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ARTICLE



Perceptions of need-support when "having fun" meets "working hard" mentalities in the elite sport school context

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ABSTRACT

The aim of this study was to investigate athletes and coaches' perceptions of coach need-supportive behaviour and to increase our understanding of the athlete-coach dynamic in the endorsement process. Video-based interviews were conducted with 11 athletes and 10 coaches at an elite sport school in Norway. Narratives were used to tell the story of the predominantly hedonic athlete (the aim of sport participation is having fun) and the predominantly eudaimonic athlete (the aim of sport participation is development). There was an obvious endorsement misfit between the group of athletes labelled hedonic and their coaches. The paradox of the endorsement process intensifies when the "have fun" mentality of the athlete meets the "work hard" mentality of the coach, which, for some athletes, undermines their need-satisfaction, commitment, performance, and well-being. The findings suggest a strong need for a fit between coach and athlete aims for successful coaching in the elite sport school context.

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KEYWORDS

Need-supportive coaching; hedonia; eudaimonia; coachathlete relationship

Introduction

Coaches' interpersonal style plays an important role in creating a social context that fosters autonomous motivation and adaptive athlete outcomes (Fenton, Duda, Quested, & Barrett, 2014; Langan, Blake, & Lonsdale, 2013; Smith, Ntoumanis, & Duda, 2010). A need-supportive coaching style can support athletes' basic psychological *needs* and facilitate optimal motivation and positive persistence in sport (Ntoumanis, 2012). Paradoxically, however, need-support is only as supportive as the athlete perceives it to be. The athletes' perception of having choices and their willingness to endorse the training context and their coaches' suggestions - despite intense demands, structure, rules, and expectations - is fundamental for their autonomous sports motivation and adaptive outcomes. Nevertheless, there is a paucity of



research examining and comparing athletes' and coaches' perceptions of coach *need-supportive* behaviours at the elite level. The aim of this study is to increase our understanding of the athlete-coach dynamic in the endorsement process.

Two central concepts in theorizing young elite athletes' sport motivation are eudaimonia and hedonia (Huta & Waterman, 2014). Eudaimonia is defined as striving to use and develop the best in one's self in ways that are congruent with one's values, and hedonia is defined as striving to experience pleasure, enjoyment, and comfort (Huta & Ryan, 2010). When these concepts are defined as aims, they are both orientations (Huta & Waterman, 2014), which allows us to discuss the concepts in parallel terms (Huta & Ryan, 2010; Huta & Waterman, 2014; Ryan, Curren, & Deci, 2013). Hedonia and eudaimonia are further defined as orthogonal concepts (Huta & Ryan, 2010). Thus, athletes can have a range of combinations of hedonic and eudaimonic aims simultaneously. Youth with a hedonic approach to sport participation predominantly seeks pleasure and fun, whereas youth with a eudaimonic approach to their sport participation predominantly aims for development of their potential. Athletes who are high in both hedonic and eudaimonic aims respectively seek pleasure and fun and development though their sport participation. Hence, in this study we identified and analysed the hedonic and eudaimonic athlete profiles.

Both approaches to sport are culturally embedded and stereotyped in the media. Snowboarding tends to be portrayed and seen as the hedonic "prototype" due to the historical resistance of the structures and disciplines of other sports. For instance, Terje Håkonsen, one of the best snowboarders of all times, was an important voice against snowboarding becoming an Olympic sport (Heino, 2000). This is further supported by the Norwegian Snowboard Federation's vision, which emphasizes the fun aspects of snowboarding (Snowboardforbundet, 2018). This is also true for freeski. To the contrary, the cross-country skiing, biathlon and alpine skiing in the Norwegian context may be a predominantly eudaimonic "prototype." For example, most winning winter Olympian of all times, cross-country skier Marit Bjørgen, is portrayed as a very hard-working athlete by the media in Norway. The Norwegian Ski Federation's developmental plan for crosscountry skiing is an "appropriate long-term developmental guide from early childhood to elite skiers" (Skiforbundet, 2018, para. 1). This represents a typical eudaimonic approach to sport, and this approach is dominant in the increasing number of sport schools.

The elite sport context and elite sport schools

Sports schools are vital in the talent development process in many countries such as Germany, China, Canada, England, Sweden, Singapore, Italy, and the Netherlands (De Knop, Wylleman, Van Houcke, & Bollaert, 1999;

Radtke & Coalter, 2007; Way, Repp, & Brennan, 2010). The transition into the upper secondary school (ages 16-19) is an important period for athletes as they are introduced to a more intense and structured period both in sports and academics (Bloom, 1985; Wylleman & Lavallee, 2004). Sport schools in Norway are acknowledged as talent development pathways (Kristiansen & Houlihan, 2017), and in 2016 a total of 3131 athletes and 461 coaches attended and worked at 12 private and 22 public Norwegian sports schools (Å. Fiskestrand, personal communication, August 8, 2017).

The non-profit private foundation The Norwegian College of Elite Sport (hereafter NTG) is a network of elite sport schools in Norway. NTG currently runs six schools with 990 students participating in 27 different sports (Norges Toppidrettsgymnas, 2018). Out of the approximately 34 elite sport schools in Norway, NTG is the most successful (Berntsen, Lemyre, & Røe, 2014). Current and former NTG athletes have achieved considerable success, accumulating 175 world championship medals, and 26 gold, 17 silver, and 21 bronze medals in the Olympics (Norges Toppidrettsgymnas, 2018). For the 2014 winter Olympics 30% of the Norwegian team members were current or former NTG students and for the 2018 Olympics 25% were (Norges Toppidrettsgymnas, 2018). Arguably, NTG is a stepping-stone for national teams and professional sports.

Theoretical framework

Self-determination theory (SDT), first formulated by Deci (1975) and extended by Deci and Ryan (1985, 2000, 2017)), is an organismic theory of human behaviour that is focused on the ways in which social contextual factors influence peoples' thriving and growth. SDT differentiates types of motivation along a continuum from controlled to autonomous and is based on the assumption that higher relative autonomy is associated with greater quality behaviour and persistence (Ryan & Deci, 2017).

The theory distinguishes between three types of motivation. Amotivation can be described as athletes going through the motions with no intention to act and thus have non-regulation. Extrinsic motivation leads to people engaging in behaviours because of the instrumental value of the behaviour. This form of motivation has four major types of motivational regulations: external, introjected, identified, and integrated. Through the process of internalization athletes can take in values, beliefs, or behavioural regulations from the sport context and transform them into their own. Successful internalization leads to athletes practicing their sports, also when the coach is not there to monitor them. The "cornerstone" of SDT's theoretical foundation is the concept of intrinsic motivation (Ryan & Deci, 2017). Intrinsically motivated athletes act because the activity is inherently satisfying to them (Deci & Ryan, 2002). According to the theory, intrinsic motivation is both a basic and a lifelong psychological growth function within humans.

Central to SDT is the distinction between controlled and autonomous motivation. Autonomous motivation has an internal perceived locus of causality whereas controlled motivation has an external perceived locus of causality. The implication of autonomous motivation is athletes engaging in an activity with a full sense of willingness and volition, and according to the theory, intrinsic motivation is the only true form of autonomous motivation. In contrast, controlled motivated athletes feel coerced to practice (or do other sports specific activities) in specific ways. Extrinsic motivational regulations are not inherently satisfying, and extrinsic incentives are needed to act. Extrinsic regulations vary in their degree of autonomy along the relative autonomy continuum, spanning from relatively controlled (external and introjected regulations) to relatively autonomous (identified regulation and integrated regulation) (Deci & Ryan, 2002, 2000). The different regulations can coexist within the sports domain and several of them can be operative within the same practice session (Ryan & Deci, 2017).

To sum up, autonomous motivation, when athletes whole-heartedly engage in the activity and practice to become more skilled players because it is enjoyable or important to them is associated with athletic development, sustained sports participation, enjoyment, and well-being and tapping into this motivation is preferable when working with young athletes (Balaguer et al., 2012; Carpentier & Mageau, 2013; Felton & Jowett, 2015). This is because acting for controlled reasons is associated with ill-being (Healy, Ntoumanis, van Zanten, & Paine, 2014), burnout (Jõesaar, Hein, & Hagger, 2012), and lack of persistence (Quested et al., 2013). The process of eudaimonia is central when considering optimal functioning and wellness for athletes. This is also present in the recent SDT writings, in which the notion of *flourishing*, a concept closely related to eudaimonia or living well, is given more focus (Ryan & Deci, 2017).

The need-supportive coaching style

Another important aspect of SDT is the assumption that all humans have three basic psychological needs - autonomy, competence, and relatedness (Ryan & Deci, 2017). Autonomy concerns the extent to which people experience their behaviour to be volitional or self-endorsed (Ryan & Deci, 2017). As Soenens, Vansteenkiste, and Sierens (2009) work has shown, being autonomous is not equated to making choices (being independent). An athlete can feel autonomous in the absence of choice when he or she endorses his or her coaches' mandated activity because he or she agrees with it. When feeling ownership of one's own actions the need for autonomy is satisfied and the athletes' resources, interest, and capacities are invested in the action. The opposite of self-endorsement is feeling coerced, compelled, or seduced to act by forces external to self (Ryan & Deci, 2017).

To feel competent, the athletes' actions must be perceived as self-organized or initiated, in other words, they feel a sense of ownership of the activities that they succeed in (Deci & Ryan, 1985). When feeling that one masters the drills and exercises in practices, and the goals are self-set, the competence need is satisfied.

The need for relatedness is the need to perceive that others care for us unconditionally (Ryan & Deci, 2017). To belong, be significant, and matter in the eyes of others is a primary goal of human behaviour. When athletes feel part of their sport's social group and have a sense of belonging with their peers or coaches, the need for relatedness is satisfied and the athlete experiences need satisfaction.

According to basic psychological needs theory (BPNT), coaches can foster athletes' autonomous motivation through their interpersonal style when athletes perceive their needs to be satisfied (Mageau & Vallerand, 2003). The coach's interpersonal style reflects the strategies he or she usually adopts when interacting with his/her athletes.

As need support is defined as autonomy support accompanied by structure and interpersonal involvement (Mageau & Vallerand, 2003; Matosic, Ntoumanis, & Quested, 2016; Taylor & Ntoumanis, 2007), the coach, as an important authority figure, should combine all three aspects of need-support. Autonomy support (requires this person to take others' perspective in consideration, acknowledge others' feelings, promote choice and decision-making, and offer a meaningful rational whilst minimizing external demands) accompanied by structure (there are rules) and involvement ("I care about my athlete") makes up the need-supportive style (Mageau & Vallerand, 2003). Then need-support can be conceptualized as the interpersonal behaviours that encourage the satisfaction of the three basic psychological needs through support of athletes' autonomy, competence, and relatedness (García-Calvo, Sánchez-Oliva, Leo, Amado, & Pulido, 2016; Rocchi, Pelletier, & Desmarais, 2017).

Coaches who provide need-support can help athletes internalize extrinsic motivation and develop the psycho-social maturity of identified motivation (Deci & Ryan, 2000). Identified motivation is needed to develop one's potential and willingness to take on tasks that may not be enjoyable, such as repetitive and demanding drills. In contrast, controlling behaviours are need undermining and include chaos (vs structure), hostility (vs warmth), and coercion (vs autonomy-supportive) (Skinner & Edge, 2002). The absence of need-supportive behaviours does not automatically imply the presence of thwarting behaviours (Sheldon, 2011). An interpersonal style

that actively thwarts athletes' needs can be considered controlling (Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011). A need supportive style is preferable over a controlling interpersonal style, which may actively thwart athletes' needs (Bartholomew et al., 2011). The concepts of controlling style and need-supportive style are orthogonal (Matosic & Cox, 2014; Soenens et al., 2009). Initial empirical evidence indicates that coaches often use a combination of the behaviours from these two interpersonal styles (Matosic et al., 2016).

Despite knowledge about and attempts to foster need-supportive coaching, there are determinants that influence coaches' interpersonal style: the coaching context, perception of athletes' behaviour and motivation, and coaches' personal orientation (Mageau & Vallerand, 2003). First, pressure from above is the pressure coaches feel to perform - this can determine how they act (Mageau & Vallerand, 2003; Pelletier, Séguin-Lévesque, & Legault, 2002). Secondly, if coaches perceive their athletes to be lazy and lacking incentives and engagement, they tend to pressure these athletes and downplay the motivation they wish to see (Rocchi, Pelletier, & Couture, 2013). Thirdly, coaches' beliefs about what good coaching is influences how they behave toward their athletes.

Perceptions of need-supportive behaviours

The competitive context typically involves extrinsic incentives and contingencies of approval that constantly challenge autonomous motivation (Cheon, Reeve, Lee, & Lee, 2015; Ryan & Deci, 2017; Standage & Ryan, 2012). For instance, if an athlete perceived pressure to win (such as prize money), then this impacts intrinsic motivation negatively. However, winning can also have an informational functional significance and enhance intrinsic motivation if competence feedback is offered in a need-supportive way (Ryan & Deci, 2017).

Despite the importance of fostering or designing need-supportive environments, few studies have investigated multiple perspectives (i.e. athletes' perceptions, coach perceptions, observer's perceptions) of coach interpersonal behaviour. In one of the few studies on multiple perspectives, Smith and Smoll (1996) found low or no correlation between coaches' selfreports and observers' ratings of coaches' interpersonal behaviour. Athletes' (young team players') ratings correlated more with the observers' ratings than that of the coaches. In a more recent study, Lyons and his colleagues examined coach and athlete perceptions of autonomy-supportive coaching in a group of Olympic ski cross athletes and found that there were consensus between coaches providing and athletes perceptions of autonomy-supportive behaviours (Lyons, Rynne, & Mallett, 2012).

In this study, we use the term need-supportive strategies rather than separate them into autonomy-supportive strategies, relatedness-supportive strategies and competence-supportive strategies because the needs are interlinked, and the different strategies support more than one need (Aelterman et al., 2013). The multiple needs-effect has been observed both in intervention-based studies (Cheon et al., 2015) and correlational studies (Amorose & Anderson-Butcher, 2007; Adie, Duda, & Ntoumanis, 2008; Gagné, Ryan, & Bargmann, 2003; Hodge & Lonsdale, 2011) and longitudinal correlational studies (Adie, Duda, & Ntoumanis, 2012; Pelletier, Fortier, Vallerand, & Briere, 2001). For instance, when coaches inquire about and acknowledge athletes' feelings, they communicate their involvement as well as their respect for the athletes, thus influencing the athletes' perceptions of relatedness in addition to autonomy. Perceptions of competence is influenced directly by coaches' non-controlling competence feedback, which also supports autonomy (Mageau & Vallerand, 2003).

SDT suggests that coaches who support need-satisfaction facilitate intrinsic motivation, internalization and integration of extrinsic motivation, and an autonomous causality orientation (Ryan & Deci, 2017). The facilitation of intrinsic motivation is hedonic in nature as it aims to foster athlete enjoyment in sports, but what happens with predominantly hedonic athletes who work with coaches who aim for their athletic development? From the above it is apparent that elite sport contexts are predominantly eudaimonic in nature (Huta & Waterman, 2014) due to the focus on winning. As a result, coaches often seek to develop athletes' potential through internalization of extrinsic motivations such as the knowledge and values for optimal development of athletic skills through instilled structure, rules, and demands. Athletes with a predominately eudaimonic approach to sport share this aim with the elite context, while hedonic athletes will struggle more to see the benefit of being part of such a program. We know little about how needsupport is perceived by athletes with predominantly hedonic aims – which would be misaligned with their context-and we also know little about athletes who resist the internalization and integration of the values and goals of their context. Based on this reasoning, the purpose of this investigation was to gain insight into the extent to which athlete and coach perceptions of coach need supportive behaviours match. Second, we wondered, how does the fit between coach and athlete aims (hedonic and eudaimonic) for their sports participation influence the athletes' endorsement of coaches' behaviours, structure, and rules?

Method

After obtaining approval from the Norwegian Social Science Data Services, informed consent was obtained from athletes and coaches before conducting the interviews (May 8th-10th, 2017).



Context and participants

The athletes and coaches at NTG face a myriad of challenges on a regular basis. During the off-season, the young winter sport athletes have two training sessions a day to prepare for high performance through physical, tactical, technical, and mental skill building. This is hard work, can be repetitive, and intrinsic motivational engagement is not enough to develop these skills. In the spring and fall, they travel and have on-snow camps on glaciers in Norway and the Alps (Central Europe). This typically involves on-snow training for the first half of the day, followed by a dry-land training session. In addition, the athletes do school work for a few hours in the evening. The athletes are responsible for packing their lunches, their recovery time, their equipment, being prepared for and focus during onsnow training, and for keeping up their schoolwork. The competitive season typically involves more pressure to perform or win. The young elite athletes (often the best in their sport in Norway and future Olympians) constantly face direct feedback from competition or reward and control from peers, parents, and coaches.

Eleven junior elite winter sport athletes aged 16-18 years (M = 17, 1, alpine skiing n = 2, freeski and snowboard n = 4, biathlon n = 3, crosscountry skiing n = 2), and 10 winter sport coaches aged 25-54 years (M = 36.4, alpine skiing n = 2, cross country skiing n = 3, biathlonn = 3, snowboard and freeski n = 2) were interviewed for this study.

Materials

A manuscript was written based on knowledge about the coaching context and sport and informed by Mageau and Vallerand (2003) autonomy supportive strategies (see Table 2), accompanied by structure and interpersonal involvement. Based on this manuscript, video fragments were produced to reveal seven need-supportive strategies (1.37 – 3.18 minutes). To make the video fragment realistic, athletes and coaches from one of the other NTG schools served as actors. A professional freelance video editor was responsible for the production of the seven videos (filming, editing). The first author supervised the editing and provided context for the needsupportive strategies and the voice-overs. Each video started with a written description of one of the seven need-supportive coaching strategies, and a sport specific scenario was next described by a voice-over while following an introduction-section of freeskiers practicing on-snow, doing flips and tricks on jumps and rail, while music is playing in the background. Next, the videos showed a dialogue between a coach and an athlete or a monologue by the coach. Each scenario was shown in a need-supportive way ("good coach") and a controlling way ("bad coach"). The videos ended



with a reflection by one of the athletes on how it felt to be coached in a typical need-supportive style versus a controlling style, which was the main goal of the videos. Next, these video fragments were used as stimulus for questioning because video can help create a meaningful common ground for discussion (Bryman, 2015; Harper, 2002; Pink, 2013).

Interviews

We chose different approaches to the athlete and coach interviews.

Video based focus group interviews with athletes

The focus group method was chosen to provide in depth information about the members' experiences with their coaches' interpersonal behaviours, and to explore how they discussed this issue (Bryman, 2015). In addition, focus groups allow for a natural conversation pattern. Athletes were appointed into groups based on their sports: Focus group 1: alpine skiing (n = 2); Focus group 2: freeski and snowboard (n = 4); and Focus group 3: biathlon and cross-country skiing (n = 5). The focus group interviews were scheduled and conducted at their school. The seven video fragments served the purpose of line of questioning; they were discussed one by one ("how do you perceive your coach to act out that strategy?").

All the interviews started with an informal chat about the athletes' everyday life at ski camp to break the ice. Next, the interviewer played one video at the time, asking the athletes to give examples of how or to what extent their coaches use that need-supportive strategy. A discussion of the athletes' perceptions of their coach ability to use the need-supportive strategies followed. Aiming to be guiding but not intrusive, the interviewer avoided interrupting the naturally occurring discussions between group members. Before moving on to the next video, the interviewer asked if the athletes had any other comments or examples they wanted to share. It was interesting to notice that some of the athletes elaborated on their examples after listening to their fellow athletes. This, we believe, helped to create a more in-depth account of what they think than had we chosen one-on-one interviews (Bryman, 2015). The interviews were audio recorded and lasted from 55 minutes to 75 minutes.

Video based interviews with coaches

We chose to interview the coaches individually to grasp every coach perception of their use of need-supportive strategies after viewing the seven need-supportive video fragments. Coaches were asked to what extent and how they used the seven need-supportive strategies (one at a time) in their interactions with the athletes. Before watching each video fragment, the interviewer asked the coaches to think about examples of them using or not using these strategies. Each video was on average two minutes long.

The interviews took place at the coaches' workplace. The two-way interaction process in the interview setting is the product of the researcher, the participant, and the relationship between them (Finlay, 2002). To create a safe setting and empower the other, communication strategies such as not interfering or expressing our own opinions and paraphrasing as part of the role as an active listener were employed (Sparkes & Smith, 2013). The interviews were audio recorded and lasted about 45 minutes.

Both coaches and athletes were informed that their anonymity would be protected, the confidentiality of the study upheld and their freedom to withdraw from the study at any point in time. No consent was withdrawn.

Data analysis and interpretation

The interviews were transcribed verbatim, which resulted in 52 pages of raw text from the coaches' interviews and 40 pages from the focus group interviews with the athletes. To maximize trustworthiness of this analysis, the six step guidelines for thematic analysis was followed (Braun & Clarke, 2006). The first phase was to familiarize ourselves with the data through the interviews and transcription. Then, the text was read and re-read and meaning started to form through generating initial codes (phase two) relevant for illustrating perceptions of the seven need supportive strategies. The text was highlighted with different colours. The different features of the data were systematically organized into a table to help us search for themes (phase three) in the answers of how athletes vs coaches express using or perceiving the need-supportive strategies (Mageau & Vallerand, 2003). Emerging findings were compared with the data to verify understanding of the perceptions of need support through vivid examples, and this was discussed with colleagues (phase four: reviewing themes). Reading, coding, and organizing the full text resulted in thematic maps and tables. Then, a refining of the specifics of each theme led us to define and name themes (phase five). Using these maps and tables, representing coaches' and athletes' perceptions of need-supportive coach behaviours, the process of evaluating codes and clustering took several rounds of reviewing and developing themes to the coded data "quotes" and the dataset as a whole.

In this process, another interesting finding was constructed, that of two distinct narratives that are related to the athletes' aims with sports participation (see Table 1). It became clear that there were two different ways to talk about aims of sport participation, and these were related to the athletes' sport and the sport context. The 11 athlete stories have been narrowed into two stories, based on similarities and differences in the narratives. Elliott (2005) defines narrative as a way of organizing a sequence of events into a whole, in addition to distinguishing between *first-order* narratives, defined as the stories individuals tell about themselves and their own experiences, and second-order



Table 1. Examples of guotes from the 11 athletes, which resulted in the creation of the hedonic and the eudaimonic athlete narratives.

The predominantly hedonic athlete – aiming to have fun and to be stoked as a result of sports participation	The predominantly eudaimonic athlete – aiming to develop and reach their goals as a result of sports participation
"I just want to snowboard and have fun. Because then I am stoked." "it is not awesome to talk about goals" "if you have to set a goal for a new trick, then I do not feel like doing the trick anymore" "it is when you are in the park that you see what you want to try. Suddenly you get stoked and want to try it" "If I am doing a trick, and I am stoked, then the coach wants me to switch to a different jump or a different trick, you feel the control." "and then you are not stoked anymore" "we just want to have fun on the slopes together". "to just snowboard together and have fun, that is optimal"	"of course we are practicing because we want to be good at it" "you do not practice just to practice, you practice for a reason" " we know a lot about what we need to practice to achieve what we aim for" "we know what we want to do, and what our goal is, and then the coaches try to help us reach that
	that we can analyse it later, and then you see what you need to do to improve"

narratives defined as the accounts constructed by "researchers to make sense of the social world, and of other people's experiences" (Elliott, 2005, p. 13). The latter do not necessarily focus on individuals, and a particular type of second-order narrative is a collective story (Richardson, 1990), which "displays an individual's story by narrativizing the experiences of the social category to which the individual belongs" (p. 25). In the results section, the predominantly *hedonic* athlete is referred to as he (*he* participates in sports to have fun and be stoked) and that of the predominantly *eudaimonic athlete* is referred to as she (*she* participates in sport to develop). The coach of the hedonic athletes was named she and the coach of the eudaimonic athlete was named he to ensure gender equality. We identified four main discrepancy points between coach and the two athlete narratives of need-supportive behaviours (phase six, producing the report). Vivid and compelling quotes were selected, and these quotes relate back to the research question of the coherence between coach and athlete perceptions of need-supportive coach behaviour.

Results

Before elaborating on the experiences of the predominantly hedonic and predominately eudaimonic athlete, an overview of the fit between the two narratives and their coaches, with a focus on the discrepancies, is offered.

Coach-athlete discrepancies

When analysing the coach and athlete interviews, there was an obvious misfit between the group of athletes labelled the predominantly "hedonic"

athlete and his coach, while this discrepancy did not exist in the group of athletes we labelled the predominantly "eudaimonic" athlete and her coach. The discrepancy was related to coach and hedonic athlete perceptions of need-supportive coaching skills (see Table 2). The results revealed discrepancies in the hedonic athlete and his coach's perceptions in four of the seven need supportive strategies.

The four discrepancies (predominantly autonomous strategies) are related to trust, involvement, explanation, and encouragement of initiative. The first discrepancy was found in trust – developing this is a central skill for coaches in respect to avoiding guilt inducing criticism, which may result in controlling statements and tangible rewards. A common theme in the hedonic athlete's stories about training and competition is a lack of coach-trust (see Table 1). The coach on her side offered examples of trusting the athletes to be responsible for on-snow practice. The second discrepancy was related to athlete involvement. It might be that the coach perceived the school structure and the ski academy rules to restrain athlete involvement. Real choices and athlete involvement in decision and solution finding processes is critical to athlete autonomy. The hedonic athlete's coach gave examples of providing choices and how she involved the athlete. Separately, the hedonic athlete experienced a lack of space for being an active part in his own development. The third discrepancy originated in the lack of explanation from coach to athlete. The coach perceived herself to offer meaningful explanations for the chosen exercises and rules to the athlete. However, the hedonic athlete did not find these the

Table 2. Coach athlete narratives: perception of need-supportive behaviours.

Need-supportive strategies	Hedonic athlete and his coach	Eudaimonic athlete and her coach
Inquire about and acknowledge the athletes feeling: open questions – active listening, emotional response, act in a warm and caring way	Coherence in perception	Coherence in perception
Supportive behaviours: show the athlete that you trust him/her, avoid judgement and criticism, minimize overt control (should, have to).	Discrepancies	Coherence
Provide choice within specific rules and limits: clarification of the responsibilities, involve the athlete in decision and solution finding processes and give the athlete choices.	Discrepancies	Coherence
Provide a rational for task, limits and rules – structure: explain why you chose a specific exercise, tactic or rule and share knowledge about the sport.	Discrepancies	Coherence
Allow athletes opportunities for initiative taking and independent work: ask open questions and encourage initiative from the athletes.	Discrepancies	Coherence
Provide non-controlling competence feedback : factual non- judgmental feedback about problems, positive feedback that convey high but realistic expectations, and target behaviour that are under the athletes' control – optimal challenge.	Coherence	Coherence
Facilitate self-improvement focus (prevent ego-involvement): focus on self-improvement, focus on mastery and effort in the group, self-set goals, and give attention to all the athletes regardless of if they are doing well or struggle.	Coherence	Coherence

rationales meaningful. The final discrepancy was related to initiative and to what degree the athlete feels opportunities for initiative taking and independent work. The data revealed that the hedonic athlete felt hindered in his attempt for initiative. In contrast, the coach gave examples of encouragement of initiative given to the hedonic athlete.

In contrast, Table 2 revealed the fit between the eudaimonic athlete and her coach. As the eudaimonic athlete endorsed the structures, rules, training sessions, and other demands from her coach, she perceived the coach to be need-supportive and as helping her in her strive for development. In contrast to the hedonic athlete, she perceived the coach to trust her, involve her, and offer choices and meaningful rationales for the activities.

SDT postulates that a need-supportive interpersonal style contributes to greater need-satisfaction (Aelterman et al., 2013; Deci & Ryan, 2000). However, as seen from the results presented in Table 2, sometimes needsupportive acts are not perceived as need-supportive (by the hedonic athlete) or the coaching context creates a gap in the coach-athlete relationship. The coach is also expected to act in line with the values and expectations of her employer (NTG) and according to what she knows about talent development. The context represents a typical eudaimonic approach to sports participation. Consequently, there is a misfit between the aim of the hedonic athlete and the aim of his coach - and selfendorsement is not present. This will be elaborated upon below in the predominately hedonic athlete's story and the predominately eudaimonic athlete's story.

The hedonic athlete's elite development

"Plaving" sport is a way of life for the hedonic athlete: "Snowboarding is freedom, it is not elite sport, it is life." For the hedonic athlete, the main goal of sports participation is not to become the best: "I am not here to win." The hedonic athlete attends sport school to have more time to "simply snowboard." The schools' focus on training is neither understood nor internalized: "If it was up to me, I wouldn't train at all... I can snowboard all day without becoming tired." Tests and doing drills that are not snowboard or freeski related seem unnecessary: "it is really hard and completely unnecessary that we run 3,000 meters with the other athletes from the other sports." Development principles such as goalsetting are not understood or accepted either - it is simply seen as a waste of time.

When the coaches interfere with how the hedonic athlete plays sport, it is perceived as meaningless: "They try to have us develop skills the same way other athletes do...it is a totally different strategy to become a great snowboarder." If the coach tells him what to do without discussing it or listening

to him, you can be certain he won't listen: "if they just decide to do a thing, and we have to do it, we will not listen to that." The hedonic athlete easily feels pressured and controlled by his coach to act in a specific way: "I feel that they once in a while try to listen, but they still pressure you to do what they want you to do...they still believe their way is the right way."

In short, the worst thing a coach might try to do is to "pressure" the hedonic athlete to act as a eudaimonic athlete: "I feel that the snowboard and freeski program is about to collapse." The hedonic athlete wants his coach to take his initiatives seriously. "Every time I suggest something...it always end up with the coaches saying "yes, but we know what's best for you." That is an unacceptable response in the hedonic athlete's eyes. He will for instance have a hard time doing a jump or not try out a hill if he does not see the reason behind the rules and demands from his coach. Learning new tricks and improving his skills must happen spontaneously and when having fun on the hill: "Suddenly you get stoked and want to try it". Stoked is a frequently used word by the hedonic athlete to express excitement. Any demand of structure is perceived as lack of trust and respect – it is boring and interferes with a "fun" lifestyle and is consequently questioned: "my coach told me I have to write a training log. I do not like writing in it, but we have to write in it. When I ask why, she says: "how else can I know that you have been practicing?" In short, a hedonic athlete does not accept coaching, as almost any attempt seems for him to reduce his control, and he feels that he practices because the coach demands it of him (external perceived locus of causality).

The eudaimonic athlete's elite development

It is "easier" to coach the eudaimonic athlete as she has a broader perspective on development - she accepts the duality that hard work can also be enjoyable: "obviously, we are practicing because we want to be good at it." For her, it is all about goal-setting and reaching goals: "I know what I want to do, and what my goal is, and the coaches help me to reach that goal." The coach is a helper in the development process, and the help is needed to excel: "The coaches support me so I can develop my skills... if we are struggling, the coaches can film us, so that we can analyse it later. In this way, she can constantly keep developing."

To be coached does not reduce her perception of independence: "... we know a lot about what we need to practice to achieve what we aim for." Trust is also important for the eudaimonic athlete, and she feels trusted by her coach: "they support my choices in the planning process." Furthermore, "you do not practice just to practice, you practice for a reason." In this context, planning is seen as an important tool for success, hence, planning and goalsetting become meaningful. The eudaimonic athlete expects responsibilities and demonstrates awareness of her



responsibilities within the structure: "you have to be serious and show up to practice with the right equipment, you have to get up early enough to be there on time and so on. You have to give a little to get a little."

Discussion: when "work hard" meets "have fun" mentalities

We identified two main challenges (and paradoxes) associated with the misfit between the hedonic athlete and elite sport expectations and coaching.

The coach challenge: the elite sport school context

Young elite athletes can benefit from instructions and structure provided by experienced coaches (Mageau & Vallerand, 2003). The potential for enhanced motivation and improved performance is present if coaches would instead of using controlling strategies (coach centred), adapt their own behaviours to fulfil their athletes' needs of autonomy, competence, and relatedness (athlete centred). NTG's structure is eudaimonic in nature, and the coach must operate within an elite sport school context and its values, goals, aims, and curriculum. The coaches followed the recommendations of providing rationales and give choices etc., but the hedonic athletes still felt controlled. The discrepancies in our data is a clear sign of how the hedonic athlete perceives the mandated activity and rules in the sports context as negative and shows that he neither understands the importance of nor accepts the training activities and structure of the school and coaches' values.

The coaches are evaluated against the school's vision of developing athletes to the point of them being "capable of winning medals in international championships, qualifying for university and academic education and developing excellent ethical principles" (Norges Toppidrettsgymnas, 2018, para. 3). Hence, the coaching context influences coach behaviour (Mageau & Vallerand, 2003). It is challenging for coaches when athletes do not endorse coach behaviours due to the common "seeking fun and pleasure" theme in the snowboard subculture (Heino, 2000) and the same is true for freeski. Endorsement of coaches' actions will happen if coach and athlete values are in coherence, or when the athletes believe in and trust the importance of the structure provided by their coaches. Discrepancies between coach and athlete aims might be a misfit between the athlete and the sport school context. The school context may end up being a barrier in the athlete-coach relationship if not discussed or considered.

The athlete challenge: culture trumps structure

The data reveal that the hedonic athlete engaged in mandated activities such as on-snow practice in a specific snowboard park or keeping a training log because his coach told him to do so. This pressure on how

to think, feel or behave, termed controlled motivation (Reeve, Deci, & Ryan, 2004), clearly undermined the hedonic athletes' intrinsic motivation and impacted his well-being and sport participation (Mageau & Vallerand, 2003; Ryan & Deci, 2017). It also seems that he expected the sport culture at the sport school to be similar to the snowboarding and freeski sports culture. This culture has an emphasis on fun and non-organized training, and this is reflected in the stories they tell about their heroes. These findings are in consonant with Soenens et al.'s suggestion that personality, culture, and other variables can alter whether or not a person will perceive a behaviour as controlling (Soenens, Vansteenkiste, & Van Petegem, 2014). Soensens et al.'s model sheds important light on the implications of coach interpersonal behaviour because once people perceive the context as controlling, they experience negative outcomes. There is no fit between coach demands and the stories of his heroes, who have won the X-games, the "Legend Games" and who have "never been in the gym." Furthermore, these stories may lead to self-handicapping strategies and reduce the hedonic athlete's chances of developing his skills, as he neglects the extensive empirical evidence that practice is necessary for elite level performance in any domain (Ericsson, Charness, Feltovich, & Hoffman, 2006; Ericsson, Krampe, & Tesch-Römer, 1993; Starkes & Ericsson, 2003).

Finally, the hedonic athlete's beliefs about practice not being necessary, fun, or meaningful are at the core of the discrepancies between the hedonic and the eudaimonic narratives. Expectation clarification seems important for the endorsement process when the rationales given by the coach are not meaningful to the athlete and constant testing of rules and school structure may be the end result. The elite sport context is demanding, and the "we do not practice" mentality is not part of this. The challenge is that, as our findings show, even when coaches offer sound rationales, give explanations for demands and rules, the hedonic athlete does not perceive it as need-supportive. Instead, he sees it as controlling.

Understanding dilemmas: how to break the vicious circle?

Coaches perceive the hedonic athlete to have low autonomous motivation, and in response, they increase their use of controlling behaviours to get him to practice enough to develop elite athlete skills. Paradoxically, the coaches' reaction to what they see as a lack of initiative in athletes (e.g. reducing independent trainings) - more controlling behaviour - results in decrease in the very motivation they wish to increase in their athletes.

On the other hand, athletes emit behaviours that generate the very controlling strategies they do not wish in their sport lives. Instead, the hedonic athlete simply perceived a lack of respect. We would like to argue that this has become a vicious circle (Mageau & Vallerand, 2003). This is problematic due to the importance of need-support for internalization of extrinsic motivation on the elite level (Ryan & Deci, 2017). To "have fun" mentality without the "working hard" mentality is a misfit with the NTG's aim to develop elite athletes, and thus challenges the internalization process. If no external reasons are meaningful to the athlete, internalization can become challenging, and these athletes will be challenging to coach. To explain how need-supportive coaching works in practice, three suggestions for how to facilitate internalization of the values in the elite sport context are provided below.

Implications for coaches

- (1) Communicate the values and expectations of the sport context to athletes in the application process. This can be an important starting point to avoid a person-environment misfit. A key question in the recruitment process is: Is the athlete willing to accept those expectations?
- (2) Internalization of extrinsic motivation takes time and is hard work. Coaches should challenge and involve the athletes' heroes to "tell the truth" both to the media and to the youth in the sport school setting.
- (3) The Federations and other key stakeholders that represent the subculture are encouraged to communicate to young aspiring snowboarders and freeskiers that enjoying the process and having fun does not mean not working hard. By getting "heroes" to define what fun means for them and explain how it feels to learn and develop a new trick may give young athletes a different picture of how to become a great snowboarder or freeskier. The Snowboard Federation and the part of the Norwegian Ski Federation that is responsible for freeski is encouraged to communicate what they expect from a national team athlete exemplified by their cooperation with the Norwegian Olympic Top Sport Centre. In addition, the national team coach can outline the time required and effort needed to develop new skills. All these examples will make the job easier for the elite sport school coaches, when information about the reality of expertise development is available to young athletes. In this way, young athletes have a chance to relate to heroes who work hard and have fun.

Limitation and future direction

We aimed at providing insight into the subjective experiences of the predominately hedonic and the predominately eudaimonic athlete in this investigation of coachathlete relationships. The snowboard/freeski athletes used in this investigation had

stereotypical hedonic aims, and it was easy for us to reveal how challenging it can be for both athletes and coaches in predominantly eudaimonic contexts for elite development. This might be seen as a limitation. However, the methodological approach used with video-based interviews and focus group interviews resulted in a common ground for understanding and discussion of need-support and the endorsement process. In these settings the participants shared experiences that they may not have shared in separate interviews, and this is a strength. Taking this into consideration, we suggest that the above recommendations for coaches in freeski and snowboard may be generalized to other contexts in which predominantly hedonic athletes meet a predominantly eudaimonic sport context. The discrepancies between athletes and their sport contexts may be present in a local or regional sports context as well as in more elite, national, or talent developmental contexts where coaches, parents, and administrators expect athletes to have eudaimonic aims for their sports participation, which then negatively influences predominantly hedonic athletes' enjoyment in sports participation.

An increased understanding of person-environment fit influence on the endorsement process may be an important endeavour for moving SDTresearch and coach education forward and improve the psychosocial and performance outcomes in elite sports. Aims can be seen as the deeper reasons to participate in sports rather than the surface content of activities (Huta & Ryan, 2010). Hence, how realistic is successful need-support when context and athlete aims are misaligned? The practical significance of this study is improved knowledge to use as a base for the design of social environments that optimize athletes' development, enjoyment, and well-being.

Conclusion

This novel study aimed to explore athletes' (predominantly hedonic and predominately eudaimonic athlete) and coaches' perceptions of coach need-supportive behaviours to increase our understanding of the athlete-coach dynamic of the endorsement process. A fit between coach and athlete aims result in shared values and meaningfulness of activities, rules, and demands, and makes endorsing possible. Self-endorsement of one's actions can be an important facilitator of positive affect and enjoyment (Ryan & Frederick, 1997). While hedonia relates to the short term/in the moment positive affect, eudaimonia has a cumulative effect on positive affect. This means that working hard can also be fun and enjoyable. As hedonia and eudaimonia are orthogonal concepts (Huta & Ryan, 2010), the coach needs to know his athlete and trigger/ combine the hedonia aspects in daily training. For this to happen, hedonic athletes need to learn, and they would be better off with a broad definition of fun, if their aim is to become an elite athlete. One coach-athlete duo who manages this balance is 2017 World champion 400 meter hurdler Karsten Warholm and his coach Svein Olav Alnes. In interviews, they both stress their unique humour and the fun they both have in the hard work that is their training process. While the coach is being labelled a wizard (Folvik & Strøm, 2017), he simply explains that some laughter and bad jokes take the edge off the toughness and seriousness - which is important for young athletes. For continued involvement in elite sport, this is an important aspect to consider when coaching young athletes. This is a good example of what happens when "have fun" mentality of the athlete meets the "work hard" mentality of the coach-it does not necessarily mean that the athletes' need-satisfaction, commitment, performance, and well-being is always undermined. Thus, coaches should be encouraged to make room for what athletes experience as fun in the internalization process. As such, we would argue that there are things to learn from the hedonic athlete as well. After all, it is intrinsic motivation that has the highest quality (Ryan & Deci, 2017). It is important to remember that hedonic aims and eudaimonic aims relate to different forms of well-being empirically and embracing both aims is associated with the greatest well-being (Huta & Ryan, 2010).

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References

- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). Autonomy support, basic need satisfaction and the optimal functioning of adult male and female sport participants: A test of basic needs theory. Motivation and Emotion, 32(3), 189-199.
- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2012). Perceived coach-autonomy support, basic need satisfaction and the well-and ill-being of elite youth soccer players: A longitudinal investigation. Psychology of Sport and Exercise, 13(1), 51-59.
- Aelterman, N., Vansteenkiste, M., Van Keer, H., De Meyer, J., Van den Berghe, L., & Haerens, L. (2013). Development and evaluation of a training on need-supportive teaching in physical education: Qualitative and quantitative findings. Teaching and Teacher Education, 29, 64-75.
- Amorose, A. J., & Anderson-Butcher, D. (2007). Autonomy-supportive coaching and selfdetermined motivation in high school and college athletes: A test of self-determination theory. Psychology of Sport and Exercise, 8(5), 654-670.



- Balaguer, I., González, L., Fabra, P., Castillo, I., Mercé, J., & Duda, J. L. (2012). Coaches' interpersonal style, basic psychological needs and the well-and ill-being of young soccer players: A longitudinal analysis. *Journal of Sports Sciences*, 30(15), 1619–1629.
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thogersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin*, *37*(11), 1459–1473.
- Berntsen, H., Lemyre, P.-N., & Røe, L. (2014). Fra klubb til verdenstopp [From sport clubs to elite sports]. Oslo, Norway: Norwegian School of Sport Sciences.
- Bloom, B. S. (1985). Developing talent in young people. New York, NY: Ballantine.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Bryman, A. (2015). Social research methods. Oxford, UK: Oxford University Press.
- Carpentier, J., & Mageau, G. A. (2013). When change-oriented feedback enhances motivation, well-being and performance: A look at autonomy-supportive feedback in sport. *Psychology of Sport & Exercise*, 14(3), 423–435.
- Cheon, S. H., Reeve, J., Lee, J., & Lee, Y. (2015). Giving and receiving autonomy support in a high-stakes sport context: A field-based experiment during the 2012 London paralympic games. *Psychology of Sport and Exercise*, 19, 59–69.
- De Knop, P., Wylleman, P., Van Houcke, J., & Bollaert, L. (1999). Sports management—A European approach to the management of the combination of academics and elite-level sport. *Perspectives—The Interdisciplinary Series of Physical Education and Sport Science*, 1, 49–62.
- Deci, E. L. (1975). Intrinsic motivation. New York, NY: Plenum Press.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Elliott, J. (2005). *Using narrative in social research: Qualitative and quantitative approaches.* Thousand Oaks, CA: Sage.
- Ericsson, K. A., Charness, N., Feltovich, P. J., & Hoffman, R. R. (2006). *The Cambridge handbook of expertise and expert performance*. Cambridge, UK: Cambridge University Press.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363–406.
- Felton, L., & Jowett, S. (2015). On understanding the role of need thwarting in the association between athlete attachment and well/ill-being. *Scandinavian Journal of Medicine & Science in Sports*, 25(2), 289–298.
- Fenton, S. A., Duda, J. L., Quested, E., & Barrett, T. (2014). Coach autonomy support predicts autonomous motivation and daily moderate-to-vigorous physical activity and sedentary time in youth sport participants. *Psychology of Sport and Exercise*, 15(5), 453–463.
- Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12(4), 531–545.
- Folvik, H. T., & Strøm, O. K. (2017). Dette er "trollmannen" bak Warholms gulljakt [This is the "wisard" responsible for Warholms pursuit of the gold medal]. Retrieved February 8, 2018, from https://www.vg.no/sport/friidrett/karsten-warholm/dette-er-trollmannen-bak-warholms-gulljakt/a/24113376/



- Gagné, M., Ryan, R. M., & Bargmann, K. (2003). Autonomy support and need satisfaction in the motivation and well-being of gymnasts. *Journal of Applied Sport Psychology*, 15 (4), 372–390.
- García-Calvo, T., Sánchez-Oliva, D., Leo, F. M., Amado, D., & Pulido, J. J. (2016). Effects of an intervention programme with teachers on the development of positive behaviours in Spanish physical education classes. *Physical Education and Sport Pedagogy*, 21(6), 572–588.
- Harper, D. (2002). Talking about pictures: A case for photo elicitation. *Visual Studies*, 17 (1), 13–26.
- Healy, L. C., Ntoumanis, N., van Zanten, J. J. V., & Paine, N. (2014). Goal striving and well-being in sport: The role of contextual and personal motivation. *Journal of Sport and Exercise Psychology*, 36(5), 446–459.
- Heino, R. (2000). New sports: What is so punk about snowboarding? *Journal of Sport and Social Issues*, 24(2), 176–191.
- Hodge, K., & Lonsdale, C. (2011). Prosocial and antisocial behavior in sport: The role of coaching style, autonomous vs. controlled motivation, and moral disengagement. *Journal of Sport and Exercise Psychology*, 33(4), 527–547.
- Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies*, 11(6), 735–762.
- Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of Happiness Studies*, 15(6), 1425–1456.
- Jõesaar, H., Hein, V., & Hagger, M. (2012). Youth athletes' perception of autonomy support from the coach, peer motivational climate and intrinsic motivation in sport setting: One-year effects. *Psychology of Sport & Exercise*, 13(3), 257–262.
- Kristiansen, E., & Houlihan, B. (2017). Developing young athletes: The role of private sport schools in the Norwegian sport system. *International Review for the Sociology of Sport*, 52(4), 447–469.
- Langan, E., Blake, C., & Lonsdale, C. (2013). Systematic review of the effectiveness of interpersonal coach education interventions on athlete outcomes. *Psychology of Sport & Exercise*, 14(1), 37–49.
- Lyons, M., Rynne, S. B., & Mallett, C. J. (2012). Reflection and the art of coaching: Fostering high-performance in olympic ski cross. *Reflective Practice*, *13*(3), 359–372.
- Mageau, G., & Vallerand, R. (2003). The coach-athlete relationship: A motivational model. *Journal of Sports Sciences*, 21(11), 883–904.
- Matosic, D., & Cox, A. E. (2014). Athletes' motivation regulations and need satisfaction across combinations of perceived coaching behaviors. *Journal of Applied Sport Psychology*, 26(3), 302–317.
- Matosic, D., Ntoumanis, N., & Quested, E. (2016). Antecedents of need supportive and controlling interpersonal styles from a self-determination theory perspective: A review and implications for sport psychology research. In M. Raab, P. Wylleman, R. Seiler, A.-M. Elbe, & A. Hatzigeorgiadis (Eds.), Sport and exercise psychology research: From theory to practice (pp. 145–180). Oxford, UK: Academic Press.
- Norges Toppidrettsgymnas. (2018). Om NTG [about NTG]. Retrieved February 8, 2018, from http://ntg.no/artikkel/om-ntg
- Ntoumanis, N. (2012). A self-determination theory perspective on motivation in sport and physical education: Current trends and possible future research directions. In G. C. Roberts & D. C. Treasure (Eds.), *Advances in motivation in sport and exercise* (Vol. 3, pp. 91–128). Champaign, IL: Human Kinetics.



- Pelletier, L. G., Fortier, M. S., Vallerand, R. J., & Briere, N. M. (2001). Associations among perceived autonomy support, forms of self-regulation, and persistence: A prospective study. *Motivation and Emotion*, 25(4), 279–306.
- Pelletier, L. G., Séguin-Lévesque, C., & Legault, L. (2002). Pressure from above and pressure from below as determinants of teachers' motivation and teaching behaviors. *Journal of Educational Psychology*, 94(1), 186.
- Pink, S. (2013). Doing visual ethnography. Los Angeles, CA: Sage.
- Quested, E., Ntoumanis, N., Viladrich, C., Haug, E., Ommundsen, Y., Van Hoye, A., ... Duda, J. L. (2013). Intentions to drop-out of youth soccer: A test of the basic needs theory among European youth from five countries. *International Journal of Sport and Exercise Psychology*, 11(4), 395–407.
- Radtke, S., & Coalter, F. (2007). Sports schools: An international review. Stirling, UK: University of Stirling.
- Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding socio-cultural influences on student motivation. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited* (pp. 31–60). Scottsdale, AZ: Information Age.
- Richardson, L. (1990). Narrative and sociology. *Journal of Contemporary Ethnography*, 19 (1), 116–135.
- Rocchi, M. A., Pelletier, L., & Desmarais, P. (2017). The validity of the Interpersonal Behaviors Questionnaire (IBQ) in sport. *Measurement in Physical Education and Exercise Science*, 21(1), 15–25.
- Rocchi, M. A., Pelletier, L. G., & Couture, A. L. (2013). Determinants of coach motivation and autonomy supportive coaching behaviours. *Psychology of Sport & Exercise*, 14(6), 852–859.
- Ryan, R. M., Curren, R. R., & Deci, E. L. (2013). What humans need: Flourishing in Aristotelian philosophy and self-determination theory. In A. S. Waterman (Ed.), *The best within us: Positive psychology perspectives on eudaimonia* (pp. 57–75). Washington, DC: American Psychological Association.
- Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. New York, NY: Guilford Publications.
- Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65(3), 529–565.
- Sheldon, K. M. (2011). Integrating behavioral-motive and experiential-requirement perspectives on psychological needs: A two process model. *Psychological Review*, 118(4), 552–569.
- Skiforbundet. (2018). Utviklingstrappa i langrenn [The developmental pathway for cross country skiing]. Retrieved February 8, 2018, from https://www.skiforbundet.no/langrenn/trening/
- Skinner, E., & Edge, K. (2002). Self-determination, coping, and development. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 297–337). Rochester, NY: University of Rochester Press.
- Smith, A. L., Ntoumanis, N., & Duda, J. (2010). An investigation of coach behaviors, goal motives, and implementation intentions as predictors of well-being in sport. *Journal of Applied Sport Psychology*, 22(1), 17–33.
- Smith, R. E., & Smoll, F. L. (1996). The coach as a focus of research and intervention in youth sports. In R. E. Smith & F. L. Smoll (Eds.), *Children and youth in sport: A biopsychosocial perspective* (pp. 125–141). Madison, WIS: Brown & Benchmark.
- Snowboardforbundet. (2018). Informasjon [Information]. Retrieved February 8, 2018, from http://www.snowboardforbundet.no/info/



- Soenens, B., Vansteenkiste, M., & Sierens, E. (2009). How are parental psychological control and autonomy-support related?: A cluster-analytic approach. *Journal of Marriage and Family*, 71(1), 187–202.
- Soenens, B., Vansteenkiste, M., & Van Petegem, S. (2014). let us not throw out the baby with the bathwater: Applying the principle of universalism without uniformity to autonomy-supportive and controlling parenting. *Child Development Perspectives*, 9(1), 44–49.
- Sparkes, A. C., & Smith, B. (2013). Qualitative research methods in sport, exercise and health: From process to product. London, UK: Routledge.
- Standage, M., & Ryan, R. M. (2012). Self-determination theory and exercise motivation: Facilitating self-regulatory processes to support and maintain health and well-being. In G. C. Roberts & D. C. Treasure (Eds.), *Advances in motivation in sport and exercise* (pp. 233–270). Champaign, IL: Human Kinetics.
- Starkes, J. L., & Ericsson, K. A. (2003). Expert performance in sports: Advances in research on sport expertise. Champaign, IL: Human Kinetics Publishers.
- Taylor, I. M., & Ntoumanis, N. (2007). Teacher motivational strategies and student self-determination in physical education. *Journal of Educational Psychology*, 99(4), 747–760.
- Way, R., Repp, C., & Brennan, T. (2010). Sport schools in Canada: The future is here. Vancouver, BC, Canada: Canadian Sport Centre.
- Wylleman, P., & Lavallee, D. (2004). Developmental sport and exercise psychology: A lifespan perspective. In W. M. R. (Ed.), *A developmental perspective on transitions faced by athletes* (pp. 507–527). Morgantown, WV: Fitness Information Technology.