

SUCCESS FACTORS IN THE TRAINING OF ELITE COACHES IN HIGH-PERFORMANCE SWIMMING: ANALYSIS FROM A FOCUS GROUP

FATORES DE SUCESSO NA FORMAÇÃO DE TREINADORES DE ELITE EM NATAÇÃO DE ALTO RENDIMENTO: ANÁLISE A PARTIR DE UM GRUPO FOCAL

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ABSTRACT

This study aimed to identify the factors elite coaches consider most important in enhancing coach swimmers' professional education and efficiency. A focus group was conducted with four Portuguese coaches recognized by the Portuguese Swimming Federation as "elite coaches" for having qualified swimmers for finals in the European Championships, World Championships, and Olympic Games. The focus group leader used a prepared set of semi-structured questions to guide the 90-minute sessions. Sessions were tape-recorded, transcribed, and analyzed by a set procedure for qualitative analysis to identify the coaches' perspectives on the factors that enhance coach swimmers' professional efficiency. The coach's personal and professional characteristics and beliefs about coach education, capacity for continuous updating, and teamwork play a determining role. The results showed that coaches value and recognize the benefits of their academic and informal training, the positive experiences as swimmers, and the importance of science in sports. Multidisciplinary support involving professionals from areas such as medicine, biomechanics, physiotherapy, nutrition, psychology, and rigorous management of the training and competition process complement the determining factors for success in high-performance swimming. In conclusion, the multifactorial nature of success in this sport has highlighted the central role of promoting eclectic training for coaches, considering the challenges of elite sports.

Keywords: high-performance swimming, elite coaches, thematic analysis, focus group, coach education

RESUMO

Este estudo teve como objectivo identificar os factores que os treinadores de elite consideram mais importantes para melhorar a formação profissional e a eficiência dos treinadores de natação. Foi realizado um grupo focal com quatro treinadores portugueses reconhecidos pela Federação Portuguesa de Natação como 'treinadores de elite' por terem qualificado nadadores para finais em Campeonatos da Europa, Mundiais e Jogos Olímpicos. O moderador do grupo focal utilizou um conjunto preparado de questões semiestruturadas para orientar as sessões de 90 minutos. As sessões foram gravadas em áudio, transcritas e analisadas através de um procedimento específico de análise qualitativa para identificar as perspectivas dos treinadores sobre os factores que melhoram a eficiência profissional dos treinadores de natação. As características pessoais e profissionais do treinador e as suas convicções sobre a formação de treinadores, a capacidade de actualização contínua e o trabalho em equipa desempenham um papel determinante. Os resultados mostraram que os treinadores valorizam e reconhecem os benefícios da sua formação académica e informal, as experiências positivas enquanto nadadores e a importância da ciência no desporto. O apoio multidisciplinar envolvendo profissionais de áreas como medicina, biomecânica, fisioterapia, nutrição, psicologia e a gestão rigorosa do processo de treino e competição complementam os factores determinantes para o sucesso na natação de alto rendimento. Em conclusão, a natureza multifactorial do sucesso nesta modalidade evidenciou o papel central da promoção de uma formação eclética dos treinadores, tendo em conta os desafios do desporto de elite.

Palavras-chave: natação de alto rendimento, treinadores de elite, análise temática, grupo focal, formação de treinadores

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Internationally, research on coach education has begun to receive more attention. High-performance sport, particularly in Olympic competitions and world championships, demands a balanced integration of physical abilities, psychological resilience, and strategic intelligence. At the core of this complex dynamic are elite coaches whose advanced technical expertise and leadership skills are pivotal in maximizing athletes' performance on the global competitive stage.

The evolution of high-performance sports has emphasized the need for a more systematic and scientific approach to the training process, which has led to an increased demand for professional development among coaches (Trudel & Gilbert, 2006). Furthermore, the globalization of sports and access to digital platforms have facilitated the dissemination of knowledge and the sharing of best practices, encouraging coaches to continuously invest in their professional growth (Côté & Gilbert, 2009).

Continuous professional development is a response to the technical and scientific demands of sports and a way for coaches to address the psychosocial challenges associated with high-performance athletes. Managing diverse teams, motivating athletes from different cultural backgrounds, and adapting to complex situations are skills that have increasingly gained prominence in the training of elite coaches (Lara-Bercial & Mallett, 2016).

The Profile of the Elite Coach

The elite coach is often described as a leader, strategist, and people manager, combining technical expertise with interpersonal skills and strategic vision. According to Currie and Oates-Wilding (2016), elite coaches are distinguished by their proven track record of success, ability to apply evidence-based methodologies, and skill in adapting strategies to meet athletes' individual needs and competitions' specific demands.

A key aspect of the elite coach's profile is their ability to create a training environment that fosters the holistic development of the athlete. This includes not only physical and technical preparation but also the management of mental health, the promotion of ethical values, and the development of psychological resilience (Côté & Gilbert, 2009). Additionally, elite coaches stand out for their commitment to lifelong learning, demonstrating openness to integrating new technologies, collaborating with experts from different fields, and adopting innovative practices.

Another essential element is leadership ability (Rosado, 2017). Elite coaches are experts in their sport and leaders who inspire trust and motivation in their athletes. This leadership is often underpinned by effective communication, empathy, and a collaborative approach, fostering a sense of team cohesion and shared goals (Lara-Bercial & Mallett, 2016).

The research focuses on examining the effectiveness of coach education programs, the educational needs of coaches, how coaches learn and develop competencies, and coach evaluation. This research has facilitated researchers' access to a central element of the coaching process - the coach. Nonetheless, a contextualized understanding specific to sports is still lacking, particularly concerning developing a theoretical framework for coach education.

In recent years, there has been a significant increase in the provision and evaluation of coach education programs. Limited knowledge exists on how coaches experience their profession, not only in structure, content, and evaluation but also regarding the construction of coaches' knowledge and its application in practice. This also applies to Pure Swimming and elite coaches, and this specificity should be deemed critical for enhancing their training and professional efficacy.

Therefore, listening to and identifying the

perspectives of elite swimming coaches is imperative. In recent years, various studies have contributed to the theoretical framework regarding the training of coaches and their subsequent evaluation (Nelson et al., 2013). However, it is not possible to conclude about the impact that training has on elite coaches, nor about the degree of satisfaction they have regarding the conventional model of knowledge transmission (Taylor & Garratt, 2010).

On the other hand, Eyton and Coopoo (2014), in a study on coach training, concluded that success in training these sports agents requires the involvement of the coaches, ensuring that their needs are taken into account in their professional development. Beyond training, it is important to focus the intervention of elite coaches in the context of developing Olympic and world champions, recognizing that these are the individuals who have a proven track record of guiding athletes to high-level success, supported by their knowledge and possessing specific sports competencies, training methodologies, and athlete management practices (Currie & Oates-Wilding, 2016).

Currie and Oates-Wilding (2016) state in their book that the central elements for the effectiveness of elite coaches include passion, commitment, previous sports experience, and mastery of fundamental training attributes such as leadership, communication, and adaptability. In our study, we aimed to gather insights from elite coaches, those who qualify swimmers for semi-finals and finals in major world and continental competitions, to address the question: which factors do coaches value most for their qualification as elite coaches?

The present study aims to identify the opinions of elite swimming coaches toward elite coaching preparation and education. The present study focused its discussion on the following themes: (a) Perception of professional development, (b) Conceptions

about coach education, (c) Beliefs about coach education in general, (d) Value of experience and academic training in choosing the coaching profession, (e) Importance of experience as swimmers, (f) Coach's relationship with research, (g) Coaches' perception of multidisciplinary work.

METHODS

Participants

The participants in this study were elite coaches who worked with high-performance swimmers focused on their preparation to qualify for continental, world championships, and primarily for the Olympic Games. The group consisted of four coaches the Portuguese Swimming Federation recognized as elite coaches. It is worth highlighting the achievement of medals in the 2022 European Championships.

A focus group was organized to collect the coaches' opinions. All swimming expert coaches received personal and e-mail invitations to attend focus groups. Participation was voluntary, and participants provided written informed consent when they first arrived at the focus group. Participants were informed that they could stop participation at any time and that their identities would be protected in reports of the study findings.

The coaches have an average chronological age of 55.25 (SD = 8.54) years. They all had an average swimming experience of 12.25 (SD = 4.03) years. In terms of the years they have worked in high-performance sports, the average was 20 years (SD = 15.05). On average, the transition period from athletes to high-level coaches was 13.75 (SD = 8.34) years.

Procedure

Focus group methodology

Considering the study's objective, the data collection method deemed most suitable for achieving the goals was the focus group. The

application of the focus group aims to investigate beliefs, values, attitudes, and opinions that lead to understanding the questions for which we seek answers.

The focus group leader was trained and experienced in working with this population as a former elite coach. He used a prepared set of open-ended questions to guide the 90-minute sessions. The semi-structured interviews allowed responses within a framework of questions whilst also granting a degree of freedom for the candidates to talk about what was important to them. The script covered preparation for the role, the logistics of coaching (the tools, timing, and training), and the topics covered during coaching sessions while allowing for other topics to be generated by participants. The focus groups were tape-recorded and later transcribed. Efforts were made to elicit responses from all subjects. The Faculty Ethical Council approved the study.

Qualitative analysis

We chose to use a script designed for this purpose as the initial data collection instrument. The script was a guiding tool for developing the topics to be addressed in the focus group and was validated in advance by the research team. Each proposed topic or question was discussed using a consensus validation approach.

Using an interpretive paradigm, qualitative analysis of transcripts followed a constant comparative method consistent with a grounded theory approach. Qualitative analysis of the focus group data used a set procedure (Denny & Weckesser, 2022). After initial readings, we extracted all discussions of coaches' interactions. Audio recordings were professionally transcribed. We then classified the elements of these discussions into themes and sub-themes. The authors met to discuss the analysis and reach a consensus on the coding procedure. Once focus groups were complete, the two authors independently

conducted a round of open coding of all group scripts.

They then met to discuss emergent themes until consensus was achieved on key themes, organized into: a) Perception of professional development, (b) Conceptions about coaching education, (c) Beliefs about coaching education in general, (d) Valuing the influence of experience and academic training in choosing the coaching profession, (e) The importance of experience as swimmers, (f) Coach's relationship with research, (g) Coaches' perception of interdisciplinary work.

The authors utilized techniques to ensure our findings' credibility, including independent coding and peer debriefing.

The semi-structured group interview involved four distinct parts: (1) introduction, expressing gratitude for the group's availability to participate in the study; (2) legitimizing the focus group procedure by requesting permission to audio record the session; (3) formalizing the informed consent form and confidentiality of information; and (4) development, presenting the study's purposes and objectives and posing the questions. In conclusion, we provided the consultation results for clarification and future contacts.

All audio content of the interview was transcribed into text format. After the meeting, the recording was transcribed, and the corresponding text for each participant was sent for validation via e-mail. In the qualitative research tradition, it is common to allow respondents to verify if they recognize themselves in the final interviews and interpretations made by the researcher. We employed the "member check" strategy to determine the credibility of the results.

RESULTS

Perception of professional development

A strong passion marks the interview coaches' journey for the sport, intrinsic motivation, and a clear sense of vocation for the

coaching role. It was unanimously considered important for their performances as coaches that they had been swimmers. However, despite this enthusiasm, the interviewees acknowledge that the reality of the coaching profession in Portugal is confronted with various challenges.

The discontinuity and instability of the career are a constant concern, with the possibility of being dismissed suddenly. Low salaries and the precariousness of contracts, which often force coaches to seek additional sources of income, add to these challenges. The lack of professional, cultural, and social recognition of the coach's role is also a reality described by these professionals.

When dedicating themselves exclusively to the club or team, the interviewees see clear advantages in this option, such as greater availability and time for athlete preparation. However, long-term job security is constrained, as the coach-club connection can be unexpectedly interrupted.

“Currently, when someone tells me they are going to take the coaching course because they want to be a swimming coach, I always say: ‘Consider what you are getting into because nowadays, being a swimming coach is a career, but it is not a continuous one.’”

The coaches also lament the lack of recognition for their work, feeling forgotten and undervalued, even while celebrating their swimmers' achievements.

Conceptions about coaching education

The interviewed coaches revealed that their training needs are best met through formal and informal education acquired through daily experience and continuous knowledge sharing. It was widely argued that peer discussion about new ideas and solutions is essential as a training strategy. The coaches also expressed a desire to understand better what other coaches are doing, especially internationally.

“I really need discussion, to disagree about something, to truly understand new realities, and perhaps pick up things here and there that help me modify and not... I always try not to change things without losing sight of my philosophy and ideas, I am always looking to do things differently.”

Beliefs about coaching education in general

The analysis revealed concerns regarding informal and formal training, highlighting aspects they consider fundamental but have been diminishing over time. Regarding informal training, coaches regret the disappearance of informal meetings held after national championships, where they could exchange ideas and discuss training. They mentioned that these practices are fading away, with less and less interaction and debate among coaches.

“... I know that your generation is the generation of (...) because I heard stories of when he was a coach. In the beginning, they used to have many conversations like the one we're having here, but they had them at national championships, right? At the end of the national championship, they would gather, have a beer, eat some peanuts, and talk and debate ideas training. I think it's something that is being lost, the art of debating, exchanging ideas.”

The removal of technical congresses during the European and World Championships by the organizations responsible for European and global swimming is also criticized. Coaches consider these congresses essential for their continuous education.

“Usually, at the Federation during championships, there were always, sometimes even too many, meetings or training sessions on the calendar or regulations every night, but there was always a training moment. Moreover, that has ended. Just like during the European and World Championships, LEN and FINA always held technical congresses. I had the chance, in Tokyo, to

participate in such sessions because our Federation President came to me, and a swimmer asked us to go to a room where the FINA President was, and he asked me what I thought was missing and what I wanted to improve. I mentioned to him that technical congresses have been missing for many years and they were essential, so I directly conveyed this gap in coaching education to him."

Regarding formal education, they believe there is an excessive focus on the scientific and theoretical components, neglecting the connection to the practical aspects of coaching. Some coaches feel that the lack of trainers with practical experience demotivates participation in training activities.

On the other hand, they emphasize the importance of informal training opportunities provided by internships and gatherings in places with good training conditions, where coaches can interact and exchange experiences with colleagues from different nationalities.

"What our entities typically do, when we propose internships in Tenerife or at high altitude, the first response is: 'Is it really necessary?', 'Again?', 'So many?', 'But why?' Because there we have conditions we don't have in Portugal, and suddenly, we can train with the best in the world. I think that is fundamental."

In general, the coaches considered that each variable plays a predominant role at a specific moment and in a particular context. It is noteworthy that all the interviewees attributed importance to academic education.

When analyzing the three components - experience as a swimmer, influence of the coach, and academic education - the interviewees emphasized the latter as decisive for their professional development. However, all acknowledged that these components played a significant role in their formation as coaches and have evolved over time.

"The academic education, especially the master's degree, was significant for me, also due to the people who accompanied me during that time, both the professors and the colleagues. We would go to Lisbon one week per month and spend that week talking about swimming from morning till night. It was fantastic."

The importance of experience as swimmers

It was a unanimous opinion regarding the importance of having experience as a swimmer prior to starting a coaching career, something that objectively benefited a better coaching intervention, as it allowed them to understand better the sensations experienced by swimmers during the various training tasks.

"The fact of having been a practitioner, at any level, has an influence in the sense of making us understand various things more easily, not only about training daily life but also about the needs that we felt as swimmers and being able to as a coach be more attentive and respond to those needs. That had a significant influence, and I believe it makes a big difference."

They believe they do not need to have been swimmers at a very high competitive level to become good coaches. They acknowledge that the richness of the experience accumulated as athletes is a valuable contribution.

"I believe that the experience as an athlete is fundamental. It's not exclusive, but it's very important. Moreover, one curious thing, the more I advance in my career, and now, obviously, in the twilight of my career, the more I appeal to the sensations I had as an athlete to try to understand the swimmers."

The interviewees revealed the significant influence their previous coaches had on them in the past when they were swimmers, with learnings that still endure today in the dynamics within the group of swimmers.

The coaches' relationship with research

Regarding the relationship of Portuguese elite coaches with science and scientific research, the results allow for identifying sub-themes related to this dynamic.

The coaches appreciated the opportunities created for students from different faculties to present research papers developed within the context of their academic studies.

However, despite this recognition, the coaches also perceived that there is still a need for greater integration between the scientific content presented and its practical application in the sports context. One of the coaches also highlighted the need for caution in seeking information, especially from the internet, emphasizing the importance of a discerning filter, as not all online content is suitable or relevant to their practice.

"We have a lot of information on the internet, but it's important to be very careful because not everything is useful."

The coaches' perception of multidisciplinary work

The involvement of different experts in the coaching staff to assist coaches in various areas was a theme where we could gather consensus and individual opinions, mainly focusing on the psychologist's role. Coaches expressed the importance of psychology and the psychologist, believing that the only way for these professionals to intervene positively is through constant and daily participation in training sessions.

"(...) always from a daily perspective, throughout the year, I don't see the psychologist's role in a team only when problems arise, to come and treat them, no. They should be there to equip swimmers and coaches with tools that prevent the emergence of extreme situations where intervention is always more challenging."

The significance of the psychologist was deemed necessary for coaches by the inter-

viewees, who recounted events justifying the support of psychologists for coaches, especially after competitions like the Olympics. One of the interviewees strongly believes in the need for various specialists, not just psychologists, to support coaches.

Coaches need recognition, and the significance of coaches to Portuguese sport must be clearly understood. The possibility of full-time dedication to the coaching activity has been analyzed in various international contexts, with studies showing a reduced number of coaches working exclusively and a significant number of coaches working part-time or voluntarily (North, 2009). This reality contributes to the dissatisfaction of many coaches, who aspire to greater involvement in accompanying the athletes throughout the entire preparation process.

In this line, there is an evident appreciation for the exclusive dedication, as this would allow for more permanent and in-depth intervention throughout the various stages of training. In general terms, there is convergence in the opinion that total dedication to coaching is desired by most of the coaches interviewed.

Another frequently mentioned topic is the social and professional recognition of the coach, which should value the role played in the educational, cultural, and sports contexts. At the same time, the training issue has received great attention, with many coaches seeking to develop the necessary skills for qualified intervention in the context of high performance.

In this sense, several studies indicate the relevance of higher academic training. Investigations conducted by Trudel and Gilbert (2006) demonstrate that a high percentage of elite coaches hold higher education in these areas, both in various European and Asian countries and other regions such as Oceania (Rynne, 2008). In addition to initial training, continuous training is emphasized, often associated with sharing experiences, work meetings, observational internships, and parti-

cipation in conferences and seminars (Cushion et al., 2003). Although there are preferences for specific methods (e.g., peer learning), it is recognized that more expository approaches, with discussion and applied practice, are also necessary (Mallett et al., 2009).

Regarding previous experience as an athlete, several authors emphasize its relevance to the coach's performance (Trudel & Gilbert, 2006). However, this experience can lead to both successful approaches and the inadvertent reproduction of inefficient practices (Cushion et al., 2003; Trudel & Gilbert, 2006). It is important to note that although competitive experience is advantageous, it is not essential for achieving success as a coach (Gilbert et al., 2006; Mallett et al., 2006; Mallett et al., 2007).

The growing complexity of high-performance training reinforces the need for coaches to keep up with scientific advances and technological developments (Muller et al., 1998). To this end, access to research results through digital resources and specialized publications becomes fundamental. In parallel, the relevance of multidisciplinary teamwork is highlighted, involving professionals from areas such as medicine, physiotherapy, nutrition, biomechanics, and psychology, whose intervention can potentially optimize sports results (Howie et al., 2016).

Including specialists in the technical team favors the articulation of different knowledge and the continuous monitoring of the training process, providing substantiated feedback that can be decisive in adapting the adopted methodologies. Such collaboration provides a solid foundation for developing elite swimmer training, contributing to high sports performance (Cushion et al., 2003; Gilbert et al., 2007).

CONCLUSION

Our study confirms that the profession of elite coach is marked by uncertainty and instability, creating a work context based on constant negotiation, tensions, and micro-politics.

Although formal training has its place, the results highlight the primacy given to experiential training, the discussion of practices, and the sharing of knowledge with practical application. In this sense, the relevance of previous experience as athletes, continuous scientific updating, and the formation of multidisciplinary support teams is emphasized. In Portugal, in the context of swimming training, such dynamics reveal challenges and opportunities that require training programs capable of supporting coaches to realistically and practically deal with the complexity of their functions. The search for discussion spaces and the emphasis on the immediate usefulness of training content reinforces the importance of training interventions that empower coaches to perform their multiple functions with high levels of excellence.

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