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Aesthetic Athletes' Reflections on Early Specialization: A Self-Determination Theory Perspective

Charlotte Downing, Karin Redelius, and Sanna M. Nordin-Bates
Swedish School of Sport and Health Sciences, Stockholm, Sweden

Despite the suggested risks concerning lower enjoyment and dropout, early specialization is said to be beneficial for high-level performance in aesthetic sports. In this study, we investigated in what ways early-specialized aesthetic athletes reflect upon their motivation throughout their training history. Ten Swedish high-level athletes who specialized early (two figure skaters, three artistic gymnasts, and five team gymnasts), age 18–24, participated in semistructured interviews. The interviews were analyzed using reflexive thematic analysis. Results are presented as three themes whereby one foundational theme, *sustained autonomous motivation*, underpins the other two themes: *early engagement* and *intensified engagement*. The results indicate that the interviewed athletes maintained autonomous motivation throughout their early specialization and their continued athletic career. This autonomous motivation remained despite experiences of external and introjected motivation during adolescence. As such, our results support a multifaceted profile perspective of motivation.

Keywords: aesthetic sports, talent development, athlete perspective, reflexive thematic analysis, qualitative research

Early specialization garners considerable interest in scientific research, sport organizations, and the media. Accordingly, publications on the topic of early specialization have been steadily increasing over the past decade (Kliethermes et al. 2021). Most commonly, early specialization is defined as intensive, year-round participation in one main sport prior to age 12 (LaPrade et al., 2016; Mosher et al., 2020). Historically, the consensus has been that early specialization is not necessary for elite performance and should be avoided due to the possible physiological, psychological, and social risks (e.g., Bergeron et al., 2015; Côté et al., 2009; LaPrade et al., 2016; Wiersma, 2000).

Several more recent studies with athletes from a variety of sports have reported that it is not typically early specializers who make it to the national team within their respective sports (Güllich, 2014; Güllich et al., 2022; Söderström & Garn, 2022). For example, a recent meta-analysis indicated that high-level athletes (e.g., national-team athletes) typically participated in multiple sports during childhood, began training in their main sport later, accumulated less main-sport training during childhood, and initially progressed more slowly than athletes who did not make it to the national-team level (Güllich et al., 2022). However, aesthetic sports such as gymnastics and figure skating are often presented as exceptions wherein intensive early training is considered advantageous for peak performance during the late adolescent years (e.g., Ferguson & Stern, 2014; Law et al., 2007). At the same time, research in gymnastics highlights that achieving later success and having a longer career is possible (Barker-Ruchti et al., 2016; Kerr et al., 2019), which challenges the belief that early specialization is necessary. Despite this, aesthetic performers continue to begin intensive training from a young age (e.g., Downing et al., 2022; Law et al., 2007).

Two of the most-discussed aspects of early specialization are its relationships with motivation and dropout (e.g., Downing et al., 2024; Waldron et al., 2020). Reported results regarding the possible relationship between these variables have been mixed, however. For example, two retrospective interview studies reported that certain aspects of early specialization, such as early onset of supplementary training that is "off-ice" (hockey players) or "dry land" (swimmers), may have contributed to reduced enjoyment and dropout (Fraser-Thomas et al., 2008; Wall & Côté, 2007). However, a later prospective study by Larson et al. (2019) found no relationship between aspects of early specialization and dropout among high-level swimmers.

Mixed results have also been reported regarding the relationship between early specialization and motivation. For example, one study of female high school athletes from a variety of sports (e.g., basketball, dance, tennis) reported that those who specialized in their youth reported less physical activity enjoyment as adults (Ryder et al., 2021). Yet, Russell and Limle (2013) identified no difference between specializers and nonspecializers in terms of enjoyment in a sample comprising a variety of sports (e.g., gymnastics, volleyball, hockey) and performance levels. Given that motivation plays an important role in athlete development (Standage et al., 2018), it is somewhat logical that early specializers who go on to reach an elite level enjoy their sport. Indeed, a recent questionnaire-based study reported that youth sport athletes involved in intensive training (the majority were gymnasts) were highly committed to their sport and found their training to be enjoyable and meaningful (Harris et al., 2023). Furthermore, a recent study with high-level aesthetic performers (e.g., gymnasts, figure skaters, dancers) indicated that those who reported higher degrees of early specialization reported *lower* controlled motivation (Downing et al., 2022). In other words, early specializers who had trained more during their childhood, and reached early specialization milestones earlier, were less likely to say they were motivated for reasons such as pressure from others or external rewards.

Redelius https://orcid.org/0000-0001-9965-0123
Nordin-Bates https://orcid.org/0000-0003-3428-6900
Downing (hello@charlottedowning.com) is corresponding author, https://orcid.org/0000-0002-7937-5918

Notably, early specialization literature is predominantly quantitative (DiSanti & Erickson, 2019), yet there have been calls for researchers to design studies that are better able to examine and discuss the nuances and complexities of early specialization (e.g., Kliethermes et al., 2021). Utilizing a qualitative approach within the present study provides an opportunity to add a deeper understanding of the complexities of results regarding motivation within the context of early specialization.

The aim of this study is to investigate in what ways early-specialized aesthetic athletes reflect upon their motivation throughout their training history. Specifically, we are interested in analyzing important aspects of what motivates early-specializing aesthetic athletes to remain in their training.

Methodology

We conducted semistructured interviews followed by reflexive thematic analysis to facilitate rich exploration of how early specializers reflect on early specialization in relation to motivation.

Theoretical Framework

Although several theories of motivation exist, self-determination theory (SDT; Deci & Ryan, 1985, 2000) is widely used for exploring relationships between early specialization, motivation, and dropout (Downing et al., 2024). Organismic integration theory, a subtheory within SDT, refers to six motivational regulations, which are either absent (amotivation); controlled (external and introjected); or autonomous (identified, integrated, and intrinsic; Ryan & Deci, 2000). Amotivation is characterized by having no sense of either purpose or perceived benefits of participation and typically leads to dropout (Deci & Ryan, 2000). External motivation is the most controlled form of motivation and refers to participation motives driven by external rewards or punishment (Deci & Ryan, 2000). Introjected motivation is also a form of controlled motivation and is characterized by internal pressure and guilt (Deci & Ryan, 2000). Identified regulation is considered a somewhat autonomous form of motivation, which refers to feeling a sense of personal importance within an activity, and the activity is incorporated into all elements of one's daily life (Deci & Ryan, 2000). Finally, intrinsic motivation is the most autonomous form of motivation, defined as motivation driven by enjoyment and a sense of value or meaningfulness in participation (Deci & Ryan, 2000).

Another subtheory within SDT is basic psychological needs theory, which provides a framework for supporting the development of autonomous motivation (Ryan & Deci, 2000). Specifically, Ryan and Deci (2000) suggested that autonomous motivation can be nurtured when athletes perceive to have their needs for autonomy, competence, and relatedness supported. Autonomy refers to meaningful choice and volition with respect to one's behavior, competence refers to feeling satisfied in one's ability to demonstrate capabilities, and relatedness refers to feeling connected to others within the social environment (Ryan & Deci, 2000). When these basic psychological needs are thwarted, controlled motivation is facilitated (Ryan & Deci, 2000).

Participants

Inclusion Criteria

The following inclusion criteria were employed whereby participants were female gymnasts or figure skaters aged 18–24 years, have specialized early (i.e., intensive training before age 12, limited engagement in other sports), and currently trained and competed in gymnastics or figure skating at a high level in Sweden (i.e., national or international level). Male athletes were excluded because gymnastics and figure skating in Sweden have far greater numbers of female participants than male (Swedish Gymnastics, 2021; Swedish Figure Skating Federation, 2022). Also, previous research has indicated possible differences regarding the talent development experiences of males and females in youth sport (Curran et al., 2019). The age range of 18–24 years was chosen to target athletes who had continued for several years after early specialization and were eligible (age wise) to be on the senior national team within their sport. The upper age limit of 24 years could also be conceptualized as the end of adolescence (Worthman & Trang, 2018). Because the target population was those competing at the national/international level, the participants could be considered high-level athletes (Swann et al., 2015).

Participant Characteristics

The participants for this study were 10 female athletes (two figure skating, three artistic gymnastics, and five TeamGym). TeamGym is a popular sport in Scandinavia with the possibility to compete internationally (e.g., European championships) TeamGym includes competing as a team on three events: floor, tumbling, and trampette. At the time of interviewing, the participants were actively training and competing at a high level (six = international, four = national). Their mean age was 21 years ($SD = 1.94$). Please see Table 1 for

Table 1 Descriptive Data for Participants and Interview Details

Pseudonym	Subdiscipline	Level	Interview length (min)	Interview format
Sofia	TeamGym	National	84	Digital
Johanna	TeamGym	International	78	Digital
Ebba	TeamGym	International	66	In person
Hanna	TeamGym	International	76	In person
Maja	TeamGym	International	65	Digital
Emelie	Artistic gymnastics	National	81	In person
Lisa	Artistic gymnastics	National	84	In person
Jenny	Artistic gymnastics	International	80	Digital
Freja	Figure skating	National	75	Digital
Wilma	Figure skating	International	87	Digital
M			77.60	

Note. Pseudonyms were decided based on relatively common female Swedish names for the participants' age bracket.

further details regarding the participants and interviews. Exact ages for each individual athlete are not reported to ensure that the participants are not easily identifiable.

Although participants self-identified as early specializers, we do not report a specific age when specialization occurred as we consider specialization to be a process that does not always occur at one specific moment in time. Nevertheless, our participants all began training early in their main sport domain at around 4 years and 5 months old ($M = 4.4$ years; $SD = 1.34$) and self-reported their training before age 12 to have been *intensive,* with limited engagement in other organized sports.

Procedure

Following ethical approval from the Swedish Ethical Review Authority [dnr: 2018/1359-31], information about the study was shared on social media. Additional recruitment was conducted via emails to national team coaches, sports clubs with high-level athletes, and national organizations that were encouraged to digitally share the study information among their gymnastics and figure skating connections.

Participants were offered either in-person or digital interviews. Although there are limitations of digital interviewing (e.g., possible technical difficulties), there are also some notable advantages (e.g., greater anonymity and greater willingness to share sensitive details; Smith & Sparkes, 2016). These factors, in addition to the normalization of digital working during the COVID-19 pandemic, provided a suitable justification for offering both in-person and digital interviews. There were no incentives offered for participation.

Participants were provided with written and verbal information concerning the study, and informed consent was obtained. The interviews ranged from 65 to 87 min ($M = 77.60$ min) and were audio recorded using Zoom (six digital interviews) or a university-issued laptop (four in-person interviews). The interviews were transcribed verbatim by the lead author. Personal data (e.g., names and locations) were replaced with suitable anonymized descriptions (e.g., [my coach]) before importing the transcripts into NVivo 10 (QSR International Pty Ltd, 2014) for analysis.

Interview Guide

The semistructured interview guide was developed in line with our study aim and consisted of five sections: introduction and warm-up, key specialization milestones, continued training, overall reflections, and concluding comments. Notably, all sections included questions relating to motivation (e.g., *lots of people drop out of gymnastics/figure skating, what do you think made you continue?*). Although the interview guide was informed by principles of SDT, no questions directly targeted specific motivation regulations or basic psychological needs. This decision reflected our desire to be open and curious about reasons why high-level athletes continue in their sport. The interview guide was further developed and updated in response to pilot interviews conducted with five female participants aged 17–27 years ($M = 21.5$ years; two artistic gymnasts, one team gymnast, one trampolinist, one ballet dancer).

At the end of each interview, the interviewer provided a short verbal summary of the interviewee's responses. During this verbal summary, the interviewer used phrases such as "Did I phrase that correctly?" and "Did I miss anything important?" The aim of the verbal summary was not to "fact check" but heeded to rigor and trustworthiness by providing an important opportunity for the interviewees to elaborate, refine, or alter their responses during the interview (Kvale & Brinkmann, 2009). Although this kind of verbal summary is not a commonly discussed component of interview technique, it led to additional rich information that has been utilized within our analysis.

Positionality

This study is underpinned by critical realist beliefs (Bhaskar, 2013). Critical realism draws from a realist ontology combined with epistemological relativism. Fundamentally, critical realism acknowledges that our understanding of an objective reality is culturally, socially, and historically situated whereby our knowledge is context specific (Bhaskar, 2013). For this study, this meant that our results were based on subjective interpretations of athlete reflections. In addition, we also acknowledge that we, as researchers, have an active role in all steps of this research (e.g., choosing the topic, writing the interview guide, conducting the analysis), to which we bring our own cultural, social, and historical perspectives.

The first author led on all aspects of this study, including conducting and transcribing the interviews and coding the data independently from the other authors. She has extensive firsthand experience in dance and several years of experience of conducting research in aesthetic sports. Notably all members of the authorship group are female and did not specialize early. Importantly for this study, the first author does not hold a strong belief that early specialization is either objectively "good" or "bad." This potentially impacted on the analytical process in the sense that a curious approach to understanding participant experience was taken. Two authors have a background of conducting research within SDT, whereas the second author utilizes other theoretical approaches in their research and took a role as a critical friend throughout the analytical process.

Analysis

Data were analyzed using reflexive thematic analysis (Braun & Clarke, 2006, 2019, 2022). Reflexive thematic analysis is a flexible approach, which afforded the opportunity for an abductive analytical approach while using SDT within the analysis and as a foundation for discussing the results.

We followed the six phases of thematic analysis outlined by Braun and Clarke (2006, 2019, 2022), which were as follows: (1) increasing familiarity with the data, (2) generating initial codes, (3) generating initial themes, (4) reviewing potential themes, (5) defining and naming themes, and (6) producing the report. The first author led on all phases of the analysis, with Phases 1 and 4–6 being completed collaboratively with the other authors. Importantly, it was during these collaborative phases when the critical friend approach was used to encourage further reflexivity by challenging interpretations of the data while also providing alternative explanations and interpretations (Smith & McGannon, 2018).

Both semantic and latent codes were used throughout the coding process, and special attention was taken to mirror language used by the participants rather than deductively applying theoretical terms within the coding process (e.g., "friendship" rather than "relatedness"). We considered our analysis to be abductive wherein a more inductive approach was utilized mostly during the initial analysis phases (i.e., 1–3) before introducing theoretical terminology at a later stage in the analysis (i.e., 4–6).

All aspects of the analytical process were completed with continuous reflections on the overarching study aim and reflexive considerations of our own experiences. Although our aim was relatively broad in terms of how athletes reflected on their early

specialization, the generated data were notably consistent. Due to the many shared experiences of the participants, our analysis took shape to organize commonalities in the data rather than highlighting variety between the athletes' experiences.

We adapted the procedure of thematic analysis by considering the temporal contextualization of the generated data when naming and organizing our themes (Steps 5 and 6). This temporal contextualization was an important part of framing our results whereby the shifting of motivation over time could be captured rather than analyzing our data in a time-agnostic manner. Making specific adaptions to how we conducted our analysis reflected Braun and Clarke's (2022) recommendation that their process for reflexive thematic analysis was a guiding framework rather than a checklist.

Results

Our results are presented as three themes whereby the foundational theme of *sustained autonomous motivation* underpins the other two themes: *early engagement* and *intensified engagement*. Each theme will be introduced separately, but the interrelatedness of the themes will be highlighted.

Sustained Autonomous Motivation

Autonomous motivation, comprising intrinsic, integrated, and identified regulations, played a vital role in all stages of early specialization and carried through into our participants' long-term engagement in their sport. For this reason, this theme was conceptualized as a foundational theme, which provided context to the entire analysis. We chose the word "sustained" within this foundational theme to clearly signify the consistency of autonomous motivation when the athletes reflected more generally on their overall training history.

Intrinsic motivation within their main sport was strongly portrayed by all participants, as demonstrated in general phrases such as "I fell in love with the sport" (Wilma). The athletes also gave more specific examples of intrinsic motivation, such as Ebba, who said, "I like flying, that's very fun to just go up in the air and have control over your own body." Integrated regulation was clearly communicated when the athletes spoke about their sport being connected to their sense of self. For instance, Lisa said, "I think it [gymnastics] was a place that I could be myself and a place that really feels like home." Finally, identified regulation was conveyed when the athletes spoke about the meaningful opportunities that were available to them within their sport. In particular, the athletes spoke extremely positively about the opportunity to meet people and make friends within their sport, such as Maja, who said, "I have had a lot of friends and fun all through every year," or Hanna who said, "I've had lots of teammates . . . and you just get to know different persons."

Early Engagement: A Playful and Supported Entry Into Sport

This theme of *early engagement* includes the subthemes *playful and fun entry into sport* and *family support*.

Playful and Fun Entry Into Sport

This subtheme encapsulated experiences of the participants' training commencing within a playful training environment that was perceived as fun and enjoyable. When speaking about their early experiences in sport, the athletes said things like, "it was very playful" (Johanna), and "it was more games and we were running around, like climbing stuff" (Emelie). Specifically, the athletes gave examples of training activities like exploring obstacle courses and playing on basic gymnastics equipment (e.g., hanging on bars, balancing on beam).

One gymnast was a notable exception, describing her early training prior to age 7 as more structured and strict rather than playful: "I just remember it was really cold, strict environments and like erm . . . a lot of repetitions over and over again, not really doing new things" (Sofia). Despite this less playful and sometimes pressured introduction to gymnastics, she still spoke about enjoying gymnastics from a young age. For example, when asked about how she felt about her gymnastics before age 7, Sofia said, "I know that I always had fun, but I also felt pressure that I always needed to do the right thing."

Family Support

Despite there being no direct questions about family involvement in the interview guide, all athletes spoke about how their families contributed to their initial and ongoing participation in sport. Notably, all but one athlete (Jenny) had a parent as a coach and/or at least one family member involved in their main sport (e.g., siblings, cousins). The results indicated that parents played an important role in facilitating their child's entry into their main sport. For example, Johanna said,

> I think my parents placed me in that group [children's gymnastics] because I had a lot of energy and I like to climb in trees and stuff like that . . . so they thought that [gymnastics] could fit me well . . . and I think gymnastics was a very good choice.

This quote from Johanna demonstrated that her parents provided a degree of external motivation by *placing* her in a children's gymnastics group. However, suggesting that gymnastics was a "good choice" that suited her might indicate autonomy support whereby her parents sought out opportunities that matched her interests. This was similar to other athletes' reflections, such as Jenny, who said, "maybe I wasn't really like the someone who would do, you know, boxing . . . I moved well and I could control my movements so I guess that was the reason why they [my parents] thought gymnastics might appeal to me."

Beyond introducing their child to sport, parents provided various forms of support for their child's ongoing training:

> They have always been involved in my training, supporting me. . . . They have always been cheering for me during competitions and no matter what I did or how good I was, my parents have lifted me to the sky with support. They have helped me keep my motivation, with all their support and love. (Maja)

By using the word "always," Maja indicated the consistency of support through the entirety of her training history. Maja also specifically spoke about the support and love from her parents as a key part of her continued motivation, likely because their support has been need supportive rather than thwarting.

Although all participants gave examples of positive influences from parents, a few of the participants commented on issues with having parents as coaches. For example, Lisa said that it was "hard to have my mom as a coach . . . because, I don't know, I, maybe you want to have your mom as your mom and not your coach," and Emelie said, "I thought she [my mum] was harder on me than other ones, uhm, I don't know if that was the case or that I'm just like this

silly person, like a kid." This indicated some possible challenges in navigating the parental coach relationship. However, when the athletes in this study spoke about their parents as coaches, they generally spoke positively, and we interpreted no strong examples of parental control.

Siblings also played a role in facilitating sport engagement via playful engagement at home as well as being sport role models:

> I had [older siblings who] did gymnastics, and my mom did gymnastics when she was young, so gymnastics has always been like there. Uhm, so I think I went to like gymnastics practice with my [siblings] to just watch ... it was a lot of gymnastics at home when I was small. [My siblings] were [older] so they tried to teach me how to do like cartwheels and stuff. So, it's always been like present. So, like forever it feels like I've done gymnastics. (Emelie)

Emelie's experience of having both parents and siblings involved in the sport might have contributed to integrated motivation via relatedness support within the family. Other participants also reflected positively on having their siblings and parents involved in their sport. For example, Hanna spoke positively about gymnastics being a family activity: "when I was five years old ... me and my brother would go to my mom's office and we took the car and we picked my father up at his work and then the whole family is together, all to go to the gymnastics hall."

Intensified Engagement: Mostly Autonomous But Also More Complex Motivation

The theme of *intensified engagement* captured a time in the athletes' specialization where their training became more intensive and serious but also more meaningful to them. This theme included three subthemes: *intensified training*, *increasing meaningfulness, and facing challenges*.

Intensified Training

This subtheme captured experiences of a clear change from playfulness to more serious training during adolescence, including the commencement of supplementary training. For example, Wilma said,

> It quickly didn't just become a hobby anymore, it became like a sport which you were supposed to get better in and supposed to compete in. So, I think it was definitely more intense and more time spent on details and stuff like that. And working hard and repeating elements and stuff to get those better and progress quicker ... I think it just ramps up pretty quick once you get better.

This example painted a picture of training becoming more intense and repetitive rather than the playful training activities they spoke about during their entry into sport. As mentioned previously, the athletes had a foundation of autonomous motivation to drive engagement in this more serious training. Wilma's quote developed this finding further in relation to this period of intensified engagement as she linked this more serious practice to expectations to work hard, progress, and compete.

Reflecting on when her training intensified, Johanna spoke about increased pressure and nervousness as competitions became bigger:

> The first time I was going to compete in the [large competition] then of course I was a lot more nervous, erm because it was new and it was something I have had as a goal for a long time and I had that pressure on myself that I have to do it right ... and to achieve my goals for the competition.

It was logical that the athletes wanted to perform well as competitions got more serious and training for competitions became more intense. Johanna was very clear that this pressure was introjected (i.e., coming from herself) rather than external pressure from her coaches or parents.

When asked "So, why gymnastics?," Jenny said,

> I would say that I loved gymnastics, I loved it immediately ... so I think that contributed to that I, you know, stuck with gymnastics. I only tried one sport and it was big immediately. And I don't think you can make a child practice that much that I did and stay with the sport for so long if it isn't like, you know, genuine passion or genuine love. So, I guess ... I wasn't the most talented kid, absolutely not, but I had at least sufficient talent [laughs].

We interpreted this as an indication that autonomous motivation was maintained even in more arduous training situations. Indeed, Jenny reflected on how it might be difficult to "make a child practice that much" without intrinsic motivation. Furthermore, this intrinsic motivation could also contribute to overall enjoyment of investing time and energy into one's training. When speaking about rehearsing her skating program, Freja said, "you can do it a hundred times and you're not tired and it's fun."

Although Jenny partly attributed her continued participation in gymnastics to her love of the sport, her words might also indicate a perception that intrinsic motivation was not enough to drive long-term participation at a high level and that "talent" was also a requirement. Notably, she was humble when reflecting on perceptions of her own talent. Perhaps, it is more socially desirable to state "passion" and "love" as drivers of continued participation rather than following one's "talent."

Commencement of supplementary training reflected a central component of training becoming more intensive during adolescence. Supplementary training was not an inherently enjoyable part of training for the athletes. For example, they said things like, "it takes something extra to get me to go out and run" (Freja). Although it was predominantly external and introjected motivation driving engagement in supplementary training, the athletes perceived it to be a beneficial or necessary part of training as a high-level athlete. When speaking about taking ballet classes as an integrated part of her figure skating training, Wilma said, "the basics of ballet definitely helps, and knowing how to like move and feel the music, so I'm grateful for that now," and Jenny said, "of course as a kid you're not that fond of doing strength and conditioning although it's necessary." As such, supplementary training perhaps supported the athletes' need for competence (i.e., they perceived it as beneficial to performance) regardless of whether they found it enjoyable.

Increasing Meaningfulness

This subtheme reflected an increased maturity in the athletes and indicated how autonomous motivation was sustained even in the absence of pure fun. The athletes spoke about the role of within-sport relationships as a contributing factor to an increased sense of meaningfulness in their sport. For example, one gymnast spoke about how her friendship groups changed over time:

> When I was younger I had most of my friends outside of gymnastics, almost everyone. ... And then that kept going

> until I guess when I was fifteen and started doing gymnastics at [specialist sport school]. But now my closest friends are gymnasts, and it's not even my gym, it can be different clubs and gyms. But I have friends from the school . . . you know from when I was younger, but my closest friends are from gymnastics. (Ebba)

The foregoing quote indicated a shifting of social interactions from being predominantly outside of sport to being within sport. We interpreted this as the athletes strengthening their commitment to their sport via strengthened social relationships, which, in turn, made their continued engagement more meaningful.

Simultaneously to their sport becoming more personally meaningful to them, the athletes began to prioritize their training over other things. Put simply, their sport was worth prioritizing because it was meaningful to them. Sofia said, "When I was competing at the [large competition] it was all about gymnastics. I skipped holidays for gymnastics, I skipped family traditions for gymnastics, birthdays, everything. Gymnastics always came first." Importantly, when the athletes reflected on their decision to prioritize their main sport, and more broadly about their early specialization, they overwhelmingly thought that it was "worth it" (quote said by several participants; Maja, Jenny, Johanna, Wilma). This phase was complex from a motivational perspective as it suggested delayed gratification regarding their training. In other words, aspects of their training history were not necessarily enjoyable in the moment, but the long-term outlook on continued training at a high level made up for those challenging moments. This, perhaps, reflected athletes' perceptions of what it takes to be an elite gymnast or figure skater. Indeed, this might have origins in both integrated and introjected regulation.

Facing Challenges

The period of *intensifying engagement* also included psychological challenges and overcoming plateaus in performance as these challenges occurred alongside more intensive and serious training. Psychological challenges included fear about getting injured: "since we have this injury risk always present, uh, I have developed some fears because I was, not really scared of the skill, but more scared of injuring myself" (Jenny). The athletes also spoke about mental blocks: "When you have like mental blocks it could be very hard. And you can be angry with yourself that you just can't do it [skill]" (Lisa).

We understood these psychological challenges as being linked to overcoming plateaus in performance or more stagnant development. For example, the athletes reflected that during times when they were having more difficulty making progress, they had thoughts about quitting. For instance, Jenny said, "I think quitting was more like my kind of excuse because I just felt that I wasn't progressing as fast as my teammates . . . I just felt so stuck. I think that's why I thought quitting was the solution." Sofia also spoke about a lack of support for overcoming staleness in performance: "I wish I would have more knowledge about the mental side . . . and getting more help in reaching my dream to come to the national team." Based on our own reflections, we speculated that competence support appeared to be particularly important for continued participation. When the athlete's competence was undermined (e.g., staleness, challenges), they perhaps continued partly due to their sustained foundational autonomous motivation, including strong identified motivation whereby continuing in their sport maintained their sense of identity.

All athletes mentioned the importance of education alongside their training. They also reflected upon how they learned to balance the demands of school alongside their training: "from a very young age I had to understand how to balance schoolwork and, uhm, also be like on top of my game in both gymnastics and in school. Failing school wasn't an option" (Sofia).

Although the athletes generally adapted well to the demands of balancing school and training, they spoke about social challenges with school peers. For example, they spoke about peer pressure to skip training:

> When you're younger there's more like peer pressure, you want to hang out with friends from school, and they don't always understand like I have this thing "oh, you can skip training for this day," but it doesn't work like that, I have to work out. (Freja)

Freja's quote highlighted a desire to "hang out with friends from school," but she felt like attending her figure skating training was nonnegotiable. She perceived that her school friends struggled to understand why she must be committed to attending her training session. Given that she consistently prioritized her training, the external motivation from her school friends was perhaps not strong enough to undermine her autonomous motivation for figure skating. Indeed, the phrase "it doesn't work like that, I have to work out," indicated some more external pressures in addition to her intrinsic enjoyment for the sport, which she expressed throughout the interview. Our interpretation of this was that prioritizing her training was nonnegotiable for both autonomous (e.g., because she wanted to train) and controlled (e.g., because she felt pressure from her coaches to train) reasons. This demonstrated the potential coexistence of motivation regulations driving participation in sport.

Discussion

Overall, this study aimed to investigate in what ways early-specialized aesthetic athletes reflect upon their motivation throughout their training history. To explore this aim, we specifically investigated common aspects of what motivates early-specializing gymnasts and figure skaters to remain in their training.

Autonomous motivation, commonly associated with performance and long-term commitment in athletic populations (Hume et al., 1993; Standage et al., 2018), was clearly present among the high-performing athletes in this study. This finding aligns with Harris et al. (2023), who reported high levels of enjoyment and commitment among children, including gymnasts, who had undertaken intensive training during childhood. Notably, a playful entry into sport appeared to contribute to the development of intrinsic motivation, consistent with research highlighting play as a key factor in sport enjoyment (Côté et al., 2007). However, our results reveal that intrinsic motivation was also present for the gymnast who began training in less playful environments, suggesting that play is only one pathway to fostering motivation. Indeed, previous research has identified that putting in effort, trying hard, and making progress are also important sources of fun for children in sport (Visek et al., 2015).

Notably, our results highlight that intrinsic motivation was sustained, and in some cases, strengthened, over time. This is akin to the findings of Vink et al. (2015), who reported that deliberate practice (i.e., training focused on specific skill improvement; Ericsson et al., 1993) is reciprocally related to intrinsic motivation over time. In other words, autonomous motivation can drive engagement in deliberate practice, but undertaking deliberate practice can also strengthen autonomous motivation. Our findings

extend previous research as the foundational autonomous motivation appeared to be a prerequisite for enduring initial deliberate practice and continuing participation the face of pressures and needing to make sacrifices. Following the initial engagement in deliberate practice, competence may be supported as a result of skill development and competence satisfaction, which, in turn, strengthens and/or maintains autonomous motivation.

Our results mirror previous findings that parents are important agents in sport participation and talent development, especially early on (e.g., Côté, 1999). Although parents often initiate their child's entry into sport (e.g., Côté, 1999), our findings suggest that entry into sport is not always exclusively driven by external motivation. More specifically, our results indicate that some parents actively seek out sports aligned with their child's interests, reflecting a more autonomy-supportive approach. Generally, the athletes in this study spoke positively about their parents' involvement in their sport. This aligns with research showing that high-level aesthetic performers perceive their parents as more need supportive than controlling (Downing et al., 2022). However, challenges arose when having a parent as a coach, underscoring the complexity of balancing support without exerting pressure (e.g., Knight, 2019). We also reflect on how the strong integration of sport into family life may limit the athletes' perceived ability to disengage from their sport. More specifically, we question to what extent it would have been possible for the athletes to drop out when their sport is so strongly integrated into their family life.

The results also highlight the important role of relatedness for ongoing participation in sport. Meaningful within-sport relationships, with friendship groups shifting to being more integrated with sport over time, provided an important foundation for ongoing participation as training became more intensive. The shift to meaningful relationships being sought within sport, rather than at school, may have two related, yet contradictory effects on relatedness, however. First, building more meaningful relationships within sport supports relatedness and, therefore, contributes to continued training as athletes feel a meaningful sense of belonging and community within their sport. Second, this shift to having friends primarily within sport might limit nonsport social interactions (i.e., not seeking new social relationships outside of sport) and may, therefore, have negative implications for social development and lead to difficulties later during retirement, deselection, or dropout (Rongen et al., 2014). Because this shift happened during adolescence for our participants (approximately age 15), sport may have provided an opportunity for varied social interactions beyond friends at school during earlier childhood. As such, social isolation outside of sport as a result of specialization might occur later as part of an autonomous choice rather than intensive sport engagement limiting the social experiences of younger children (i.e., under 12 years).

Many of the challenges discussed by the athletes in this study link to a lack of perceived competence (e.g., performance inhibited by injury or mental blocks). This highlights the importance of perceived competence. Other research has similarly identified that competence support is a key part of overcoming challenges in high-performance domains (Haraldsen et al., 2020). Importantly, the athletes in this study did not drop out because of their performance-related or psychological challenges, perhaps because their lives were strongly integrated within their sport, making it hard to disengage from their sport. Furthermore, the athletes' strong foundational autonomous motivation likely contributed to their ongoing participation in the face of challenges.

Our results support the notion that intrinsic motivation can coexist with other less autonomous regulations, such as introjected and external regulation. This aligns with research from adult exercisers (Lindwall et al., 2017) and students in a physical activity context (ages 12–16 years; Bechter et al., 2018) whereby mixed motivational profiles that include high introjected regulation alongside autonomous motivation were reported. Similarly, qualitative research on Norwegian elite performers, including ballet dancers and athletes, identified complex motivational patterns involving both autonomous and controlled forms of motivation (Haraldsen et al., 2020). Other research has highlighted that young specialized academy football players perceived pressure to fully invest in their training and to keep improving to avoid deselection and identity loss (Clarke et al., 2018). These introjected pressures on performance typically predict negative outcomes over time, such as negative affect, anxiety, and burnout (Standage et al., 2018). In other research, introjected motivation has been identified as a positive predictor of short-term (10 months) persistence in training in competitive swimming (Pelletier et al., 2001). The discussion around introjected motivation and its potential outcomes is ongoing, with Lindwall et al. (2017) identifying a "self-determination and introjected profile."

In light of our reflexive discussions within the authorship group, we also acknowledge the conceptual link between introjected motivation and perfectionism (Stoeber, 2011) and recognize the undertone of perfectionism in some of our data (e.g., expressing that failure was not an option, high striving in all aspects of life). Future research specifically investigating perfectionism within the context of early specialization is highly warranted and likely requires a variety of methods. Qualitative methods, such as the interviews used here, likely provide greater insight into the complex nature of these variables, but it is still difficult to identify clear motivational regulations for specific situations and especially for long periods of time (e.g., the process of early specialization).

The reflections regarding supplementary training being less enjoyable align to previous research, which has identified that those who commenced "off-ice" (ice hockey) and "dry-land" (swimming) training earlier were more likely to drop out (Fraser-Thomas et al., 2008; Wall & Côté, 2007). However, despite not initially enjoying their supplementary training, the participants in this study continued in their sport. As such, we interpret that supplementary training being unenjoyable was not a strong enough reason for the interviewed athletes to drop out. This is, perhaps, because the athletes in this study had a strong foundation of autonomous motivation within their sport. Indeed, motivation toward supplementary training could become more akin to identified regulation over time as the athletes valued the benefits of supplementary training for their athletic development. We suggest that coaches can support autonomous motivation toward supplementary training by providing clear rationale for why such training is beneficial to athletic performance.

Limitations and Directions for Future Research

Due to the ongoing discussions around the definition and measurement of early specialization (e.g., Mosher et al., 2020), it is particularly challenging to apply specific inclusion criteria for participants in studies like this one. As a result, athletes self-selected into the study based on their identification as an early specializer and continued participation in gymnastics or figure skating. Although the first author screened interested participants based on key milestones of early specialization, which are included

in various definitions (e.g., start age, sport involvement outside of main sport; LaPrade et al., 2016; Mosher et al., 2020), the participants' understanding of early specialization may have influenced their perception of the inclusion criteria.

Due to widespread interest in the topic of early specialization, it is possible that those who volunteered either strongly agreed, or strongly disagreed, with the portrayal of early specialization in the media. In other words, perhaps those who wanted to specifically comment on the negative portrayal of early specialization volunteered to participate.

We recruited high-level female gymnasts and figure skaters under the umbrella of aesthetic sports. Although this sample is homogeneous in some regards (e.g., level, gender, sport type), there are some potentially important differences between these sports. For example, motivation differences might be observed between team (e.g., TeamGym, synchronized skating) and individual (e.g., artistic gymnastics, singles skating) athletes (Pluhar et al., 2019). Despite this, it is relatively common to group aesthetic sports together under the belief that they are similar in nature (e.g., artistic qualities, normalized prepubertal success). Although no obvious differences between the interview data from artistic gymnasts, team gymnasts, and figure skaters were noted, our thematic analysis focused on shared meaning and commonalities between participants and, therefore, might not be an appropriate analytical approach for identifying differences between the athletes. Doing so would be an interesting direction for future researchers to explore. Such between-sport comparisons could provide valuable information as to whether there are notable differences between these sports (e.g., in sport culture, training norms) and what the implications of such differences might be.

Our results indicate that intensive family involvement in one's main sport is potentially common among high-level aesthetic athletes. Some previous research has discussed parental and family involvement in relation to early specialization (e.g., Downing et al., 2022; Padaki et al., 2017). Notably, questions about the role of family were not explicitly included within the interview guide, yet aspects of family involvement in sport are clearly represented within our results. Future research specifically investigating the role of parents who coach their early-specializing children would be a valuable extension to the literature.

In this study, we specifically recruited those who followed an early specialization pathway and continued in their training at a high level as adults. By focusing on those who continued, we are unable to discuss aspects relating to dropout. Indeed, previous research has indicated that lack of enjoyment and lack of parental support could contribute to dropout from sport (e.g., Boiché & Sarrazin, 2009; Côté, 1999; Fraser-Thomas et al., 2008). Therefore, further qualitative research exploring the nuanced differences between those who continue with and those who drop out from early specialized sport participation would be an interesting contribution.

In line with our underlying assumptions from the critical realist perspective, we must stress that results are context specific. That is, the participants in our study reflected on their early specializing in a way that was culturally, socially, and historically situated. Particularly in relation to the historical situation, we cannot say to what extent the early specialization pathway that the participants in this study experienced is similar to or different from the early specialization pathways available to young gymnasts and figure skaters who are currently specializing early (i.e., those under 12 years) or who specialized early in different countries.

Given our focus on commonalities between the participants throughout our analysis, it is important to highlight that we are not suggesting that our results represent common experiences among a larger population. Generalizability in qualitative research is complex; however, we argue that our results indicate *transferability* due to similar findings being reported among participant groups with similar characteristics (Tracy, 2010). For example, they resemble findings from the study by Harris et al. (2023) in which athletes involved in intensive training during childhood found their training to be enjoyable and meaningful. Such an example whereby our results mirror the findings of a larger "population" of early specializers provides tentative support for the transferability of our results. However, we recommend that our results remain contextually situated (i.e., Swedish aesthetic sports).

Conclusion

In conclusion, our results reveal that the athletes enjoyed their sport, were supported by their families, and despite some challenges, managed to balance the demands of their schoolwork and social activities alongside their sport commitments. The athletes in this study spoke about many positive aspects regarding their training histories (e.g., enjoyment, social interactions), which arguably challenges the widespread criticism of early specialization. However, the results also highlight complexity regarding motivation to remain in early specialized training. Although athletes can autonomously drive their specialization and continued training, in doing so, they limit experiences outside of sport, perhaps due to reduced time and energy.

To conclude, early specialization in aesthetic activities is complex from a motivational perspective. This study indicates that the process of early specialization can be need supportive and driven by autonomous motivation. Although there were some examples of controlled motivation (e.g., having to do supplementary training), it was clear that the athletes perceived autonomy in their choice to continue in their main sport. Still, we can critically question whether the choice to remain in training was truly autonomous or partly driven by introjected regulation. Indeed, dropping out might disrupt the belief that early specialization, including the hard work and sacrifices, was worth it.

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