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The Youth Olympic Games: a facilitator or barrier of the high-performance sport development pathway?

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The Youth Olympic Games: A facilitator or barrier of the high performance sport development pathway?

Abstract

Research question: This paper examined the impact of participation in YOG on Norwegian team members with a particular emphasis on differences between those who continued in elite sport and those that dropped out.

Research methods: We used a retrospective survey design to collect quantitative and qualitative data from former Norwegian YOG participants (from 2010, 2012, and 2014), with 58 of the 64 athletes responding to the survey in December 2015.

Results and Findings: Ericsson et al.'s typology of constraints and their concept of deliberative practice provided the framework for the data analysis. Key findings include: a) the dropout rate was lower than that reported for similar groups; b) the main reasons for dropout were school pressures and poor relations with the coach; c) there was little difference in the perceived level of support from schools, parents and coaches between those who dropped out and those who did not; d) participation in the YOG was a significant motivating factor for staying in elite level sport for some athletes; e) medal winners were as likely to dropout as non-medal winners; and f) the national context for elite youth development may play a larger role in deeper engagement in sport than YOG participation. We derive hypotheses/propositions based on our results, which should be tested in future studies.

Implications: Our findings suggest the entourage's support is critical for continued engagement in sport, but is not sufficient for preventing dropout. The national context, in terms of the sport and education systems, must align to ensure young athletes do not need to choose between elite-level sport and school. The national context may play a larger role in deeper engagement in sport than YOG participation/success.

Keywords: Norway, Youth Olympic Games, sport development, engagement, dropout

The Youth Olympic Games: A facilitator or barrier of the high performance sport development pathway?

In February 2016, Norway hosted the second edition of the winter Youth Olympic Games (YOG) in Lillehammer. *As a recognized winter sport nation and host of the 1994 Olympic Winter Games in Lillehammer, the region came out to support the hosting of the YOG (Holthe & Skille, 2017). However,* Norwegian sport organizations were initially reluctant to support the YOG concept *and its hosting. To wit, Norway sent* only five athletes (aged 15-18) to the first summer Games in Singapore in 2010. The sentiment *appeared to* change when Norway became the host nation for the 2016 winter YOG in 2011, and a bigger team of *28* athletes was quickly selected and sent to Innsbruck for the first winter YOG in 2012 (Kristiansen, 2015).

The Norwegian ambivalence towards elite youth sport competitions such as the YOG *should* be understood in a historical context, specifically in relation to the rules governing children's sport in Norway, which are designed to restrict the exposure of young people to intense competition particularly at the international level (Skirstad, Waddington, & Safvenbom, 2012). *For example, at the age of 11, lists of results, tables and rankings may be used but, the athletes are only allowed to compete at national and international championships from the year they turn 13.* The concern of the nation's governing body *Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF) to protect the young from intense competition* had to be balanced against the country's strong commitment to winter sports and particularly the winter Olympic *Games*. At the time of the bid for the 2016 *winter YOG in 2011*, the Norwegian government and NIF were considering a bid for the 2022 Olympic Winter Games, and the bid to host the 2016 *winter YOG* was seen as a way *to demonstrate* the country's commitment to the Olympic Movement. *Furthermore,*

the Norwegian YOG bid was **undoubtedly** helped by the lack of other bids and the clear signals of support received from the **International Olympic Committee (IOC)**.

An important element in the context of the bid for the 2016 winter YOG was inauguration of in 2011 of a ten-year youth campaign called *Ungdomsløftet* [youth promotion] designed to increase the involvement of youth in all aspects of sport (Kristiansen, 2017). The tension between NIF's youth policy and the organisation's desire to strengthen links with the Olympic Movement was managed by emphasising the developmental value of the YOG for the young athletes. Similarly, many of the Olympic Movement's values and the collection of experiences for the athletes attending and participating in the YOG, are a part of the *Culture and Education Program* – renamed *Learn and Share* after the 2012 edition (IOC, 2014a). Schnitzer et al. (2014) noted 'the YOG gives young sportsmen and sportswomen the chance to compete in an intercultural environment very early in their careers but more importantly the event facilitates education and character building education related to personal development' (Schnitzer, Peters, Scheiber, & Pocecco, 2014, p. 12). Due to the educational aspect of YOG, the Norwegian Olympic Top Sport Program (*Olympiatoppen*), argued that, for the different national sport federations, the YOG and the European Youth Olympic Festival are *learning opportunities* for the young athletes, and the young athletes' experiences at these Games could help them in their future athletic careers (Kristiansen, 2016). This sentiment is analogous with the IOC's claim that 'young people attending the Youth Olympic Games will go on to become Olympians' (Rogge, 2008, p. 9). To become an Olympian (i.e., to participate in the Olympic (Winter) Games), a dream for many YOG athletes (Kristiansen, 2015), and to excel as 'senior' athletes, previous international Games experiences can be a significant stepping stone towards deeper engagement in high performance sport (Gould, Dieffenbach, & Moffett, 2002). For example, 64 former YOG athletes competed at the Sochi 2014 Olympic Winter Games; they represented 34 National

Olympic Committees and won 6 medals (IOC, 2015). This number was significantly higher at the Rio 2016 Olympic Games, with nearly 500 former YOG athletes competing at the Games and winning 80 medals, up from the 193 Singapore 2010 alumni who competed in London 2012 and won 25 medals (IOC, 2016b). Moreover, previous research confirmed the significance of participation in YOG for the athlete career of young athletes (Peters & Schnitzer, 2015).

Although the former IOC President, Jacques Rogge, presented the YOG idea as a means to help combat obesity and increase sport participation (IOC, 2007), the IOC also saw the YOG as a marketing opportunity to target the younger demographic, both athletes and consumers, to ensure they continue to be engaged in the Olympic Movement (IOC, 2012). Notwithstanding the possible benefits accruing to young athletes noted above (e.g., potential pathway to Olympic Games medals), the YOG concept continues to be questioned by internal (e.g., international federations and IOC members) and external (e.g., academics and media) stakeholders in the Olympic Movement (Hanstad, Parent & Kristiansen, 2013; Judge, Petersen, & Lydum, 2009; Wong, 2011).

While there is evidence of an increasing number of YOG participants continuing their athletic careers and competing at Olympic level, there is little systematic analysis of the impact of YOG participation on future career decisions. This paper examined the degree to which preparations for participations in the YOG fosters continued involvement in high performance sport (cf., De Bosscher, Bingham, & Shibli, 2008). Specifically, the study considered in what way(s), if any, does preparation for and competition at the YOG foster retention in sport.

Literature Review and Conceptual Framework

Young athletes' success is in part attributed to individual skill and the management decisions giving them appropriate opportunities to compete at the highest level such as World Championships and chase the 'Olympic Dream' (Andersen, Houlihan, & Roglan, 2015). According to Sotiriadou and De Bosscher (2013), the factors contributing to international success can be explored from macro, meso and micro perspectives. In this study, we focus on the micro level in terms of managing elite youth athletes and the processes affecting their development and retention in elite level sport. Aspects influencing young athlete development include being selected for an international competition where they can gain experience (e.g., Baker & Young, 2014); having the right support system/entourage (e.g., family and coaches) where they can garner emotional and technical support (e.g., Kristiansen, Roberts, & Lemyre, 2015); and being able to handle a dual career of education and sport competition (e.g., Wylleman & Lavallee, 2004). The literature has identified a number of factors potentially influencing sport participation, such as personal characteristics (e.g., gender, age, and ethnicity), psychological predispositions (e.g., motivations and attitudes), socio-cultural influences (e.g., household socioeconomic status, family support and peer influence), and situational/environmental factors (e.g., transportation, urban versus rural location, and school size) (for more details, see Vander Kloet et al., 2007). However, studies which focus on the factors affecting the participation of athletes who are already competing at the elite level are less common.

Enoksen (2011) conducted a longitudinal study of dropout among 300 young elite Norwegian track and field athletes on three occasions (1975, 1983 and 1989). According to Enoksen the 'three most commonly mentioned reasons for dropping out of track and field throughout the longitudinal study were injuries (24.3%), school priority (21.4%) and lack of motivation (20.7%)' (2011, p. 28). Enoksen (2011) summarises the main reasons for

withdrawal from sport identified in the literature under five headings: 1) training and performance factors (such as lack of improvement in performance and serious/recurring injury); 2) education and work obligations and the general problem of managing a dual career; 3) motivational aspects (perhaps the result of failure to achieve personal goals, poor training facilities, poor relationship with coaches); 4) social factors (lack of a supportive family and peer network); and 5) transfer to other sports/activities (whether sporting or social activities). **Enoksen's findings reinforce Swain's (1991) conclusion that the withdrawal from elite level sport is both a complex and a multifactorial process. Enoksen's conclusions also add substance to Klint and Weiss's (1986) typology of elite dropout: the reluctant (for example, those dropping out due to injury or lack of resources); the voluntary (for example, those who have lost the necessary motivation); and the resistant (for example, those who are dropped from elite squads).**

The high attrition rate among promising young elite athletes comes at a time of an increasing number of youth competitions and an intensification of the pressure to succeed. The combined effect has led many nations to redesign their talent development systems (Barreiros, Cote, & Fonseca, 2014), and to sharpen the focus on elite youth sport competitions and how they contribute to athletes development (De Bosscher et al., 2008). In order to explore the specific impact of YOG participation on an athlete's career and development, we adopted the analytical framework developed by Ericsson, Krampe, and Tesch-Roemer (1993), which focused on three particular factors (i.e., resources, effort and motivation) within the broader concept of 'deliberate practice' in the context of pursuing an elite career. These three factors resonate with much of the existing knowledge on young athlete dropout – particularly the work of Enoksen (2011), Molinero et al. (2006) Koukouris (1991) and Kreim and Mayer (1985). The adoption of Ericsson et al.'s (1993) analytical framework acknowledges that many activities requiring cognitive or physical effort do not

usually lead to immediate personal, social or financial rewards, and are done with the purpose of improving performance. The role of competitions such as the YOG is one means to do so, as middle adolescence athletes (i.e., 15-18 years, see Weiss & Bredemeier, 1983) have developed the skills needed (physical, cognitive, social, emotional, motor skills) to invest in highly specialized training (Cote, Lidor, & Hackfort, 2009) by this time.

The first constraint is *resources*, according to Ericsson et al. (1993), and a special emphasis is given to the role of parents both in the recognition of talent as well in meeting the cost of the talent development (Chambliss, 1989). The parents' role has been examined for decades (e.g., Appleton, Hall, & Hill, 2010; Bloom, 1985; Kay, 2000; Keegan, Spray, Harwood, & Lavelle, 2010; Trussell & Shaw, 2012), in particular during an athlete's entry into elite sport – as this is a critical development phase, where dedication and specialisation may be perceived differently by the athletes. Athletes have to make sacrifices in order to become an elite athlete (Gould, Guinan, Greenleaf, & Chung, 2002; Holt & Dunn, 2004; Wolfenden & Holt, 2005), which is typical for the specializing years (Côté, 1999). Financial resources may also become a constraint for athletes. In Norway, access by young athletes to an elite sport career seems increasingly dependent on socioeconomic status, specifically parental wealth and resources (Kristiansen & Houlihan, 2015) a finding which adds weight to the evidence which indicates that Olympic sport participation is heavily skewed in favour of those from upper income groups (Smith, Haycock, & Hulme, 2013).

The second constraint, *effort* (Ericsson et al., 1993), focuses on the athletes' need for balancing competition, training and recovery. When introducing competitions for younger athletes, early specialization and higher training volume may also increase the risk of overuse injuries and burnout among young athletes (DiFiori et al., 2014). Thus, on the one hand, having the 'best' young athletes compete at the YOG may increase premature dropout (Bergeron et al., 2015; LaPrade et al., 2016), but on the other hand, it may also foster deeper

engagement in sport (e.g., toward the Olympic Games). The latter may be fuelled when a young athlete is selected for a national team, as it often introduces them to dedicated elite-level coaches. However, whether YOG participation fosters or hinders deeper engagement in high performance sport remains uncertain. Further, and added to the balance between competition, recovery and training, is the fact the YOG age group athletes are also high school-level students, and thus pursuing a dual career (De Knop, Wylleman, Van Houcke, & Bollaert, 1999). In Norway, for example, a dual career is most common during the high school years. Once they have finished high school at age 19, some athletes choose to pursue an elite sport career, while others reduce training and commit to higher education. Enabling young athletes to pursue a dual career is increasingly recognised by both individual governments (Aquilina, 2009) and by the IOC (IOC, 2014b) as an important aspect of effective development. The IOC now offers an online platform, *IOC Athlete MOOC (Massive Open Online Course)*, which deliver free educational content to elite athletes around the world, though the topics are related to how to become better athletes. The IOC's concern with facilitating the pursuit of dual career is in line with the YOG's twin objectives of promoting education and high-performance sport.

The third constraint, labelled the *motivational* constraints, relates to the fact practice is not always fun and young athletes need to perceive an instrumental value in improving performance. Ericsson et al. (1993) highlighted parents' role in this regard, as parents may transmit their knowledge and motivation for pursuing sport. For example, in the Lillehammer 2016 men's gold medal winning United States hockey team, seven of the 17 15-year-old athletes had fathers with previous NHL experience (USA Hockey, 2015). Thus, it may be advantageous for young athletes to get support to pursue their ambitions from parents as well as from coaches who believe in them. A competitive experience is rated as being extremely important for elite athlete development (e.g., Young & Salmela, 2002), though data from

different sports have been contradictory in terms of the degree of importance (Baker & Young, 2014). However, if the goal is to help young athletes to learn to cope with competitive stress (Nicholls, Holt, Polman, & James, 2005), time spent in competition is vital in particular for the less 'experienced' athletes (Kristiansen & Roberts, 2010). From a developmental perspective, it is important that athletes learn basic competencies to cope with the competitive sport environment. Each additional iteration from competing in a sport event then becomes an important step towards the athlete learning the coping mechanisms needed to succeed in sport. Generally, younger athletes have a more limited coping repertoire (Holt, Hoar, & Fraser, 2005; Kristiansen & Roberts, 2010), and may perceive added stressors due to the novelty of the event which may lead to lack of concentration, anxiety and lost self-confidence (Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999). Making it to the YOG may be a stepping stone for some athletes and parents (Hanstad et al., 2013; Kristiansen, 2015), and may have a long lasting effect on the athletes' ability to learn to cope as well as their motivation to pursue future sport competitions (Gould et al., 1999). However, early selection will be problematic for those who are not yet able to cope with the pressure of competition (Gould, Feltz, Horn, & Weiss, 1982).

In summary, the literature highlights both potential benefits and challenges associated with earlier specialization and participation in high performance sport competitions. The degree to which elite youth sport events are vehicles for fostering (or hindering) deeper engagement in and commitment to high performance sport remains unknown empirically. This study seeks to address this gap, **specifically within a Norwegian sporting context. The purpose of this paper is to examine the impact of participation in YOG on Norwegian team members from 2010, 2012 and 2014 with a particular emphasis on differences between those who continued in elite sport and those that dropped out.**

Method

Although the use of retrospective recall is often criticized, as there is a tendency to forget, underreport, or over-report (Folkman & Moskowitz, 2004), research has found athletes are able to recall specific moments (Gould, Finch, & Jackson, 1993) and, when given time to reflect, they are able to provide a more complete account (Folkman & Moskowitz, 2004). **Participating in the Olympic Games (and also in the YOG), tend to be one such memorable moment, and several of the participants actually wrote without encouragement that they had no problem remembering this experience. We now describe the participants, instrument, data analysis, and trustworthiness measures taken for this exploratory study.**

Participants and procedure

After obtaining ethical approval from the Norwegian Social Science Data Services, the data were generated from an internet-based survey (QuestBack) sent to all former Norwegian YOG participants ($N = 64$) in November 2015. Three reminders were sent out in November and December 2015 regarding the study. Norway had a small team ($n = 5$) for the summer 2010 Singapore YOG. The size of the delegation grew for subsequent Games: $n = 28$ for Innsbruck 2012, and $n = 31$ for Nanjing 2014. See Table 1 for details. With the three reminders, 58 athletes completed the survey, while one completed parts of the survey, for a response rate of 92%. The participants included 24 female (41.4%) and 34 male (58.6%) athletes competing in a variety of summer and winter sports (e.g., swimming, wrestling, boxing, volleyball, luge, alpine skiing, cross-country skiing, biathlon and speed skating).

[Insert Table 1 near here]

Instrument

The **survey** instrument (**see the Appendix**) captured both quantitative and qualitative data including the athletes' current involvement in their sport after they competed at the YOG. Open-ended questions helped determine factors the athletes felt were important to their high performance career. The instrument was created based on the extant sport management

research on athlete experience noted earlier, the researchers' prior experience with NIF, and their general knowledge of the YOG itself. The instrument consisted of 29 questions covering six main areas (YOG performance and experience, education, leaving sport, pursuing an elite career, learning and legacy, see the Appendix). Due to the small number of former Norwegian YOG participants and in order to protect the athletes' anonymity, as much as possible, demographics only included gender, which YOG edition they participated in, and if they were athletes in an individual or a team sport. Both open-ended qualitative questions and quantitative questions, measured on a 5-point Likert scale (1 = very poor, 3 = satisfactory, 5 = excellent), were used to understand competition effect and retention in the sport system. Together, these mixed method questions are a result of a pragmatic orientation of social inquiry (Greene, 2007; Teddlie & Tashakkori, 2009), and the concept of *blending*, that is, "the use of two or more different methods to assess varied facets of the same complex phenomenon" (Greene, 2007, p. 126). According to Greene, this method is preferable when implemented concurrently, as in the survey. As the survey and responses were given in Norwegian, a translation was conducted by the fully bilingual first author before data analysis and discussion with the research group.

Data Analyses

To begin, the data were analysed separately. The quantitative dataset was first reviewed for missing data and, where needed, was replaced with the series mean (Tabachnick & Fidell, 2001). Descriptive statistics, along with analyses of variance, were computed to ascertain the factors important to the participants' continued involvement in sport, their perspective on education and dual careers in particular. **Following this step, the qualitative responses were organized and analysed according to a question-focused procedure** (Patton, 2002). Meaning units were created in the **initial** stage of the analysis by identifying main categories such as the importance of the different stakeholders (e.g. federation, school,

parents and coach). Next, responses were then shortened into a code that best described the response and a table approach was used, and these associated sub-categories were placed in this deductive analysis (Kondracki, Wellman, & Amundson, 2002). This approach assisted in reducing the raw data and identifying the common themes reported by athletes for each question.

Trustworthiness

The use of multiple sources of evidence increased the trustworthiness of the findings (Eisenhardt & Graebner, 2007), in addition to providing a more complete picture of the athlete's situation (Doyle, Brady, & Byrne, 2009). Though each method has its limitations, a more accurate inference can be drawn when they are used in combination (Creswell, Plano Clark, Gutman, & Hanson, 2003). **The use of both qualitative and quantitative methods in data collection was also valuable in making more likely the capture not only of the variety of expressions of the Norwegian athletes in preparation for, and participation in, the YOG, but also the variety of post-YOG experiences and career paths.** Emerging findings were compared and discussed among the researchers (investigator triangulation; Patton, 2002) and with a group of independent peers at the European Association for Sport Management conference which **helped refine the findings.**

Results

Participants

At the time of the research, late 2015, the majority of respondents were still involved in elite level sport, although a substantial minority, 29% (n=17), had dropped out. Therefore, the majority of the athlete's remained in sport. The majority of respondents (84.5%) indicated the YOG was not their first international sport competition, as they had prior international competitive experiences in their sport. Again, the majority noted their YOG experience was positive (84%). In terms of their performance and experience (n=15, 31% felt very satisfied,

n=26, 53% felt satisfied). The overall performance of the Norwegian athletes was strong, with 17 athletes winning medals - four gold, seven silver, and 13 bronze medals - across the three editions of the YOG. **Next, we examine more closely what characterized the dropouts.**

Reasons for Athlete Dropout versus Retention in Sport

One of the most interesting findings was that seven of the 17 medal winners **within the study** were among the group of dropouts; **suggesting that winning a medal** did not seem to be important in determining whether an athlete stayed in elite sport or not. When dividing the sample between those still active in elite level sport and those no longer active in elite level sport, we found a higher correlation between family support and those no longer active than for the group who were still active in elite level sport. The only significant difference between the two groups was in relation to coach support (see Table 2) **where those who were no longer active in elite level sport expressed a significantly higher level of satisfaction with their coach.** A similarly counter-intuitive finding was that those who stayed in sport perceived they had received less coaching support, than those who had left elite level sport.

[Insert Table 2 near here]

The data in Table 2 indicate satisfaction with the level of support received from the family, other athletes, school and the coach. Interestingly, almost every mean score was higher for those young people no longer active in elite sport than for those who were still active. **In this case, the significant difference found was the role of the coach.** One interpretation of these results is the young people who are no longer active in elite sport felt they needed more support from their entourage. We therefore hypothesize that those still in sport may be a little more ‘self-directed,’ ‘self-motivated’ than those no longer active. Hence, to make it as an elite athlete, you may need to be more highly self-motivated to pursue such an objective, whereas those less-motivated may need more encouragement from others to keep them engaged or ‘retain’ them in the sport development pathway.

Those who had dropped out of elite level sport were asked their reasons for doing so. One reason given by all 17 athletes was they 'needed more time for my studies.' Of the 17, 14 also reported a desire 'to spend more time with friends' and, while expressing satisfaction with the quality of coaching, a similar number reported 'I did not like my coach' as a further reason for dropping out, indicating the quality of personal relations with the coach was as important as the quality of coaching advice provided. Thirteen of the dropouts identified a variety of additional reasons for dropping out including 'parental pressure,' 'I got bored,' 'my family moved,' 'my coach moved,' and 'I was happy with what I had accomplished.' Finally, three of the 17 named injuries as a reason, and two identified a lack of motivation for pursuing elite sport. It is clear from the data that for the strong majority of the 'dropouts' the motivation was personal rather than due to structural failings in the development system. Access to training, coaching and competition resources were not mentioned although the poor inter-personal relations with their coach could be interpreted as a structural failing. However, it might also be the case that these athletes considered that they had received all they thought they could from sport, and consequently could see no value in continuing. In summary, personal reasons as well as perceived entourage support were the collective explanation of the dropouts, with educational pressures and the desire to spend more time with peers being the most common themes.

Finally, when reviewing the sports of the 17 who dropped out, there was no discernible pattern, in that they competed in 13 different sports with five indicating they were involved in team-based sport competitions. There was also no clear pattern when school pressures were examined since athletes arguing that keeping up with school work was a challenge had a similar profile to those who indicated school work was unproblematic. However, there was evidence athletes in major national sports, particularly cross-country

skiing, have a better dual career support system after age 19. We now further explore the dual career issue.

The challenge of managing a dual career

Athletes noted the dual career challenge, including enough recovery time, as a major constraint in their daily lives and a reason for leaving high performance sport. Balancing the growing training load and desired athletic development with regular schooling, without support from schools to adapt timetables, defer exams, arrange study time, etc., was emphasized as challenging. Thirty respondents mentioned the difficulty of finding enough time to complete school assignments, train and recover; 11 identified the development of efficient time management routines as a major challenge; while eight expressed concern about the impact of enforced absences for sport on their studies and their relationship with teachers. One respondent noted:

The biggest challenge was to stay on top of school progress during the season with exhaustive travel for camps and competitions. After high school, I chose to study besides being committed to sport. As I am able to structure my time, I prioritize what I need to attend at the University, as sport is number one. It also helps that I have a coach that supports me and helps when I have to skip practice.

Only two athletes wrote they never felt the sport-school combination was challenging: 'I have acquired a good structure of how to combine the workload – though, there were some occasional long study nights with little sleep now and then.'

YOG and the development pathway

Participants were asked if they wanted to pursue an elite career in sport (e.g., towards the Olympic Games) as part of the legacy of being a YOG participant, and Figure 1 provides an overview of the reasons given.

[Insert Figure 1 near here]

Other reasons given for pursuing an elite career were: 'I enjoy my sport even more after all the new friends I made during YOG' and 'I chose to pursue an elite career before I went to YOG.' This supports the proposition that YOG athletes are already seen as talented and know they have the potential to succeed, and that, by the time they have reached YOG standard, most have made a substantial long term commitment to a sporting career.

The YOG sport competition as a step on the high performance development pathway may have a perceived beneficial effects for some, although we have no statistical evidence supporting this claim. However, a number of athletes mentioned that being successful at the YOG increased their self-confidence and belief in what they felt they could accomplish:

I learned a lot! I did not perform at the level I expected of myself during the YOG, and I handled the competition not very professionally. The event was bigger than I expected, and I felt pressure to perform well from others. However, the experience taught me how to cope with this type of pressure, especially the one put on me from others and myself.

Discussion and Implications

This paper investigated the impact of the Youth Olympic Games (YOG) on young elite athletes' continued involvement in high performance sport. First, the majority of athletes noted YOG was a positive experience for them, supporting the findings from the study of the experiences of YOG 2012 team conducted by Kristiansen (2015). Despite the current role of sport in their life, being a 'Young Olympian' seems to have been perceived as a reward for hard work, something to be proud of and an important event in their life. In relation to the IOC's ambition to give equal importance in the YOG to competition and culture/education (IOC, 2016a), only the experiences from the competition element of YOG were highlighted by the respondents. Furthermore, in relation to participation in 'their' YOG, most respondents already had elite competition experience and were already recognized as talented. In addition,

they considered that they had performed well during the YOG, so dropping out seemed to be caused by reluctance according to Klint and Weiss's (1986) typology.

The lack of profile given to the Learn and Share program (the cultural/educational aspects of YOG) poses a significant challenge to YOG and future local organising committees. While it is too soon to argue that the objective that YOG should 'be an event of the highest international sporting standards for young people' is fundamentally incompatible with the objective to 'innovate in educating about Olympic values and debating the challenges of society' it is clear that giving both objectives equal status in the mind of young athletes remains a distant prospect. A second challenge for the IOC is managing the status of the YOG and whether it is perceived by the young athletes as a stage (albeit an important one) in their progress to the Olympic Games or an end in itself. As mentioned previously many YOG athletes do progress to the Olympic Games, but there is a risk that as the status of the YOG grows more young athletes will see participation as granting them the accolade of 'Olympian'. A third implication of this research for the IOC is to reemphasise the importance of encouraging NOCs and IFs to support the dual career aspirations of young athletes and avoid the loss of promising athletes who prioritise education over sporting ambitions.

When revisiting Ericsson et al.'s (1993) analysis, which identified three major constraints, resources (apart from time) do not seem to be a significant constraint in the present context. Previous investigations on this age group highlighted the importance of coach and parental support for sport participation (Kristiansen, 2015; Kristiansen & Houlihan, 2015; Kristiansen & Parent, 2014). The present study also highlights family and coach support as being a factor in determining whether you stay in sport. However, the study also reveals young athletes feel they received enough support. Even the athletes who quit elite sport recognized the amount of support they had received. Norway, as a country, does not fund this age group (Kristiansen & Houlihan, 2015), suggesting that the entourage

support will continue to be vital (Bloom, 1985) both during and after high school **until commercial sponsorship or Olympiatoppen funding becomes available**. Parents of **YOG athletes** are proud their child is a Young Olympian (Kristiansen & Parent, 2014); their pride may **therefore translate into an increased willingness to** continue providing support in the immediate post-**G**ames years.

The second constraint identified by Ericsson et al. (1993) is effort. **For the study** participants, this was a clear constraint, as athletes struggled with their dual careers (**see also De Knop et al., 1999; Kristiansen, 2016b; Wylleman & Reints, 2010**) and where to place **their emphasis in terms of effort**. While the IOC initiated the Cultural and Education Program/Learn and Share program (IOC, 2016a), it also aimed to teach athletes how to cope with dual careers. In Norway, the dual career is a constant challenge for athletes over 19 without professional funding for their sport (Bugge, 2016; Ekeli, 2016). This issue was also raised at the national level after the disappointing Norwegian results at the 2016 Rio Olympics; one of the rowers received headlines when arguing that it was time to put this issue on the political agenda, as the roles of a high performance athlete and a student are very difficult to combine primarily due to lack of funding (Bugge, 2016). To avoid a dual workload, the younger athletes may think their future will be brighter if they **withdraw from** sport and focus **their efforts** on school or their early work career rather than pursuing sport further.

Motivational constraints (Ericsson et al., 1993) were also identified among the former YOG-participants. According to Cote et al. (2009), participation might affect athletes' motivation in different ways due to their physical, cognitive, social, emotional, **and** motor skills development, **as well as** their investment in highly specialized training and elite arrangements. There were few reports of a negative effect **from** participation; and for three respondents, YOG was the peak of their career. The majority's responses showed

commitment and the ability to make a mature assessment of future involvement and continued development in elite sport. The importance of what **the young athletes** could learn from participation supports this assessment. In contrast to development models such as the LTAD (e.g., Balyi, Way, & Higgs, 2013), the athletes may have a more short-term perspective on success than that held by **the national sport governing bodies** they belong to (Kristiansen, 2017). What is apparent, however, is that following their participation in YOG and faced with the transition to the senior squad, the pressure of a dual career makes some **young athletes** leave sport prematurely. **This is compounded in university/college-level sport in Norway, as most universities/colleges subscribes to the values of the mass sport movement, and only a small number have experience of (and willingness to support) the athletes who wish to combine academic studies with elite sport ambitions. Hence, much responsibility falls on the individual athlete to manage and negotiate the demands of the academic institutions and their sport. The national funding arrangements for sport and education add to the dual career challenges as funding can be accessed either as an elite athlete (through Olympiatoppen) or as a student (through the State Educational Loan Fund). As a result, and unfortunately, the athletes end up choosing one as both funding sources require 100% commitment from the individual (Kristiansen, 2016a). Thus, we propose that the national context – both sport and education-wise – also factor into young athletes' decision to dropout, the significance of which depends on the context (e.g., important in Norway, perhaps the reverse in the United States with its college sport system).**

As such, a systematic approach from the political level seems **required** to retain **young** athletes in high performance sport, as it is the level above the coaches that **appears to** fail to adapt to development. The absence of a systematic or coherent approach to elite youth **sport** development has previously been demonstrated in an investigation of the Norwegian sport school system (Kristiansen & Houlihan, 2015). In the same investigation, the marginal role of

Olympiatoppen, the federations' variable quality of support offered, and the government's reluctance to intervene were also highlighted. The lack of resources for a more coherent high performance sport development system, and a policy vacuum created by the complexity of policy decision making (NIF, as the government-funded national sport organization, Olympiatoppen, as the government-funded elite sport agency, and the individual federations), has led to policy inaction (Kristiansen & Houlihan, 2015).

Reflecting on the hypotheses/propositions derived from the data analysis, we argue young athletes require support to pursue deeper engagement in sport (e.g., to aim for selection to the Olympic Games), but this support needs to come from more than the entourage (i.e., coach and parents) to help the more self-motivated athletes transition more effectively from youth to senior level sport (events), especially if they simultaneously pursue higher education degrees. This is a clear gap in the Norwegian context, one that requires joint addressing by the Norwegian politicians and sport managers. This situation is unlikely to be unique to Norway (cf. Kristiansen, et al., 2017; Parent & Patterson, 2013), though this remains to be further explored in future studies.

Conclusion and Future Direction for Research

The study contributes to the sport development literature by providing empirical evidence of the impact of participation in **one type of** youth elite multi-sport event on athletes' careers. In particular, our findings reinforce the observation by Swain (1991) regarding the multifactorial character of decisions to withdraw from elite level sport. The findings also help refine the list of major reasons for dropping out identified by Enoksen (2011). The first reason identified by Enoksen was factors related to training and performance (such as lack of improvement). Our research suggests that, for some athletes, success in the YOG was to justify ending their elite careers. Thus, rather than perceived failure prompting dropout, it was perceived achievement that led to withdrawal. **However, the degree to which**

the YOG were a barrier or facilitator of deeper engagement in sport appears weaker than other factors identified by the athletes, namely entourage support as well as the national context issue noted earlier. This consequently raises concerns regarding the effectiveness of YOG as a vehicle for achieving deeper commitment to the sport development pathway.

Our findings strongly endorse Enoksen's second reason (education and work obligations) with the management of a dual career being a major challenge for young athletes in Norway. Enoksen's third reason, motivational factors, was also supported with a significant proportion of young athletes indicating the positive impact of participation in YOG in maintaining their enthusiasm for elite level development. Poor training environment (Enoksen's fourth reason) was supported as a significant factor, although it was a poor personal relationship with the coach that was mentioned most frequently. However, given YOG was also perceived as the highlight of some young athletes' careers before they dropped out leads us to propose the national context, in terms of the educational and sport systems, may have a stronger effect on whether athletes become more deeply engaged in sport or decide to dropout. However, this proposition remains to be tested in other countries.

The most substantial difference between our findings and those of Enoksen and others (Ek 1977, Naesje 1985) was the relatively low level of dropout among our sample. The obvious explanation for this difference is the relative short time period between the most recent YOG and the data collection. However, there was no significant difference in the dropout rate found among athletes who has competed in the 2010 and 2012 YOGs versus those who competed more recently in the 2014 YOG. Although confirmation would have to wait for a subsequent study, it may be that, once young athletes have reached a YOG standard, many, if not most, will have crossed the threshold of commitment to an elite level sport career and most of those considering dropping out will already have done so at a lower level in the developmental pathway.

With regard to the utility of Ericsson et al.'s framework, there is strong evidence of its effectiveness in explaining the impact of participation in YOG by young athletes: (a) the key resource problem for young athletes is time and support to manage their dual careers and the key specific resource 'problem' is their relationship with their coach; (b) YOG athletes demonstrated effort, but there was **some criticism of the quality of support received from their federations, especially among athletes who had dropped out (see Table 2)**; (c) the significance of YOG as a motivational factor seems clear, though the influence may be positive (i.e., fostering a desire to go to the 'senior' Olympic Games) or negative (i.e., being seen as the peak of the athlete's career) **depending on the national context. As such, there is a role not only for the IOC to play in ensuring a positive learning experience for young athletes attending the YOG, but also for national governments (both sport and education ministries) and sport governing bodies to ensure their systems can align and promote a dual career as opposed to having young athletes choose one path or the other and potentially losing future Olympic medal winners, on the one hand, or bright minds on the other.**

The IOC has a vested interest in developing young and talented athletes, and the creation of the YOG has provided a platform whereby the competitors gain both competition experience as well as various learning opportunities associated with being a high performance athlete. Despite efforts of the IOC through the YOG to offer younger athletes information on how to cope with the dual career (through the Learn and Share workshops), information pertaining to the implications for the athletes future involvement in sport remain unknown or inconclusive. Future research must test the proposition that the various educational offerings during the YOG have any influence on the athletes' ability to cope with the dual roles and help them remain in sport.

Of course, this study's findings must be considered in relation to its limitations. Most notably, this study focused on one country, Norway. Though 92% of the Norwegian YOG

alumni responded, this sample is still small, making deeper statistical analyses difficult. The Norwegian context is also distinct from other areas of the world. Thus, we urge researchers to broaden the sample to multiple countries to garner a larger sample and hopefully allow for a clearer answer to the question of whether or not the YOG facilitate or hinder deeper engagement in high performance sport. Also, as this was an exploratory study, confirmatory studies are recommended to test the hypotheses/propositions derived from the present study.

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Appendix – The Athlete Survey

1. Which YOG did you participate in
2. Gender (male/female)
3. Team sport/individual sport
4. Was this your first major international competition?
5. How satisfied are you with your own performance in YOG? (1-5)
6. Can you expand on your own performance?
7. Are you still participating in sport at an elite level?
8. Which international championships have you participated in after YOG?

Questions concerning education

9. What is your highest finished education? Choose between high school, bachelor, master (or started on one)
10. Which high school did you attend? Choose between private staying at home, public staying at home, private moving away from home, public moving away from home
11. ELABORATE UPON: What have been the biggest challenges with your dual career?
12. When in high school: How satisfied were you with the school's ability to adapt for the combination education/sport 1-5
13. How satisfied were you with the federation's ability to adapt to your responsibilities in school and sport 1-5
14. How satisfied were you with your coach's ability to adapt for the combination education/sport 1-5
15. How important were your parents in order to make this combination easy? 1-5

Questions concerning your YOG experience

16. ELABORATE UPON: What was your goals going into YOG?
17. ELABORATE UPON: What do you remember the most from your YOG participation?
18. ELABORATE UPON: What did you learn by participation in YOG (private and as an athlete)
19. ELABORATE UPON: What did you like the least by your participation in YOG?
20. Rate from 1-5: To what extent do you agree that your participation in the YOG was important in your development as an athlete
21. Rate from 1-5: How important in the learning process was participation in CEP
22. Rate from 1-5: Did you get enough time to participate in CEP?
23. Rate from 1-5: How important in your personal development was meeting international athletes?
24. Rate from 1-5: How important in your personal development was meeting and being together with the others in the Norwegian team?

Questions about leaving sport

25. If you are not an elite athlete anymore, why not? Please tick all answers that apply.
 - I needed more time for my studies
 - I wanted to spend more time with my friends
 - I did not like my coach
 - I got bored
 - My family moved
 - My parents put too much pressure on me

- My coach moved
- I was happy with what I had accomplished
- Injuries
- Other: _____

Questions about pursuing a sport career

1. If you pursued an elite sport career, explain why. Please tick all answers that apply.
 - Participation in YOG made me more ambitious
 - Participation made me want to become an Olympian
 - Participation made me more aware of social issues
 - Participation made me more aware of world issues
 - Participation gave me an adrenaline rush
 - Other: _____

Final questions

2. ELABORATE UPON: What did you learn from Olympiatoppen that has been useful later?
3. ELABORATE UPON: Did participation in the YOG affect your choice of career?
4. ELABORATE UPON: Did participation in the YOG influence you to stay in sport one way or the other (e.g. as a coach, a volunteer, a manager, young leader)?
5. Anything else you would add?