To my wonderful and caring mom, Eli Jordheim. Your courage and willpower inspire me. You have always been there for us, for which I am forever grateful.

Preface

The purpose of this thesis was to write about something I think is very interesting, informative and that could be useful for further research in sport psychology.

I have been fortunate to get to combine two of my passions, namely sport and psychology. This is largely thanks to Frode Moen at Olympiatoppen who showed courtesy and interest when I knocked on the door in Granåsen, Trondheim. Frode conducted the survey among elite junior athletes from central Norway in autumn 2012, and gave me the opportunity to write about the data.

Thanks to my supervisor at the department of Psychology at NTNU, Leif Edward Ottesen Kennair, for his quick replies, encouraging feedback and constructive criticism. Also thanks to my father, Reidar Tyssen, for good help with statistics, mainly, but also useful comments and proofreading. Lastly I would like to thank my girlfriend, Ingvild, for her understanding and support throughout this semester.

Abstract

The purpose of this study was to examine motivation, positive emotions and challenge in groups of elite junior athletes. Results are discussed in terms of self-determination theory and the functional well-being approach. Men and female elite junior athletes (N=211) aged 15-19 years completed a series of online questionnaires. Results revealed that a) older athletes reported higher levels of extrinsic motivation than younger athletes, b) younger athletes reported higher levels of both eudaimonic and hedonic well-being, c) athletes in private school reported higher levels of well-being than athletes in public schools, d) challenge was more strongly associated with eudaimonic well-being, than hedonic well-being, e) in multiple regression models, younger athletes and challenging training episodes were adjusted predictors of eudaimonic feeling states, and challenging training episodes were predictors of hedonic feeling states, also when controlled for other variables. This is the first study that examines hedonia and eudaimonia in elite junior athletes in different age groups and in private/public schools, and motivational differences among elite junior athletes in private and public schools.

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1. Introduction

1.1 Introduction

There are undoubtedly many physical requirements for athletes; anaerobic and aerobic endurance, strength, technique and speed to name the most important. These properties are easy to measure, and they have therefore long been a major part of sports science literature. Although growing in popularity the last decades, less is known about athletes' psychological characteristics. To perform at the highest level it is not enough to meet the physical demands, if psychological characteristics are not met. Indeed factors such as self-regulation, confidence, concentration and focus, motivation (Gould, Dieffenbach, & Moffett, 2002; Williams & Krane, 2001) and other psychological abilities are crucial for athletes to best utilize their physical abilities. An athlete's performance is thus a combination of physical and psychological characteristics, where properties mutually influence each other as well as being interdependent.

In this study I will first and foremost emphasize two psychological characteristics, namely motivation and self-reported positive emotions in numerous training episodes. Secondly, I will examine athletes' perceived challenge in these episodes. Through statistical analysis of cross-sectional data I will explain differences and relationships between types of motivation, positive emotions and challenge in groups of elite junior athletes. Elite junior athletes are those who have superior athletic talent, undergo specialised training, receive expert coaching and are exposed to early competition (Armstrong & Mc Manus, 2010). In the following part I will explain the theoretical foundation and fields of research that serve as the basis for my thesis, particularly sport psychology and positive psychology.

1.2 Theoretical framework

1.2.1 Sport psychology

Sport psychology is the scientific study of people and their behaviour in sports and the practical application of that knowledge (Gill & Williams, 2008). The key objective is to apply psychological knowledge to improve athlete performance, e.g. through psychological counselling and training or by analysing and alleviate problems. Sport psychology is an

interdisciplinary field with many different research areas, such as coaching, motivation, personality, group dynamics, competition preparation, well-being, burnout etc. (Weinberg & Gould, 2014). It is important for practitioners to know about these factors because they can lead to important changes in behaviour among athletes or coaches (Weinberg & Gould, 2014).

1.2.2 Motivation

Motivation refers to the why of behaviour and it highlights the reasons for doing an activity (McClelland, 1985). Self-determination theory (SDT) is an extensive, social cognitive theory of motivation (Deci & Ryan, 1985). SDT is useful in studying individual differences for sport participation (Vallerand & Fortier, 1998) because it emphasizes the satisfaction of sport relevant needs to achieve goals while it simultaneously considers the social environment (Deci & Ryan, 1985; Vallerand & Losier, 1999). This is the most widely used theory that emphasizes sport motivation and it has received considerable support within research conducted in sport (Smith, Ntoumanis, & Duda, 2007). SDT postulates that the type of motivation varies and motivational processes determine the quality of the outcome.

According to SDT, different types of motivation lie on a continuum regarding their level of self-determination (Deci & Ryan, 2002; Deci & Ryan, 1985). The most self-determined type of motivation is intrinsic motivation, while extrinsic motivation is the least self-determined. Amotivation, or being unmotivated, is a third major type of motivation (Deci & Ryan, 1985). Individuals who are amotivated show lack of interest and intention to act. They see no value in participating in sport activities.

Intrinsic and extrinsic motivation

Intrinsic motivation is about performing an activity for its inherent satisfaction rather than doing it for a separate consequence, e.g., merely because it is experienced as interesting and fun (Ryan & Deci, 2000). Extrinsic motivation is about doing an activity in order to achieve some specific outcome, e.g., to meet parents and friends expectations. Extrinsic motivation consists of four different types of motivation (i.e., integrated, identified, introjected and external) who occupy the continuum between intrinsic motivation and amotivation (Deci & Ryan, 1985).

There are various reasons why athletes participate in sports, such as to master challenges, learn new skills, or to gain social approval (Vallerand & Losier, 1999). Elite athletes are characterized by multiple motivations and, in particular, self-determined motivation (Gillet, Berjot, Vallerand, Amoura, & Rosnet, 2012; Mallett & Hanrahan, 2004). Research has shown that the most prominent motives for playing sports is of intrinsic nature (Frederick & Ryan, 1995; Wankel & Kreisel, 1985). According to SDT, intrinsically motivated behaviour is associated with satisfaction of three primary psychological needs: the need for autonomy, competence and relatedness (Deci & Ryan, 1985; Vallerand & Losier, 1999). Autonomy is the need to make our own choices and being the initiator of actions (deCharms, 1968). Competence is the need to succeed in optimally challenging tasks, achieve a desired result, and a feeling that one has mastered the task (Harter, 1978; White, 1959). Relatedness is the need we humans have to establish mutual respect and trust with others, and to feel connected to other people (Baumeister & Leary, 1995; Deci & Ryan, 2002). Ryan and Deci (2007) argue that the experience of autonomy, competence and relatedness are essential prerequisites for maintaining and promoting intrinsic motivation. An athlete's goals and actions, will therefore be guided by these psychological needs.

Gender

Fortier, Vallerand, Brière, and Provencher (1995) examined the relationships between gender and athletes' sport motivation in 399 athletes aged 17-25 involved in 4 different sports (badminton, basketball, volleyball and soccer). The authors found that female athletes were more intrinsically motivated to accomplish things, while displaying less external regulation and less amotivation, compared to male athletes. Chantal, Guay, Dobreva-Martinova, and Vallerand (1996) analysed sport motivation in 98 elite Bulgarian athletes with a mean age of 19,5. Findings revealed that the motivation of female athletes was more strongly characterized by intrinsic motivation. Similar results also appear in other studies (Brière, Vallerand, Blais, & Pelletier, 1995; Gillet & Rosnet, 2008; Gillet, Vallerand, & Paty, 2013; Murcia, Gimeno, & Coll, 2007; Pelletier et al., 1995). A more recent study, conducted by Gillet and Rosnet (2008), investigated the relationships between gender, individual and team sports and athlete perceptions of the three primary needs, autonomy, competence and relatedness. Two hundred and eighty-eight athletes (83 females and 205 males) with a mean age of 19.4 years participated in the study. The results showed that female athletes exhibited more intrinsic

motivation than men. In addition, women felt less competent and demonstrated less external regulation than men.

Year of education

Several studies have indicated that interest for the sport and students' intrinsic motivation regarding physical education or competitive sports, decrease with age (Digelidis & Papaioannou, 1999; Guzmán & Kingston, 2012; Ntoumanis, Barkoukis, & Thøgersen-Ntoumani, 2009; Sallis, 2000; Van Wersch, Trew, & Turner, 1992), although some inconsistency exists with Cecchini, Méndez, and Muñiz (2002), who found the opposite. Furthermore, this may explain why many young athletes tend to give up their sport activities during adolescence (Wang, Biddle, & Elliot, 2007) and as many as two-thirds aged 7–18 withdraw from sport each year (Petlichkoff, 1996). Consequently, identifying potential motivational differences in groups of young athletes is a primary concern in sport psychology (Gould, Feltz, Horn, & Weiss, 1982). This can more specifically clarify what age intrinsic motivation potentially starts to decline and measures can be implemented.

Guzmán and Kingston (2012) identified age related differences in their study of 857 Spanish athletes aged 11-19 years involved in over twenty different sports. They found that self-determined motivation decreased with higher age. Digelidis and Papaioannou (1999) examined age-group differences in students' motivation in Greek physical education lessons, with students aged from 10 to 17 years. The results showed that the oldest students showed lower intrinsic motivation with the biggest difference emerging between 12-13 years (7^{th} grade) and 15-16 years (10^{th} grade) (Digelidis & Papaioannou, 1999). Similar results were found by Ntoumanis et al. (2009) who examined changes in students' motivation to participate in physical education over a period of 3 years. From age 13 until age 15 intrinsic motivation decreased while maladaptive motivation such as amotivation, increased. Extrinsic regulations remained stable (Ntoumanis et al., 2009). On the other hand Cecchini et al. (2002) examined motives for practicing sport in Spanish schoolchildren aged 8 to 18 years. They found that older pupils scored higher on a factor called "fun/ability", expressing intrinsic motivations, while younger pupils scored higher on the opposite pole, namely "social approval/prevention of illness". The latter is related to extrinsic motivations such as approval from the trainer or peers, satisfying parents or friends and preventing illness (Cecchini et al., 2002).

Most studies addressing sport motivation and age are characterized by a large age gap in the sample, i.e. participants ranging from 10-18 in each study. This greatly affects the results compared to minimizing the age gap, but it provides a more extensive sample because it includes several ages. The majority of the literature examining participation motives in physical activities is largely based on studies with children (Trembath, Szabo, & Baxter, 2002). The research is sparse when it comes to intrinsic motivation in adolescent athletes (Murcia et al., 2007), and especially inadequate regarding elite junior athletes (Armstrong & Mc Manus, 2010; Mallett & Hanrahan, 2004). The samples in the above studies seem to provide some indication of the general age tendency when it comes to intrinsic motivation, suggesting that intrinsic motivation decrease with age.

Individual vs. team sports

Motivational differences among elite junior athletes could be due to the nature of the sport activities. Gillet and Rosnet (2008) study revealed that athletes in individual sports felt more autonomous than athletes in team sports, indicating a more intrinsically motivational profile. As a concrete example, we can imagine that a downhill-skier chooses the competitions he or she will participate in. By contrast, a footballer doesn't care about this issue, because someone else determines the season schedule. Thus, the downhill-skier will have a greater sense of autonomy and therefore a more intrinsically motivational profile. In addition, similar outcomes were found in Murcia et al. (2007) study of young athletes motivational profiles. The sample for this study was comprised of 413 athletes (322 boys and 91 girls) and had a significantly lower average age than the aforementioned studies (M=13,7). A "self-determined profile" was strongly associated with athletes from individual sport activities, while a "non-self-determined profile" was more common in athletes from team sports (Murcia et al., 2007).

Private and public schools

To our knowledge, there is no research on motivational differences between young athletes in private compared to public schools, making empirical evidence rather limited. SDT suggests that there is a close relationship between perceived competence and intrinsic motivation. The more competent that an athlete perceives himself or herself in an activity the more intrinsically motivated he or she will be (Deci & Ryan, 1985; Jakobsen, 2012). This

relationship assumes 1) that the activity must be optimally challenging and 2) an experience that one can influence the outcome. To get into a private school the students must master the specific entrance requirements, and therefore be quite skilful in their sport. Consequently, there will be an environment with sufficient challenges, as they train with other talented peers. Secondly, there are differences between the two schools when it comes to volume of training, number of students per coach, training facilities and the level of players. As shown by Murcia et al. (2007), a more "self-determined profile" was associated with those who train more than three days a week. This indicates a positive correlation between the amount of exercise and motivation, to some degree. In private school they have up to 20 hours of training a week, which is more than sports education in a public school (NTG, 2015). In addition, there are more coaches per student in a private school, including more specialized trainers such as a goalkeeping coach in football etc. (Konradsen, 2009). From research we know that the coaches' behaviour is of importance for the students' motivation (Amorose & Horn, 2000; Mageau & Vallerand, 2003). According to Konradsen (2009) the private school is in possession of better training facilities and they use equipment with better quality, compared to that in public schools. The quality of the training facilities are important for the students' motivation to exercise (Ebben & Brudzynski, 2008). These social and environmental factors are specifically important in SDT because they can either facilitate or undermine intrinsic motivation (Ryan & Deci, 2000).

Thirdly, a private school costs money. Athletes in private school may experience a greater commitment and pressure to perform, because they know that the family invests a lot of money in their future sports career. Hypothetically, athletes at a private school may to a greater degree be run by extrinsic motivation in terms of expectations from family and friends, compared to that of students in public schools.

Finally, previous studies that have examined motivation in high-level athletes have suggested that the behaviour of such athletes is not solely intrinsically motivated (Chantal et al., 1996; Gillet, Berjot, et al., 2012; Mallett & Hanrahan, 2004). Gillet, Berjot, et al. (2012) examined the motivation-performance relationship in competitive athletes. Participants were 153 French junior national fencers (87 females and 66 males) aged 14 years. They conducted two studies, and in both studies the results showed that athletes with a high motivational profile, (i.e., high intrinsic and extrinsic motivation) obtained the highest level of performance (Gillet, Berjot, et al., 2012). Because of a higher level of skills among athletes in private school, we can

imagine a stronger correlation between both intrinsic and extrinsic motivation and performance, compared to lower-level skilled athletes in public schools.

1.2.3 Positive psychology and well-being

Research in sport emotion literature has traditionally focused on negative emotions, such as anxiety and stress, rather than positive emotions such as happiness, enjoyment and satisfaction (McCarthy, 2011). Positive psychology is the study of positive emotions, positive character, and positive institutions (Seligman, Steen, Park, & Peterson, 2005; Seligman & Csikszentmihalyi, 2000).

Research on well-being is divided into two different approaches: the hedonic well-being (HWB) approach and the eudaimonic well-being (EWB) approach. Advocates of the hedonic approach argue that well-being may simply put be connected to the idea that all there is to a good life is the presence of pleasure and the absence of pain (Kahneman, 1999; Tännsjö, 2007). By contrast, those who promote eudaimonic approaches believe that well-being is more than pleasant feelings (Deci & Ryan, 2006; Vittersø, Søholt, Hetland, Thoresen, & Røysamb, 2009; Waterman, 1993). In this study, we will recognize that HWB and EWB are related, but they should be seen as two separate dimensions that are qualitative different from each other (Straume & Vittersø, 2012). Both dimensions of well-being and different feeling states are of interest in sport psychology research (Salama-Younes, 2011).

In the literature there is little consensus on the concepts and definitions on EWB and HWB, which makes the two dimensions difficult to quantitatively measure and compare (Huta & Waterman, 2013). Huta and Waterman (2013) suggested in their review 1) clearer definitions (i.e., degree of correlations), 2) four categories of analysis (orientations, behaviour, experience, functioning) and 3) two levels of measurement (state and trait) to better compare findings across studies. Hence, this study operationalizes hedonia and eudaimonia as experiences (emotions) measured at the state level. HWB core concepts (i.e., definitional) include happiness, pleasure, satisfaction and enjoyment. EWB core concepts include engaged, interested, enthusiastic and absorbed.

Predicting eudaimonic and hedonic feeling states in training episodes

Vittersø et al. (2009) proposed a functional approach as a framework for the analysis of human well-being. A functional perspective on well-being argues that pleasure is an affective response to stimulus that are not too complex and where needs are fulfilled and goals are achieved (Vittersø et al., 2009). The role played by pleasure in the regulation of behaviour in sport is to reward successful behaviour, and to broaden up attention to provide mental flexibility (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Importantly, the functional well-being approach (FWBA), in contrast to the broaden-and-build theory of positive emotions (Fredrickson, 2001), does not suggest that pleasure facilitates improvement of own levels of skills and performance. Another group of positive emotions fulfils this role, and interest is the most typical one among these (Straume & Vittersø, 2012; Vittersø et al., 2009). Both interest and pleasure are classified as positive emotions that may be separated and where attentional resources are managed quite differently (Straume & Vittersø, 2012). During pleasant feeling states attention is broadened up, and prepares people for rapid changes in activities or goals. Interest, on the other hand, provides sustained attention to an object that is difficult to understand, or to a goal that is hard to reach. When absorbed in something interesting, attention is focused and changes in goal commitment do not occur easily (Straume & Vittersø, 2012).

Thus, happiness is particularly experienced in savouring moments and in situations where processing is easy (Winkielman & Cacioppo, 2001), while difficult and novel situations are typically accompanied by feeling states such as interest and inspiration (Thrash, 2007). Considering the aforementioned approaches of well-being, it seems appropriate to refer to the emotions as hedonic and eudaimonic, respectively (Straume & Vittersø, 2012).

Many studies have shown that eudaimonic and hedonic feeling states are distinct with different functions (Straume & Vittersø, 2012; Vittersø et al., 2009). For example, Csikszentmihalyi (1997) found that challenging situations is strongly associated with the idea of a meaningful and authentic life and a condition for experiencing flow – "a subjective state that people report when they are completely involved in something to the point of forgetting hour, fatigue, and everything else but the activity itself " (Csikszentmihalyi, 1990; Csikszentmihalyi, Abuhamdeh, & Nakamura, 2014). Contrary, challenging situations is unrelated to self-reported happiness (Burke, 1991; Keyes, 2007). Other studies point to

differences in self-reported hedonic emotions based on when they are measured. It appears that pleasant affect is highest in the weekends, when the challenges are few and small (Csikszentmihalyi & Hunter, 2003; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996). This may be because in weekends we are participating in activities that are social and gives us pleasure, and less in activities that require concentration and cognitive capacity, e.g. work (Straume & Vittersø, 2012; Thrash, 2007).

Straume and Vittersø (2012) based their study on the FWBA and examined how complex working episodes affect emotional experiences of jobholders. They found that episodes perceived as difficult had opposite effects on inspiration and happiness. Thus, at the state level, the hedonic feeling of happiness was usually experienced when life was easy or a goal was reached. The eudaimonic feeling of inspiration was typically experienced when facing challenges in the process of goal attainment (Straume & Vittersø, 2012). This research provides further support for a simple-hedonic and challenging-eudaimonic tendency, and the distinction between the two.

For many athletes, competitive sport at a high level can be compared with a part-time or full-time job (Lundqvist, 2011). A sports career at a high level will most likely include environmental and organizational challenges as well as stressors and demands (Fletcher & Wagstaff, 2009). Findings from the work-related literature can therefore have relevance in the context of sport (Lundqvist, 2011). This may also apply to different environmental demands in diverse school systems.

Year of education

We find no relevant studies on emotional differences and year of education among elite junior athletes. Self-determination theory and research show that satisfaction of autonomy, competence, and relatedness needs are linked directly to well-being (Deci & Ryan, 2000). Athletes who have these needs met will have high intrinsic motivation and thus better performance and higher psychological well-being (Deci & Ryan, 2000; Gillet, Vallerand, Lafrenière, & Bureau, 2012). Gillet, Vallerand, et al. (2012) found that autonomous motivation, highly related to intrinsic motivation, predicts positive affect, while controlled motivation that is highly related to extrinsic motivation, and amotivation both lead to negative affect. These results provide strong support for the SDT (Deci & Ryan, 2000; Gillet,

Vallerand, et al., 2012). The research explains that greater sport enjoyment is associated with greater sport commitment among youth and elite sport performers (McCarthy, 2011). The more we know about sport enjoyment, the more we know about the motivational consequences and different functions of positive emotions (McCarthy, 2011).

Private and public schools

To our knowledge, research on differences in eudaimonic and hedonic feeling states in athletes in private and public schools, is non-existent. SDT posits that the fulfilment of the basic psychological needs for autonomy, competence, and relatedness is necessary for well being to be attained and maintained (Gagne, 2003). Hence, satisfaction of the basic psychological needs fosters subjective well-being, which is related to hedonic well-being, and eudaimonic well-being (Ryan & Deci, 2001), indicating a positive correlation between intrinsic motivation and well-being. As mentioned above, students in private schools maintain a generally higher level of skills and performance in their sport than students in public schools (Konradsen, 2009; NTG, 2015). Perhaps talented peers and expectations from coaches and others will lead to a more challenging environment for students at a private school. Athletes in this study are either part of sports education in public school or a private elite sports gymnasium. It seems that the majority of students who choose sports education in public schools wish to combine sports with education (Kårhus, 2001). Students who want a career as professional athletes seem rather to select a private elite sports gymnasium because they have better cooperation with sports teams who has interests in the school system (Alderslyst, 2011). This may support the assumption of a more challenging environment in a private school because there is more focus on sport and competition, compared to education.

From a FWBA eudaimonic feeling states are produced to motivate behaviour in challenging environments (Vittersø et al., 2009). This indicates that athletes in private schools display a higher degree of eudaimonic feeling states, compared to athletes in public schools. The FWBA suggests that athletes in public schools exhibit more hedonic feeling states in their training episodes, because there is more of the non-challenging and not too complex environment. On the other hand, according to SDT, well-being will follow intrinsic motivation, i.e., the group that scores highest on intrinsic motivation will also have the highest degree of both eudaimonic and hedonic feeling states.

1.3 The present study

The first aim in this study was to identify motivational differences across gender because, according to Fortier et al. (1995), it is important to take into account gender differences in sports motivation. As mentioned above, research has found that female athletes exhibited more intrinsic motivation than men (Brière et al., 1995; Chantal et al., 1996; Fortier et al., 1995; Gillet & Rosnet, 2008; Gillet et al., 2013) and was stronger associated with a "self-determined profile" (Gillet et al., 2013; Murcia et al., 2007). In line with past investigations it was hypothesized that (I) female athletes would display higher intrinsic motivation than male athletes.

The second aim of this research was to explore motivational and emotional differences by year of education. Most studies show that intrinsic motivation for physical education and competitive sports, decline with age (Guzmán & Kingston, 2012; Ntoumanis et al., 2009). In line with past investigations we hypothesize that (II) younger athletes would display higher intrinsic motivation compared to older athletes. In addition, because of inconsistent findings, (III) we will explore potential differences in extrinsic motivation and year of education. Based on SDT (Deci & Ryan, 2000) and the integrative model of emotions as mediators of the situational motivation-performance relationship (Gillet, Vallerand, et al., 2012), we expect that both eudaimonic and hedonic feeling states will follow intrinsic motivation, and lower levels of positive emotions will follow extrinsic motivation. Therefore, we hypothesize that (IV,V) younger athletes would display a higher degree of eudaimonic and hedonic feeling states, compared to older athletes.

The third aim in the present study was to examine if motivational differences could be due to the nature of sport activity (i.e., individual vs. team sports). Gillet and Rosnet (2008) found that athletes in individual sports felt more autonomous than athletes in team sports, indicating a more intrinsically motivational profile. Murcia et al. (2007) also found that athletes in individual sports were stronger associated with a "self-determined profile" than athletes in team sports. Thus, we hypothesize that (VI) athletes involved in individual sports report higher intrinsic motivation than athletes in team sports.

The fourth aim of this study was also a more exploratory approach with little evidence in relation to empiricism, namely to analyse the motivational and emotional differences between

athletes in private and public schools. Nevertheless, on the basis of the above arguments we hypothesize (VII,VIII) higher intrinsic and extrinsic sport motivation among students in private schools compared to that in public schools. In addition we hypothesize that (IX) well-being follows the prediction of SDT and the FWBA with a higher degree of eudaimonic feeling states in athletes in private school.

Finally, the fifth aim in the present investigation was to follow the predictions from the FWBA regarding hedonic and eudaimonic feeling states and challenging vs. non-challenging training episodes. Based on the empirical findings and arguments above we expect there to be (X) a positive correlation between eudaimonic feeling states and challenging training episodes and (XI) no correlation between hedonic feeling states and challenging training episodes.

2. Methods

2.1 Participants

Four hundred and ten elite junior athletes from 7 different Norwegian high schools for elite sports were asked to voluntarily participate in an online questionnaire measuring thoughts and feelings associated with their experiences in sport. The athletes were from different sports such as cross-country skiing, biathlon, Nordic combined, shooting, ice hockey, ski jumping, alpine skiing, bicycling, football, orienteering, handball and volleyball. From these, 211 participants (123 males and 88 females) completed the data collection, which gives a response rate of 51,5 %. One hundred and ten were involved in individual sports and 43 in team sports. One hundred and seventeen students attended a private school (the Norwegian college of elite sport, NTG) and 94 students attended public schools. The sample consisted of students from four different grades. The younger students, grade 1 and 2 consisted of 128 students, while the older students, grade 3 and 4, consisted of 83 students. The sample had a mean age of 17.2 years, ranging from 15 to 19 years.

2.2 Procedure

Participation in this survey was voluntary. After providing informed consent, the athletes individually completed the survey online. They were informed that there are no right or wrong answers to the questionnaire items. They were also assured that the responses were anonymous and confidential.

2.3 Measures

Demographic variables

The variables examined here included gender, year of education, individual vs. team sports, and private vs. public schools.

2.3.1 *Situational Motivation Scale (SIMS)*

SIMS is grounded in self-determination theory (SDT) and is commonly employed in research within sport to measure situational motives to assess more transient motivation (Guay, Vallerand, & Blanchard, 2000; Lonsdale, Sabiston, Raedeke, Ha, & Sum, 2009; Ntoumanis, 2001b; Ntoumanis, 2005; Prusak, Treasure, Darst, & Pangrazi, 2004; Taylor & Ntoumanis, 2007). A 16-item version of the SIMS was originally developed by Guay et al. (2000). However, in three studies across diverse physical activity domains, Standage, Treasure, Duda, and Prusak (2003) showed that two items produced scores that did not conform to the hypothesized factor structure. Following these authors' suggestions, a 14-item version of the questionnaire was used here. The item stem was *"Why are you currently engaged in this activity?"* and the measure included subscales designed to measure intrinsic motivation (e.g., *"Because I think that this activity is interesting"*), identified regulations (e.g., *"Because I believe this activity is important for me"*), external regulation (e.g., *"Because I am supposed to do it"*), and amotivation (e.g., *"I do this activity but I am not sure if it is worth it"*). The participants responded using a seven-point Likert scale, ranging from 1 "Not true at all" to 7 "Very true."

2.3.2 *Day Reconstruction Method (DRM)*

The day reconstruction method (DRM) was originally used to capture core and difficult work situations (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). The respondents were asked to describe four separate episodes based on the events of their previous training and write a diary consisting of these four separate episodes based on these events. Two episodes were mandatory, while two were voluntary. Each episode contains information on when the episode began and ended, and what exactly they were doing in the episode. Based on the idea of sorting episodes in distinct classes (Kahneman et al., 2004) the researchers did a qualitative interpretation of the information for each of the episodes in the investigation (798 episodes). For each episode feeling states were measured repeatedly. The participants were asked to consider how they felt during each episode and how much they felt of different feeling states such as satisfaction, happiness, pleasure, fear, anger, sadness, engagement, interest, enthusiasm and absorption on a Likert scale ranging from not at all (0), to very much (6). As

part of the DRM the participants were repeatedly asked to consider how challenging the episode was on a Likert scale ranging from not at all (1), to very much (7).

2.4 Statistics

Independent samples t-tests were conducted to determine significant differences in types of motivation and positive emotions in groups of youth athletes (gender, year of education, individual vs. team sports, private vs. public schools). Post hoc regression analyses were used to pursue and strengthen significant findings. A multiple regression analysis makes it possible to control the predicor variables for each other in order to identify independent effects and hence minimize confounding variables. In our analysis, we tried to predict positive emotions by the aforementioned groups of youth athletes, including challenge.

3. Results

3.1 Gender

(I) We found no significant differences between male and female athletes in intrinsic motivation.

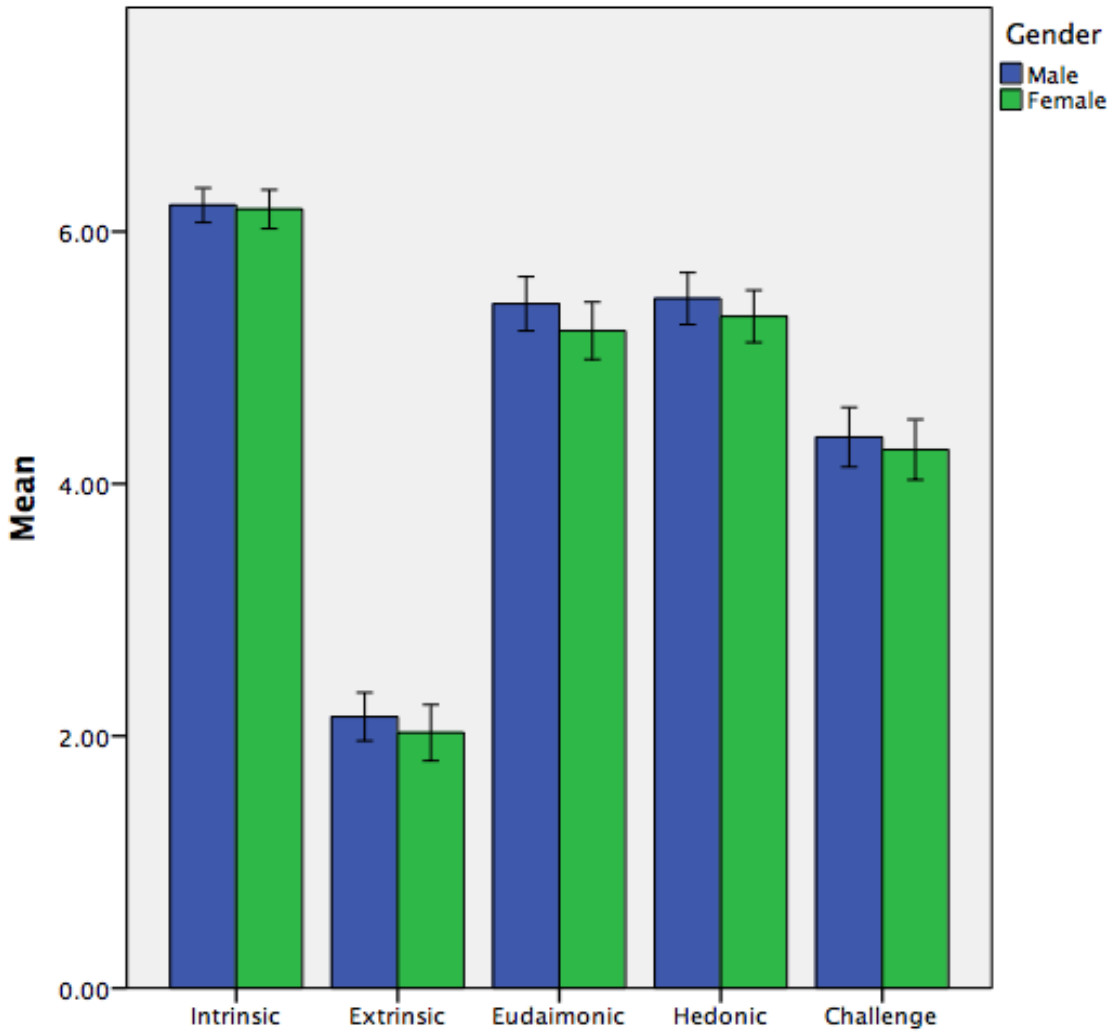

Figure 1. Motivation, positive emotions and challenge in male and female athletes. Error Bars: 95 % CI

3.2 Year of education

Independent samples t-tests were conducted with intrinsic and extrinsic motivation, eudaimonic and hedonic feeling states, and year of education. (II) We found no significant differences between younger and older athletes in intrinsic motivation. (III) There was a significant lower level of extrinsic motivation in the younger (M=1.94, SD=0.94) than in the older (M=2.36, SD=1.22) group of athletes; t (141)=-2.668, p = 0.009, d = 0.39, a small to medium effect size (Cohen, 1992).

(IV) There were significantly higher levels of eudaimonic feeling states among the younger athletes (M=5.49, SD=1.07) compared to that among the older (M=5.11, SD=1.24); t (209)=2.392, p = 0.018, d = 0.33, a small to medium effect size (Cohen, 1992). Likewise, (V) we found significantly higher levels of hedonic feeling states among the younger athletes (M=5.53, SD=1.05) compared to that among the older athletes (M=5.22, SD=1.12); t (209)=2.026, p = 0.044, d = 0.29, a small to medium effect size (Cohen, 1992). Specifically, the results indicated that younger athletes experienced a significantly higher degree of both eudaimonic and hedonic feeling states, compared to older athletes (figure 2).

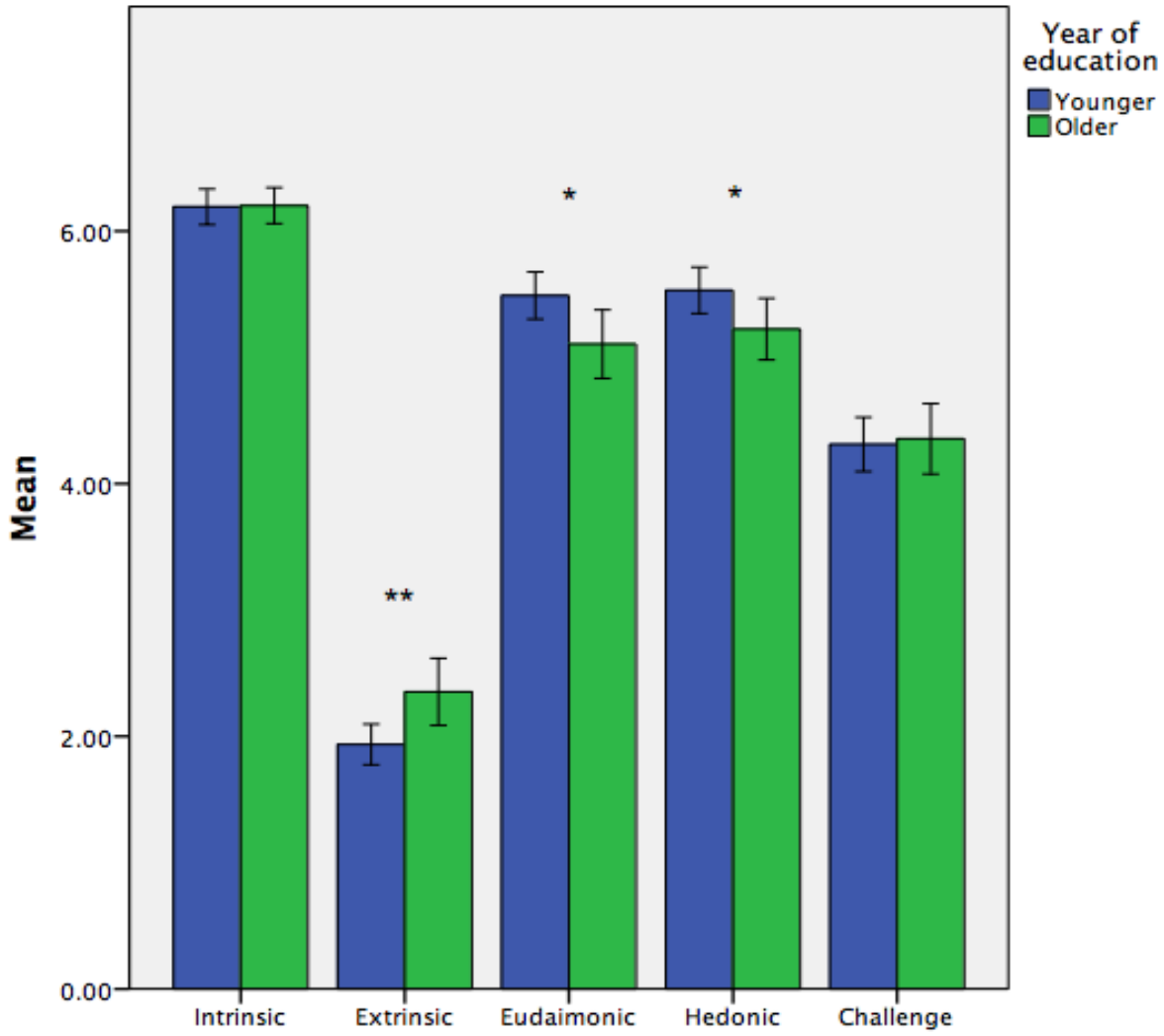

Figure 2. Motivation, positive emotions and challenge in younger and older athletes.

Error Bars: 95 % CI

*p<0.05, **p<0.01

3.3 Individual vs. team sports

(VI) We found no significant differences between athletes in individual and team sports in intrinsic motivation. Results revealed a significant difference in challenge in individual (M=4.14, SD=1.27) and team (M=4.63, SD=1.04) sport conditions; t (151)=-2.257, p = 0.025, d = 0.42, just below a medium effect size (Cohen, 1992).

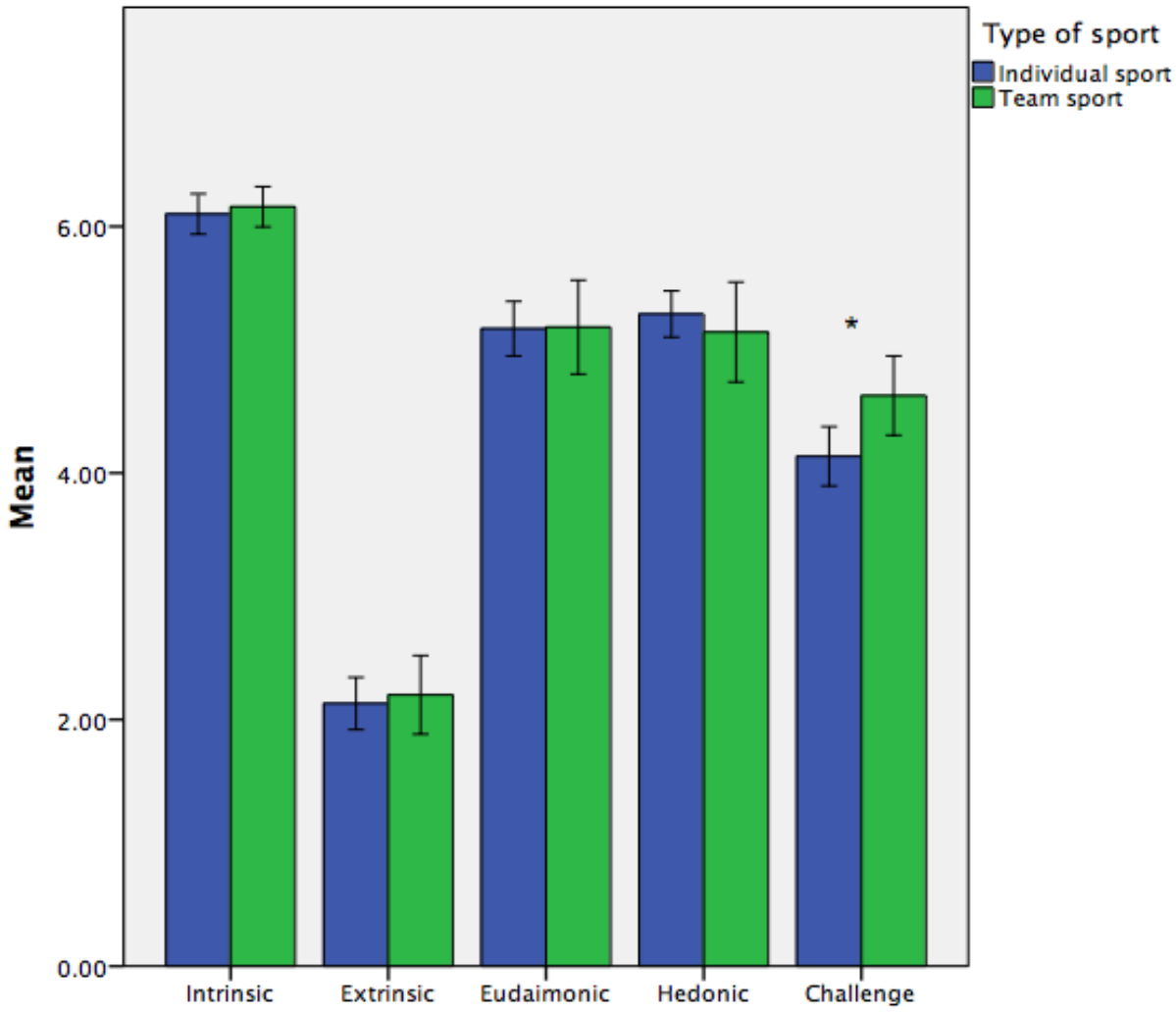

Figure 3. Motivation, positive emotions and challenge in individual and team sports.
Error Bars: 95 % CI
*p<0.05

3.4 Private and public schools

(VII) We found no significant differences between athletes in private and public schools in intrinsic motivation, or in (VIII) extrinsic motivation. As illustrated in figure 4, (IX) we found a significant difference in eudaimonic feeling states in private school (M=5.56, SD=0.99) and public school (M=5.07, SD=1.28) conditions; t (209)=3.135, p = 0.002, d = 0.43, just below a medium effect size (Cohen, 1992).

Results also indicated a significant difference in hedonic feeling states in private (M=5.57, SD=1.01) and public (M=5.21, SD=1.14) schools conditions; t (209)=2.417, p = 0.017, d = 0.33, a small to medium effect size (Cohen, 1992). In addition, we found a significant difference in challenge in private (M=4.52, SD=1.25) and public (M=4.09, SD=1.19) schools conditions; t (209)=-2.534, p = 0.012, d = 0.42, just below a medium effect size. Since there are differences in more variables between private and public schools, the independent effects should be sorted out in post hoc regression analyses (see table 1 and 2).

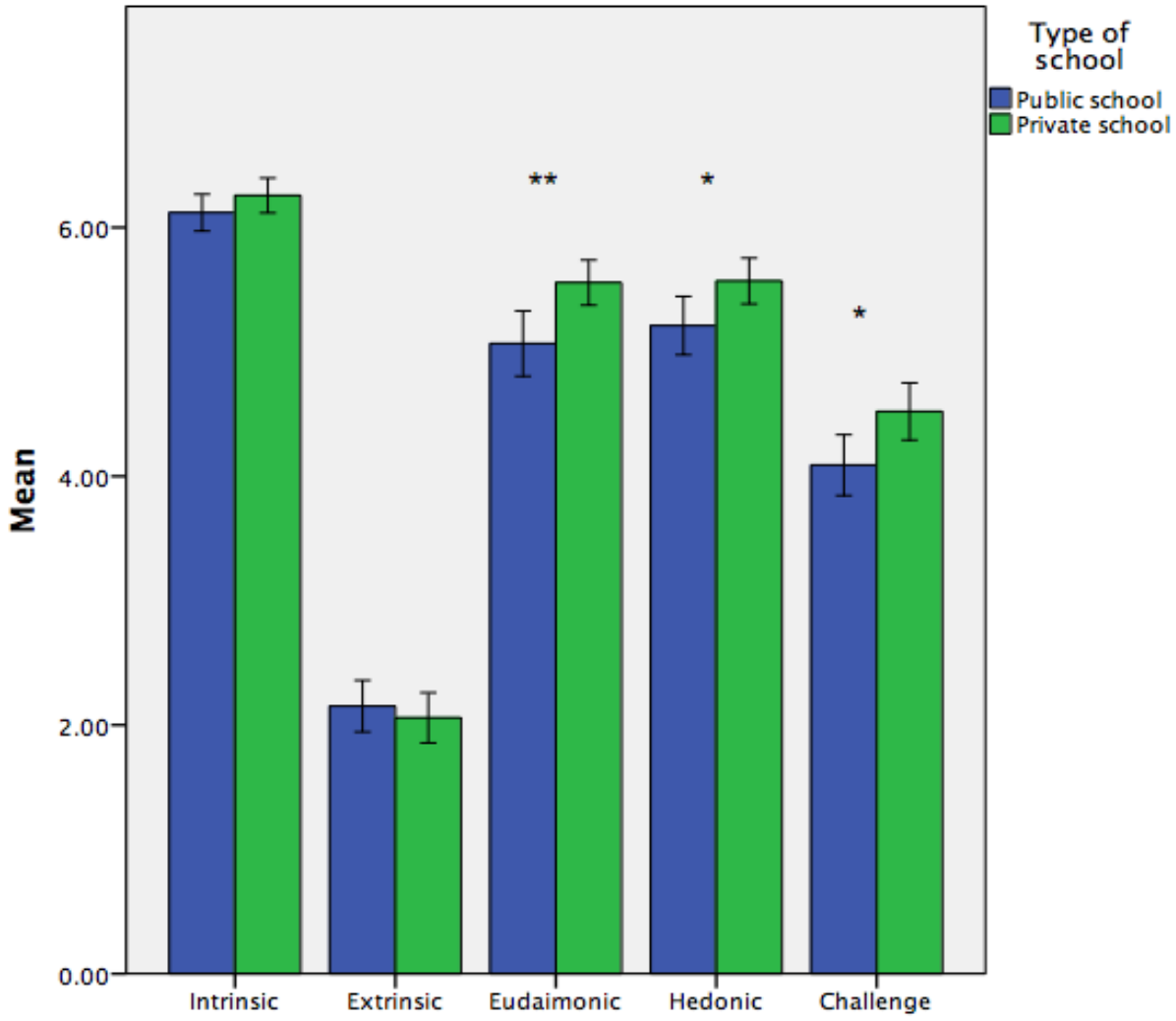

Figure 4. Motivation, positive emotions and challenge in athletes in private and public schools.

Error Bars: 95 % CI

*p<0.05, **p<0.01

3.5 Challenging and non-challenging training episodes

A Pearson product-moment correlation coefficient was conducted to assess the relationship between the two types of well-being and challenging training episodes. (X) There was a positive correlation between eudaimonic feeling states and challenge, r = 0.39, n = 211, p = < 0.001, a medium to large effect size (Cohen, 1992).

(XI) There was a positive correlation between hedonic feeling states and challenge, r = 0.21 n = 211, p = <0.01, a small to medium effect size (Cohen, 1992). Specifically, the results show that an athlete's increasing levels of challenge, also increases well-being, or vice versa. This applies to a greater extent for eudaimonic feeling states compared with hedonic feeling states.

3.6 Post hoc linear regression analyses

When we analysed year of education and private vs. public schools, we found significant differences in both eudaimonic and hedonic feeling states. Table 1 shows the linear regression analyses of eudaimonic feeling states. Significant unadjusted (univariate) predictors were: younger year of education (p=0.018), private school (p=0.002), and challenge (p<0.001). Adjusted (multivariate) predictors were: younger year of education (p=0.032) and challenge (p<0.001). The effect size for this analysis ($R^2 = 0.18$) was found to exceed Cohen (1992) guidelines for a large effect ($R^2 = 0.14$).

	Unadjusted			**Adjusted**		
	Unstandard. beta	*p*	CI (95%)	Unstandard. beta	*p*	CI (95%)
Gender (1=male 2=female)	-0.21	0.184	-0.53 to 0.10	-0.12	0.418	-0.41 to 0.17
Year of education (0=young 1=old)	-0.38	0.018	-0.70 to -0.07	-0.33	0.032	-0.63 to -0.03
Type of school (0=public 1=private)	0.49	0.002	0.18 to 0.80	0.23	0.143	-0.08 to 0.53
Challenge	0.36	<0.001	0.25 to 0.48	0.35	<0.001	0.23 to 0.46

Table 1. Linear regression analyses of eudaimonic feeling states

Table 2 show the linear regression analyses of hedonic feeling states. Significant unadjusted (univariate) predictors were: younger year of education (p=0.044), private school (p=0.017), and challenge (p=0.002). Significant adjusted (multivariate) predictors were: challenge (p=0.005). The effect size for this analysis ($R^2 = 0.06$) was equivalent to Cohen (1992) guidelines for a medium effect.

	Unadjusted			**Adjusted**		
	Unstandard. beta	*p*	CI (95%)	Unstandard. beta	*p*	CI (95%)
Gender (1=male 2=female)	-0.14	0.353	-0.44 to 0.16	-0.07	0.624	-0.37 to 0.22
Year of education (0=young 1=old)	-0.31	0.044	-0.61 to -0.01	-0.25	0.101	-0.56 to 0.05
Type of school (0=public 1=private)	0.36	0.017	0.07 to 0.65	0.20	0.196	-0.11 to 0.51
Challenge	0.18	0.002	0.07 - 0.30	0.17	0.005	0.05 to 0.29

Table 2. Linear regression analyses of hedonic feeling states

4. Discussion

The first aim of this investigation was to identify motivational differences between male and female elite junior athletes. Contrary to our hypotheses, the present results did not confirm that (I) female athletes displayed higher intrinsic motivation, compared to male athletes. These findings are not in line with previous research in the area (Brière et al., 1995; Chantal et al., 1996; Fortier et al., 1995; Gillet & Rosnet, 2008; Gillet et al., 2013; Murcia et al., 2007). In both Chantal et al. (1996); Fortier et al. (1995) and Gillet and Rosnet (2008) studies, participants were slightly older (M=19.3), compared to participants in the present study (M=17.2). In addition, participants were from France, Canada and Bulgaria, respectively. These cultural and age-related differences may be of importance for the result. All three studies contained competitive athletes, but only Chantal et al. (1996) included elite junior athletes. In fact, the above studies (Fortier et al., 1995; Gillet & Rosnet, 2008) also demonstrated that the level of athletes, whether they are recreational or competitive, are of importance for motivation. This makes the studies less comparable with the present study, and suggests a lack of research specifically on elite junior athletes (Armstrong & Mc Manus, 2010), from several different sports. Additionally, the result show that intrinsic motivation is far more dominant than extrinsic motivation for all groups. As mentioned above, this is in line with previous findings and supports the idea that interest, enjoyment and challenge are more important for youth athletes than achieving a separable outcome of extrinsic nature (Ryan & Deci, 2000).

The second aim of the present research was to explore motivational and emotional differences in year of education. Contrary to our hypothesis and related research (Digelidis & Papaioannou, 1999; Guzmán & Kingston, 2012; Ntoumanis et al., 2009), (II) we found no differences in intrinsic motivation between younger and older athletes. These discrepant results may be due to the participants age and small age gap, or the lower-level athletes that serve as the basis of comparison. Our sample consists of athletes aged 15-19 years. Firstly, studies of this age group are sparse (Murcia et al., 2007; Trembath et al., 2002), making it difficult to compare results across studies. Secondly, the aforementioned age gap makes the variation in the present sample smaller compared with related studies that include more age groups and a greater age gaps.

In line with our hypothesis, (III) we found a significant difference in extrinsic motivation and year of education. The results revealed that older athletes reported significantly higher extrinsic motivation than the younger ones, despite the small age gap in the sample. We can imagine that it is easier to find differences in a larger age span, due to greater variance, making this finding more robust. That is, tangible benefits such as trophies or money, or social reward such as approval from peers and parents (Vallerand & Losier, 1999), are more important motives to participate in sports in older athletes. As mentioned in the introduction, Gillet, Berjot, et al. (2012) found that athletes with a high motivational profile obtained the highest level of performance. Thus, performance depends on both intrinsic and extrinsic motivation. It is natural to think that older athletes are at a higher level and participate in more competitions. Elite junior athletes compete at national and international levels and competition will be the primary objective. Competition is an extrinsic motivator because it encourages athletes to win and beat others, not to have fun or join the activity for its inherent satisfaction. Perhaps this is an explanation for why older athletes display more extrinsic motivation. Another explanation may be that a potentially negative impact in a competitive environment during adolescence can shift the perceived locus of causality from internal to external during structured sporting experiences (Mallett & Hanrahan, 2004). Adolescents yearn for peer recognition and approval, which may be critical to their positive sense of self (Mallett & Hanrahan, 2004). Results revealed that both younger and older athletes showed considerably more intrinsic motivation than extrinsic motivation, which supports SDT (Ryan & Deci, 2000).

Regarding emotional differences in year of education, (IV,V) we found that younger athletes displayed a higher degree of both eudaimonic and hedonic feeling states, compared to older athletes. The results are consistent with our hypotheses, but not the rationale behind the hypotheses, because there was no difference in intrinsic motivation between younger and older athletes, and our rationale was that well-being would follow intrinsic motivation. The findings are partially in line with SDT (Ryan & Deci, 2001) and Gillet, Vallerand, et al. (2012) integrative model of emotions as mediators of the situational motivation-performance relationship. On the one hand older athletes exhibited significantly more extrinsic motivation, which according to SDT and the aforementioned integrative model, is associated with lower levels of positive emotions. On the other hand, our results seems independent of intrinsic motivation because of the lack of significant differences between younger and older athletes. Year of education remained a significant predictor of eudaimonic feeling states in the post hoc

linear regression analysis, even when controlling for gender, individual vs. team sports and challenge. This was not the case with hedonic feeling states. Specifically, lower age predicts eudaimonic feeling states in elite junior athletes. Perhaps there is more focus on having fun when you're younger and more seriousness with age. Also, it may be due to the tiring lifestyle of an athlete, who have to sacrifice a lot of time and energy to perform at the highest level.

The third aim of the present research was to examine motivational differences between athletes in individual and team sports. Unlike our hypothesis, (VI) there was no significant difference in intrinsic motivation between athletes in individual and team sports. Like gender, Gillet and Rosnet (2008) study was part of the empirical basis for our hypothesis, in addition to Murcia et al. (2007). Thus follow the same explanations for the discrepant results, such as cultural, age-related or level-related factors that could affect the results. Gillet and Rosnet (2008) indicated only a more intrinsic motivational profile of athletes in individual sports, namely by finding that they were more autonomous. SDT also includes the need for competence and the need for relatedness, which advantageously should be satisfied for intrinsic motivation to occur (Deci & Ryan, 1985). One explanation for the result may be that athletes from individual sports and team sports scores differently on the three needs, and that the needs should be examined separately, and together, for a more accurate result. Additionally, athletes from both individual sports and team sports displayed considerably more intrinsic motivation compared to extrinsic motivation.

The fourth aim of the present study was to analyse the motivational and emotional differences between athletes in private and public schools. Athletes in both schools exhibited more intrinsic motivation, compared to extrinsic motivation. Although the results point toward our hypothesis, that (VII) intrinsic motivation is higher among athletes in private school, the difference is not significant (figure 4). This contradicts our assumption based on SDT and research discussed in the introduction. According to SDT, competence breeds intrinsic motivation when the activity is challenging and when one can influence the outcome (Deci & Ryan, 1985; Jakobsen, 2012). In the introduction we argued that athletes in private school felt more competent than athletes in public schools, because they are more skillful and participate in a more challenging environment. On the other hand it may be that athletes in private school to a lesser degree have satisfied the two other needs, namely autonomy and relatedness, which according to SDT, is necessary to maintain and promote intrinsic motivation (Deci & Ryan, 1985; Ryan & Deci, 2007). In addition, the present study has not taken into consideration

social aspects in the two schools, which is an important factor in SDT (Ryan & Deci, 2000). To lighten the other side of our argumentation, the skillful level in private school may cause athletes to not necessarily feel competent, but rather doubting themselves, due to social comparison (Festinger, 1954).

We found no differences in (VIII) extrinsic motivation between athletes in private and public schools. Perhaps training facilities, training volume, number of students per coach, and the level of players has less impact on motivation than anticipated. The results could be due to smaller differences between private and public schools included in this study, compared to studies in other countries. Several studies have found that athletes with a high motivational profile, both intrinsic and extrinsic, obtain the highest level of performance (Chantal et al., 1996; Gillet, Berjot, et al., 2012; Mallett & Hanrahan, 2004). Differences in age, culture, level or a combination of these, in our sample compared with the above research, could explain the result. Our findings were not in line with related studies in the sport context (Amorose & Horn, 2000; Ebben & Brudzynski, 2008; Gillet, Berjot, et al., 2012; Konradsen, 2009; Murcia et al., 2007), and suggest that private vs. public school can be taken less into consideration when it comes to motivation in sport.

The present study also examined emotional differences in private and public schools. In line with our hypothesis, results show that (IX) athletes in private school displayed a higher degree of eudaimonic feeling states during their training episodes, compared with athletes in public schools. In fact, they exhibited higher hedonic well-being as well. The group difference in eudaimonic feeling states in public and private schools shows the highest effect size among the t-tests. SDT posits that satisfaction of the basic psychological needs of autonomy, competence and relatedness fosters both hedonic and eudaimonic feelings (Gagne, 2003; Ryan & Deci, 2001). The results correspond with SDT seeing that all athletes score generally high on intrinsic motivation and eudaimonic and hedonic feeling states, and low on extrinsic motivation. Hence, well-being follows intrinsic motivation (Ryan & Deci, 2001). Athletes in private school reported significantly more challenging training episodes, and the multiple regression model showed that the effect of private school was mediated by challenge during training. The results provide support for the FWBA in that a challenging environment among athletes in private school fosters eudaimonic well-being. On the other hand, the results are partly incompatible with FWBA, seeing that also hedonic feeling states are significantly higher among athletes in private school. According to the functional well-being approach,

hedonic feelings should be highest in the less challenging environment, namely among athletes in a public school. In general it seems like athletes in private school experience more well-being during their training than athletes in public schools.

The fifth aim of this investigation was to follow the predictions from the FWBA regarding eudaimonic and hedonic feeling states and challenging vs. non-challenging training episodes. In line with our hypothesis, the present results show that (X) there was a positive correlation between eudaimonic feeling states and challenging training episodes. Unlike our hypothesis, (XI) we found that hedonic feelings also correlated positively with challenging episodes, although this correlation was weaker. The results mean that an increase in one variable corresponds to an increase in the second variable, particularly for eudaimonic feeling states compared to hedonic feeling states. This partially support the FWBA (Vittersø et al., 2009), in that eudaimonic and hedonic feeling states are distinct with different functions (Burke, 1991; Keyes, 2007; Straume & Vittersø, 2012; Vittersø et al., 2009). In addition, the challenging-eudaimonic tendency in the study conducted by Straume and Vittersø (2012) held at the workplace, seems to appear across domains. Challenge remained a significant predictor for both eudaimonic and hedonic feeling states when controlling for gender, private vs. public schools and year of education. This means that challenge was the only significant variable that predicted both types of well-being in the athletes' training episodes (table 1 and 2). In line with the aforementioned hypotheses, the results from the post hoc regression analysis show that challenge was a stronger predictor of eudaimonic feeling states than hedonic feeling states. Indeed, it seems like challenging training episodes fosters a sense of interest, engagement, and absorbed presence to a greater extent, compared with feeling states of happiness, pleasure and satisfaction.

As we can see from table 1, lower year of education and challenge are the only independent (adjusted) predictors of eudaimonic feeling states, while challenge is the only significant independent predictor for hedonic feeling states (table 2). The results support to some extent earlier research showing the usefulness of distinguishing between eudaimonic and hedonic well-being. Although eudimonic and hedonic feelings strongly correlated they showed differences of degree in challenging training episodes. In addition, we find it very interesting that younger age predicts eudaimonic well-being. This may indicate that interest and enthusiasm declines with age, maybe because of greater pressure, fierce competition and a shift in perceived locus of causality from internal to external (Mallett & Hanrahan, 2004).

Perhaps an important step forward is to focus on balancing an increased childlike enthusiasm with a challenging environment.

4.1 Theoretical considerations

Self-determination theory and the *functional well-being approach* represented the theoretical basis of this study. About half of our hypotheses were confirmed. All groups displayed significantly more intrinsic motivation, compared with extrinsic motivation, which provides support to SDT. According to SDT, well-being results in large part from satisfaction of the three basic psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2001). Our findings also supported this assumption, as well-being followed intrinsic motivation. Although SDT proved to be useful in understanding motivation and well-being in groups of young athletes, the theory has certain challenges. SDT claims to be universal across gender and culture (Deci & Ryan, 2002). Some cross-cultural researchers have argued that the basic assumptions of SDT do not apply to Eastern cultures (Bond, 1988; Markus & Kitayama, 2003) or women (Jordan, 1997). At the center of this critique is the question of whether autonomy is a universal psychological need (Jang, Reeve, Ryan, & Kim, 2009). Recognizing this criticism, Jang et al. (2009) tested the SDT view that high school students in collectivistically oriented South Korea benefit from classroom experiences of autonomy support and psychological need satisfaction. The findings supported SDT's cross-cultural generalizability (Jang et al., 2009). In addition, Deci and Ryan refute this criticism by rhetorically asking whether it is so that people in the East, women and other human subgroups will not be damaged by being controlled or coerced (Hagger & Chatzisarantis, 2007). Nevertheless, more research across cultures remains to make SDT a more robust motivation theory.

Another controversial aspect of the model is its assertion that all three needs is essential, so that even neglect of one of them, will have negative consequences (Hagger & Chatzisarantis, 2007; Løtveit, 2013). Deci and Ryan refer to various research where all three needs contributes independently to boost or attenuate the experience of satisfaction or well-being (Hagger & Chatzisarantis, 2007). However, there seems to be some inconsistencies in how much the three needs predicts motivation in SDT. When examining all three needs simultaneously, the different kinds of motivation have been inconsistent (Amorose & Anderson-Butcher, 2007; Dahl, 2012; Reinboth, Duda, & Ntoumanis, 2004). Research on the

needs separately provide a specific indication, but to further develop the theory studies ought to examine how the needs interoperate in their role as motivators for athletes.

The *functional well-being approach* (Vittersø et al., 2009), although considerably less used than SDT in the present study, proved helpful in showing that eudaimonia is strongly connected with challenging training episodes. Nevertheless, to give further support to the theory we must examine the functional features of both hedonia and eudaimonia more than one point in time, especially whether eudaimonic well-being improves performance in young athletes. In their brief introduction, Gable and Haidt (2005) address two of the most common shortcomings of positive psychology; a) preferring a Pollyanna view of the world, failing to recognize the negative sides of life, and b) defining positive and related concepts can be complex and multidimensional. The latter seems very relevant for our study and apply to concepts like eudaimonia and hedonia as well (Huta & Waterman, 2013). Research on eudaimonia and hedonia includes differences in core definitional elements, categories of analysis, and levels of measurement (Huta & Waterman, 2013; Kashdan, Biswas-Diener, & King, 2008). This makes it difficult to compare results across studies and jointly develop this branch of positive psychology. According to Kashdan et al. (2008), the distinction does not necessarily translate well to science. Empirical evidence currently suggests that hedonic and eudaimonic well-being overlap conceptually, and may represent psychological mechanisms that operate together (Kashdan et al., 2008).

SDT is with achievement goal theory (AGT) the two main contemporary motivational frameworks in sport psychology (Ames, 1992; Moreno, González-Cutre, Sicilia, & Spray, 2010; Nicholls, 1984). AGT is like SDT a social cognitive theory, and is particularly concerned with how the motivational climate affects achievement-related cognitions, behaviors, and affective responses of athletes (Standage, Duda, & Ntoumanis, 2003). Research has centered around two dimensions of the motivational climate, namely mastery (or task-involving) climates and performance (or ego-involving) climates (Standage, Duda, et al., 2003). Mastery climates are characterized by learning, mastery, trial and error, while performance climates are characterized by social comparison, interpersonal competition and feedback based on results (Nicholls, 1984). Mastery climates are associated with intrinsic motivation and positive affect (Ntoumanis & Biddle, 1999), which is consistent with SDT, while performance climates are associated with decreased intrinsic motivation (Mallett & Hanrahan, 2004). How athletes define competence in an achievement setting, whether it is

performance-oriented or mastery oriented, will result in different outcomes. Perceived competence is therefore the goal of action in AGT (Pensgaard & Roberts, 2002). Although SDT and AGT share certain characteristics (i.e., the way athletes construe the meaning of an activity will influence the outcome), each theory focuses on a different body of meaning (Ntoumanis, 2001a). Specifically, AGT focuses primarily on the effects of task and ego involvement on performance, while SDT investigates the effects of goal involvement on intrinsic motivation (Ntoumanis, 2001a). In addition, both theories emphasize that perceived competence plays a key role in regulating performance behavior (Ntoumanis, 2001a). However, AGT distinguishes between a differentiated and a undifferentiated conception of competence (Nicholls, 1989), while SDT views competence as a unitary need (Ntoumanis, 2001a). As a result, SDT has been criticized for promoting one rather than another conception of competence (Butler, 1989). On the other hand, AGT can be criticized for placing too much emphasis on perceived competence (Ntoumanis, 2001a). This can lead to an incomplete understanding of motivation in achievement contexts, such as sport. Athletes also strive to make their own choices (i.e. need for autonomy) and feel connected to each other in a meaningful way (i.e. need for relatedness)(Ntoumanis, 2001a).

One could argue for the benefit of using AGT ahead of SDT in the present study, especially considering that the sample consists of elite junior athletes. Elite athletes spend a lot of time with others, whether it be coaches, team members or others (Pensgaard & Roberts, 2002). The perceived climate is therefore particularly important for elite athletes; it influences their lives to a greater extent, compared to athletes at lower levels who spend most of their time away from team members etc. (Pensgaard & Roberts, 2002). Dispositional and situational factors in the perceived climate can either promote an ego-orientation, a task-orientation or a combination of these (Mallett & Hanrahan, 2004). AGT predicts that elite sport is characterized by ego-involvement, because of the focus on winning (Duda, Chi, Newton, Walling, & Catley, 1995). However, Pensgaard and Roberts (2002) found that elite athletes primarily benefit from a mastery climate. This study showed that all athletes displayed high task orientation and moderate to high ego orientation. Roberts (2001) concluded that although scientists have argued that ego-involvement is necessary for success as an elite athlete, it is advantageous to be task-involved, even for elite athletes who show high ego orientation.

4.2 Stengths and limitations

One of the strengths of this study is that the sample is very diverse with regard to sport activity. Participants take part in over fifteen different sports, making findings more generalizable across sports activites. The large amount of activities is in contrast to many other studies containing youth athletes, which contain fewer activities. Another strength in this study is the day reconstruction method. Analyzing multiple training episodes, compared with fewer episodes, contributes to increased statistical power. In addition the results will to a greater extent capture the variations in athletes' experiences.

One major limitation of this study is the cross-sectional design. Firstly, by not using an experimental design we can't be assured of the directions of the relationships between the variables. Is it challenge during training that enhances athletes' well-being, or is it their subjective well-being that determines their perceptions of challenge? Is it motivation that determines sport activity, or is it sport activity that determines motivation? Applying longitudinal or experimental designs would more accurately examine the relationships between sport activity, motivation and well-being. Secondly, a cross-sectional study is only a snapshot of reality. If the study was conducted in another timeframe, the situation may have produced different results. Another limitation is the retrospective nature of episodic sampling. By reconstructing past events, participants may have been exposed to memory bias. On the other hand, they were asked to render today's or yesterday's training, so memory bias may not have been as significant. Finally, this sample consists of elite junior athletes. Research on this group is sparse (Armstrong & Mc Manus, 2010; Mallett & Hanrahan, 2004) and the basis of comparison with other studies may consequently have its limitations.

4.3 Future research

Future research should consider longitudinal and experimental investigations, in order to get a better understanding of motivational processes in sport in young athletes. It would be appropriate to longitudinally analyze motivational profiles with larger and more culturally diverse samples, particularly aimed at elite junior athletes. It would also be interesting to pursue the work of Gillet, Vallerand, et al. (2012) and look into motivation and well-being, and their relationship with performance in sports. Particularly how eudaimonia and hedonia differ in terms of feelings and impact on behavior, and how challenging training episodes is

associated with well-being and performance.

5. Conclusion

Our findings are in line with self determination theory's predictions regarding intrinsic motivation and well-being, and the functional well-being approach predictions regarding a eudaimonic-challenge association. The results show that about half of the hypotheses were confirmed, most of them related to well-being. All groups reported more intrinsic motivation, compared with extrinsic motivation. Self-determination theory and the functional well-being approach proved to be helpful theories in predicting motivation and well-being in elite junior athletes. Self-determination theory is highly recognized and well documented, but more research is needed across cultures, among elite junior athletes and how the three basic psychological needs work together. The functional well-being approach is with positive psychology at an early stage and has several challenges related to definitions, analysis and development.

The present findings highlight the importance of considering motivational, challenge and especially emotional differences in the sport domain as a function of among other year of education and private vs. public school. They also offer several guidelines for further research, e.g. through more experimental studies of the relationship between motivation, eudaimonic and hedonic well-being and performance. This research expands our psychological knowledge within the sports domain and can be used by athletes to exploit the physical requirements of the sport.

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APPENDIX A

Questionnaire

MORGENDAGENS TOPPUTØVERE HØST 2012

Prestasjonsutvikling i videregående skole.

Vi ønsker din deltagelse i prosjektet *Prestasjonsutvikling i videregående skole*. Prosjektet er en del av satsningen på morgendagens utøvere innenfor idrettsfag i videregående skole.

Alle opplysningene i undersøkelsen vil bli behandlet konfidensielt. Verken skolens ledelse eller lærere vil være i kontakt med de enkelte besvarelsene. Resultatene vil bli presentert slik at verken den enkelte deltaker eller skole kan bli gjenkjent. Undersøkelsen er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelige datatjeneste (NSD) AS. Resultatene fra undersøkelsen vil bli benyttet til å kvalitetssikre tilbudene på de enkelte skolene og undersøke interessante problemstillinger i samarbeid med NTNU.

For å få så sikre resultater som mulig, må vi enkelte ganger stille flere spørsmål om samme sak. Det betyr at du finner flere spørsmål som kan se ganske like ut. Vi ber om at du leser hvert spørsmål nøye og besvarer det så ærlig som mulig uten å tenke på de andre spørsmålene. **Hvert spørsmål i må besvares for å komme videre i undersøkelsen.**

På forhånd takk for hjelpen!
Din identitet vil holdes skjult
Les om retningslinjer for personvern. (Åpnes i nytt vindu)

1) * Hvilken videregående skole går du på?

- Heimdal
- Strinda
- Oppdal
- Melhus
- Meråker
- Steinkjer
- Verdal
- NTG

2) * Hvilken idrett driver du med?

- Langrenn
- Skihopp
- Kombinert
- Skiskyting
- Håndball
- Friidrett
- Fotball
- Ishockey

- Skyting
- Volleyball
- Skøyter
- Alpint
- Sykkel
- Orientering
- Annen idrett

3) * Kjønn

- Mann
- Kvinne

4) * Hvilket videregående trinn går du på?

- VK1
- VK2
- VK3
- VK4

Ta utganspunkt i siste konkurransesesong og vurder i hvor stor grad du er fornøyd med din egen utvikling på en skala hvor 1=svært missfornøyd, og 7=Svært fornøyd.

5) * Jeg er fornøyd med ...

	(1) Svært missfornøyd	(2) Meget missfornøyd	(3) Missfornøyd	(4) Hverken, eller	(5) Fornøyd	(6) Meget fornøyd	(7) Svært fornøyd
... mine måloppnåelser under siste sesong.							
... min idrettslige utvikling under siste sesong.							
... utviklingen av mine prestasjoner under siste sesong.							
... utviklingen av mine idrettsspesifikke kapasiteter under siste sesong.							

6) * I hvor stor grad er du fornøyd med din skolefaglige utvikling det siste året?

- (1) Svært missfornøyd
- (2) Meget missfornøyd
- (3) Missfornøyd

- (4) Hverken/ eller
- (5) Fornøyd
- (6) Meget fornøyd
- (7) Svært fornøyd

Nedenfor finner du en del påstander som passer mer eller mindre godt for ulike mennesker.

7) * Hvor godt stemmer disse påstandene for deg?

	(1) Svært uenig	(2) Uenig	(3) Både/og	(4) Enig	(5) Svært enig
Jeg nyter å hanskes med problemer som er helt nye for meg.					
Jeg nyter å forsøke å løse kompliserte problemer.					
Jo vanskeligere problem, dess mer nyter jeg å forsøke å løse det.					
Når jeg deltar i en aktivitet, har jeg en tendens til å bli så involvert at jeg "glemmer tiden".					
Når jeg er intenst interessert i noe, skal det mye til for å avbryte meg.					
Mine venner vil beskrive meg som "ekstremt intens" når jeg er midt oppe i noe.					
Jeg tror på betydningen av kunst.					
Jeg elsker å komme på nye måter å gjøre ting på.					
Jeg liker å høre om nye ideer.					
Jeg kan utføre en rekke ulike oppgaver.					
Jeg møter gjerne utfordrende oppgaver.					
Jeg vet hvordan jeg skal anvende mine kunnskaper.					

Nedenfor står fem utsagn om tilfredshet med livet som et hele. Vis hvor godt eller dårlig hver påstand stemmer for deg og ditt liv ved å krysse av for det tallet som stemmer best for deg.

8) * Hvor godt stemmer disse utsagnene for deg?

	(1) Stemmer dårlig.	(2)	(3)	(4)	(5)	(6)	(7) Stemmer perfekt.
På de fleste måter er livet mitt nær idealet mitt.							
Mine livsforhold er utmerkede.							
Jeg er tilfreds med livet mitt.							
Så langt har jeg fått de betydningsfulle tingene jeg ønsker i livet.							
Hvis jeg kunne leve livet på nytt, ville jeg nesten ikke forandret på noe.							

I denne delen av undersøkelsen skal du ta stilling til utsagn som undersøker hvorfor du driver med idrett. Vurder utsagnene på en skala fra 1=passer ikke i det hele tatt, til 7= passer helt perfekt.

9) * Jeg driver med idrett...

	1= Passer ikke i det hele tatt	2	3	4	5	6	7= Passer helt perfekt
... fordi jeg synes at denne aktiviteten er interessant.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg gjør det for min egen skyld.	☐	☐	☐	☐	☐	☐	☐
... fordi det er forventet at jeg skal gjøre det.	☐	☐	☐	☐	☐	☐	☐
... det er kanskje mange gode grunner for å gjøre denne aktiviteten, men personlig så ser jeg ingen.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg synes at denne aktiviteten er behagelig / trivelig.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg tror at denne aktiviteten er bra for meg.	☐	☐	☐	☐	☐	☐	☐
... fordi det er noe jeg må gjøre.	☐	☐	☐	☐	☐	☐	☐
... jeg gjør denne aktiviteten, men jeg er ikke sikker på at det er verdt det.	☐	☐	☐	☐	☐	☐	☐
... fordi denne aktiviteten er artig / morsom.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg har valgt det selv.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg ikke hadde noe valg.	☐	☐	☐	☐	☐	☐	☐
... jeg vet ikke. Jeg ser ikke helt hva denne aktiviteten gir meg.	☐	☐	☐	☐	☐	☐	☐
... fordi det føler godt å gjøre denne aktiviteten.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg mener at denne aktiviteten er viktig for meg.	☐	☐	☐	☐	☐	☐	☐
... fordi jeg føler at jeg må gjøre det.	☐	☐	☐	☐	☐	☐	☐
... jeg driver med denne aktiviteten, men jeg er ikke sikker på om det er riktig å fortsette.	☐	☐	☐	☐	☐	☐	☐

Episoder i løpet av treningen (Les dette nøye!).

I den neste delen av spørreskjemaet skal vi se nærmere på hendelser og opplevelser du hadde i forbindelse med treningen i dag (evt. i går om du ikke har trent i dag). Vi ber deg bruke noen minutter til å lage en liten "dagbok" fra treningen, der du skriver ned hva du gjorde og hvilke

opplevelser du hadde i forbindelse med treningen.

Tenk på det som skjedde i forbindelse med treningsøkten som om det var en serie episoder i en film. En slik episode kan for eksempel være oppvarming, samtale med treneren, gjennomføring av intervaller eller når du tøyde ut. Vanligvis varer slike episoder mellom 10 minutter og to timer, og du skal gjengi **4 forskjellige episoder** fra treningen. Gi hver episode et kort navn, og skriv ned omtrent når hver episode begynte og når den sluttet. Fortell litt om hva du gjorde, hvilke oppgaver du holdt på med, hvor episoden fant sted, hvem du var sammen med. Etter at du har gitt disse opplysningene, ber vi deg svare på noen spørsmål om hvordan du opplevde denne episoden.

10) * NAVN PÅ EPISODE 1

11) Episoden startet kl: (eks. 15:30)

12) Episoden sluttet kl: (eks. 15:40)

13) * BESKRIVELSE AV EPISODE 1

Her skal du beskrive hvordan du følte deg under episoden. Vennligst oppgi hvor mye du følte av hver av følelsene under. Marker ved det tallet som best beskriver dine følelser under episoden.

0= Nei, ikke i det hele tatt, og 6=Ja, i høyeste grad.

14) * I løpet av denne episoden følte jeg meg...

	0	1	2	3	4	5	6
Tilfreds	☐	☐	☐	☐	☐	☐	☐
Fylt av velbehag	☐	☐	☐	☐	☐	☐	☐
Lykkelig	☐	☐	☐	☐	☐	☐	☐
Glad	☐	☐	☐	☐	☐	☐	☐
Redd	☐	☐	☐	☐	☐	☐	☐
Sint	☐	☐	☐	☐	☐	☐	☐
Trist	☐	☐	☐	☐	☐	☐	☐
Engasjert	☐	☐	☐	☐	☐	☐	☐
Interessert	☐	☐	☐	☐	☐	☐	☐
Entusiastisk	☐	☐	☐	☐	☐	☐	☐
Oppslukt	☐	☐	☐	☐	☐	☐	☐

Kryss av under det tallet som best beskriver hvordan du bedømte dine ferdigheter i løpet av denne episoden.

15) * I denne episoden var mine ferdigheter:

	1 Svært dårlige	2	3	4	5	6	7 Svært gode
bedømmelse av ferdigheter...	○	○	○	○	○	○	○

Beskriv i hvor stor grad du opplevde denne episoden som utfordrende. 1= Veldig lite utfordrende, og 7= Veldig utfordrende.

16) * Hvor utfordrende var denne episoden?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Beskriv i hvor stor grad episoden ga deg mulighet til å vise frem ditt potensial. 1= I veldig liten grad, 7= I veldig stor grad.

17) * I hvor stor grad ga episoden meg mulighet til å utrykke mitt egentlige potensial?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

18) * NAVN PÅ EPISODE 2

19) Episoden startet kl: (eks. 15:30)

20) Episoden sluttet kl: (eks. 15:40)

21) * BESKRIVELSE AV EPISODE 2

Her skal du beskrive hvordan du følte deg under episoden. Vennligst oppgi hvor mye du følte av hver av følelsene under. Marker ved det tallet som best beskriver dine følelser under episoden.

0= Nei, ikke i det hele tatt, og 6=Ja, i høyeste grad.

22) * I løpet av denne episoden følte jeg meg...

	0	1	2	3	4	5	6
Tilfreds	☐	☐	☐	☐	☐	☐	☐
Fylt av velbehag	☐	☐	☐	☐	☐	☐	☐
Lykkelig	☐	☐	☐	☐	☐	☐	☐
Glad	☐	☐	☐	☐	☐	☐	☐
Redd	☐	☐	☐	☐	☐	☐	☐

Sint	☐	☐	☐	☐	☐	☐	☐
Trist	☐	☐	☐	☐	☐	☐	☐
Engasjert	☐	☐	☐	☐	☐	☐	☐
Interessert	☐	☐	☐	☐	☐	☐	☐
Entusiastisk	☐	☐	☐	☐	☐	☐	☐
Oppslukt	☐	☐	☐	☐	☐	☐	☐

Kryss av under det tallet som best beskriver hvordan du bedømte dine ferdigheter i løpet av denne episoden.

23) * I denne episoden var mine ferdigheter:

	1 Svært dårlige	2	3	4	5	6	7 Svært gode
bedømmelse av ferdigheter...	○	○	○	○	○	○	○

Beskriv i hvor stor grad du opplevde denne episoden som utfordrende. 1= Veldig lite utfordrende, og 7= Veldig utfordrende.

24) * Hvor utfordrende var denne episoden?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Beskriv i hvor stor grad episoden ga deg mulighet til å vise frem ditt potensial. 1= I veldig liten grad, 7= I veldig stor grad.

25) * I hvor stor grad ga episoden meg mulighet til å utrykke mitt egentlige potensial?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

26) NAVN PÅ EPISODE 3

27) Episoden startet kl: (eks. 15:30)

28) Episoden sluttet kl: (eks. 15:40)

29) BESKRIVELSE AV EPISODE 3

Her skal du beskrive hvordan du følte deg under episoden. Vennligst oppgi hvor mye du følte av hver av følelsene under. Marker ved det tallet som best beskriver dine følelser under episoden.

0= Nei, ikke i det hele tatt, og 6=Ja, i høyeste grad.

30) I løpet av denne episoden følte jeg meg...

	0	1	2	3	4	5	6
Tilfreds	☐	☐	☐	☐	☐	☐	☐
Fylt av velbehag	☐	☐	☐	☐	☐	☐	☐
Lykkelig	☐	☐	☐	☐	☐	☐	☐
Glad	☐	☐	☐	☐	☐	☐	☐
Redd	☐	☐	☐	☐	☐	☐	☐
Sint	☐	☐	☐	☐	☐	☐	☐
Trist	☐	☐	☐	☐	☐	☐	☐
Engasjert	☐	☐	☐	☐	☐	☐	☐
Interessert	☐	☐	☐	☐	☐	☐	☐
Entusiastisk	☐	☐	☐	☐	☐	☐	☐
Oppslukt	☐	☐	☐	☐	☐	☐	☐

Kryss av under det tallet som best beskriver hvordan du bedømte dine ferdigheter i løpet av denne episoden.

31) I denne episoden var mine ferdigheter:

	1 Svært dårlige	2	3	4	5	6	7 Svært gode
bedømmelse av ferdigheter...	○	○	○	○	○	○	○

Beskriv i hvor stor grad du opplevde denne episoden som utfordrende. 1=Veldig lite utfordrende, og 7= Veldig utfordrende.

32) Hvor utfordrende var denne episoden?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Beskriv i hvor stor grad episoden ga deg mulighet til å vise frem ditt potensial. 1= I veldig liten grad, 7= I veldig stor grad.

33) I hvor stor grad ga episoden meg mulighet til å utrykke mitt egentlige potensial?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

34) NAVN PÅ EPISODE 4

35) Episoden startet kl: (eks. 15:30)

36) Episoden sluttet kl: (eks. 15:40)

37) BESKRIVELSE AV EPISODE 4

Her skal du beskrive hvordan du følte deg under episoden. Vennligst oppgi hvor mye du følte av hver av følelsene under. Marker ved det tallet som best beskriver dine følelser under episoden.

0= Nei, ikke i det hele tatt, og 6=Ja, i høyeste grad.

38) I løpet av denne episoden følte jeg meg...

	0	1	2	3	4	5	6
Tilfreds	☐	☐	☐	☐	☐	☐	☐
Fylt av velbehag	☐	☐	☐	☐	☐	☐	☐
Lykkelig	☐	☐	☐	☐	☐	☐	☐
Glad	☐	☐	☐	☐	☐	☐	☐
Redd	☐	☐	☐	☐	☐	☐	☐
Sint	☐	☐	☐	☐	☐	☐	☐
Trist	☐	☐	☐	☐	☐	☐	☐
Engasjert	☐	☐	☐	☐	☐	☐	☐
Interessert	☐	☐	☐	☐	☐	☐	☐
Entusiastisk	☐	☐	☐	☐	☐	☐	☐
Oppslukt	☐	☐	☐	☐	☐	☐	☐

Kryss av under det tallet som best beskriver hvordan du bedømte dine ferdigheter i løpet av denne episoden.

39) I denne episoden var mine ferdigheter:

	1 Svært dårlige	2	3	4	5	6	7 Svært gode
bedømmelse av ferdigheter...	○	○	○	○	○	○	○

Beskriv i hvor stor grad du opplevde denne episoden som utfordrende. 1=Veldig lite utfordrende, og 7= Veldig utfordrende.

40) Hvor utfordrende var denne episoden?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Beskriv i hvor stor grad episoden ga deg mulighet til å vise frem ditt potensial. 1= I veldig liten grad, 7= I veldig stor grad.

41) I hvor stor grad ga episoden meg mulighet til å utrykke mitt egentlige potensial?

1 2 3 4 5 6 7

I det følgende presenteres 14 påstander som sier noe om når du føler deg mest vellykket på trening og konkurranse. For hver påstand skal du ta stilling til hvor enig eller uenig du er, hvor 1= Svært uenig, og 5= Svært enig.

42) * I hvilken grad passer disse utsagnene for deg?

	(1) Svært uenig	(2) Uenig	(3) Hverken enig eller uenig	(4) Enig	(5) Svært enig
Jeg møter gjerne utfordrende arbeidsoppgaver som jeg kan lære av.					
Det er viktig for meg å vise at jeg kan gjøre arbeidsoppgavene mine på en bedre måte enn mine kolleger.					
Jeg ser ofte etter muligheter til å kunne utvikle nye ferdigheter.					
Jeg er opptatt av hvordan jeg kan fremstå som dyktig ovenfor de andre utøverne i laget.					
Jeg trives med utfordrende og vanskelige arbeidsoppgaver som kan lære meg noe nytt.					
Jeg liker det når andre utøvere ser hvor flink jeg er i idretten min.					
Det er så viktig for meg å kunne utvikle meg som utøver at jeg gjerne tar sjanser på å prøve å feile litt.					
Jeg foretrekker arbeidsoppgaver som gjør det mulig å fremstå som dyktig ovenfor de andre utøverne på laget.					
Jeg liker å arbeide med krevende arbeidsoppgaver som stiller høye krav til dyktighet og talent.					
Jeg er villig til å velge utfordrende arbeidsoppgaver for å lære mest mulig.					
Jeg ser ofte etter muligheter til å utvikle nye ferdigheter og ny kompetanse.					
Jeg liker utfordrende og vanskelige oppgaver hvor jeg lærer noe nytt.					
Det er viktig å ta risiko for at jeg skal lære og kunne utvikle min kapasitet.					
Jeg foretrekker å arbeide i situasjoner som er krevende i forhold til mine evner og talent.					

Les utsagnene nedenfor nøye og vurder om du føler deg slik vedrørende din deltagelse i din idrett. Din deltagelse i idrett inkluderer all trening og aktivitet du har gjennomført i løpet av det siste året. Vurder om du har hatt tanker eller følt deg slik på en skala hvor 1= "Jeg har aldri følt meg slik", og 5= "Jeg føler meg slik det meste av tiden". Det er ikke noe rett eller galt svar på spørsmålene.

43) * Min deltagelse i idrett...

	Jeg har aldri følt meg	Jeg føler meg	Jeg føler meg	Jeg føler meg slik av	Jeg føler meg slik det meste av

	slik (1)	sjelden slik (2)	hverken/ eller (3)	og til (4)	tiden (5)
Jeg klarer å oppnå mye som er verdifullt i min idrett.	○	○	○	○	○
Jeg føler meg så sliten etter trening at jeg har trøbbel med å finne energi til andre ting.	○	○	○	○	○
Den energien jeg bruker på idretten min ville gitt bedre avkastning på andre områder.	○	○	○	○	○
Jeg føler meg altfor sliten som følge av deltagelse i min idrett.	○	○	○	○	○
Jeg presterer ikke spesielt bra i min idrett.	○	○	○	○	○
Jeg bryr meg ikke om mine idrettsprestasjoner i den grad jeg gjorde før.	○	○	○	○	○
Jeg presterer ikke opp mot mine evner i min idrett.	○	○	○	○	○
Jeg føler meg tom som en følge av min idrett.	○	○	○	○	○
Jeg bryr meg ikke like mye om min idrett som jeg en gang gjorde.	○	○	○	○	○
Jeg føler meg fysisk utslitt som en følge av min idrett.	○	○	○	○	○
Jeg føler meg mindre bekymret angående mine prestasjoner i idrett enn jeg gjorde tidligere.	○	○	○	○	○
Jeg føler meg utkjørt av de mentale og fysiske kravene i min idrett.	○	○	○	○	○
Det ser ut til at uansett hva jeg gjør, så presterer jeg ikke så godt som jeg egentlig kan.	○	○	○	○	○
Jeg føler meg suksessfull i min idrett.	○	○	○	○	○
Jeg har negative følelser knyttet til min idrett.	○	○	○	○	○

44) Eventuelle kommentarer.