

# Antecedents of need fulfillment among elite athletes and coaches: A qualitative approach

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## Abstract

The main objective of study 1 and 2 was to provide, within the framework of basic psychological need theory (BPNT), a mini-theory in self-determination theory (SDT), more in-depth understanding of the needs which athletes and coaches have in relation to each other. In particular, we wanted to investigate antecedents of the three basic psychological needs of athletes and coaches who compete at the elite level in sport. The two studies were conducted with the use of semi-structured interviews. Six former Norwegian world-class athletes participated in study 1 and four coaches with extensive experience within elite sport participated in study 2. In study 1, being seen as a whole person and being recognized in the planning process and the execution of athletes' training emerged as antecedents of autonomy. Help to improve skills and feeling supported as an athlete emerged as important for need satisfaction of competence and relatedness. Potential antecedents of need thwarting were also illuminated. In study 2, feedback on the quality of the coaches' work emerged as an antecedents of need satisfaction of competence. The need to know their athletes' life situation and how they would think and feel in different competitive situations emerged as antecedents of the coaches' need satisfaction of relatedness as it provided them with a sense of security. The results did not reveal any antecedents of need fulfillment of autonomy among the coaches. It was, however, revealed that athletes have the potential to thwart coaches' needs. 241 words

**Key words:** Self-Determination Theory, Basic Psychological Needs, Elite Sport, Coaches, Athletes

## Introduction

Elite sport is a context wherein its participants are very much concerned with performance development in striving for success. There is a constant focus on good results, and thus it is an environment that can be very competitive and potentially stressful. Elite athletes and coaches also often spend more than 150 days

together in any one year (Pensgaard & Roberts, 2002), and it is important that this relationship is effective as the quality of the coach-athlete relationship is highly relevant for the development of performance, satisfaction (Jowett & Meek, 2000) and motivation (Mageau & Vallerand, 2003).

According to the theoretical framework of the self-determination theory (SDT) (Deci & Ryan, 1985, 2000), individuals have an innate motivation to take part in meaningful activities, develop and exercise skills, and search for a sense of belonging to other people and

social groups. Basic psychological need theory (BPNT; Ryan & Deci, 2002), one of the mini-theories within SDT, pays specific attention to the concept of innate psychological needs; the need for autonomy, the need for competence and the need for relatedness, and their direct influence on the development of integrity, psychological growth and health (Ryan & Deci, 2000b). The need for autonomy is satisfied when one feels that one is the origin of one's own actions, as one act in accordance with one's own interests and integrated values (Deci & Ryan, 1985). Behavior influenced by external sources can also be perceived as autonomous if it is experienced to coincide with one's initiative and values and consequently express part of oneself (Ryan & Deci, 2002). The need for competence is satisfied when one experiences mastery, and at the same time has the possibility to develop further within one's environment/social context. The need for competence makes people seek challenges that are optimal according to their capacities, which in turn contributes to ongoing effort to maintain and improve relevant skills through the activity. The need for relatedness is satisfied when one feels connected to others and that one cares for them and vice versa (Baumeister & Leary, 1995; Ryan & Deci, 2002). The feeling of belonging to other people and one's environment is important as it contributes to the experience of acceptance by one's fellows, companions and peers.

Research using the theoretical framework of SDT (Deci & Ryan, 2000) to study relationship functioning and need satisfaction within sport has until now focused primarily on how coaches influence need satisfaction of the basic psychological needs, motivation and well-being among athletes (Adie et al., 2008; Gillett et al., 2010). In other words, the focus has thus far not been directed at how athletes contribute to need satisfaction among coaches. With these contextual characteristics in mind and the fact that elite athletes perceive the quality of the coach-athlete relationship to play a pivotal role in their development (Jowett & Cockerill, 2003), it makes it interesting to gain more

in-depth knowledge about their experiences in relation to each other.

According to BPNT, need satisfaction of the basic psychological needs is directly linked to well-being, whereas hindrance of the needs will directly lead to thwarting of a healthy development of the self and its functioning (Ryan & Deci, 2002). New research argues, however, that it is not necessarily correct to assume that low need satisfaction indicates that there is high need thwarting (Bartholomew et al., 2011). The reason for this is that need thwarting involves an active opposition to need satisfaction, whereas low need satisfaction demands that needs are not sufficiently satisfied. Consequently, Bartholomew et al. (2011) argue that it is more accurate to measure the degree of need thwarting to predict instances of need thwarting rather than measure need satisfaction. By representing two different constructs, need thwarting and need satisfaction could also be present in the same context. When we investigate the perceived needs of athletes and coaches in relation to each other and how they found their counterpart influenced them during their career, it provides us with an opportunity to obtain further insight into how the mechanisms of both need satisfaction and need thwarting may operate within the context of elite sport.

There is now an increased recognition of the fact that other people do play a very important role when it comes to the effect on an individual's well-being through need satisfaction of the basic psychological needs (Patrick et al., 2007). According to La Guardia and Patrick (2008) a relationship partner will be autonomy-supportive when he or she tries to understand the other's perspective, interests and preferences. Provision of clear, reasonable expectations and structures allows the need for competence to be supported. Relatedness support is provided by involvement and interest in the other person, and by showing that the other is important. If the relationship partner, however, is excessively controlling, too challenging or dismissive, the needs will not be met and optimal functioning will

be impaired (Ryan & Deci, 2000a).

### Basic psychological needs - their functional meaning in a social context

An important aspect of basic psychological needs is that they are said to be universal, which means that they apply to all humans across gender, age and culture. How the needs are satisfied might vary, however, because it is not the environment itself that means something, but rather the functional meaning it has for the need satisfaction of an individual (Ryan & Deci, 2002). Thus, in an environment where a person experiences a sense of competence, relatedness and autonomy, his/her motivation regarding the given activity will be optimal. If one looks at this in the context of sport, both coaches and athletes must experience need fulfillment in order to experience optimal functioning. Considering that, at the elite level, both coaches and athletes spend a considerable amount of the year together (Pensgaard & Roberts, 2002), many probably spend more time with each other than each of them does with family and friends in the course of a year. This makes it likely that the two parties have the opportunity to influence each other's need satisfaction. Research has already revealed that different forms of coach behavior indeed predict athletes' need satisfaction (Reinboth & Duda, 2006; Reinboth et al., 2004), but as far as we know it has not previously been published any studies that focus on how the coaches perceive that the athletes' behavior may affect *their* need satisfaction. Thus, it is important to investigate the means through which the three needs are satisfied and recognized as the antecedents of need satisfaction, for both athletes and coaches. Further, this will also help us to gain insight into how athletes and coaches perceive their relationship partner to influence their basic need satisfaction within the elite sport context. In line with this argument, the questions we want to address are: what are important considerations

for athletes in the elite sport context in terms of need satisfaction? how can coaches in this context contribute to their athletes' need fulfillment? what are important considerations for coaches in the elite sport context in terms of need satisfaction? how can athletes in this context contribute to their coaches' need fulfillment?

Because even minor differences in the environment can affect the performance and perception of ability for athletes at the world-class level (Pensgaard & Roberts, 2002) a qualitative approach was deemed appropriate in order to try and capture these small nuances. According to Vergeer (2000) a qualitative approach can provide a sharp focus on data and thus on our understanding when we investigate issues related to the functioning of relationships in sport. We conducted two separate studies in order to provide insight into these questions.

## Study 1

In the first study, we wanted to expand on Reinboth and Duda's (2006) study where the findings revealed that athletes' perception of a coach-created task involving climate positively predicted their need satisfaction of autonomy, competence and relatedness and that need satisfaction of autonomy and coach relatedness were positive significant predictors of an increase in subjective vitality. Thus, the aim of the first study was to provide deeper insight into highly elite athletes' experiences of need satisfaction within their collaboration with their coach. It is reasonable to assume that elite athletes' perceptions may differ from those of lower-level athletes owing to the fact that they spend a considerable amount of time "on the road" with their team and coach. A more comprehensive understanding of this rather atypical work environment and how it influence athletes is important if we want to develop this relationship further.

## Method

### Participants

The participants were selected on the basis of their accomplishments in elite sport over time and retirement from their athletic career at the time of interview. The criterion for inclusion of athletes was that they should have a minimum of three medals from international championships.<sup>1)</sup>

The conditions under which elite athletes develop change constantly and it was therefore decided to include athletes who had ended their careers between 2000 and 2010. The criterion that the athletes should have retired from their career was set because it was believed that they would be able to provide an overall picture and be better able to see connections and consequences of different incidents in their life and career than athletes at the peak or in the middle of their career.

Six athletes participated in the study, four female athletes and two male athletes. Five of the athletes participated in individual sports, both summer and winter sports, and one of the female athletes participated in a team sport. These athletes had won seventeen medals in the Olympic Games, eight of which were gold medals. They also attained forty-eight medals from the World Championship, twenty-three of which were gold medals and eight medals from the European Championship, four of which were gold medals. In the interest of anonymity the descriptions of the athletes are brief.

### Procedure

An invitation to take part in the study, an information letter and an informed consent form were sent by post or by e-mail to the participants. It was emphasized that participation was voluntary and they could withdraw at any time and that the study had received ethical

approval from the Norwegian Social Science Data Services (NSD). Eight athletes were invited to participate, but two of them did not respond.

### Interview guide

Because the purpose of this study was to gain a more in-depth understanding of need satisfaction and the functional meaning of needs within the framework of BPNT, this framework was also used as part of the basis for preparation of the interview guide.<sup>2)</sup>

It was emphasized, however, that the specific questions were open-ended to enable the participants to talk about their experiences and the knowledge gained throughout their athletic career. Questions included: "In what way did your coach take into consideration that, even though you were an elite athlete, you might have a need to participate in other arenas in life outside sport?" "How involved were you in the planning process and evaluation of your training?" "What do you think is the most important part of a coach's job?" "How did you respond to negative feedback versus positive feedback from your coach?" "What, in your opinion, is the coach's role in building athletes' confidence?" "What role did having a sense of security have for you as an elite athlete?" "Have you ever experienced any negative incidents or episodes during your athletic career?" and "Is there anything you wish in retrospect that people surrounding you when you were an elite athlete had not done?" The conducted interviews were part of a larger study and thus the overall interview guide covered these main topics: career development, significant others, the meaning of the coach-athlete relationship, preparation and participation in major championships, stress and coping strategies and motivational climate. In study 1 the primary focus is on needs which athletes had in relation to their coaches and how they perceived their coaches influenced them. The interview guide was semi-structured with the main

1) European Championships, World Cups and/ or Olympic Games

2) The interview guide is available by request from the first author

themes described above forming the basis for the interview conversation. The direction of the conversation was influenced by the participants, however. Follow-up questions were also asked to obtain more detailed information.

### Interview procedure

The time and place for the interviews were arranged with each participant. Four of the interviews were conducted at the Olympic Training Center in Oslo. One of the interviews was conducted at the participant's current workplace and one interview was conducted at the participant's home. Each participant was interviewed once. The interviews lasted from one hour and fifty minutes to two hours and forty-five minutes. Reasons for the variation in the length of the interviews may be that some of the respondents had experienced more during their career and/or had reflected more on their experiences or were more willing to share their experiences with the interviewer (first author). All of the interviews were conducted and transcribed verbatim by the first author. The interview texts were then sent back to the participants for review. They were all asked to confirm that the written interview text was in agreement with what they had intended to communicate. They were also invited to make further specifications or rephrase the wording if they felt that what they had wanted to communicate was not reflected in the written text.

### Data analysis

The analysis of the interviews was carried out within the hermeneutical tradition. Hermeneutics is the theory of interpretation and deals with how we read and understand text (Thiselton, 2009). Two central concepts within this tradition are preliminary understanding and the hermeneutical circle (Palmer, 1969). The preliminary understanding or starting-point of this study was an interest in the importance of need satisfaction within the coach-athlete relationships in elite sport

that emerged through previous work also grounded in self-determination theory (Frøyen & Pensgaard, 2008). A significant aspect of the hermeneutical circle is to be aware of and acknowledge that one always looks at events or situations in the light of previous experiences (Smith, 2007). When the first author started conducting the interviews, the attention previously directed toward the recognition and comprehension of preliminary understandings was moved toward the participants. The task was now to facilitate the participants' opportunity to talk about their experiences in elite sport (Smith, 2007).

The further process of analysis began when we received the participants' responses to the written interview texts. An important first step was to identify needs in relation to their coaches, i.e. the higher-order themes. These higher-order themes represented the antecedents of need satisfaction of basic psychological needs. On the basis of the content, the various antecedents were further encoded with reference to the basic need to which they were assumed to contribute.

The Maxqda 10 was used as an analytic tool in the coding process. As the hermeneutical circle operates on several different levels, it was emphasized that the interpretation of each statement gave meaning within the whole interview text, and that the interview texts gave meaning to each statement, thereby relating the parts to the whole and the whole to the parts (Smith, 2007). It was also emphasized that the understanding of each of the higher-order themes gave meaning to the existing theory, and that the existing theory gave meaning to each higher-order theme, representing a whole and parts at a different level. Because attainment of understanding is often a process, the interpretations were discussed by the authors over time. When we experienced differences in our understanding or interpretations the interviews were reread and discussed to clarify the conditions that were involved in our process of understanding (Madison, 1991). As the hermeneutical approach advocates that truth in interpretations is generated through conversation and dialogue (Gallagher, 1992; Smith, 1997) this process was perceived as an

important criterion in terms of establishing confidence in our data interpretation process (Sparkes & Smith, 2009).

## Results

The participants are described by a number (e.g., athlete 1), and F for female or M for male (e.g., athlete1 [F]).

The need to be in control of their lives and their training

Although the athletes themselves had chosen sport participation as their primary focus, it was still important for them that their coaches took into account that they also had a need to be involved in other areas of life outside sport; athlete 6 [F]:

*Obviously I went to practice because I thought it was fun, but if I was tired of it one day I could just give him [coach] a call to say that I wanted to stay at home or go to the movies with some friends or something.*

Within the training context, however, the picture differed slightly. Athlete 5[F] wanted her coach to take complete control of the development of training plans;

*For me it was important to have a coach that just told me what I had to do. I trusted that my coach had faith in his own expertise and that made me confident and enabled me to fully focus on what I had to during practice, because it was what I did during practice that was important.* In contrast to athlete 5[F], the other athletes needed their coaches to involve them in the planning process of their training and also in its evaluation. Athlete 1[F] was however the only athlete who felt that she was not adequately involved. She found her coaches to be very single-minded in terms of what one had to do to be successful, and they were not interested in her views and experiences with regard to practice;

*There were not many who asked how I found the training. You feel and sense quite a lot during training,*

*you know. You know your own body after doing sport for more than twenty years. You get to be very aware of your body and how you react to different kinds of training.*

The need to gain confidence and feel competent

The training situation was where the athletes had the opportunity to practice skills they needed to improve. The coach's task was to challenge the athletes and help them break through their performance barriers and thus contribute to their athletes' experience of self-confidence at a higher level of performance.

*Athlete 6[F]: As a player you might have barriers when it comes to playing against certain players. But if you are going to get better you have to work at it step by step. I think being able to talk about it, making situations seem a bit less dangerous, then you feel a bit stronger, you get a little more faith in your own skills, but you might need to hear it from the coach that you are good at this.*

Athlete 1[F] and 2[F] highlighted the importance of a positive perspective and a positive approach in training for optimal development. For athlete 1[F] one of the most important things was to have a positive approach to what she did in training. The coach's feedback had to be focused on what she should do, not on what she should not do. She felt that she really looked for the good messages that made it possible for her body to perform the required movement. Thus, she was very much aware of how she and the coach communicated and the feedback she received had to be very clear. For athlete 2[F], help with changing her focus from what she was doing wrong to what she did well was of great value; *Of course, you noted when you did something wrong. But what we were to recognize and repeat and reinforce were the things we did well. That was really a mind-opening experience for me.*

The need to feel supported

Having confidence in their own skills and their ability to further develop provided all the athletes with

a sense of security that they perceived to be essential for them. An important factor in creating this feeling of security was that the coaches showed that they had faith in them and believed in them as athletes and their ability to perform at the highest level in sport.

Athlete 6[F]: *If you do not have a platform of security it is difficult to break performance barriers again and again. The feeling of security needs to be there for you to have the courage to challenge yourself on other things.*

Athlete 2[F] also said that the need to receive support from coaches so she felt secure and relaxed in championships grew as she continually performed at the highest level.

*When you have achieved as much as I have it was expected that I should perform every time. Then you need some support from people whom you trust and whom you can actually tell if you are feeling a bit insecure or nervous. In many ways I needed more support in the last years of my career than I did in my younger years when I was more courageous in a sense. The increased pressure made me need the coaches in a different way to find the necessary sense of security.*

Athlete 4[M] also drew attention to some of the things athlete 2[F] mentioned by emphasizing that although a sense of security is important athletes still need to be challenged to develop. Nevertheless, he highlighted that in his last years as an elite athlete it was the coaches' and support staff's faith in him that was the most important, as he felt that he had a high level of expertise.

Two of the athletes found their sense of security in relation to their coaches vanished, as they felt thwarted and rejected by their coaches. Both of them found this to be their most negative experience throughout their career. Athlete 5[F] described her experience more precisely: *I thought it was really tough, tragic really. It was the worst thing I have ever experienced because there were so many things that were not good between us and I simply did not feel welcome.*

Athlete 1[F] had the opportunity to terminate the

relationship with her coach and so she did. Athlete 5[F] on the other hand had to maintain her relationship as she was at the mercy of that coach if she wanted to be part of the national team. In the end, however, her feeling of insecurity became such a burden that she decided to end her career despite the fact that she was still performing at world-class level.

## Discussion

The overall findings in the athlete section indicated that coaches can play a pivotal role when it comes to providing antecedents of athletes' need satisfaction and/or need thwarting, which is consonant with the findings of Bartholomew et al. (2011), Adie et al. (2008), Amorose and Anderson-Butcher (2007) and Gillet et al. (2010). The findings also revealed interesting insights into the significance of all the needs being satisfied within one context and also suggested the importance of balance in need satisfaction between contexts (Milyavskaya et al., 2009).

Sufficient and insufficient fulfillment of the need for autonomy

Given the athletes' response it is evident that they had a general autonomous orientation toward their sport participation. At the same time they also had coaches who understood that even though they were highly committed elite athletes they also had a need to be involved in arenas outside sport. It is therefore fair to assume that the athletes would still maintain their feeling of autonomy if they sometimes had to limit their participation in these other arenas. This kind of understanding/autonomy support from coaches also is also most likely to contribute to the balance of need satisfaction across different life domains. The balance of need satisfaction between different contexts has proved to be significant for adjustment (Milyavskaya et al., 2009) and to prevent athlete burnout (Perreault et al., 2007). The evidence for the importance of

balance of needs is tentative, however (Ntoumanis, 2012). Thus, more research is warranted to explore this issue. The general autonomous orientation among the athletes might also have been an important prerequisite for openness, honesty and mutual understanding in the coach-athlete relationship and thus be an important contributor to the athletes' need satisfaction of relatedness as well (Hodgins et al., 1996). Still, it is important to recognize that although the athletes generally had an autonomous orientation and coaches who saw them as persons and not just as athletes, this does not necessarily mean that their need satisfaction of autonomy in relation to their coach cannot fluctuate as a consequence of the dynamic nature of coach-athlete relationships. This was for instance the case with athlete 1[F] who experienced feeling controlled in her everyday training when her coach did not show interest in her expertise and concrete preferences. When her perception of what she should do to develop her performance did not coincide with her coach's perception she was deprived of control over her own actions. Her description of the experience also indicated an anticipation of being able to influence her coach. In other words, there was an expectation of mutual influence which could create what she believed to be optimal interplay for performance enhancement. When this anticipation was not realized it reduced her need satisfaction of autonomy. Similar results emerged in a diary study among young female gymnasts where need satisfaction during practice as a result of perceived coach support predicts changes in well-being before and after practice (Gagné et al., 2003).

Athlete 5 [F]'s need to give her coach control over the development of her training plans also points to an important aspect of need fulfillment of autonomy. It is still possible to feel autonomous when one gives others control to influence one's behavior if this is perceived to be volitional (Ryan & Deci, 2002).

#### Fulfillment of the need for competence

Training sessions where the coaches emphasized

development and maintaining/building confidence were considered to be significant antecedents for need satisfaction of competence. Behavior change in terms of improved athletic skills is crucial for an elite athlete if he or she is to perform at the highest level over time. An important aspect in relation to this and the fulfillment of competence is the provision of structure (Markland & Vansteenkiste, 2007). Structure helps to create realistic expectations about the required behavior changes, and also contributes to athletes' belief that they can master the developmental requirements they are faced with. As development of athletic skills and maintenance of confidence are factors of the utmost importance in elite sport, it is reasonable to assume that the provision of structure can fulfill the need for competence.

#### Need satisfaction and thwarting of the need for relatedness

From the results it appears that the athletes' need for their coaches to have faith in them and their subsequent sense of security are relevant antecedents of need satisfaction of relatedness. It also appears that the coaches' ability to show faith in them also provided the athletes with a foundation from which to develop as it enabled them to have the necessary faith in their own skills, which is a fundamental aspect of performing at this level. Thus, it appears that the athletes' need satisfaction of relatedness through coach faith and a sense of security is an important premise for their further need fulfillment of competence. The fact that two of the athletes who experienced need thwarting of relatedness characterized it as their worst experience of their career also attests to the significance of this need being satisfied. Still, it is interesting to note that despite need thwarting of relatedness over time for athlete 5, it probably did not affect her performance as she continued to perform at the highest level. A possible explanation for this might be that thwarting of this need has the most negative effect on the interpersonal relationship between coach and athlete and



the athlete's general welfare. This again stresses the importance of taking care of the whole person and not just judging success in the light of performance. According to Ryan and Deci (2002), under conditions where need satisfaction is perceived as unavailable people will try to compensate by developing need substitutes. These substitutes can provide some kind of fulfillment, but will never contribute to true satisfaction of basic needs. As many elite athletes do not have the opportunity to choose the head coach of their national team, it would be interesting to conduct more research on how elite athletes handle being in a coach-athlete relationship where the basic needs are thwarted.

Athlete 5[F]'s emphasis that the coach did not do anything to improve their relationship might also be an interesting aspect in the light of the mechanisms of need support within coach-athlete relationships. Based on the difference in authority and their different roles there is probably a perception among athletes that it is the coach who is responsible for providing support to them and initiating the communication process if there is something wrong with their relationship. It is important that the coaches become aware of this expectation and, to some extent, obligation.

To summarize, study 1 provided us with insight into the perceived needs of elite athletes in relation to their coaches. It also provided information about how specific coaching behavior can influence them either negatively or positively. This kind of information is useful because it gives both coaches and sport psychologists a clearer picture of how coaches can specifically contribute to athletes' need satisfaction, and what kind of coaching behavior might lead to low need satisfaction or need thwarting. In other words, our findings give us more thorough understanding of the antecedents of need satisfaction among elite athletes.

## Study 2

In the light of the findings that emerged from study

1 it was sensible to expand the next study to include elite-level coaches. It has been argued by some researchers that the coach-athlete relationship is not reciprocal. Indeed, Deci, La Guardia, Moller, Scheiner, and Ryan (2006) argue that there is a lack of mutuality in relationships which involve an authority difference between two parties, because the subordinate party will not be expected to provide support to the superior one. This kind of authority difference is probably inherent in coach-athlete relationships, particularly in national teams where the head coach has the overall responsibility for the athletes' development. Even though the expectations of need support provision might be higher for the coaches, it might not necessarily mean that need support only functions one-way from coach to athlete. To our knowledge, there has not been any previous research on the degree of mutuality in need support within coach-athlete relationships (or any other relationships with an authority difference, for that matter). As a consequence, there has not been no research on the potential mutuality of need support between athletes and coaches in elite sport. Thus, the aim of the second study was to gain further insight into how elite coaches perceive their athletes to influence them and what they recognize as supportive athlete behavior.

## Method

### Participants

The participants in study 2 were also selected on the basis of their accomplishments in elite sport. Thus, the coaches all had to have extensive coaching experience working with athletes at this level. All the coaches who participated were male. They had all been head coach on a national team and trained athletes to win several gold medals in the Olympic Games and World Championships. The coaches had between 22 and 30 years of coaching experience with a mean of 20 years.

One of the coaches only coached females at the highest level; another coached only males, and two of them had worked with both males and females. At the time of the interview all the coaches had retired as elite coaches, but were still involved in elite sport in different roles.

### Procedure

The invitation and information procedure was the same in study 2 as in study 1. Five coaches were invited to participate and all of them agreed to take part in the study. One of the coaches decided to withdraw from the study later, however. Thus, his interview was not included in the results.

### Interview guide

Because study 2 was also part of a larger study, the interview guide covered the same main topics as in study 1 and formed the basis of the interview conversation. Study 2 is primarily focused on the needs the coaches had in relation to their athletes and how they perceived the athletes to influence them. Relevant questions in this regard included: "What do you think characterizes a good coach? How do you perceive yourself as a coach in terms of these characteristics?" "Do athletes have a responsibility to contribute to their coach being successful in his/her job?" "How did your athletes' contribute to building your confidence as a coach?" "What did you consider to be the most important characteristics in your relationship with your athletes?" "What does it mean to know an athlete well?" "What do you consider to be the most challenging part of a coach's job?" and "How involved were your athletes' in the planning process and evaluation of their training?"

### Interview procedure and data analysis

The time and place for the interviews were arranged with each participant. Three of the interviews were

conducted at the Olympic Training Center in Oslo and one interview was conducted at the participant's current workplace. Each participant was interviewed once. The interviews lasted from two hours to two and a half hours. After the interviews were conducted the further procedures and data analysis were carried out in the same manner as in study 1 with the only difference that in this study the coaches' needs in relation to their athletes represented the higher-order themes.

## Results

Even though the interview themes were designed and developed based on the BPNT, the questions were rather open so that the participants could elaborate on what they perceived as been important. Thus, there were no statements that alluded to the fact that their relationship with the athletes influenced their need for autonomy, directly. However, when it came to the fulfillment of need to feel competent, a different picture emerged.

### The need to feel competent

All of the coaches emphasized the importance of getting some sort of confirmation that the work they had put in contributed to the athletes' development; coach 3: *I feel like a good coach when someone whom I have worked with appreciates what I have done and says that I have done a good job.*

Coach 1 highlighted that he needed to see progress among his athletes, and that they were engaged and enthusiastic in regard to their training and their development to feel competent, as he felt that he had enabled this to take place. Coach 1 and coach 4 emphasized their need to see their athletes perform and achieve results, so when they saw that what they had focused on during training led to world-class performances they felt like good coaches.

For coach 3 it was also important to achieve results, but the most meaningful experience for him was the

dialogue with the athletes and their confidence in his expertise as a coach. In fact, the reason why he took the job as national coach in the first place was because the athletes believed that his competence would contribute to their development.

Coach 1 and 3 also elaborated about how their sense of competence was affected by the response from their athletes. Coach 1 expressed, on the one hand, that it was disconcerting to hear that he was not always able to provide feedback in a proper manner to his athletes, as he believed this was important for optimal interaction between them. On the other hand, he was also motivated by this kind of feedback from his athlete: *If I had done everything exactly right and they had then given me very little back in terms of feedback it would have had a negative influence on my motivation. Coach 3 also reflected on how the athletes responded to his feedback. His perception of the quality of interactions was also to a large extent based on the response he got from his athletes:*

*If I left a session feeling that I had not contributed anything positive at all I had a very bad feeling. Then I was dissatisfied. I did not like to leave a conversation at training or a meeting with an athlete without having the feeling that we had made a good plan that we both agreed upon. And the feeling that I had was really based on the athlete's response, I would say.*

Illustrating how the coaches need to feel competent in relation to their athletes, coach 2 said that he was told by one of his athletes that he did not live up to his expectations. The athlete was worried that what they were doing to prepare for the Olympics was not good enough and he said this directly to the coach. The coach, on the other hand, felt that he was working round the clock to help the athlete with his preparations. As his coach, he had great respect for the athlete for giving him the feedback, but it also made him sad because he got the feeling that he was not competent enough and that he was no use.

The need to know their athletes

For the coaches it was important that their athletes provided them with information about everything that could affect their training, including aspects of their life outside sport. The coaches also perceived it as necessary to know their athletes well enough to understand how they would react in stressful situations and their way of thinking when they succeeded and when their performance was not up to standard.

Coach 3: *You need to know their overall life situation so that you can see their training in context with everything else that they are doing. You do not necessarily have to know every detail of their life, but you need to know their priorities, their overall life situation in relation to studies, work, if they have problems at home and stuff like that which can affect their training.*

Coach 4: *You need to understand how they think when things go well and how they are thinking when they are under pressure. It means that you know how they are doing and that they are functioning in the arenas where they want to function.*

To sum up, in relation to their athletes the coaches were particularly concerned about getting to know their athletes well enough to be able to provide them with optimal coaching in every situation and to receive confirmation from their athletes that the work they put in was valuable.

## Discussion

With regard to the coaches in this study, the findings overall indicate that coaches were influenced by the athletes they worked with. More specifically, the results revealed that at the elite level athletes represent an important contextual factor that helps to fulfill the needs coaches have in their job, and thus provide important antecedents of coaches need satisfaction of basic psychological needs. In other words, it appears that there is a form or level of reciprocity in

the coach-athlete relationship, as there are studies that support the fact that athletes perception of their coach being autonomy-supportive significantly predicts their need satisfaction of autonomy, competence and relatedness (Adie et al., 2008; Amorose et al., 2007;).

No relevant antecedents of need satisfaction of autonomy

An interesting aspect that emerged from the results among the coaches was that none of the needs they had in relation to their athletes represented relevant antecedents of need satisfaction of autonomy. This might not be surprising considering that autonomy support is, by definition, provided by an authority figure, which normally is not the case for athletes within the coach-athlete relationship. Yet this does not mean that athletes do not have the opportunity to influence their coach's feeling of autonomy. To what extent this is possible may vary depending, for instance, on cultural differences like the level of competition or the nature of the coach-athlete relationship (hierarchical or egalitarian). Future research should therefore investigate the important antecedents for coaches' need satisfaction of autonomy as satisfaction of all three needs is important for optimal functioning and well-being (Ryan & Deci, 2002). It should also examine what coaches' perceive to be antecedents of need thwarting of autonomy as this might be different from those which contribute to need satisfaction (Bartholomew et al., 2011).

Need satisfaction and thwarting of the need for competence

The statements made by the coaches indicate that providing need support might also initiate the process of own need satisfaction as the athletic development of their athletes was an important source of information when the coaches judged their level of competence. To enable their athletes to experience optimal athletic development, their coaches probably provided them with competence support. Thus, when the coaches

provide competence support to their athletes, they contribute to their athletes' development, which again represents an antecedent for the coaches' need satisfaction of competence. These results also contribute to the argument that there is mutuality in need support among athletes and coaches at the elite level. As the coaches' need for competence was satisfied through both direct feedback from the athletes and through their perception of need fulfillment of competence among their athletes it shows that both providing and receiving need support contributed to need satisfaction among the coaches. Because the authority difference in the relationship is likely to provide different role expectations with regard to need support in the relationship, a dyadic study to examine the mechanisms of need support within coach-athlete relationships would appear to be relevant for future research.

Although it is often emphasized that it is important that athletes should develop both as a person as well as an athlete, one might still argue that the primary objective of the participants in this context is to achieve optimal performance and obtain good results. Consequently, it could be argued that this primary objective forms the basis for the establishment of the coach-athlete relationship. For the coach-athlete relationship to be maintained, both parties must find their own and the other's contributions optimal in their quest for performance development. Performance development, then, functions as confirmation that their partnership may lead to the athlete achieving results. The success of the coach is also in many ways seen as based on the success of his or her athletes (Olusoga et al., 2009), which is also confirmed by the coaches in this study. Thus, it explains how athletes' achievements contribute to the coaches' need satisfaction of competence. At the same time, the achievement of results at this level is very difficult and marked by a lot of uncertainty. The coaches' emphasis on the importance of having a productive dialogue with the athletes and coach 3's rating of the dialogue with his athletes as more meaningful than the achievement of results might

indicate that athletes' responses have a strong impact on the coaches' need fulfillment. When the athletes tell the coaches that they are doing a good job, they are telling them that they live up to their expectations, which might provide the coaches with a stronger sense of security in relation to their athletes. Constructive feedback might also be a more tangible sign of satisfaction with their collaboration than achievement of results which might be influenced by several other factors as well.

In the light of the results it appears that coach 1 did not experience reduced need satisfaction of competence when his athletes told him that he did not live up to their expectations. Part of the reason he did this could be because, after receiving this feedback, he chose to discuss with his athletes what he could do to improve. Consequently, the area in which he had potential for improvement was clarified and made more specific, which again might have contributed to a sense of control and perception of this as an optimal challenge.

In contrast to coach 1's experience, coach 2 experienced thwarting of his need for competence as a consequence of feedback from one of his athletes. Part of the reason why he perceived it in this manner might be that he never quite knew what he had to do to improve as he already felt that he was doing everything he could and that there was no room for further improvement. The athlete's expectations might then not have been perceived as achievable and made him feel inadequate. According to Bartholomew et al. (2011), feeling inadequate is a common feeling when one's needs are thwarted.

#### Fulfillment of the coaches' need for relatedness

To gain a sense of security in relation to their athletes and to enhance their opportunity to provide optimal coaching the coaches needed access to their athletes' experiences, thoughts and feelings. If athletes develop enough trust to give their coaches this personal information and also understand that knowing

these things allows coaches to do the best job possible, this can be an important contribution to coaches' need satisfaction of relatedness.

Although it was not explained in detail what exactly the coaches did to establish this sense of security among the athletes, their statements nevertheless indicates that they were interested in their athletes' experiences, perspectives and interests. This kind of behavior is consistent with the definition of autonomy-supportive behavior, which supports the satisfaction of all three basic psychological needs (Adie et al., 2008; Mageau & Vallerand, 2000;). According to Hodgins et al. (1996) autonomous people disclose more and are more honest, but in a socially desirable manner adjusted to the given type of relationship. In other words, they do it with people they perceive as close when they perceive them to be honest and self-disclosing. It therefore appears that providing autonomy support to their athletes and thus contributing to their need satisfaction might also contribute to the athletes disclosing relevant personal information to their coaches, which further contributes to their coaches' need satisfaction of relatedness. In other words, giving autonomy support to their athletes might be what initiated the process of need satisfaction for coaches. A possible explanation may be the difference of authority between coach and athlete and the expectation and understanding that it is the coaches who are responsible for supporting their athletes in their development and not the other way round. The fact that there is an authority difference between them does not mean, however, that a reciprocal process does not exist. Future studies should try and tap into how much a coach should disclose in order for the athlete to feel the same type of relatedness or whether, in fact, we may talk about different levels of need for relatedness in this respect.

To summarize, the findings in study 2 showed that elite coaches are indeed influenced by their athletes and that they have perceived needs in relation to them that, if satisfied, can represent important antecedents of

need satisfaction of competence and relatedness. With regard to need satisfaction of autonomy, the coaches did not have any perceived needs in relation to their athletes that were considered to be potential antecedents of this need. The findings of study 2 also revealed that athletes can contribute to need thwarting among coaches.

## General Discussion

If we assume that the relationship between elite athletes and coaches is reciprocal, an interesting next step is then to compare the results in study 1 and study 2.

According to Jowett (2003) communication in terms of dialogue, talk and self-disclosure is what builds a relationship. Considering this in relation to the results of study 1 and 2, it is likely that athletes and coaches will support each other's need satisfaction through various forms of communication. For instance, the athletes' need to be volitional with regard to decisions concerning their life and training and the coaches' need to know their athletes and their thoughts and feelings to be able to provide optimal coaching might be viewed as two sides of the same coin, as an open dialogue and self-disclosure about these matters can be assumed to contribute to both parties' need satisfaction.

Several studies of sport have already confirmed that coaches contribute to athletes' need satisfaction through autonomy-supportive coaching behavior (Pope & Wilson, 2012; Sheldon & Watson, 2011). Deci et al. (2006), however, found that in close friendships (reciprocal relationships) both giving and receiving autonomy support contributes to need satisfaction and perception of relationship quality. Thus, an important area for dyadic studies on the coach-athlete relationship within SDT would be examining how the process of need satisfaction takes place within this relationship and its influence on relationship quality.

In study 1 it was revealed that two of the athletes (athlete 1[F] and athlete 5[F]) had different preferences

when it came to their level of involvement in parts of their training. Still, both preferences are considered to be antecedents of need satisfaction of autonomy. One of the reasons we chose to employ in-depth interviews as our methodological approach was to bring out the small nuances that can make a big difference for the individual athlete. For elite coaches, this kind of detailed information is of the utmost importance as it determines the quality of athletes' training and development (Pensgaard & Roberts, 2002). It is also fair to assume that coaches who act on this kind of detailed information will contribute positively to athletes' perception of competence and their level of confidence and thus contribute to their need satisfaction of competence. As the coaches emphasized their dialogue with the athletes and their response to training as an important source of information when judging their competence as coaches this scenario would probably also contribute to the coaches' need fulfillment of competence. Still, more research with the use of dyadic coach-athlete relationships is warranted to explore the process of need support and need satisfaction for both athletes and coaches.

When we compare the results of study 1 and 2 there is one final aspect that is worth emphasizing and that is the possible effects of athletes' perception of need thwarting on coaches' need fulfillment. In study 1, two of the athletes felt rejected and actively opposed by their coaches. Such an experience would probably lead to suboptimal dialogue with the coach. A likely ripple effect of this is that several of the other needs of both the athlete and the coach will suffer. Thus, it is fair to assume that if athletes perceive their needs to be thwarted it will also lead to their coach experiencing low need satisfaction or need thwarting depending on their perception of their needs not being sufficiently met or actively rejected by their athletes (Bartholomew et al., 2011). More research is needed to investigate the process of low need satisfaction and/or need thwarting within coach-athlete relationships and how this affects both athletes and coaches.

## Conclusion

The findings of study 1 and 2 have given us more insight into the antecedents of need satisfaction and need thwarting of both elite athletes and coaches. These findings have thus provided us with more in-depth understanding of the mutuality of need support within the coach-athlete relationship at the elite level.

Possible limitations of these two studies are to the extent to which we have been able to interpret the informants' statements and uncover meaning that goes beyond the spoken word. There is also a possibility that our own a priori knowledge has not been obvious to us, at least not to a level where we could be fully aware of how it has colored our interpretations. Both authors have spent considerable time with elite-level athletes (and coaches) and one of us has been working with Olympic-level athletes for more than two decades. Thus, some of this knowledge is clearly tacit knowledge and can influence the interpretation process in ways of which we are unaware.

One last limitation is the fact that we used SDT as the framework to discuss our findings. Although this is a dominant theoretical framework within sport psychology research at present, there may be other equally suitable frameworks that could help us explain or highlight the findings revealed by this study. The results showed, however, that coaches are indeed influenced by their athletes and that they have specific needs in relation to them. The recognition of the coach-athlete relationship as a reciprocal relationship should therefore be taken into consideration in future research on the coach-athlete relationship within the framework of SDT.

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