

Norwegian elite handball coaches' perceptions of high-performance coaching and the development of talented handball players

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Abstract

The main aim of this study was to investigate elite handball coaches' perceptions of their role as high performance coaches and their understanding of the talent development process. The study uses a qualitative approach through eight in-depth interviews of elite coaches, who possessed extensive experience as coaches (mean 23.5 years), at the national or international level. The thematic data analysis generated two main themes in terms of: the role as high performance coaches and the talent development process. The results showed that the coaches considered their role as a facilitator of development and highlighted their need for competence and dedication in their role. Further, coaches described that at the essence of their role was the coach-athlete relationship, and their investment in the players individual development and the environment they provided. They considered however, talent to be a complex concept and further highlighted that some players could compensate for a lack of certain skills and still perform at a high level. While stating the need for a broad approach in the identification process, they identified two factors of particular importance to become successful as a senior handball player, in terms of the "X-factor" and motivation. Overall, the study supported earlier research on talent identification and perceptions of the term talent, while also elaborating on how coaches consider their own role in the talent development process.

Keywords

Coach-athlete relationship, communication, motivation, resilience, well-being

Reviewer: Leah Monsees (Malmö University, Sweden)

Introduction

Performance coaching embraces an attempt to control contributory performance variables,¹ where the coaches are responsible for developing athletes' tactical, technical, physical, and mental abilities. At an elite level in interactional team sports like ice-hockey and handball, the development of the individual player will often be subordinated by the responsibility to facilitate team performance in a manner such that they realize the expectation to win.² An essential part of the role as a performance coach is the talent development environments these coaches provide, and how their relationship with their athletes impacts the athletes' development and success.^{3–4} In this regard, the performance coaching role is challenging and requires several qualities to be successful,⁵ since they are expected to handle dynamic, complex and situation-dependent challenges.⁶

Since talent development environments are shown to be important, the performance coach's understanding of the concept of talent is crucial for their work with talented players. Even though the concept of talent within sports is commonly used,⁷ the sport science literature shows that the understanding and perceptions of talent has been a

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challenging concept for many decades.⁸ Even so, and despite the concept's popularity, there is hardly any agreement on what the concept of talent represents and the associated criteria for identifying the most talented athletes.⁹ This lack of agreement has led to ambiguity in both research and coaching practices, relating talent and the talent identification process to everything from innate skills, long-term training, future potential or a combination of these factors.¹⁰ Earlier studies show that coaches use instinct, gut feeling and the so-called "coach's eye" in their talent identification process,¹¹⁻¹² or the more general description of a "X-factor", i.e., something that makes the athlete special.¹³ Even though the modern conceptualizations of talent identification have identified several diverse talent types,¹³ predicting which athletes will most likely succeed in the long term has still proven to be difficult.⁷

During the last decade, there has been an increasing focus on the importance and impact of the holistic talent development environment. Henriksen and Stambulova¹⁵ described the need for such an approach, when stating: "By ecological, we mean the focus on the athletes' environment that affects their development; holistic refers to a view of the environment as a complex and dynamic whole that consists of multiple interrelated settings, levels and domains" (p. 2). Furthermore, Storm et al.,¹⁶ highlighted that talent development is a process where one interacts with other people to facilitate development towards becoming an elite athlete.

In the international literature, structured talent identification and development environments are considered one of the main reasons for international success in sport, and several sports systems have adopted normative talent development models.¹⁷ Despite the existence of research on talent identification and talent development environments, less is known about elite coaches in the sport of handball and their role in the talent development process. Handball in Norway is the second largest organized sport,¹⁸ and the senior national teams have had success in the last decades. More specifically the women's national team won the 2021 and 2025 world championship and placed second in 2023, whereas the men's national team placed second in 2019 and sixth in the 2021 and 2023 world championship. Historically, the women's national team has been more consistent in the last 20 years, placing among the top three in 8 world championships, whereas the men have failed to qualify four times and been among the top three twice. The women's national team has also won the Olympics 3 times in the same period, while the men's team only qualified once. Studies on Norwegian elite handball coaches have indicated a diverse and less normative approach to talent identification and development. For instance, Bjørndal and Ronglan,¹⁹ found that elite handball coaches perceived they were constantly faced with dilemmas, such as balancing individual and collective needs, having both long-term and short-term thoughts and allocating playing time. Røsten

et al.²⁰ found that age-specific national team coaches in ice-hockey considered the talent identification process as an enabling process in which multiple types of learning could be set in motion and continue over time. Therefore, the main aim of this study was to investigate elite handball coaches' perceptions of the role as high performance coaches and their understanding and impact on the talent development process. This insight would give us more nuanced understanding of high-performance coaching in the talent development process both in Norway and globally.

Methods

Based on the main aim of the study and the potential coaches to be recruited which might be approximately thirty coaches, a qualitative approach was taken. The study is grounded in a social interactionist ontology and adopts an interpretivist approach.²¹ This approach focuses on the coaches' perceptions of the talent development process and their role as high performance coaches. The approach suggests that multiple realities exist, and that social reality is a subjective experience and thereby adopts a constructionist approach.²² Hence, the authors never attempted to find an absolute 'truth'. The data were collected using semi-structured interviews and analysed using thematic analysis.²³ The interview guide (see appendix 1) was informed by earlier research on talent development environments from the last authors University research group.

Participants

A total of ten coaches were contacted, with eight of the coaches accepting the invitation to participate, while two declined based on time limitations. The coaches were recruited based on the first authors social network of coaches in elite handball, and the snowball method based on these coaches' relationships with other elite coaches. Seven male and one female coach took part in the study, with an average age of 46 years (from 32 to 62 years). The inclusion requirement for participating coaches was that they had to have coaching experience from senior elite or second level or age-specific national teams in Norwegian handball. The coaches were very experienced with an average of 23 years of experience as coaches (from 8.5 years to 48 years) at various levels. Four of the coaches had extensive experience as national team coaches for either junior or senior teams (C2, C4, C7 and C8), and two from coaching abroad (C2 and C8). Four of the coaches had international player experience from abroad (C1, C2, C4 and C8), one at the Norwegian elite level (C5), while four coaches did not have playing experience from the elite senior level (C3, C5, C6 and C7). Six of the coaches had completed the European Handball Federation's (EHF) "Master Coach" and thus received their "Pro License" (C2, C3, C4, C5, C7 and C8), while the other two coaches had coach

education from below the pro License (C1 and C6). The majority had higher education qualifications from university and college related to coaching through sports, pedagogy or coaching studies. To secure the coach's anonymity we provide no more data on their background.

Procedure

Following ethical approval from the lead authors institution, and the Norwegian Centre for Research Data [reference number 847780], all the qualified respondents received a cover letter explaining in detail the purpose of the study. The cover letter included the participants agreement to the use of an audio recorder, their opportunity to decline to answer questions and their right of withdrawal from the study at any point without repercussions. The participants were also informed that to ensure their confidentiality, pseudonyms would be used. The first author conducted the interviews in Norwegian, and the participants chose the interview setting, where three interviews were conducted in a meeting room in the coach's handball hall, and five were conducted digitally due to travel distance. Wakelin et al.²⁴ have identified benefits and challenges with online interviews such as the potential to 'capture the essence of the person' and through the flexibility of the technology in enabling face-to-face connections, while disruptions due to interviewing taking place in the person's home and connectivity issues was considered a potential challenge. The authors concluded that online interviewing should not be considered a 'poor relation' to in-person face-to-face interviews, but instead, a valuable option especially with geographically dispersed locations which saves time and resources for both the researcher and participant. The interviews lasted 90 min on average (from 37 to 147 min). Six interviews lasted over 60 min, with the other two being 50 and 37 min respectively. The length of the interviews might often reflect the insight and experience the participants had on the topic of interest in an interview study. This was also the case in the present study where the shortest interview was conducted with the coach with the least experience.

Data analysis

We applied a thematic analysis to our interview data and adopted an inductive-deductive analytical approach, which was initially grounded in the data before drawing on extant literature to deepen our analytic interpretations.²³ In doing so, we followed Braun et al.'s²³ six phases in our analysis process. First, in the familiarisation phase the first author read through the transcripts, and it was determined that 'information power' had been reached based on data saturation from the interviews where no new insights or themes emerged from data collection.²³ Coding and initial theme generation then began, where the first author generated

initial codes and labels for the data and started to develop initial themes (e.g., coach-athlete relationship, concept of talent, and talent identification). This process started inductively by sorting the main codes and labels found in the data, while also being deductively guided by theoretical perspectives related to the concept of talent and talent identification literature.^{4,7-12} During phase four, reviewing and developing themes, the first author reviewed the initial analysis in full. At this point, the first and last authors worked together to further develop themes (e.g., role as high performance coaches). Phase five, refining, defining, and naming themes, was undertaken to critically review the analysis and support the collaborative naming of themes to inform the narrative and structure of the scholarly outputs. Phase six, producing the report, was led by the first and the last author to produce the first draft of the manuscript, while the second, third, fourth and fifth author played a significant role, alongside the first and last author, in the development process of the manuscript from the first to the fifth draft. During this phase, an initial draft version of the manuscript was shared with 'critical friends', including members of the last authors University research group and second authors research group who sat within another University institution. Critical feedback was received and subsequently implemented to improve the quality of the paper, both related to language and flow in the manuscript, structure and connection to earlier research.

Research rigor

Tracy²⁵ introduced eight criteria for high-quality qualitative research; worthy topic, rich rigor, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. In the planning of the study, the first and last author discussed the scarce number of studies on the elite handball coaches understanding of the talent development process (worthy topic), while building on the empirical findings of earlier studies on talent development (rich rigor). As a part of the data collection process, the first and sixth author discussed our interpretations of the results to ensure peer agreement and validity and to address ethical issues such as anonymity (meaningful coherence, sincerity, credibility, and ethics).²⁵⁻²⁶ As we argue that the study has a potential to give a more nuanced understanding of high-performance coaching in the talent development process. And we also discussed how these findings could impact coaches and stakeholders in the handball federation and club coaches, both at a grassroots and elite level (resonance), and at the same time coaches from other sports (significant contribution). Importantly, the first author is an elite handball coach with coaching experience from within the Norwegian handball talent pathway. Mimicking Kerr et al.²⁷ stating that researchers can never be complete insiders or outsiders, instead possessing only partial shared understandings and relationships with those in the field.

The authors highlighted how researchers could have the capital to operate within a specific field, which as times gives access and authority, while at other times being met with opposition and disinterest. The insider-outsider status will therefor always be in flux. The other authors are researchers with extensive experience of conducting studies on talent development and elite sports, with extensive experience of handling the insider-outsider dilemma within talent development and elite sports.

Results and discussion

The main aim of this study was to investigate elite handball coaches' perceptions of the role as high-performance coaches and their understanding and impact on the talent development process, in order to give new insight into the high-performance coaching. The analysis generated two main themes each with two sub-themes. The first theme, the talent development process (e.g., the coach experiences from the talent identification process), included the two sub-themes: *talent – a complex concept* and *this is what we are looking for*, related to the criteria the coaches use to identify the talented players. The second theme, the role as high performance coaches (e.g., the coach as the orchestrator of talent development), included the two sub-themes: *it all comes down to the coach-athlete relationship*, and *the role as facilitators of development*, related to the coaches' acknowledgement that their player-relationships were essential for the players development.

The talent development process

Talent – a complex concept. The coaches considered *talent* to be a multidimensional concept, indicating its complexity and difficulty to define. As one of the coaches stated: "Is it really possible to define it? There is no conclusion to that in my world" (C2). Still, he also had a conscious focus on how their understanding of the concept had a major impact on player's opportunities to develop and be considered talented, "The coach idea of what a talent is could be absolutely crucial, after all, that is what we select when we choose athletes" (C2). According to the coaches, handball is a sport with a such a range of skills that can signify talent: "In handball, you have so many skills, there is such a wide range of what you can be good at. So that means that almost everyone can be a talent" (C4). Similarly, C8 simply stated: "Almost anyone can become an elite series player in Norway, there are so many roles and so much you can become good or an expert at". Their broad description resembles an idiosyncratic view of the concept of talent,²⁸ where the players *talent* can be related to a range of skills such as; technical skills e.g., shooting skills and passing skills, or tactical skills e.g., game understanding. The coaches also emphasized the need for physical skills i.e., speed, strength, motor skills and explosiveness, while "fighting

will", attitudes, resilience, patience, performing under pressure, and handling adversity were examples of psychological skills considered important. However, independently of these specific skills the coaches acknowledge the importance of players having an X-factor skill,¹³ separating them from other athletes:

You must have a specialized competence that makes you stand out ... you look for some things and some qualities or skills that allow this individual to reach all the way up. And there can be many different things in handball. (C5)

Similarly to earlier research,¹¹ some of the coaches highlighted that they find it hard to describe in words what they have seen, connecting the process to intuition and coincidences. As one of the coaches stated, "It is difficult to put your finger on what you are looking for. But you're looking for some players who have something to offer, it's hard to explain somehow". (C4) This statement might be seen to synthesize with the findings from German and Swedish academy coaches,²⁹ where the concept of talent was found to function as an empty signifier rather than a fixed or universally agreed-upon concept, which was continuously (re) negotiated through discursive struggles and marked by power and exclusion.

Related to the difficulty of talent identification, coaches argue for the importance of focusing on the athlete's potential, both in terms of the breadth of skills to consider and what might make a player stand out compared to others. In line with earlier research,⁷ this emphasizes the need for a broad understanding of talent:

Having a broad way of thinking about what a talent is crucial if you are going to include the great breadth of the talent pool, so you don't start to exclude people based on the wrong reasons. The athletes always have something that makes them stand out, and the best often have several things. We have to look closely for what people can do and not what they can't. (C7)

In summary, the data indicates that coaches struggle with defining the important concept of talent, where players can be considered as talented based on different skills and abilities. Still, many coaches were found to have a conscious focus on how their understanding of the concept had a major impact on player's opportunities to develop and be considered talented. Despite the potential messy process of identifying the most talented players, this individualized perception of talent might, to the benefit of players, indicate that a variety are considered to be talented enough to reach the elite level, and thereby recruited to age-specific national teams and elite clubs.

This is what we are looking for

Independently of their challenges with defining the concept of talent, the coaches' role is largely related to identifying the

specific skills and abilities of the most talented players. Coaches highlighted three particular skills; training talent, motivation and the will to persevere in training over time.

I really value the talent to train or endure training. I think it's the most important talent you can have. Also, most of what we do is very trainable, so if you have the talent to train and keep at it over time, you can get as far as you want, I feel. (C3)

If you find the joy, the drive, the passion and the motivation, you can get far in handball. If you have that interest and drive and do everything you can to get ahead, it can trump a lot of genetics. So, it's probably a bit of the two factors - genetics and joy or motivation or whatever you want to call it. (C8)

Even though the coaches highlighted key skills and abilities, they repeatedly described talent identification as *difficult*, involving “gut feelings” and their intuitive instinct on what “catches their eye”.^{11–12} Coaches perceive talent identification to be an individual endeavour, informed by individual experiences, which may not actually reflect reality considering the social aspect of coaching. As one of the coaches explained, “I'm probably just looking to see if there's something there that catches my eye as a coach, but it could be something completely different with your eyes” (C4). The coaches focus on the talent identification process reflected their struggles to define what talent is and might look like, because of the complexity of the term. One of the coaches described it like this:

I don't think it's like “if you're just good at this, it'll be fine”. I don't think so, at least not the way handball is today, where there is more room for more players. You can be anything and succeed. You can be good at shooting, dribbling, training or mentally strong. There are 100 things that you can be good at. But you should probably be better than most in one way or another. (C7)

Despite the wide range of skills mentioned by the coaches, most related many of them to psychological factors, especially intrapersonal skills such as will, passion and inner drive. They also highlighted how psychological skills and abilities pertaining to talent were more in focus now compared to only few years ago where they focused on technical skills and abilities in the talent identification process:

In the past you might have looked more at how good the player was, now I am very concerned about whether the athlete is motivated, whether he has his own drive. I have experienced that over time, that without that drive, that desire, it will never be enough. I've had plenty of examples of players who I've thought “there's something here that's quite exceptional”, but then the people involved don't want to do the job and that

player just turns out to be a good youth player. So that self-driven but also sort of the ability to stand up to adversity. (C5)

The players ability to work hard over time was therefore considered important,⁸ and the coaches in the present study wanted to get to know the person, and to consider their personality and inner drive,^{13–14} to make a better assessment of their talent. So “assessing the whole person” was pointed out as important, indicating the need for the concept of talent to be considered holistically within ‘the person as athlete’ to most ably identify talented players.³⁰

Even though talent identification was found to focus mostly on individual skills and abilities, some of the coaches also described the need for players with qualities that help them fit into the team they are coaching, as stated by C4, “I have always been keen to put together a team. So, I value talented athletes who can play for each other and my team, who have the abilities”. C6 stated, “It's about whether they show the technical and tactical skills you want [in your team], at the same time you look for potential with the physicality and the player's attitudes and attitude to do the work needed to reach as far as possible.”

Some of the coaches also reflected on how the talent identification process might impact the players motivation to invest time and effort in their own development and subsequent selection and retention:

I am selecting talented players for the national teams, and we are now looking on 15–16-year-olds trying to foresee who of them are going to be good when they are 25–26. As you could imagine, it is difficult. But what I see is that if I have Mia and Eva, they are just as good and have the same position. But I must choose one for a gathering or a championship. I experienced this with a previous national team, where I had an “Aha” experience, because when I chose one of the two then, the one [I chose] took much bigger and faster steps than the one I didn't choose. But the talent was no less on the one I didn't choose. But that was only because I chose the one person who received more inspiration, motivation and competence transfer. That's why we often select new players at national team meetings, so we don't think about teams, but about individual development. (C2)

These results are similar to current studies on football coaches' perceptions of the concept of talent and talent identification where coaches reflect on their impact on the talent development process of the players,^{12,29} indicating that this might be a trend in coaches' perceptions of the talent development process in team sports.

The role as high performance coaches

It all comes down to the coach-athlete relationship. The coach-athlete relationship was considered to represent the essence of the coach's role, characterized by mutual trust

and respect, open communication and jointly set goals.³¹ As described by one of the coaches, “It is perhaps one of the most important things really. That you, as a player, trust your coach to lead you to where you can become good” (C4). This was further elaborated on by C3,

“It must be open and honest, that there is a high ceiling, a player should be allowed to come to a coach to be dissatisfied and express his opinion and not be afraid to be honest. So, there must be openness there, and mutual respect and trust. It must be a good interpersonal relationship where you are respected both ways. So that is the most important thing in a relationship. In other words, there is mutual respect and understanding and that you have common goals.” (C3)

Open coach-athlete communication could, according to the coaches, be informal but had to include investing time to get to know the person behind the performer.³ This has much in common with the notion of seeking a holistic understanding of athletes.³⁰ Furthermore, all the coaches confirm that they use different idiosyncratic approaches for different athletes,^{19,32} which they considered as particularly important. As stated by I4, a team can consist of; “20 different practitioners with 20 different individuals who must be treated in 20 different ways”. This investment was considered essential by many of the coaches especially when they were seeking to get to know the players:

Communication is very important. I used to ask about completely everyday things such as work, studies, family, girlfriend, pets and completely normal things and talk then. So, you must learn to know the whole athlete and know which leadership or how to be against it. It only becomes fair when it is unfair, and then we must learn to know them in order to get the best out of the athletes. (C2)

According to the coaches, investing time in the relationship and selecting the right idiosyncratic approach with each athlete was a key factor in helping to foster a sense of player security. The coaches showed awareness of approaches that have a lot in common with what has been described as positive coaching and solution focus coaching,^{33–35} frequently citing the importance of being positive, supportive and encouraging in the athletes’ development process.

The role as facilitators of development

The coaches consider their role to have a considerable impact on the talent development process, and pivotal for the talent development environment (see,^{3,9}) especially the players long-term development. They furthermore consider their competence as essential for the players development, as described by C1, “I think, first and foremost, the coaches must be competent, because without that you will not be able to create the environment required to further

develop the players”. When the coaches described the pre-required skills needed, they highlighted both professional knowledge, but also social skills and the ability to see the holistic picture:

You must have coaches with both professional knowledge, who know what to train on and why, but also good social skills so that you look after the whole group and not just the best. The coaches thus have a crucial role. Having competence and having a broad competence, you must be a holistic coach, that is crucial. (C7)

The coaches considered the need for individualization and adaptation for the individual athlete,³⁶ well-being,³² safety to try, and making mistakes without judgement, as especially important. To be able to facilitate development, they needed to provide a safe environment for the players:

It must be an environment that has the basic security, everyone must have a sense of belonging, it must be safe, one must be allowed to try and fail. A development-oriented way of thinking which means that many people get the opportunity to develop, so even the best and the less skilled have opportunities to develop. (C5)

The need to focus on the long-term development of the players was also considered important by most of the coaches.^{37–38} They highlighted that rather than focusing solely on results, highlighting coping as important for creating joy,³² focusing on both individual and collective goals, establishing agreement on expectations and putting long-term goals before performance or results goals,³⁷ was especially important. Still, the coaches also expressed the importance of player dependency on doing the work themselves, with help from key stakeholders such as their coaches and other social support sources,³⁷ highlighting the complexity of talent development and the psychosocial context it is a part of¹⁶:

I believe that you [the coach] must convey this realization to the players that no one is going to make them good. I am (the player) the one who owns my development. And then it can help that I’m in the right environment and have the right coach. Regardless, I can develop independently of the environment. You have to do the work, and you can be as good as possible, that’s what you decide, no matter what environment or coach you have. (C8)

The coach’s reflection might be considered as downsizing their own role in the process, stating that it is up to the player to develop, based on their own efforts. Still, the literature is quite clear that the talent development environment has a major impact on athletes’ development,^{4–5,15–16} and furthermore that the players are dependent on getting

access to such talent development environments to increase the likelihood of becoming a professional handball player.

Limitations and future studies

One of the obvious limitations of the study was the inclusion of only one female coach. Even though there are few female coaches at the elite level in Norway, an issue raised by several researchers,³⁹ it is important to get the female coaches' perspective on their role in elite handball. Another limitation could be the first authors relationship with some of the coaches, which might have increased their willingness to talk about the topic with a colleague who have lived the experience as an elite coach. This could however also made the coaches hold back on their opinions to be regarded as more politically correct or in accordance with the federations approach based on their collegial role.²⁷ There might also be a potential effect of translating the quotations. In retrospect we also see that we could have specified the age groups of the players for the coaches interviewed to enable them to be more precise in their evaluation of skills athletes need to develop at different ages.

A next step and future study could be to investigate how grassroots and youth level handball coaches perceive the concept of talent, identify criteria for talent identification and their perceived role in the talent development process. There is also potential to conduct a longitudinal study of elite handball coaches, including how coach/university education could change coaches' approach to the talent development process and their role in the process.

Practical implications


As in previous research, the elite handball coaches in our study found it challenging to define the concept of talent and the criteria required to identify the most talented players. This finding indicates the need for both coaches and players to draw on a combination of both established knowledge and skilled intuition in the talent development process of young handball players. The knowledge from this study of largely experienced coaches' dynamic conceptualization of the concept of talent and the talent development process might have a positive impact on the development of players in the teams they coach. The insight from the study on the coaches' perception of the talent development process might help players understand how coaches think of their process and partly their own impact on the process. This knowledge should also be implemented in the federations coach education program, both in terms of getting coaches to reflect on their own role and how their understanding of the concept and how they perceive the talent identification process impact on the players opportunities to develop. By adopting this knowledge in their coach education at every level of the system, such a dynamic approach would draw in many of the potential


pitfalls of being certain in the talent identification process seen by elite coaches, which coaches and players at the lower level have not experienced.

Conclusion

In seeking to understand elite handball coaches perceptions of the talent development process and their role as high performance coaches in this process, the coaches emphasize that the concept of talent is complex, diverse and consists of many different factors that make it difficult to define, and thus seem to have a dynamic and non-linear understanding of the concept, in contrary to earlier studies especially in team sports.^{7-8,10} Nevertheless, certain factors, also described as X-factors, were described as most important, with training talent, the ability to be resilient, and steadfastness being the most prominent factors in the coach's talent descriptions.⁹ The coaches argued however that handball is a sport where the players need a variety of skills, and since predicting future athlete success is challenging, they advocated the need in their role to facilitate as many athletes as possible to reach the elite level.^{7,9} The identification of talent is a key part of the everyday life of an elite coach, and their central role in its development was shown to be linked to their facilitating coaching role and especially the coach-athlete relationship. The coaches also pointed out that their understanding of the concept of talent had a major impact on the players actual opportunities to develop in the talent development process, while also arguing that they did not have a fixed understanding of the concept because of their difficulty to pinpoint the concept, indicating an ambiguity on their understanding of their impact. Still, the coaches focus on long-term development,³⁷⁻⁴⁰ as well as their role in creating well-being, security, joy and mastery related experiences in the talent development space,^{32,35} appears crucial to creating the talent development environments required for success.⁹⁻¹⁰ Further studies are needed to dig deeper into the ambiguity of the coaches perceptions of the concept of talent and its impact on the talent identification process.

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Ethical considerations

The study was approved by the lead authors institution, and the Norwegian Centre for Research Data [reference number 847780].

Consent to participate

Written informed consent to participate was obtained from all participants.

Consent for publication

All participants provided informed consent for publication.

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Data availability

The data from this publication is available by request to the corresponding author.

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Appendix I: Interview Guide

A: Opening Questions

- Where are you from?
- How old are you?
- What do you do for a living?
- When did you become interested in sports or handball?

B: Mapping the coach

- At what level have you played handball and for how long?
 - How long and at what level have you been a handball coach?
 - How important is experience in the coaching profession? Experience as a player vs. coach?
 - Do you have a sports education as a coach? Which one?
- Why did you choose to get an education?

- Do you see the value and benefits of education as a coach?

C: The concept of talent

- How do you define talent?
 - How do you define talent specifically in handball?
 - Do you have a conscious relationship to what talent is?
- What do you look for when you identify talents and who you think will be good in the long term?
- What do you think it takes to be good at handball as a senior? What skills are important?
- What are other important factors/qualities that make you good at handball as a senior?

D: Talent development

- What are your thoughts on talent development and the importance of this at different levels?
 - What factors are required to create a good talent development environment?
 - How do you experience talent development in Norwegian handball?
- Are there major differences between the environments?
- Are we different from other countries?
- Do we have a system that captures and focuses on a broad spectrum of athletes?

E: The role of the coach

- How would you describe yourself as a coach and leader?
 - What characterizes a good coach in handball? And what distinguishes a good coach at children/youth level and in top handball?
 - How important is the coach in the development of handball players?
- Is it difficult to develop athletes? What is important for success?
- What do you do to develop the environment?
- What do you do to develop the individual athlete?
- What do you do to develop the team?

F: The coach-athlete relationship

- What is a good coach-athlete relationship?
 - How can you create a good coach-athlete relationship and how important is it?
 - What can a good relationship between coach and athlete provide?
- Is the coach-athlete relationship important in the talent development of handball players?

- What do you do to create good relationships with your athletes?
- Do dispositions in matches or training affect the relationship between coach and athlete? In what way?

G: Rounding questions

- How important do you think the coach is for developing handball players?

→ Is the coach crucial for good and effective talent development?

- What do you think is the most important thing for developing handball players?
- What do you think is the coach's most important task(s)?
- Is there anything we haven't talked about that you think might be relevant to the study?