Construction and content validity of the coaches' knowledge and competence questionnaire - CKCQ

Construção e validação do conteúdo do questionário dos conhecimentos e competências do treinador - QCCT

Ricardo Teixeira Quinaud[1]
Ana Flávia Backes[1]
Daiane Cardoso da Silva[1]
Juarez Vieira do Nascimento[1]
Valmor Ramos[2]
Michel Milistetd[1]

Abstract – The validation of this questionnaire is an important tool for analyzing the knowledge and skills of coaches, as well as a better understanding of their practice context. Therefore, the aim of the present study was to establish the content validity of the Coaches' Knowledge and Competence Questionnaire (CKCQ). Five specialists with doctorate degree for at least 10 years, academic experience and periodicity of publications with the theme in national and international journals participated in the validation process. Specialists evaluated 38 items of the questionnaire and assigned a score on a 1-5 point likert scale for each item in the language clarity, practical pertinence and theoretical relevance criteria. The content validity coefficient (CVC) was used to determine the CVCI of items and the CVCt of the total instrument of each criterion, adopting cutoff point of 0.81. The approximate results found for language clarity (0.92), practical pertinence (0.99) and theoretical relevance (0.98) presented values considered almost perfect and appropriate for validation. The content validation of the CKCQ is an important alternative for the evaluation of the knowledge and competences of sports coaches.

Key words: Coach training; Knowledge; Professional competence; Validity of tests.

Resumo – *A validação do presente questionário apresenta-se como importante ferramenta para a análise dos conhecimentos e competências de treinadores, bem como melhor entendimento de seu contexto de prática. Para tanto, o objetivo do presente estudo foi estabelecer a validade de conteúdo do Questionário acerca dos Conhecimentos e Competências Funcionais do Treinador Esportivo (QCCT). Participaram do processo de validação cinco especialistas com titulação de doutor há pelo menos 10 anos, experiência acadêmica e periodicidade de publicações com a temática em revista nacionais e internacionais. Os especialistas avaliaram 38 itens do questionário e atribuíram uma nota em uma escala likert de um a cinco para cada item nos critérios de clareza de linguagem, pertinência prática e relevância teórica. Fez-se o uso do coeficiente de validade (CVC) para determinação do CVC_i dos itens e o CVC_t do total do instrumento de cada critério, adotando como ponto de corte 0,81. Os resultados aproximados encontrados para clareza de linguagem (0,92), pertinência prática (0,99) e relevância teórica (0,98) apresentaram valores considerados quase perfeitos e apropriados para sua validação. A partir da validação do conteúdo, o QCCT mostra-se como uma importante alternativa para a avaliação dos conhecimentos e competências dos treinadores esportivos.*

Palavras-chave: *Capacitação de treinadores; Competência profissional; Conhecimento; Validade dos testes.*

1 Federal University of Santa Catarina. Florianópolis, SC. Brazil.

2 University of the State of Santa Catarina. Florianópolis, SC. Brazil

INTRODUCTION

The role of the sports coach as a fundamental element in the success of athletes and sports teams has been increasingly valued and recognized in the sports environment[1,2]. The performance of sports coaches requires mastery of a set of knowledge and skills that involve not only aspects specific of their area of intervention, but also the ability to interact and relate to other actors in the sports context, the ability to reflect and make decisions about their own practice[1,3].

In fact, due to the complex nature of the coach's action and to the holistic nature of his intervention context[4,5], the International Council for Coaching Excellence (ICCE) has suggested that coaches should present a solid background of knowledge and skills to successfully perform their function. In addition, it recommends that the activity of coaches should be supported by three major knowledge bases, namely, Professional, Interpersonal and Intrapersonal knowledge. Complementarily, functional competences are defined for the professional performance of sports coaches such as: Defining Vision and Strategy; Organizing the Environment; Building Relationships; Conducting Practices; Reading and Responding to the "Field" of Action; Learning and Reflecting[6].

Traditionally, knowledge and skills related to the professional aspects of coaches' performance have occupied significant space in the investigative agenda on the subject[7-10]. In spite of the low presence of instruments for assessing coaches' performance[11], among the instruments available in specialized literature to investigate the knowledge and/or competences of sports coaches[10,12,13], there seems to be an overlapping of aspects related to the dimension of professional knowledge to the detriment of dimensions of interpersonal and intrapersonal knowledge, as well as competences associated with such knowledge.

In the specialized literature, empirical studies conducted in international and national contexts using questionnaires, despite being sources of valuable information, present fragmented information. Some of these information are in the verification of different areas of knowledge and competence of basketball coaches in Portugal[14], professional knowledge of tennis coaches[15], competence of handball coaches[10], competence of soccer coaches[12], professional and interpersonal skills of coaches of various sports modalities[16], functional competences of various collective and individual sport modalities[13], as well as analysis of professional experiences and expertise level[17,18].

The construction of instruments that demonstrate the different dimensions of knowledge/skills of sports coaching becomes necessary to reveal characteristics or aspects about the reality of coaches' practice. In this process, the validation of an instrument is a first step to better understand the gaps still existing in this area, in particular related to the assessment of interpersonal and intrapersonal knowledge, as well as learning and reflection skills. In addition, content validity[19,20] has been a preponderant aspect in sports literature[21,22] for the improvement of academic knowledge.

Considering the current demands for the training and performance of coaches, in view of the perspectives on the knowledge base and competences recognized by ICCE[6], the aim of the present study was to establish the content validity for a questionnaire about the knowledge and functional competences of sports coaches. From its validation, the knowledge and skills of coaches were analyzed according to the value/score assigned to the importance and domain perceived in each item of the questionnaire.

METHODOLOGICAL PROCEDURES

Participants

Five specialists (n = 5) from public higher education institutions from different regions of Brazil participated in the study. For the selection of specialists, the inclusion criteria adopted were having a doctorate degree for at least 10 years, academic experience with the theme and periodicity of publications in national and international journals of impact in the area[23].

Ethical Procedures

The study was approved by the Ethics Research Committee of the Federal University of Santa Catarina (protocol No. 169,330). In addition, participants signed the Free and Informed Consent Form (ICF).

Process of Instrument Construction

The coaches' knowledge and competence questionnaire (CKCQ) was elaborated from a two-dimensional structure, including questions about the importance and the perceived mastery of coaches' knowledge (n = 20) and the functional competencies of coaches (n = 18). The distribution of the number of questions related to professional (n = 10), interpersonal (n = 5) and intrapersonal (n = 5) knowledge of sports coaches, as well as the content of each item of the questionnaire is justified based on the conceptual model " Coaches Knowledge "elaborated by Côté and Gilbert [3] and Gilbert and Côté[24] and in the frameworks (version 1.1 and 1.2) of the International Council for Coaching Excellence[6,25].

Professional knowledge includes a greater number of questions due to the amount of professional aspects involved in the practice of sports coaches. In this way, professional knowledge is related to the specific knowledge that guides the teaching-learning process of athletes and practitioners, such as technical-tactical knowledge of sports, physical preparation, training methodologies, implementation and evaluation of programs. Interpersonal knowledge is related to the social interactions of coaches in their practice environment, which involve communication and leadership with their athletes and work in conjunction with the technical committee and other actors involved in the sports context. Intrapersonal knowledge refers to the coaches' understanding of themselves and their capacity for self-formation, introspection and reflection, as well as the development of their work philosophy[8].

Questions about the functional competences of sports coaches were subdivided into: set vision and strategy (n = 3), shape the environment (n = 3), build relationships (n = 3), conduct practices (n=3), read and react to the "field" (n = 3), and learn and reflect (n = 3)[6,8]. These competencies refer to the adaptation of approaches to guide the development of athletes in the social and organizational contexts [6]. The use of these two dimensions within the same questionnaire is based on the premise that the work capacity of coaches involves the development of specific competences, supported by a set of knowledge and their individual characteristics.

Validation Process

The validation procedures of the CKCQ content followed guidelines of Cassepp-Borges, Balbinotti and Teodoro[20]. Specialists assigned a score on a five-point Likert scale (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high) to classify each of the following criteria: language clarity (language used in items), practical pertinence (considers whether each item was elaborated in order to evaluate the concept of interest of a certain population) and theoretical relevance (relevance between items and theory).

In the validation process, specialists were also able to make additional comments about each item of the questionnaire analyzed. Upon receipt of instrument validation forms by all specialists, data were tabulated in a Microsoft Office Excel 2013 spreadsheet for further analysis.

Data analysis

Data analyses were performed based on the calculation of the content validity coefficient (CVC)[19]. Calculations are presented as follows:

1) Based on the scores attributed by specialists, the mean score of each item (Mx) was calculated:

$$Mx = \frac{\sum_{i=l}^{J} Xi}{J}$$

Where Σxi represents the sum of the specialist's scores and J represents the number of specialists who evaluated the item.

2) Based on the mean score, the CVC was calculated for each item (CVCi):

$$CVCi = \frac{MX}{Vmax}$$

Where Vmax represents the maximum value that the item could receive.

3) The error (Pei) was also calculated to discount possible biases of specialists for each item:

$$Pei = \left(\frac{1}{j}\right)^{j}$$

4) Thus, the final CVC of each item (CVCc) was calculated as follows:

$$CVC_c = CVC_i - Pe_i$$

5) For the calculation of the total CVC of the questionnaire (CVCt), for each of the criteria (language clarity and practical pertinence), we used:

$$CVC_t = Mcvc_i - Mpe_i$$

Where Mcvci represents the mean of the content validity coefficients of the questionnaire items and Mpei the mean of the questionnaire items errors.

The cutoff point adopted for language clarity, practical pertinence and theoretical relevance was $CVC_c \geq 0.81$ for each item and $CVC_t \geq 0.81$ for the complete instrument, levels considered almost perfect[19].

RESULTS

The results obtained in the CVC calculation for language clarity are presented in table 1. The instrument presented an approximate CVC_t of 0.92, above the established cutoff point. Of the 38 proposed items, three (6, 9 and 25) presented CVCc below the cutoff point established for language clarity. Other items, although not presenting CVCc of language clarity below the established cutoff point, received suggestions for possible changes. Thus, the items were re-adapted, following specialists' suggestions, later, they were resubmitted for re-evaluation. After the second evaluation, all items were considered appropriate and included in table 1.

Regarding practical pertinence, the instrument presented an approximate CVC of 0.99, considered above the established cutoff point (table 2). All items of the instrument obtained CVCc above the cutoff point, considered almost perfect and, therefore, items were kept for the initial construction of the instrument.

For theoretical relevance, the instrument presented approximate CVCt of 0.98. All items of the instrument obtained CVCc above the cutoff point, considered almost perfect, therefore, items were kept for the initial construction of the instrument.

From the initial content validation process, the initial version of the CKCQ was elaborated contemplating 38 questions about the knowledge and functional competences of sports coaches (Box 1).

Table 1. Results of the CVC calculation for language clarity.

Item	Mean	CVC_i	Pe_i	CVC_c
1	4.60	0.92	0.00032	0.91968
2	4.60	0.92	0.00032	0.91968
3	4.40	0.88	0.00032	0.87968
4	4.60	0.92	0.00032	0.91968
5	4.20	0.84	0.00032	0.83968

Continue…

... continue

Item	Mean	CVC_i	Pe_i	CVC_c
6	4.20	0.84	0.00032	0.83968
7	4.60	0.92	0.00032	0.91968
8	4.80	0.96	0.00032	0.95968
9	4.20	0.84	0.00032	0.83968
10	4.60	0.92	0.00032	0.91968
11	4.80	0.96	0.00032	0.95968
12	4.80	0.96	0.00032	0.95968
13	4.20	0.84	0.00032	0.83968
14	4.80	0.96	0.00032	0.95968
15	4.60	0.92	0.00032	0.91968
16	4.00	0.80	0.00032	0.79968
17	4.40	0.88	0.00032	0.87968
18	4.80	0.96	0.00032	0.95968
19	4.20	0.84	0.00032	0.83968
20	4.80	0.96	0.00032	0.95968
21	4.60	0.92	0.00032	0.91968
22	4.60	0.92	0.00032	0.91968
23	4.40	0.88	0.00032	0.87968
24	4.60	0.92	0.00032	0.91968
25	4.20	0.84	0.00032	0.83968
26	4.60	0.92	0.00032	0.91968
27	4.80	0.96	0.00032	0.95968
28	4.80	0.96	0.00032	0.95968
29	4.60	0.92	0.00032	0.91968
30	4.60	0.92	0.00032	0.91968
31	4.80	0.96	0.00032	0.95968
32	4.80	0.96	0.00032	0.95968
33	5.00	1.00	0.00032	0.99968
34	4.80	0.96	0.00032	0.95968
35	4.80	0.96	0.00032	0.95968
36	4.40	0.88	0.00032	0.87968
37	4.80	0.96	0.00032	0.95968
38	4.80	0.96	0.00032	0.95968
CVC_t				0.91652

CVCi = initial validity content coefficient; Pei = error calculation; CVCc = final validity content coefficient of each item; CVCt = total validity content coefficient.

Table 2. Results of the CVC calculation for practical pertinence.

Item	Mean	CVC_i	Pe_i	CVC_c
1	5.00	1.00	0.00032	0.99968
2	5.00	1.00	0.00032	0.99968
3	5.00	1.00	0.00032	0.99968
4	5.00	1.00	0.00032	0.99968
5	5.00	1.00	0.00032	0.99968
6	5.00	1.00	0.00032	0.99968
7	5.00	1.00	0.00032	0.99968
8	4.80	0.96	0.00032	0.95968
9	5.00	1.00	0.00032	0.99968
10	5.00	1.00	0.00032	0.99968

Continue…

… continue

Item	Mean	CVC_i	Pe_i	CVC_c
11	5.00	1.00	0.00032	0.99968
12	5.00	1.00	0.00032	0.99968
13	4.80	0.96	0.00032	0.95968
14	5.00	1.00	0.00032	0.99968
15	5.00	1.00	0.00032	0.99968
16	4.80	0.96	0.00032	0.95968
17	5.00	1.00	0.00032	0.99968
18	5.00	1.00	0.00032	0.99968
19	5.00	1.00	0.00032	0.99968
20	5.00	1.00	0.00032	0.99968
21	5.00	1.00	0.00032	0.99968
22	5.00	1.00	0.00032	0.99968
23	5.00	1.00	0.00032	0.99968
24	4.80	0.96	0.00032	0.95968
25	5.00	1.00	0.00032	0.99968
26	5.00	1.00	0.00032	0.99968
27	4.80	0.96	0.00032	0.95968
28	5.00	1.00	0.00032	0.99968
29	5.00	1.00	0.00032	0.99968
30	5.00	1.00	0.00032	0.99968
31	5.00	1.00	0.00032	0.99968
32	4.60	0.92	0.00032	0.91968
33	5.00	1.00	0.00032	0.99968
34	4.80	0.96	0.00032	0.95968
35	4.80	0.96	0.00032	0.95968
36	4.60	0.92	0.00032	0.91968
37	4.80	0.96	0.00032	0.95968
38	5.00	1.00	0.00032	0.99968
CVC_t				0.98705

CVCi = initial validity content coefficient; Pei = error calculation; CVCc = final validity content coefficient of each item; CVCt = total validity content coefficient.

Table 3. Results of the CVC calculation for theoretical relevance.

Item	Mean	CVC_i	Pe_i	CVC_c
1	5.00	1.00	0.00032	0.99968
2	5.00	1.00	0.00032	0.99968
3	5.00	1.00	0.00032	0.99968
4	5.00	1.00	0.00032	0.99968
5	5.00	1.00	0.00032	0.99968
6	5.00	1.00	0.00032	0.99968
7	4.80	0.96	0.00032	0.95968
8	4.80	0.96	0.00032	0.95968
9	4.80	0.96	0.00032	0.95968
10	4.80	0.96	0.00032	0.95968
11	4.80	0.96	0.00032	0.95968
12	4.80	0.96	0.00032	0.95968
13	5.00	1.00	0.00032	0.99968
14	4.80	0.96	0.00032	0.95968
15	5.00	1.00	0.00032	0.99968

Continue…

Item	Mean	CVC_i	Pe_i	CVC_c
16	5.00	1.00	0.00032	0.99968
17	5.00	1.00	0.00032	0.99968
18	4.80	0.96	0.00032	0.95968
19	5.00	1.00	0.00032	0.99968
20	5.00	1.00	0.00032	0.99968
21	4.80	0.96	0.00032	0.95968
22	5.00	1.00	0.00032	0.99968
23	5.00	1.00	0.00032	0.99968
24	4.60	0.92	0.00032	0.91968
25	4.80	0.96	0.00032	0.95968
26	4.80	0.96	0.00032	0.95968
27	4.80	0.96	0.00032	0.95968
28	4.80	0.96	0.00032	0.95968
29	4.80	0.96	0.00032	0.95968
30	4.80	0.96	0.00032	0.95968
31	4.80	0.96	0.00032	0.95968
32	4.60	0.92	0.00032	0.91968
33	5.00	1.00	0.00032	0.99968
34	5.00	1.00	0.00032	0.99968
35	5.00	1.00	0.00032	0.99968
36	4.80	0.96	0.00032	0.95968
37	5.00	1.00	0.00032	0.99968
38	5.00	1.00	0.00032	0.99968
CVC_t				0.97757

CVC_i = initial validity content coefficient; Pe_i = error calculation; CVC_c = final validity content coefficient of each item; CVC_t = total validity content coefficient.

Box 1. Items that compose the initial version of CKCQ after CVC calculation for language clarity, practical pertinence and theoretical relevance.

Dimension	Question	Indicator
Knowledge	1	Training planning (objectives, task structure and content progressions).
	2	Training management (time, physical space, equipment).
	3	Pedagogical intervention (instruction in training, correction, orientation, organization of tasks and progressions).
	4	Assessment of technical-tactical, physical and psychological aspects in the context of sports training.
	5	Training and long-term development of athletes (initiation, specialization and improvement).
	6	Implementation and evaluation of training programs.
	7	First aid measures.
	8	Legislation regulating the sports system (rules and regulations of specific confederations).
	9	Context of professional performance (recreation, development, performance)
	10	Organization of sports competitions.
	11	Leadership and management of athletes and coaching staff
	12	Effective communication during training.
	13	Professional development of coaches.
	14	Communication with other actors in the sports context (parents, media, referees).
	15	Development of attitudes, values and behaviors of athletes.
	16	Personal strategies for self-learning
	17	Reflection about own practice
	18	The own emotion and emotion of others (athletes, parents, media, referees).
	19	The very training philosophy (principles, values, beliefs)
	20	Awareness and criticism of professional practice

Continue…

Dimension	Question	Indicator
Functional competencies	21	Understanding the different contexts of sports practice.
	22	Analyzing the goals / needs of athletes / practitioners.
	23	Defining the objectives of the work according to the practice context and athletes / practitioners.
	24	Preparing a safe training environment.
	25	Planning the training session.
	26	Defining performance criteria for athletes / practitioners.
	27	Leading and influencing.
	28	Communicating effectively.
	29	Managing people.
	30	Conducting athletes / practitioners in training and competition.
	31	Using different training methodologies according to the practice context and athletes / practitioners.
	32	Organizing competitions.
	33	Evaluating training and competition.
	34	Analyzing the performance of athletes / practitioners and teams.
	35	Making adjustment in the training and competition process.
	36	Developing work philosophy.
	37	Learning continuously.
	38	Reflecting and self-assessing.

DISCUSSION

In order to validate the Coaches' Knowledge and Competence Questionnaire (CKCQ), the study focused on its content validation. The validation of questionnaires with the purpose of investigating the competences of sports coaches has already proved to be of great importance for a better understanding of this subject[12,13]; however, there is still lack of a concise approach to knowledge. The emergence of questionnaires addressing this theme reinforces the need for studies in this area and corroborates the construction of the present questionnaire[10]. Despite the existence of these questionnaires, this instrument appears as an alternative aligned with the broader understanding of the actions of sports coaches[6].

In general, the results found in the study for language clarity (0.92), practical pertinence (0.99) and theoretical relevance (0.98) of the instrument CVC_t indicate that the values can be considered almost perfect[19,20,23,26]. The study by Costa et al.[21], involving the content validation for tactical knowledge in volleyball, obtained CVC results for language clarity of 0.92, practical pertinence of 0.96 and theoretical relevance of 0.96. Similarly, in the validation process of the tactical knowledge test for basketball by Morales et al.[27], CVC values of 0.94 for language clarity and 0.91 for practical pertinence were obtained. The results obtained in both studies corroborate the CVC found in the present study.

The CVC values found by Greco et al.[28], in study assessing the content validation of a tactical knowledge test of sports orientation in basketball, handball and indoor soccer modalities, were 0.80-0.88 for language clarity, 0.87-0.94 for practical pertinence and 0.94-0.98 for theoretical relevance. In the study by Saldanha et al.[29], the CVC values for language clarity (0.83)

and practical pertinence (0.88) were obtained for the content validation in the translation of the Youth Sport Values Inventory[2]. Although these values are considered almost perfect, the present study showed relatively higher values. In another study of translation and validation for the Brazilian reality of the Multidimensional Scale of Perfectionism in Sport-2, Nascimento Júnior et al.[30] obtained values for language clarity and practical pertinence above 0.81, which indicates appropriate language clarity and relevance practice for the Brazilian context. In addition, Vieira et al.[22] performed the validation of the coach-athlete relationship questionnaire, obtaining CVC values above 0.8, showing satisfactory values for its construction and use.

CONCLUSION

From the validation process of the Coaches' Knowledge and Competence Questionnaire (CKCQ), it could be concluded that the initial version of the instrument meets the language clarity, practical pertinence and theoretical relevance criteria, presenting almost perfect CVC_t levels. The study continuity with future analyses for its validation process is emphasized, considered the target population of the questionnaire (sports coaches). The application of the instrument will result in the possibility of performing other analyses (exploratory and confirmatory factorial analysis) in order to verify the need for modifications and grouping of indicators in each dimension of the CKCQ. It is expected that from the factorial analysis (multi) dimensionality of the instrument will be confirmed by grouping the items in relation to the categories of knowledge and competences provided in the theoretical reference used, even if it is necessary to reduce certain items in order to better structure it, as well as to reach answers that meet the objectives proposed by this questionnaire.

The questionnaire presents itself as an important instrument that assists in a more in-depth understanding of the role of sports coaches of different levels of training and contexts of action, allowing the identification of knowledge and competences that involve their practice with a view to improving their professional performance. In addition, the questionnaire also shows itself as a new tool for the academic environment, to advance discussions about sports coaching and, specifically, to contribute to the development of the production of scientific knowledge inherent in the area of professional training and performance.

REFERENCES

1. Abraham A, Collins D, Martindale R. The coaching schematic: Validation through expert coach consensus. J Sports Sci 2006;24(06):549-64.
2. Demers G, Woodburn AJ, Savard C. The development of an undergraduate competency-based coach education program. Sport Psychol 2006;20(2):162-73.
3. Côté J, Gilbert W. An integrative definition of coaching effectiveness and expertise. Int J Sports Sci Coach 2009;4(3):307-23.
4. Coté J, Saimela J, Trudel P, Baria A, Russell S. The coaching model: A grounded assessment of expert gymnastic coaches' knowledge. J Sport Exerc Psychol 1995;17(1):1-17.

5. Nash C, Collins D. Tacit knowledge in expert coaching: Science or art? Quest 2006;58(4):465-77.

6. International Council for Coaching Excellence (ICCE). International Sport Coaching Framework Version 1.2. Champaign: Human Kinetics; 2013.

7. Brasil VZ, Ramos V, Barros TES, Godtsfriedt J, Nascimento JV. A trajetória de vida do treinador esportivo: as situações de aprendizagem em contexto informal. Mov 2015;21(3):815-29.

8. Milistetd M, Galatti LR, Collet C, Tozetto A, Nascimento JVd. Formação de treinadores esportivos: orientações para a organização das práticas pedagógicas nos cursos de bacharelado em educação física. J Phys Educ 2017;28(2):1-14.

9. Santos ASFM, Mesquita IMR. Percepção dos treinadores sobre as competências profissionais em função da sua formação e experiência. Rev Bras Cineantropom Desempenho Hum 2010;12(4):276-81.

10. Mesquita I, Borges M, Rosado A, De Souza A. Handball coaches' perceptions about the value of working competences according to their coaching background. J Sports Sci Med 2011;10(1):193-202.

11. Soares JAP, Antunes HRL, Rodrigues JdJF. Avaliação de desempenho dos treinadores desportivos: da inexistência de um instrumento estruturado à valorização dos resultados desportivos. Rev Bras Edu Fís Esp 2011;25(3):431-40.

12. Cunha GBd, Sousa T, Rosado AFB, Mesquita IMR, Pereira P. Necessidades de formação para o exercício profissional na perspectiva do treinador de futebol em função da sua experiencia e nível de formação. Motriz: J Phys Ed 2010;16(4):931-41.

13. Egerland EM, Nascimento JVd, Both J. As competências profissionais de treinadores esportivos catarinenses. Motriz: J Phys Ed 2009;15(4):890-9.

14. Rodrigues J, Andrade R, Graça A, Mesquita I. Importance awarded to knowledge for coaching and self-perception of competence manifested by portuguese basketball coaches. Rev Psicol Deporte 2009; 18(3):451-55.

15. Corrêa C, Milistetd M, Galatti L, Crespo M, Abaide CA. Professional knowledge of tennis coaches. Coach Sport Sci Rev 2016;70(24):10-2.

16. Mesquita I, Isidro S, Rosado A. Portuguese coaches' perceptions of and preferences for knowledge sources related to their professional background. J Sport Sci Med 2010;9(3):480-9.

17. Santos SFM, Mesquita IMR, Graca ABS, Rosado AFB. What Coaches Value about Coaching Knowledge: A Comparative Study Across a Range of Domains. Int J Appl Sports Sciences 2010;22(2):96-112.

18. Gomes RE, Isidro ASM, Batista PF, Mesquita IR. Acesso à carreira de treinador e reconhecimento das entidades responsáveis pela formação: um estudo com treinadores portugueses em função do nível da escolaridade e da experiência profissional. J Phys Edu 2011;22(2):185-95.

19. Hernández-Nieto RA. Contributions to statistical analysis. Mérida: Universidade de Los Andes; 2002.

20. Cassepp-Borges V, Balbinotti MAA, Teodoro MLM. Tradução e validação de Conteúdo: uma proposta para a adaptação de instrumentos. In: Pasquali L, editor. Instrumentação Psicológica: fundamentos e práticas. Porto Alegre: Artmed; 2009. p. 506-20.

21. Costa GDCT, Castro HdO, Cabral FdA, Morales JCP, Greco PJ. Content Validity of scenes of the Declarative Tactical Knowledge Test in Volleyball–DTKT: Vb. Rev Bras Cineantropom Desempenho Hum 2016;18(6):629-37.

22. Vieira LF, Nascimento Junior JRAd, Pujals C, Jowett S, Codonhato R, Vissoci JRN. Cross-cultural adaptation and psychometric properties of the Brazilian coach-athlete relationship questionnaire (CART-Q)-Athlete Version. Rev Bras Cineantropom Desempenho Hum 2015;17(6):635-49.

23. Balbinotti MAA, Benetti C, Terra PRS. Translation and validation of the Graham-Harvey survey for the Brazilian context. Int J Manage Finance 2006;3(1):26-48.

24. Gilbert W, Côtê J. Defining coaching effectiveness: a focus on coaches' knowledge. In: Patrac P, Gilbert W, Denison J, editors. Routledge handbook of sports coaching. London: Routledge; 2013. p. 5-15.

25. International Council for Coaching Excellence (ICCE). International Sport Coaching Framework version 1.1. Champaign: Human Kinetics; 2012.

26. Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics 1977;33(1):159-74.

27. Morales JC, Greco PJ, Andrade RL. Validade de Conteúdo do Instrumento para Avaliação do Conhecimento Tático Processual no Basquetebol. Cuad Psicol Dep 2012;12(1):31-6.

28. Greco PJ, Aburachid LMC, Silva SR, Morales JCP. Validação de conteúdo de ações tático-técnicas do Teste de Conhecimento Tático Processual-Orientação Esportiva. Motri 2014;10(1):38-48.

29. Saldanha RP, Balbinotti MAA, Balbinotti CAA. Tradução e validade de conteúdo do Youth Sport Value Questionnaire 2. Rev Bras Ciên Esp 2015;37(4):383-8.

30. Nascimento Junior JRA, Vissoci JRN, Lavallee D, Vieira LF. Adaptation and validation of the Sport Multidimensional Perfectionism Scale-2 (SMPS-2) for the Brazilian sport context. Motriz: J Phys Ed 2015;21(2):125-36.

CORRESPONDING AUTHOR

Ricardo Teixeira Quinaud
Avenida Vinícius de Moraes, n 82,
Córrego Grande
CEP: 88037-240
Florianópolis, Santa Catarina, Brasil
Email: ricardoquinaud@gmail.com

SUPPLEMENTARY FILE

Questionnaire in Portuguese

QUESTIONÁRIO ACERCA DAS DIMENSÕES DOS CONHECIMENTOS E COMPETÊNCIAS FUNCIONAIS DO TREINADOR - QCCT

- **Parte 1: Conhecimentos dos Treinadores Esportivos**

Objetivo específico: Identificar o grau de importância atribuída e de domínio percebido dos conhecimentos de treinadores esportivos.

Nas questões 1.1 a 1.20, indique o grau de importância atribuída e de domínio percebido dos conhecimentos do treinador esportivo, conforme os valores apresentados nas duas escalas a seguir:

Importância Atribuída:
1 – Não Importante
2 – Pouco Importante
3 – Importante
4 – Muito Importante
5 – Importantíssimo

Domínio Percebido:
1 – Não Domino
2 – Domino Pouco
3 – Domino Razoavelmente
4 – Domino Bem
5 – Domino Muito

Assinale a alternativa que corresponde ao **grau de importância atribuída** e de **domínio percebido** aos seguintes conhecimentos do treinador esportivo:

	Conhecimentos do Treinador Esportivo	Importância Atribuída					Domínio Percebido				
1.1	Planejamento do treino (objetivos, conteúdos, estruturação das tarefas e progressões).	1	2	3	4	5	1	2	3	4	5
1.2	Gestão do treino (tempo, espaço físico, equipamentos e pessoas).	1	2	3	4	5	1	2	3	4	5
1.3	Intervenção pedagógica (estratégias instrucionais no ensino do esporte, organização das tarefas e progressões).	1	2	3	4	5	1	2	3	4	5
1.4	Avaliação dos aspectos técnico-tácticos, físicos e psicológicos no contexto do treino esportivo.	1	2	3	4	5	1	2	3	4	5
1.5	Formação e desenvolvimento de atletas a longo prazo.	1	2	3	4	5	1	2	3	4	5
1.6	Implementação e avaliação de programas que envolvam a integração de especialistas em Ciências do Desporto.	1	2	3	4	5	1	2	3	4	5
1.7	Primeiros socorros.	1	2	3	4	5	1	2	3	4	5
1.8	Legislação que regulamenta o sistema esportivo.	1	2	3	4	5	1	2	3	4	5
1.9	Contexto de atuação profissional.	1	2	3	4	5	1	2	3	4	5
1.10	Organização e participação em competições esportivas.	1	2	3	4	5	1	2	3	4	5
1.11	Liderança e gestão dos atletas e comissão técnica.	1	2	3	4	5	1	2	3	4	5
1.12	Comunicação eficaz durante o treino.	1	2	3	4	5	1	2	3	4	5
1.13	Formação de outros treinadores.	1	2	3	4	5	1	2	3	4	5
1.14	Comunicação com outros atores do cenário esportivo (pais, mídias, árbitros).	1	2	3	4	5	1	2	3	4	5
1.15	Desenvolvimento de atitudes, valores e comportamentos sociais aceitáveis.	1	2	3	4	5	1	2	3	4	5
1.16	Aprendizagem profissional.	1	2	3	4	5	1	2	3	4	5
1.17	Reflexão para prática profissional.	1	2	3	4	5	1	2	3	4	5
1.18	A própria emoção e emoção dos outros (atletas, pais, mídias, árbitros).	1	2	3	4	5	1	2	3	4	5
1.19	Filosofia de treino.	1	2	3	4	5	1	2	3	4	5
1.20	Conscientização e criticidade da prática profissional.	1	2	3	4	5	1	2	3	4	5

- **Parte 2: Competências dos Treinadores Esportivos**

Objetivo específico: Identificar o grau de importância atribuída e domínio percebido das competências dos treinadores esportivos.

Nas questões 2.1 a 2.18, indique o grau de **importância atribuída e domínio percebido** das competências do treinador esportivo, conforme os valores apresentados nas duas escalas a seguir:

Importância Atribuída:	**Domínio Percebido:**
1 – Não Importante	1 – Não Domino
2 – Pouco Importante	2 – Domino Pouco
3 – Importante	3 – Domino Razoavelmente
4 – Muito Importante	4 – Domino Bem
5 – Importantíssimo	5 – Domino Muito

	Competências do Treinador Esportivo	Importância Atribuída					Domínio Percebido				
2.1	Compreender o contexto de prática.	1	2	3	4	5	1	2	3	4	5
2.2	Analisar as necessidades dos atletas/praticantes.	1	2	3	4	5	1	2	3	4	5
2.3	Definir os objetivos do trabalho de acordo com o contexto e os atletas/praticantes.	1	2	3	4	5	1	2	3	4	5
2.4	Preparar um ambiente seguro de treino.	1	2	3	4	5	1	2	3	4	5
2.5	Criar planos de ação.	1	2	3	4	5	1	2	3	4	5
2.6	Definir critérios de êxito de atletas/praticantes.	1	2	3	4	5	1	2	3	4	5
2.7	Liderar e influenciar.	1	2	3	4	5	1	2	3	4	5
2.8	Comunicar-se de maneira eficaz.	1	2	3	4	5	1	2	3	4	5
2.9	Gerir pessoas.	1	2	3	4	5	1	2	3	4	5
2.10	Conduzir atletas/praticantes em treino e competição.	1	2	3	4	5	1	2	3	4	5
2.11	Empregar diferentes metodologias de treino de acordo com o contexto e atletas/praticantes.	1	2	3	4	5	1	2	3	4	5
2.12	Organizar competições.	1	2	3	4	5	1	2	3	4	5
2.13	Avaliar o treino e a competição.	1	2	3	4	5	1	2	3	4	5
2.14	Analisar a perfomance de atletas/praticantes e equipes.	1	2	3	4	5	1	2	3	4	5
2.15	Fazer ajustamento no processo de treino e competição.	1	2	3	4	5	1	2	3	4	5
2.16	Desenvolver filosofia do coaching.	1	2	3	4	5	1	2	3	4	5
2.17	Aprender de forma contínua.	1	2	3	4	5	1	2	3	4	5
2.18	Refletir e autoavaliar-se.	1	2	3	4	5	1	2	3	4	5