of knowledge, skills and attitudes necessary to perform professional functions<sup>1</sup>. Competences are developed through successive planned experiences based on interests, needs, and demands. This is a gradual and permanent process that exhibits variations and peculiarities among individuals<sup>2</sup>.

The excellence of professional performance can be considered not only the result of acquired competence, but also of the self-assessment of one's own competences<sup>3,4</sup>. The perception of professional competence is frequently defined as the feeling that professionals show in relation to their abilities to perform professional functions, which is directly related to career success<sup>2,5</sup>.

Within the context of sports training, the success of a coach fundamentally depends on his life and work philosophies, which determine the beliefs and principles that guide his actions. Studies have shown that the adoption of a dynamic and open training philosophy favors the adequate application of professional knowledge and skills, determining the style and objectives of the training process<sup>6,7</sup>. The essential competences for the education of sport coaches include those related to training and daily tasks of the coach, as well as planning, leadership and knowledge on the theory and methodology of sports training<sup>8-10</sup>.

The career development of an elite coach is a complex, dynamic and nonlinear process that depends on contextual particularities<sup>11</sup> and that can be divided into cycles or phases<sup>12</sup>. The approach to professional development contributes to a better understanding of the evolution of professional competences throughout a coach's career and is affected by both personal experiences and organizational influences<sup>12</sup>.

In Brazil, studies on coaches' perception of competence are sparse and have been conducted on a regional basis. A study investigating coaches' perception of professional competence in the state of Santa Catarina<sup>13</sup> found a high perception of competence related to knowledge and professional skills, particularly knowledge on the theory and methodology of sports training and sports planning, management, communication and integration skills. Therefore, in order to better understand the perception of professional competence of national coaches, the present study investigated the perceived level of professional competence of Brazilian college coaches, considering the competences in which they perceive themselves as most competent, the type of sports discipline, and professional development cycles.

## METHODOLOGICAL PROCEDURES

A descriptive, cross-sectional study was conducted. The study was approved by the Ethics Committee on Research Involving Humans of the Federal University of Santa Catarina (Permit No. 337/2008) and authorized by the Brazilian Confederation of University Sports (Confederação Brasileira do

Desporto Universitário) and the Santa Catarina Federation of University Sports (Federação Catarinense do Desporto Universitário). The subjects gave written informed consent after they had received detailed information about the objectives of the study and procedures used.

The population consisted of sport coaches participating in the 2010 Brazilian University Games (about 420 subjects), linked to University Associations, who worked in team or individual sports. The questionnaires were handed out to all coaches during a general technical meeting and subsequently collected in the hotels where the respective delegations stayed. Ninety-two (76.1% men) of the coaches invited returned the properly completed questionnaire and thus comprised the sample of the present study. The selection process of the participants was therefore intentional and non-probabilistic.

According to the regions of Brazil, the sample consisted of 5.43% coaches from the northern region, 28.21% from the northeastern region, 13.4% from the mid-west region, 22.73% from the southeastern region, and 30.23% from the southern region. With respect to the characteristics of the coaches, most of them were from team sports (72.8%) and older than 30 years (84.7%). The high coaching experience profile was confirmed by a predominance of coaches with 7 to 19 years of experience (45.8%) or even more than 20 years of experience (35.6%). Regarding the level of academic education, 50.8% of the coaches had a postgraduate course (specialization and/or Master's degree in Physical Education), whereas 49.2% only had higher education.

The adapted Self-Perception of Competence Scale (SPCS) of sport coaches was used for data collection. This instrument identifies the perceived level of professional competence of coaches. The adaptation of the original scale to the Brazilian context<sup>14</sup> involved the analysis of language clarity and objectivity by 26 sport coaches. The results led to the elimination of six questions which did not show the expected 80% consensus. The test-retest method was used to evaluate reproducibility and 50 coaches participated in this analysis. All correlation coefficients were higher than 0.75 and therefore considered to be adequate<sup>15</sup>.

The adapted SPCS comprises the domains of professional knowledge (indicators: 1.1 = sports management and legislation; 1.2 = sports biodynamics; 1.3 = sports psycho-socio-cultural aspects; 1.4 = theory and methodology of sports training), and professional skills (2.1 = sports planning and management; 2.2 = sports assessment; 2.3 = sports communication and integration; 2.4 = self-reflection and professional development in sports). The instrument consists of 39 closed questions that are answered on a 5-point Likert type scale from 1 to 5, where 1 = non-competent, 2 = slightly competent, 3 = reasonably competent, 4 = competent, and 5 = very competent for self-perception of competence.

The data collected from the answers of the coaches were entered into Microsoft Excel for Windows (2010) spreadsheets and provided the basis for descriptive analysis (absolute and relative frequency). With respect to self-

perceived coaching competences, the elements of the SPCS were subsequently classified into the categories “non-competent”, which comprised the first two elements non-competent and slightly competent, and “competent” which comprised the elements reasonably competent, competent and very competent.

The criteria for the characterization of professional development cycles, based on the years of coaching experience, were adapted as follows: career entry (0-3 years), consolidation (4-6 years), diversification (7-19 years), and stabilization (20-35 years)<sup>12</sup>.

Inferential analysis was performed by the chi-squared test using the IBM SPSS Statistics 20.0 package. If an expected frequency was less than 5 (in 2x2 tables), Fisher’s exact test was used. In the specific case of 2x2 tables, the chi-squared test with Yates correction for continuity was applied as described in the literature<sup>15</sup>. Analysis was performed in order to determine the existence of an association of SPCS indicators with type of sports discipline and professional development cycles of the coaches. A level of significance of 5% was adopted in all analyses.

## RESULTS

Table 1 shows the SPCS indicators in which the Brazilian college coaches studied perceived themselves to be most competent.

**Table 1.** SPCS indicators in which the coaches perceived themselves as most competent

Indicators and questions	Competent	
	n	%
(KTM) Knowledge on technical-tactical content of the sports discipline	85	92.4
(SCI) Ability to communicate with athletes alone or in a group	84	91.3
(KTM) Knowledge on technical and tactical aspects of the sport	83	91.2
(KSB) Knowledge on the physical skills of athletes	79	85.9
(KPS) Knowledge on the role of the sport in contemporary society	79	85.9
(SPM) Ability to plan and execute sports training programs	78	84.8
(KSB) Knowledge on the effects of physical activities and/or exercise	77	83.7
(SPM) Ability to organize and plan sport activities	77	83.7
(KTM) Knowledge on sport initiation	76	82.6
(SPM) Ability to select adequate teaching progressions, methods and strategies	76	82.6

KSB: Knowledge on sports biodynamics; KPS: knowledge on psycho-socio-cultural aspects related to the sport; KTM: knowledge on the theory and methodology of sports training; SPM: sports planning and management skills; SCI: sports communication and integration skills.

Analysis of the questions regarding coaches’ perception of professional competence showed that coaches perceived themselves most competent in knowledge on the theory and methodology of sports training (KTM) and sports biodynamics (KSB), in addition to sports planning and management skills (SPM).

Table 2 shows the perceived level of competence of sport coaches considering the type of sports discipline.

**Table 2.** Coaches' perception of professional competence considering the type of sports discipline

Type of sports discipline	Professional competence		p
	Competent	Non-competent	
<b>Professional knowledge</b>			
Sports management and legislation <sup>1</sup>			
Team	47 (70.1%)	20 (29.9%)	0.04*
Individual	11 (44.0%)	14 (56.0%)	
Sports biomechanics <sup>2</sup>			
Team	57 (85.1%)	10 (14.9%)	0.50
Individual	23 (92.0%)	2 (8.0%)	
Psycho-socio-cultural aspects related to the sport <sup>2</sup>			
Team	63 (94.0%)	4 (6.0%)	0.21
Individual	21 (84.0%)	4 (16.0%)	
Theory and methodology of sports training <sup>2</sup>			
Team	64 (95.5%)	3 (4.5%)	0.56
Individual	25 (100.0%)	-	
Overall perception of professional knowledge <sup>2</sup>			
Team	58 (86.6%)	9 (13.4%)	0.75
Individual	21 (84.0%)	4 (16.0%)	
<b>Professional skills</b>			
Sports planning and management <sup>2</sup>			
Team	60 (89.6%)	7 (10.4%)	0.44
Individual	24 (96.0%)	1 (4.0%)	
Sports assessment <sup>2</sup>			
Team	56 (83.6%)	11 (16.4%)	0.50
Individual	23 (92.0%)	2 (8.0%)	
Communication and integration in sports <sup>2</sup>			
Team	59 (88.1%)	8 (11.9%)	0.72
Individual	23 (92.0%)	2 (8.0%)	
Self-reflection and professional development in sports <sup>2</sup>			
Team	57 (85.1%)	10 (14.9%)	0.50
Individual	23 (92.0%)	2 (8.0%)	
Overall perception of professional skills <sup>2</sup>			
Team	58 (86.6%)	9 (13.4%)	0.72
Individual	23 (92.0%)	2 (8.0%)	
Overall perception of professional competence <sup>2</sup>			
Team	56 (83.6%)	11 (16.4%)	1.00
Individual	21 (84.0%)	4 (16.0%)	

1: Chi-squared test with Yates correction for continuity; 2: Fisher's exact test. (\*) Significant difference.

In the domain of professional knowledge, the theory and methodology of sports training was the indicator in which coaches perceived themselves as most competent, whereas sports management and legislation was the indicator in which they perceived themselves as least competent. With re-

spect to professional skills, the coaches perceived themselves as competent mainly in aspects related to sports planning and management, whereas a lower perception of competence was found for sports assessment.

A significant difference ( $p=0.04$ ) was only observed for the domain of professional knowledge, specifically in the indicator of sports management and legislation, with coaches from team sports perceiving themselves more competent than coaches from individual sports.

Analysis according to professional development cycles (Table 3) revealed no significant differences in coaches' perception of knowledge, skills or professional competence between the groups studied.

**Table 3.** Perceived level of professional competence of sport coaches considering professional development cycles

Professional development cycles	Professional competence		p
	Competent	Non-competent	
Professional knowledge			
Overall perception of professional knowledge <sup>1</sup>			
Entry	17 (94.4%)	1 (5.6%)	0.40
Consolidation	10 (76.9%)	3 (23.1%)	
Diversification	29 (82.9%)	6 (17.1%)	
Stabilization	22 (91.7%)	2 (8.3%)	
Professional skills			
Overall perception of professional skills <sup>1</sup>			
Entry	15 (83.3%)	3 (16.7%)	0.52
Consolidation	12 (92.3%)	1 (7.7%)	
Diversification	30 (85.7%)	5 (14.3%)	
Stabilization	23 (95.8%)	1 (4.2%)	
Overall perception of professional competence <sup>1</sup>			
Entry	15 (83.3%)	3 (16.7%)	0.66
Consolidation	10 (76.9%)	3 (23.1%)	
Diversification	29 (82.9%)	6 (17.1%)	
Stabilization	22 (91.7%)	2 (8.3%)	

1: Chi-squared test with Yates correction for continuity.

With respect to overall perception of professional competence, more experienced coaches (stabilization cycle, 20 to 35 years of experience) perceived themselves as more competent when compared to their peers in other stages of professional development.

Comparison of coaches' perception of competence related to professional knowledge and skills revealed a better perception of competence related to professional skills than professional knowledge in all cycles of professional development, except for the entry cycle (0 to 3 years of experience). In that case, coaches perceived themselves more competent in professional knowledge than in professional skills.

## DISCUSSION

Sport coaches usually work under pressure to achieve competitive goals and their behaviors are continuously monitored by the outside world. The level of requirements for sport coaches has increased considerably in recent years, with success being more easily achieved through a set of competences that are specific of the function, thus confirming the view that mere intuition and inspiration are not sufficient to obtain results<sup>16</sup>.

In the present study, detailed analysis of the 39 questions of the SPCS regarding coaches' perception of professional competences showed that the subjects studied generally perceived themselves as competent in knowledge related to the theory and methodology of sports training and sports biodynamics. These results agree with the findings of studies focusing on the analysis of competences necessary for the coaching profession and confirm the value of this knowledge for the education of these subjects<sup>9,16,17</sup>.

The training factor is decisive to obtain high performance levels since it involves physical, technical, tactical and psychological factors, among others. At present, the organization and structuring of sports training are fundamental for planning, both at the beginning of the season and during the training of young athletes. Planning involves the determination of the most appropriate activities in competition programs in order to achieve the performance goals<sup>11,18</sup>.

The intervention in sports teams is no longer restricted to the physical and technical preparation of athletes, but requires coaches to have knowledge of the concepts of different areas, as well as the skills and attitudes to help with the formation of a human and to perform investigative and management activities<sup>6</sup>. Specifically in the case of Olympic coaches, they usually attribute their success to high emotional stability and the presence of professional attributes such as passion for the sport, commitment, decision-making capacity, and leadership<sup>19</sup>.

The coaches studied were found to have a good capacity to plan and execute sports training programs, to organize and plan sport activities, and to select adequate teaching progressions, methods and strategies. The ability of sports planning and management should be obligatorily included in the education of coaches, considering that international education programs of beginner coaches develop this competence in their programmatic content<sup>8,20</sup>. In fact, a systematic training well-planned by qualified professionals since the early ages will guarantee success in the future<sup>21</sup>.

The results regarding the perceived level of competence of sport coaches and its relationship with the type of sports discipline revealed a significant difference ( $p=0.04$ ) in the domain of professional knowledge, specifically in the indicator of sports management and legislation. In this case, coaches from individual sports perceived themselves as less competent than coaches from team sports.

Although there is no properly substantiated explanation for the differences found, the better competence related to knowledge on management and legislation perceived by coaches from team sports agrees with the

literature. In this respect, a study involving Portuguese handball coaches<sup>22</sup> showed that these coaches perceived themselves as competent in this factor and considered this knowledge highly important for their professional education. In addition, these findings are similar to the profile observed for a large proportion of coaches from Santa Catarina who described themselves as non-competent in this factor<sup>16</sup>. In another study also involving coaches from Santa Catarina, the indicator of sports management and legislation was considered to be essential knowledge for professional coaching<sup>13</sup>.

The low perception of competence related to knowledge on management and legislation suggests the need to improve these contents in basic and continuing coaching courses in order to improve the qualification of professional intervention in the area. Although most undergraduate courses in Physical Education comprise disciplines related to sports management, continuing education is essential due to the transformations in the contemporary work environment that require qualified and dynamic professionals<sup>23</sup>. Furthermore, the importance of this knowledge for coaches should be taken into consideration in situations that involve the management of human resources, team leadership and implementation of sport projects. The coach is a leader and training knowledge mainly resides in the ability to manage and conduct this process<sup>11</sup>.

Analysis of coaches' perception of competence according to professional development cycle showed no significant difference in the domains of knowledge, skills or overall perception of professional competence between groups. However, there was a general trend of more experienced coaches (stabilization cycle) perceiving themselves as more competent compared to their peers in other stages. In addition, in all cycles, the coaches perceived themselves as more competent in professional skills compared to professional knowledge.

Although not statistically significant, the difference in the perception of professional competences between more or less experienced coaches might be related to the characteristics of the phases of consolidation (4-6 years of experience), diversification (7-19 years), and professional stabilization ( $\geq 20$  years). After the transition phase (0-3 years) between basic education and continuing professional development (entry cycle) characterized by the discovery of the profession and by the "reality shock" with the labor market, coaches go through a stage of consolidation which is characterized by an increase in confidence, safety, and professional competence. The subsequent stage, the diversification phase, is generally characterized by motivation and enthusiasm of the subject towards his professional activity, a fact that may encourage the diversification of work possibilities. Finally, during the last years of the career (stabilization), the better the experiences in previous phases, the greater will be the perceptions of serenity, confidence and professional enthusiasm<sup>12</sup>.

In fact, more experienced coaches tend to attribute their success to the thorough knowledge of the sport in which they work, since they feel to be able to plan, organize and to creatively integrate technical-tactical aspects in order to achieve the maximum performance of athletes<sup>24</sup>. However, it

should be noted that professional development does not occur in a linear fashion, but is rather a construction of the “professional self” that evolves throughout the career and that is affected by experience, contexts and influences exerted on the coach along his professional career<sup>12,25</sup>.

The present study was the first investigation conducted in Brazil that analyzed the perception of competence of college coaches and its relationship with the type of sports discipline and professional development cycles, in addition to identifying the main competences in sport coaching. Within this context, this study aims to contribute to the discussion and reflection about the process of coach education in Brazil, as well as to the improvement of basic and continuing education offered by the responsible institutions and to a better understanding of the relationship between career development and the acquisition of professional competences.

## CONCLUSIONS

The results of the present study indicate a high self-perception of competence among Brazilian college coaches, especially in relation to knowledge on the theory and methodology of sports training and sports biodynamics, in addition to sports planning and management skills. Considering professional development cycles, no significant differences were observed in coaches' perceptions of competence, although more experienced coaches tended to perceive themselves more competent. When coaches from individual and team sports were compared, a significant difference was only observed in the perception of competence related to knowledge on sports management and legislation, in which the coaches from team sports described themselves as more competent.

The main limitations of the study are related to the size of the sample and caution is therefore needed when generalizing the results obtained for the Brazilian situation. Further studies are necessary to improve the education of Brazilian sport coaches and, consequently, to increase the qualification of national sport.

In an attempt to better understand the development of professional competences of sport coaches, quantitative-qualitative studies should be conducted to trace the performance of coaches in different career stages and to determine the relationship between professional development and the acquisition of competences. In addition, studies are needed to adapt the proposal of the classification of professional development cycles to the context of coaching activity and to the characteristics of these professionals.

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