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A Descriptive Study of Coaches' Perceptions Regarding Talent Identification and Development in Swimming

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Abstract Sports coaches have a fundamental role in talent identification and development pathways as they are responsible for determining the characterization of an athlete and overseeing his subsequent advancement in the sport. This study aimed to conduct a comprehensive survey on coaches' current perceptions of talent identification and development issues in swimming. An online survey of 20 different types of questions was completed by 112 swim coaches (87 male/25 female) of competitive swimmers based in five countries. Pearson chi-square test assessed the relationship between coaches' responses and their coaching experience and gender. Cramer's V test was applied as an effect size of the relationship. According to the results, general health indicators (37.6%), buoyancy (46.2%), body composition (33.7%), family support (55.9%), coaching environment (66.4%), and the desire for training (25.5%) were considered the highest-ranked answers regarding the physiological, technical, morphological, social, environmental, and psychological factors, respectively. Moreover, coaching level and gender appeared to have a minor effect on participants' perceptions. The data presented provide a detailed overview of the methods and beliefs adopted by contemporary swim coaches and may offer valuable insights into issues and practices related to talent selection and development. The results can also be useful for coaching education curriculums and designing and implementing future talent identification programs in swimming.

Keywords Swim Coaches, Talent Pathways, Survey

1. Introduction

While the notion of talent has captivated researchers and coaches across different sports for decades, a precise and widely accepted definition of talent in sports science remains elusive [1]. Yet, it remains undisputed that sports coaches, especially the more experienced ones, have a critical responsibility in the talent identification (TID) and development (TDE) processes. Coaches' role is considered integral as they are responsible for making decisions on characterizing an athlete and his/her subsequent progression in the sport [2]. However, this decision-making process is not easily understood due to its composition [3]. In this sense, it has been recently suggested that the subjective process of TID, also referred to as the "coach's

eye" or "gut instinct" [3,4], is honed over time and includes the evaluation of various aspects of an athlete's abilities and potential. Despite the somewhat limited understanding of this process, which is probably non-reliable [5], sports coaches' experiential knowledge and education seem to play a key role [2].

Various factors, namely age, gender, maturity, physical condition, and recent training background, have contributed to the identification of talent [6]. The pathway for identifying gifted athletes should consist of three main pillars: *Identification*, *development*, and *systematic monitoring* [7]. Importantly, the selection of athletes should aim at a continuous, in-depth process of reflection and modification of training. Moreover, the evaluation methods and the stages of athlete development are crucial factors in guaranteeing the time efficiency of the control methods for the sporting community [8]. While the goal is the improvement and effectiveness within a given sport, the negative outcomes of participating in TID programs on athletes' physical health have also been emphasized [9].

The primary purpose of tailored TID programs is to identify athletes with the potential to excel in future international competitions [10]. A repercussion of early specialization is the ever-increasing physical and mental pressure athletes are under from their coaching and social environment [11]. Undoubtedly, however, this process allows for specific preparation and effectiveness in athletes' performance in a short period. Thus, TID programs should be dynamic and tailored to the athlete [12]. In addition, the biological age and the maturity status of the athletes should always be considered to allow for the inclusion of children and young adults. Other important factors, such as the relative age (i.e., the chronological age difference between athletes of the same age group), and the peak height velocity should be also discussed by coaches and stakeholders [13,14]. Finally, due to sport's complex and multifaceted nature, talent should be defined as "innate", according to a range of biological (hereditary and genetic), cognitive, physical, social, and psychological characteristics [15], as well as their potential interaction [16].

According to a recent study applied to basketball coaches, the importance of different indicators for the development of young basketball players (tactical skills, positioning, decision-making, quality of training, and skills related to psychological parameters) was influenced by the level of competition that coaches were at (international, regional, or national level) [17]. Similarly, two other studies [18,19] focused on ascertaining any differences in the process of evaluating the physical, technical, and tactical characteristics and documenting the criteria that coaches consider when identifying the talents of young male football players. Both studies identified the need to implement specific training strategies for physical, tactical, and technical characteristics to reduce the differences between promising and less promising athletes and thus offer an appropriate development process for all. Finally, due to the complexity of soccer, coaches emphasized the importance of a holistic testing approach to identify skillful players who will succeed at a higher level from a young age in the sport.

Swimming is a complex and demanding sport requiring a combination of technical skills, physical attributes, mental resilience, and specific performance indicators, meaning that the necessity of identifying talented athletes arises from its multifactorial nature [20]. TID in swimming is an essential process to identify young athletes and is of particular importance for those with the greatest potential to excel in the sport. According to Silva et al. [21], selected anthropometric variables were more strongly correlated with performance in the 200m individual medley compared to those in the 400m front crawl. Similarly, explosive power and aerobic capacity assessments explained more variance for 100m compared to 200m competition performance in elite junior swimmers [8]. Furthermore, the number of races over the competitive year was highlighted as a potential success factor for TDE in a large sample of highly ranked male swimmers [22].

To the authors' knowledge, a study of the parameters used by coaches in detecting and ultimately characterizing swimmers as "talented" is missing from the current literature. This procedure might also be influenced by coaches' gender and/or training experience. Consequently, developing and implementing a more thorough model of TID would facilitate the understanding of performance, successes, and failures at all stages of athletic development, while helping both stakeholders and practitioners to revise their current TID and TDE pathways. In addition, it may be possible to form more realistic performance expectations within the sporting community (team administrators, coaches, and sports scientists) [23,24]. The purpose of the current study was therefore to investigate the perceptions of swim coaches regarding issues related to TID and TDE, taking their coaching experience and gender into account.

2. Materials and Methods

2.1. Participants

An a priori power analysis was performed to calculate the minimum sample size required (G*Power, v. 3.1.9.7) [25]. The analysis indicated the required sample size to achieve 95% power for detecting a medium effect of d = .40, at a significance criterion of $\alpha = .05$. Cohen's d (44), was 69 subjects. Ultimately, 112 swim coaches (87 male / 25 female) participated voluntarily. All participants were part of competitive swimming teams in Greece (in 25 Greek municipalities) and four other countries (Switzerland, France, Cyprus, and England). The participants completed an anonymous online survey designed for the research. As previously applied [26,27], the participants were divided into four groups by their coaching experience (in years). In this study, the 10-year rule for reaching expertise in sports

coaching was followed: (i) intermediate (up to 10 years) (ii) experienced (11-21 years), (iii) highly experienced (22-33 years), and very highly experienced (34 years or more). The Institutional Ethics Review Board provided ethical approval before the survey distribution and conformed to the Declaration of Helsinki.

2.2. Study Design

The inclusion criteria specified that the participants must: i) be active swimming coaches; and ii) practice the profession of competitive-level swimming coaching (i.e., training national or elite-level swimmers). Initially, a pilot study was conducted to improve the clarity and usability of the survey. The survey was pilot-tested by four swimming coaches (who were not included in the final sample) of athletes competing at the highest level, two of whom held a Ph.D. in sports science, to assess the validity of the study and ensure clarity and comprehension. Following the clarifications and feedback provided by this group of coaches, three additional questions were added, two were removed, and four were reworded to make them easier to understand.

The survey (only in Greek) contained seven types of questions (open-ended, pre-defined, yes/no, yes/no/sometimes multiple-choice, linear (Likert) scale, and multiple-choice grid). The final survey was classified into four sections and included a total of 18 questions, excluding those containing demographic / training characteristics and free commentary (i.e., the introductory and final sections). The first section of the survey included a detailed description of the study, stating the confidentiality of the information, along with questions on the gender, age, years of coaching experience, and academic background of the participants. This was followed by the demographic data of the participants, the number of athletes under their supervision, the age category to which their athletes belong, and the prefecture of Greece where they train. The second section consisted of 15 questions focused on gathering information regarding each participant's perceptions of identifying talented athletes. In this section, the participants were asked to assess the importance from 1 (*not important at all*) to 5 (*extremely important*) of specific "physiological", anthropometrical, morphological, technical, social, training/environmental, and psychological factors that affect the overall TID and TDE processes in swimming. The third section consisted of two questions adapted to the methodological problems arising during the TID and TDE procedures. Finally, the fourth section included a question allowing participants to comment freely, providing reflections and new views on the present research topic. The average time required to complete the questionnaire was around five minutes.

2.3. Procedures

The survey was designed through the online platform Google Forms and was distributed through the individual regional swimming committees, coaching associations across the country, social media, personal contacts of the researchers, and the national swimming federation. The time allocated for completing the questionnaire was from November 29, 2022, to January 29, 2023.

2.4. Statistical Analysis

All responses were processed anonymously and exported from Google Forms to a Microsoft Excel file (Microsoft Corp., Redmond, Washington) for descriptive analysis. To validate the assumptions of normality, the Kolmogorov-Smirnov test was applied, indicating a parametric distribution of the data ($p > 0.05$). The Pearson chi-square test (χ^2) was used to examine the association between coaches' answers and their coaching experience and gender. Cramer's V test (V) was applied as an effect size for Pearson's test χ^2 test. The frequency of answers was categorized as follows: all represented 100% of relevant participants; most indicated ≤75%, the majority referred to 55 to 75%, approximately half denoted ∼50%, approximately a third indicated ±30%, and the minority represented >30% [28]. All statistical analyses were performed using the IBM SPSS (version 27; SPSS Inc, Chicago, IL). The alpha value was set at $p \leq 0.05$.

3. Results

The survey respondents mostly worked with 13- to 14-year-old categories (n=103; 95.4%), with an average number of 46.5 swimmers under their supervision. Importantly, 109 (98.2%) of them had studied sports science at a third-level institution (n = 102; 91.1%). As for their chronological age, 19 respondents belonged to the <30 and the 31-35 groups (17.0%), (17.0%), and 17 to the 51-55 group (15.2%). Of the remaining respondents, 16 were between 41 and 45 years old (14.3%), 15 were between 46 and 50 years old (14.3%), 14 belonged to the 56+ group (12.5%), and 12 were between 36 and 40 (10.7%). The distribution of the respondents regarding their professional experience is shown in Table 1.

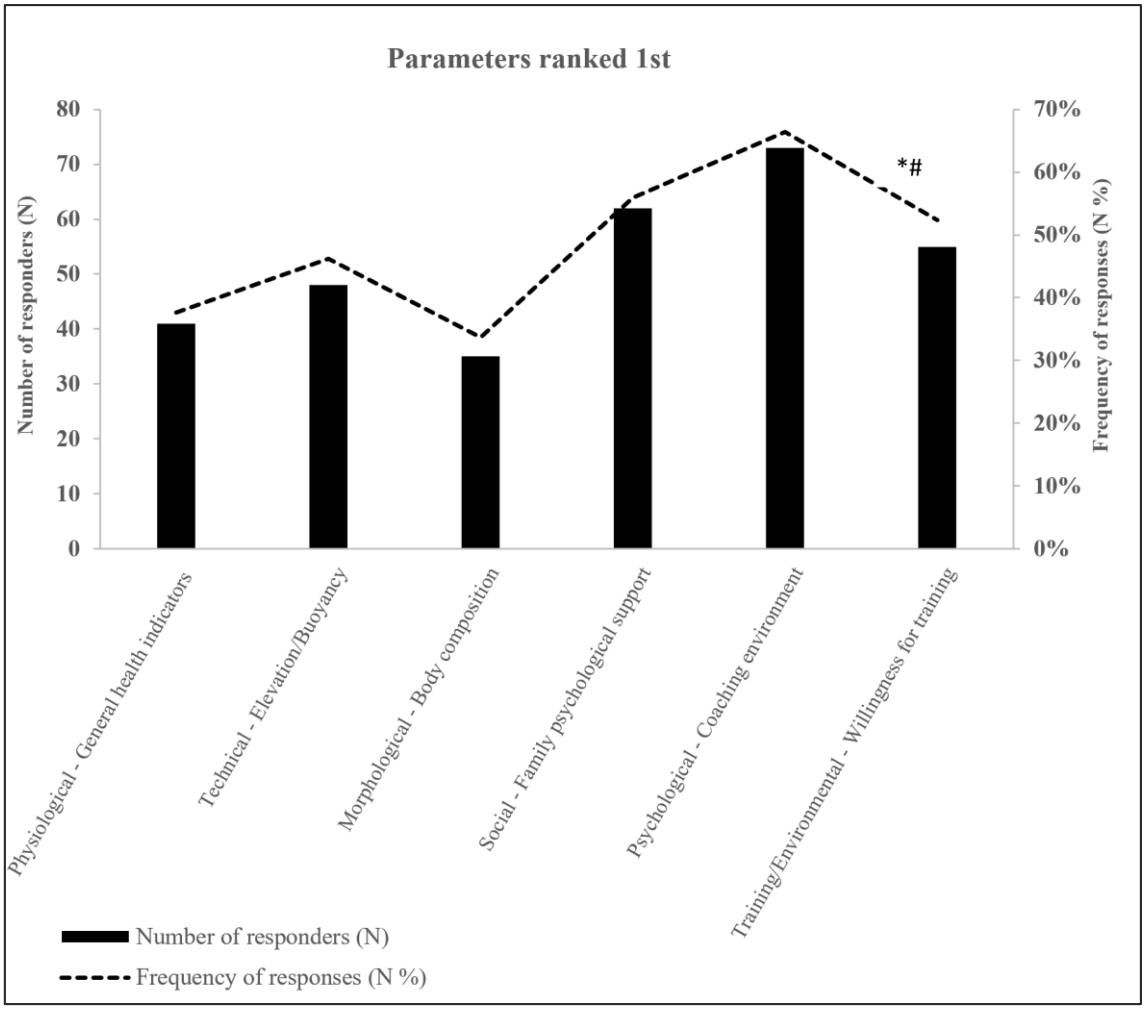
Table 1. Grouping of participants according to years of coaching experience

Coaching experience (yrs.)	Number of respondents (*n*)	Percent (%)
1-10	28	25.0
11-21	44	39.3
22-33	23	20.5
34+	17	15.2

The majority of the respondents (n = 77; 68.8%) believe that a talented athlete is born, while the remaining answered "becomes talented through training" (n = 35;

31.3%). The coaches were then asked about the ideal age category for identifying a swimming athlete as talented. The majority of the respondents (n = 74; 66.7%) chose the age range of 9 to 12 years, followed by "13 to 15" (n = 19; 17.1%), and "6 to 8" (n = 18; 16.27%). An almost equal answer distribution was obtained when the respondents were asked whether they agreed, between a list of predefined statements, about the contribution of different parameters affecting the TID and TDE processes. More specifically, 33 respondents (29.5%) stated that *different mechanisms affecting the combination of genetic and environmental factors probably exist*, followed by the statement that *training and environmental factors generally are responsible for an athlete's future sports career to a greater extent* (n = 29; 25.9%). The rest of the statements revealed an equal distribution of genetic and environmental factors (n = 26; 23.2%), and a preference for genetic factors alone (n = 24; 21.4%).

During the main section of the current survey, coaches were asked to rank (on a scale of 1 to 5, 1 = most important to 5 = least important) specific parameters categorized into "physiological", technical, morphological, social, environmental, and psychological factors affecting the TID and TDE processes. Significant differences were observed in this group of questions. More specifically, for the parameter *desire to train*, both male coaches, as well as those belonging to the 34+ coaching experience group, selected this parameter more often [(χ^2 = 14.79(4); p = 0.005; V = 0.36, and χ^2 = 27.39(12); p = 0.007; V = 0.29, for the gender and coaching experience, respectively)]. These results are presented in Figure 1 (parameters ranked 1st), and Table 2 (parameters ranked from 2nd to 5th place).



*p≤0.05 for males compared to female participants; # p≤0.05 for participants belonging to the 34+ years of coaching experience group, compared to the rest of the three groups.

Figure 1. Ranking of the perceived most important factors related to both TDI and TDE processes

Table 2. Participants perceived importance in descending rank order (2nd to 5th) of the rest of the factors related to both TDI and TDE processes

Parameters	Ranked 2nd	Ranked 3rd	Ranked 4th	Ranked 5th
Physiological	Cardiorespiratory endurance	Speed	Flexibility	Strength
Technical	Coordination	Stroke index	Reaction time	Swimming economy
Morphological	Height	Arm spam	Palm/foot size	Trunk height
Social	Family's athletic experience	Previous competitive experience	Family's financial support	Time management
Environmental	Time devoted to the sport	Birthplace	Existing injuries	Current swimming performance
Psychological	Desire for success	Self-confidence	Progress within the sport	Success/failure management

Coaches were then asked to prioritize, from a list of predefined preferences, the most important testing procedures used to identify swimmers' potential talent. Repeated sprint ability was selected by the majority of the respondents (n = 76; 67.9%), followed by critical swimming speed (n = 64; 57.1%), lactate (n = 57; 50.9%), time to cover a 2000m swimming distance (T2000) (n = 39; 34.8%), power production (e.g., vertical jumping tests) (n = 20; 17.9%), and the "swim bench" (n = 13; 11.6%). "Coach's eye" was considered a *very important* subjective assessment indicator tool in assessing the future development of a swimmer as talented by the majority of the respondents (n = 65; 58.69%). Twenty-six respondents (23.4%) perceived this method as *fairly important*, 15 (13.5%) as *important*, while the rest of the answers were *slightly important* (n = 4; 3.6%) and *not at all important* (n = 1; 0.9%). The following two questions were "Yes / No" questions. Significant differences were identified in these questions between the respondents belonging to the 23-34 years training experience group, as they seem to place more importance on the "coach's eye" as a subjective assessment indicator for the future development of an athlete as talented (χ^2 = 24.08(12); p = 0.016; V = 0.27). Approximately half of the respondents (n = 58; 51.8%) seem to not acknowledge the contribution of relative age to the TID process. In contrast, peak height velocity was most indicated (n = 103; 92.0%) as a parameter considered in the TID process.

High performance at developmental ages in swimmers can predict future success *to some degree*, according to the majority of the respondents (n = 84; 75.0%). In contrast, the answer *no* (i.e., high performance in swimmers at developmental ages cannot predict future success) was chosen by 15 respondents (13.4%), and the remaining responses were *yes* (n = 13; 11.6%). Finally, respondents were asked whether they considered the TDI and TED processes in swimming to be a holistic procedure. The answer *yes* was chosen by the majority of the respondents (n = 71; 63.4%), followed by the answer *to some degree* (n = 36; 32.1%), and *no* (n = 5; 4.5%). Significant differences were identified in this question between male and female coaches, as female respondents seem to believe, to a greater extent, that the TID and developmental processes should be considered holistic procedures (χ^2 = 6.59(2); p = 0.037; V = 0.42).

Following, coaches were requested to select, from a list of predefined answers, what they saw as the main challenges during the TDI and TDE pathways. For TDI, 45 respondents (40.2%) noted the absence of support from national governing bodies, 33 reported the nonexistence of reliable and commonly accepted testing procedures (29.5%), and 21 respondents highlighted the lack of pool space. The remaining responses included financial reasons (n = 12; 10.7%), and limited chances to participate in swim races (n = 1; 0.9%). Regarding the TDE process, 37 respondents (33.0%) emphasized the fact that TDE is a multifactorial procedure, and 28 (25.0%) underlined that *some qualitative and quantitative characteristics that can determine high-level performance are only revealed during the last stages of puberty.* Of the remaining responses, 27 coaches (24.1%) reported a dearth of knowledge among their colleagues, and 20 respondents (17.9%) mentioned the fact that *talent is not static.* Finally, coaches had the opportunity to freely express their thoughts on any boundaries or restrictions related to the TDI and TDE pathways. Useful viewpoints were gained from this part of the survey on this topic. These include the psychological consequences of selecting and/or deselecting a young athlete as talented, the critical role of the school environment during the TID procedure, and the long-term development of a swimmer, which should be prioritized by both coaches and parents. Here, only questions that reveal statistical significance are reported.

4. Discussion

4.1. Key Results in Summary

This study sought to investigate swim coaches' perceptions regarding issues related to the TID and TDE

processes while taking their coaching experience and gender into account. Specific barriers to the TID and development pathway were also highlighted. Through the online survey distributed, swimming coaches located in different countries had the chance to express their thoughts and beliefs, allowing valuable insights and data to be gathered. The results showed that the respondents' coaching experience and gender did not have a significant impact on the parameters affecting the variables analyzed.

4.2. Analysis of the Results

The question of "nature or nurture" has been a matter of debate among exercise scientists and coaches, with significant implications for the design of talent identification and development programs by sports organizations and federations [29]. As such, one of the first questions of the current study required the participants to answer whether they believe that a talented athlete is born or made. Interestingly, the majority of the respondents chose the option "born". However, aiming for a more comprehensive analysis of coaches' perspectives related to this controversial issue, a related question asked the participants to select from four predefined answers. In this case, the "possibility of the existence of different mechanisms affecting the combination of genetic and environmental factors during the TID and TDE processes" was the most preferred option (29.5%).

The ideal age for talent identification in swimming may vary due to several factors, including the specific swimming discipline or training distance, the development philosophy of the club, or the national swimming organization approach [30]. In addition, issues related to early identification or, on the contrary, long-term development are usually considered [31]. The majority of respondents surveyed here (66.7%) considered the age range of 9 to 12 years old to be the ideal age for identifying talented swimmers. Although the usual perception is that swimmers follow an "early entrance–early exit pattern" during their sporting career, the age of finalists in both the World Championships and the Olympic Games has increased during the last decades [32].

4.3. Main Parameters Affecting TDI and TDE Processes

Regarding the "physiological" parameters, the respondents believed general health status to be the most important, reflecting the notion that controlling athletes' physical and mental well-being is essential for their competitive success and longevity in the sport. Although no specific examples characterizing "health status" were provided for this question, swim coaches usually monitor swimmers' functional state during the preparatory period or after a training microcycle to assess the relationship between fatigue and recovery, to achieve high-level performance [33]. Moreover, the results of mental and biochemical evaluation tests in young swimmers can offer valuable information on issues related to physiological adaptations to training and competition [34].

Being a technically demanding sport, competitive swimming relies on technical proficiency, especially during middle-distance events (i.e., 400m) for young swimmers [35]. The findings reported here show that the respondents primarily consider buoyancy to be the main technical factor that may affect the TID and the development process. This parameter has not received much attention [36] as published evidence on technical factors that contribute to the development of competitive performance more frequently seems to highlight the importance of specific biomechanical factors related to the swimming stroke technique. More specifically, stroke length, stroke frequency, and intra-cyclic variation of swimming speed have been noted as factors that may better explain variations in swimming performance [37]. In their study on trained adolescent swimmers, Läät et al. [34] demonstrated that swimming stroke index and stroke rate explained 92% of the variance during a 100m all-out swimming effort. In any case, the importance of each of the technical factors that the swim coaches rate highly is probably a reflection of their practical knowledge rather than information from scientific results.

A plethora of information related to morphological factors and their contribution to swimmers' competitive performance is evident in the current literature. As such, arm span, body height, upper extremity length, and hand/foot areas have been previously reported as important determinants of young swimmers' performance in various competitive distances (100 to 400m) [38,39,40,41]. In the present study, body composition was most frequently identified by the respondents as an important morphological parameter affecting the identification and development processes of talented young swimmers. Previous studies have highlighted the fact that swimmers' body composition can influence propulsion forces, resulting in faster swimming [42]. More recently, Espada et al. [43] demonstrated that body composition is related to physiological indexes (e.g., cardiorespiratory fitness) and should, therefore, be acknowledged for optimizing competitive performance, mainly in middle-distance swimmers. In the same line, Dopsaj et al. [44] underlined the importance of controlling body composition to evaluate training adaptations in high-level sprint swimmers.

One of the criticisms when organizing and implementing TID and development programs is that they usually neglect the social factors that may have a major impact on the entire process [45,46]. Realizing the crucial role of athletes' parents in nurturing the development of gifted athletes, the highest response to this group of questions, by the swim coaches surveyed here, was "family's social support". Indeed, over the last decades, the contribution of the family and siblings in facilitating young athletes to gain access to new opportunities and resources and offering valuable feedback has been acknowledged [47,48]. Generally, in

sports, the term "social support" encompasses different types of support, namely emotional, informative, and tangible [49]. Further studies are needed in this field to analyze the contribution of these types of support to promoting and prolonging athletes' involvement in the sport of swimming.

Given the importance of the environmental factors involved in TID, especially in the developmental period of talented athletes, several studies have analyzed issues related to the delivery of high-quality training programs by coaches supplementarily to building a strong coach-athlete relationship (for a review, see Li et al. [50]). This latter parameter was selected by the respondents as the most critical factor that can influence TID and development processes. This may be because the swim coaches in the current study probably realize, daily, the value of a close coach-athlete relationship to maximize coaching effectiveness. This can be accomplished through promoting communication and providing a secure environment where successful sports career progression can be accomplished, as previous studies have emphasized [51,52].

Psychological characteristics play a fundamental role in talent prediction and performance development [53]. "Desire to train" (also known as intrinsic motivation) was seen as the most important psychological parameter. Generally, athletes participating in individual sports, such as swimming, demonstrate more substantial levels of intrinsic motivation than those in team sports [54]. This parameter is of great interest in competitive sports, as it has been linked with desired attitudes and values [55] such as increased effort [56], in addition to associations with positive mental health outcomes [57]. Likewise, Schmid et al. [58] report that athletes with high intrinsic motivation may have a greater potential for success. Taking this into account, it is clear that swim coaches' experiential knowledge remains a key element during the TID and development processes.

4.4. Physiological Testing Procedures during TDI

The list of proposed physiological testing procedures used to identify talented athletes in swimming involves a combination of laboratory and in-water assessments [8]. The respondents reported repeated sprint ability (RSA) as being of the utmost importance to them. Although this parameter has received much attention from swim coaches during daily swim practice [59], the correlation between RSA and short- and long-swimming performance has been proven to be relatively poor [60]. Surprisingly, critical velocity, a single non-invasive in-water testing procedure widely used to evaluate training adaptations [61] and estimate aerobic capacity and aerobic power even in age-group swimmers [62], was the second most preferred answer in the current study. Critical velocity has been reported as a crucial parameter as part of a testing battery related to the TID process applied to young elite swimmers, partially explaining performance during a 200m trial test. Even so, conducting non-periodic assessments using a "snapshot" testing procedure may overlook an athlete's future development potential [63], or result in the de-selection of a potentially talented athlete [64].

4.5. The Role of "Coach's Eye", Relative Age Effect, and Peak Height Velocity in TDI and TDE Processes

Coaches' reliance on their "gut instinct", also referred to as the "coach's eye", is integral to determining an athlete's potential talent. Ideally, this intuition should be grounded in expertise and experience, complemented with objective criteria [3,5], combined with several testing procedures (such as those mentioned above), and regularly applied, considering the dynamic nature of a talented athlete [1]. Indeed, the respondents' dependence on their "coaching eye" as a subjective index for evaluating a swimmer's future development as a talented athlete was noticeable. That said, gut instinct can be a valuable tool in both TDI and TDE processes in terms of a comprehensive approach, also taking into account the principles of long-term development models, in sports such as swimming [65].

The influence of the relative age effect (RAE) [66] has previously been described in detail in swimming (see Lorenzo-Calvo et al. [67] for a review). Even though in this case only six studies were included for analysis, the authors reported a meaningful influence mainly during short-term competitive performance, which was also more apparent in younger and male athletes. Nevertheless, the participants surveyed here did not seem to recognize the critical role that the RAE effect can play during the TID process. Future educational programs and swimming organizations should acknowledge this dearth of knowledge on the concept of the RAE among swim coaches and its implications for TID and the selection process, recognizing its existence and, ultimately, encouraging actions to promote fairness and equal opportunities for all athletes. On the contrary, it appears that estimating peak height velocity (PHV) is crucial during the TID pathway for the respondents. Indeed, in the study by Mitchell et al. [8] calculating the years from PHV was suggested as a test that should be included in subsequent TID programs, mainly for male sprint swimmers.

4.6. Effect of Coaching Experience and Gender on Participants' Perceptions

Chi-square analysis showed that the coaching experience level and gender of the respondents did not have a significant impact on their perceptions regarding the issues analyzed in this study, as only limited answers were affected by these parameters. This result is opposed to the findings presented in the study by Dalamitros et al. [27], in which the coaching experience of 123 swim coaches worldwide markedly affected specific topics related to their

professional development. On the other hand, in that study, the participants' gender also showed only a slight impact on psycho-social issues and training practices. This may be partially explained by the fact that the sample of swimmers who participated in the present survey is homogeneous in terms of their educational level and because no different criteria for male and female talented athletes were included. Therefore, no bias based on expectations or societal or cultural norms would be expected.

4.7. Strengths and Weaknesses

This study provides a contemporary, comprehensive analysis of perceptions related to talent identification and development pathways by a relatively large group of swim coaches, also taking their coaching experience level and gender into account. However, this study does not come without limitations. Firstly, we acknowledge that a significant number of closed-ended questions were incorporated. Thus, there is a possibility that the respondents were restricted from expressing nuanced opinions, or whether a depth of information for each topic existed. A possible solution to this drawback could be the inclusion of mixed methods for the analysis of perceptions, for instance, combining a survey with observational methods and interviews. Secondly, although a pilot test of the survey was conducted before its distribution, test-retest reliability was not included. Even so, we believe that the results presented here may be used by both swim coaches and stakeholders to introduce methodological approaches and to design and implement future talent identification programs, as they contribute to expanding insight into contemporary perceptions of swim coaches on key-related issues.

5. Conclusions

The current study presents an in-depth description of current swim coaches' approaches and beliefs related to talent identification and development processes. Moreover, it is noted that coaches' professional experience and gender have a minimal influence on the answers given. These findings can add to the current body of literature on topics and practices related to talent selection and development pathways in swimming and may be valuable in formulating forthcoming coaches' educational programs.

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Conflict of Interest

The authors declare no conflict of interest.

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