

Motivation of Slovenian and Norwegian Nordic Athletes towards Sports, Education and Dual Career

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Abstract

This research examined the motivation towards dual career of Norwegian and Slovenian elite Nordic athletes who compete in specific sports disciplines (cross-country skiing, ski jumping and biathlon) where winter conditions are essential. Due to preparations, trainings and competitions these athletes are often far away from their place of residence and education and make every effort to coordinate their sports career and their education. The sample consisted of 51 Norwegian (female: $n = 18$, age: 25.2 ± 3.7 ; male: $n = 33$, age: 23.6 ± 3.6) and 66 Slovenian athletes (female: $n = 31$, age: 22.9 ± 5.82 ; male: $n = 35$, age: 22.0 ± 4.59) who participate in the elite competitions. We have examined the links between three types of motivation (for study, sports and dual career) and socio-demographic characteristics. The factor analysis of the SAMSAQ-EU questionnaire demonstrated a three-factor model and the Crombach's Alpha reliability test confirmed the reliability of the measurement of three latent dimensions of motivation: AM ($\alpha = 0.878$), SAM ($\alpha = 0.738$) and CAM ($\alpha = 0.694$). The results showed that female athletes are more motivated towards education than male athletes and that Slovenian athletes are more motivated towards sports careers than their Norwegian peers. The parents of the respondents from Norway (fathers as well as mothers) tend to have higher education than the parents of the Slovenian athletes, whereas the mothers have higher education than the fathers. More educated (Norwegian) parents contributed significantly to their children's involvement in sports, whereas Slovenian athletes would generally choose their sports career by themselves. Our research did not show significant links between the factor of motivation towards education and the factor of motivation towards sports. Although Norway and Slovenia both experience the lack of structural measures for education of elite athletes in higher education, student-athletes of both countries are highly motivated towards academic and sports career.

Keywords: education, sports, dual career, competitive systems, school systems

Introduction

The term "dual career" was introduced in 2007 when it was first written down in official documents (European Commission, 2007). It indicates the career of the athletes who coordinate their sports activities with education during their sports career, i.e. during their active trainings and competitions. Several studies were already published in this area (Brettschneider, 1999; Chen, Snyder & Magner, 2010; Wuerth, Lee & Alfermann, 2004; Flanagan & Winther, 2004; Gaston-Gayles, 2005; Althouse, 2007; Aquilina & Henry, 2010; Alfermann, Stambulova & Zemaityte, 2004; Comeaux, & Harrison, 2011; Corrado, Tessitore, Capranica, Rauter & Doupona Topič, 2012; Henry, 2013; Cosh & Tully, 2014; Ryba, Stambulova, Ronkainen, Bundgaard & Selänne, 2015). In addition, the term "dual career" can also indicate athletes' activities and their life after the end of their sports career when former athletes actively participate in after-sports life and build new life careers (Lavallee, Grove & Gordon, 1997; Wylleman, DeKnop, Ewing & Cumming, 2000; Torregrosa, Boixados, Valiente & Cruz, 2004; Stambulova, Stephan & Japhag, 2007; Stambulova, 2010; Moesch, 2012; Park, Lavallee & Tod, 2013). The legal basis for sports regulation in the European Union member states was developed based on different dual career studies (Parrish, 2003; Amara, Aquilina, Henry & PMP Consultants, 2004) that identified significant differences regarding student-athletes

between the European Union member states. Moreover, the EU Work Plans 2011-2014 and 2014-2017 covered the development and support measures for the employment, education and trainings of young elite athletes (Guidotti, Curtis & Capranica, 2015).

Every year one third of the athletes between the ages 10 and 17 discontinues their sports activities because they spend too much time at trainings and competitions and do not devote sufficient time to other areas, such as education (European Commission, 2012).

The elite athletes often encounter difficulties with coordinating their sports career and education. Due to the nature of the sport, some athletes are absent from their home and study even more than 100 days per year. Their trainings and competitions take place at home as well as abroad; therefore, athletes must be very self-confident, have a high level of motivation and be prepared to sacrifice and take the necessary responsibility to be able to do sports and education at the same time. In addition, the elite athletes must be capable of good organisation with the aim to coordinate their sports and school obligations. If not, they are often forced to choose between their sport and school (European Commission, 2012).

According to Capranica and Millard-Stafford (2011), this is why the protection and support of young athletes during their active participation in the elite sport is essential to ensure their development in the area of sport and education, and further on professional opportunities. The European Commission (European Commission, 2012) supports the efforts of sports and educational institutions that exploit the benefits of curricula, adapted to the needs of the elite student-athletes at the secondary school and university level. On one hand, the high pressure on the elite athletes aimed at more successful coordination of sports and academic careers and the absence of support provided by schools, universities, state institutions or clubs and sports associations often lead to a premature end of the elite athletes' sports career (Aquilina, 2013; Wylleman & Reints, 2010). On the other hand, some athletes prioritise their sports career and achieving sports results which leads to neglecting their academic achievements or education in general (Cosh & Tully, 2014; Lally & Kerr, 2005). In North America, sports and education systems are closely linked. The education systems incorporate sports and provide scholarships for student-athletes. Love and Kim (2011) state that student-athletes are very recognizable and are an important part of the USA university system, having all the possibilities for coordinating their sports and study. Trainers and other professionals in the area of trainings and education, state-of-the-art sports infrastructure and scholarships for study programmes are available to them while they compete for their universities; nevertheless, the student-athletes strive for good grades (Gatmen, 2012) and are usually motivated to achieve good sports results (Gaston-Gayles, 2005). On the opposite, in the European Union member states the elite sport more or less depends on small private clubs and national sports associations with basically no connections to the education system (Aquilina & Henry, 2010; Stambulova, Stephan, Japhag, 2007). Consequently, young athletes are confronted with considerable difficulties when coordinating their dual careers (Brettschneider, 1999). Therefore, according to Amara et al. (2004), many young athletes choose education over sports as a preparation for their later employment, thus abandoning their sports ambitions or ending their study courses much later.

Exploring the motivation factors enables us to recognise the student-athlete motivation level and to motivate him/her for the academic level before it considerably influences his/her grades (Althouse, 2007). Fortes, Rodrigues and Tchanchane (2010) established that on average athletes are more motivated towards good academic results than any other population. The student-athletes are highly motivated towards sports (Simons, van Rheenen & Covington, 1999), but are not interested in education. Moreover, the time they spend in trainings limits their time and energy for schooling and fulfilling their study obligations (Peltier, Laden & Matranga, 1995). Corrado et al. (2012) conducted a research on student-athletes from Slovenia and Italy. They established that there are no differences between the two genders regarding motivation, whereas women are more motivated towards the academic career than men are. Furthermore, the female athletes are more motivated towards dual career than male athletes are, although the level of motivation is extremely high regardless the gender (Corrado et al., 2012).

Each EU member state deals with the dual career problems differently. In 2012, the EU Expert Group on Education and Training in Sport (European Commission, 2012) recommended general guidelines on dual career for the EU member states. Regarding this, each EU member state takes decisions on the implementation of these guidelines autonomously in line with its financial situation and development strategy. In their research that analysed 25 EU member states, Aquilina and Henry (2010) identified four approaches to the academic education of the elite athletes. At the same time, they established that several states do not take any of the identified approaches.

A unique challenge in the framework of studying the dual career is represented by the athletes who are absent from their regular education process most of the time during winter (up to 150 days per year) due to the nature of their discipline (winter sports). We have not found a research on problems faced by Nordic athletes when coordinating their sports and school obligations. The aim of this paper is thus to establish how elite Nordic athletes from Slovenia and Norway cope with coordinating their sports and school obligations, whether problems are extensive and how they are motivated for doing their sport and studying. Norway and Slovenia were chosen because neither of them has structural measures for the education of the elite athletes in higher education. However, Norway is more successful in providing better conditions for the dual career of Nordic athletes than Slovenia.

Adjustment of Study Programmes to Student-athletes in Slovenia and Norway

In the Slovenian education system, the concern of the state for the athletes' education is demonstrated by the adjustment of the schoolwork and the organisation of sports classes in primary and general upper secondary schools; however, this is not the case in the higher education. In Slovenia, this area is regulated by the Higher Education Act. On its basis higher education institutions autonomously establish their study regimes and the forms and timetables of examination. The adjustment of study obligations to the elite athletes at universities is entrusted to individual higher education institutions, whereas the elite athletes seek to exploit these adjustments (examinations, possibility of longer absence, doing one year of study over several academic years) mainly by themselves or together with their sports associations.

To assure equal education opportunities for the elite athletes, it is necessary to adjust the process of fulfilling the education programme obligations, particularly at the university level. Regardless the lack of institutional support, the Slovenian athletes are highly motivated for dual career (Lupo, Tessitore, Capranica, Rauter & Doupona Topič, 2012).

At the secondary education level in Norway, there are five secondary schools with different programmes, publicly supported by the Norwegian government and the Norwegian Ski Association. According to the interview with Baldishol (personal communication, November 27, 2015), who is a Norwegian Ski Association responsible for the coordination with education system, these regionally distributed schools ensure the enrolment and adjustment of schooling to Nordic and other athletes. There are no special conditions for the enrolment of athletes to universities in Scandinavian countries (Aquilina & Henry, 2010). Rimeslåtten (2013) agrees with this and explains the details of the Norwegian programme for athletes' dual career. The aim of the programme is for the elite athletes to achieve sports excellence and be fully prepared for their life after the end of their careers. According to Rimeslåtten (2013), this is achieved by general professional orientation before, during and after the sports career, finding appropriate employment in cooperation with Adecco, the help of sponsors from the Norwegian Olympic Committee and counselling on the coordination of sports and academic development of the elite athletes. Rimeslåtten (2013) states that Norwegian athletes do not receive any special state-regulated treatment at universities. The adjustments aimed at the elite athletes are specified by their faculties and encompass mainly the prolongation of their study, examinations outside the school premises and the possibility of distance learning. Rimeslåtten (2013) further states that it is the athletes' responsibility to make decisions regarding the coordination of schooling and sports; and the responsibility of sports organisations is to help them with it and cooperate with academic institutions in finding best solutions for the elite athletes.

Research Methodology

The sample included 117 elite sportswomen and sportsman from Norway and Slovenia participating in the elite competitions (the Olympic Games, World Championships, and World Cup) in the following disciplines: cross-country skiing, ski jumping and biathlon. The relevant information was gathered with the on-line SAMSAQ-EU questionnaire and live interviews that included socio-demographic questions aimed at examining the motivation for study, sports and dual career. The applied rating scale was 6-point Likert scale where 1 means "strongly disagree" and 6 means "strongly agree". The SAMSAQ-EU questionnaire had 39 closed questions for measuring the motivation of the responding athletes for study (AM), sports (SAM) and dual career (CAM). 30 questions were taken from the original questionnaire (Gaston-Gayles, 2005) whereas 9 questions were taken from the Italian version SAMSAQ-IT (Corrado et al., 2012). According to Aquilin and Henry (2010), this questionnaire is adequate for establishing the motivation for dual career of student-athletes especially in the states where there are no identified and defined rules, measures and legislation that would help the student-athletes.

Questions about trainings and competitions, schooling and life of athletes during their top-class career were added to the SAMSAQ-EU questionnaire. The data were coded and processed with the IBM SPSS 20.0. In the research, the descriptive

statistics with cross section tables was performed. The interconnections between variables were demonstrated with the analysis of the h^2 test, the analysis of Spearman's rank correlation coefficient and one-way ANOVA test. The SAMSAQ-EU questionnaire was analysed with the research factor analysis.

Research Results

Socio-demographic Results

The sample consisted of 51 Norwegian (35.3 % of women) and 66 Slovenian athletes (47.0 % of women). The analysis of disciplines revealed that the majority of the athletes competed in cross-country skiing and ski jumping. Some respondents have participated in the Olympic Games, World Championships and World Cup races (56 % of Norwegian and 62 % of Slovenian athletes) whereas the others took part in the Continental and Scandinavian cups, which are second most important right after the World Cup competitions. The respondents' average age was 23.28 ± 4.54 . The oldest athletes came from Norway (the average age was 23.94) whereas the average age of the Slovenian athletes was 22.58.

Schooling and Sports

Among the respondents, 60 % of the Norwegian and 64 % of the Slovenian athletes train between 20 and 35 hours per week and 60.7 % of the Norwegian and 68.2 % of the Slovenian athletes are involved in schooling during the time of their active sports career. The level of schooling differs significantly; namely 74.2 % of the Norwegian athletes and only 28.9 % of the Slovenian athletes are at universities; 16.1 % of the Norwegian and 13.3 % of the Slovenian athletes are at short-cycle colleges or professional colleges; and 9.7 % of the Norwegian and 57.8 % of the Slovenian respondents are at general upper secondary schools, whereas the Norwegian athletes are only 1.36 years older on average. All of the Norwegian respondents who were in education during their sports career had "very little" to "some" problems in coordinating sports and academic careers while 57.7 % of the Slovenian respondents had "some" to "too many" problems which is indicated also by the significant statistic correlation between the quantity of problems the respondents experienced in fulfilling school obligations and their country of residency ($r = 0.466$, $p < 0.01$). This may result mainly from the regulated university education in Norway which covers not only the adjustments for the student-athletes regarding schooling but also smart sports infrastructure near universities and the help of professional staff (trainers, physicians, physiotherapists). The Norwegian student-athletes can therefore attend trainings and schools in one place without wasting precious time for long drives to their training sites. This is demonstrated also by the fact that 92 % of the Norwegian respondents do not spend more than one hour on the road to the training site per day whereas 95 % of the Slovenian respondents spend there between 1 and 4 hours daily.

Reliability and Analysis of SAMSAQ-EU Data

The research factor analysis (the principal axis method and oblique rotation) was used to clarify the correlations between a large number of variables resulting from the Student Athlete's Motivation towards Sports and Academics Questionnaire (SAMSAQ-EU) and a small number of factors. The questions that did not meet the criteria of the factor weight value ≥ 0.30 were eliminated. The rest of the variables were given the names of the thematic categories; AM - Academic Motivation; SAM - Student Athletics Motivation; CAM - Career Athletics Motivation. These factors, shown in Table 3, explain the 33.36 % common variance.

Insert Table 3 here.

The acceptance of the sample was verified by KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) which showed the sufficient value of 0.71 implicating that the acceptability of the sample is appropriate. At the same time the adequacy of the collected replies, considering the importance of the research, can be confirmed with the statistical significance of the Bartlett's sphericity test ($p < 0.05$). The factor values of the three standardised factors (AM, SAM, CAM) were calculated using the regression method.

The Cronbach's Alpha index of variables, weighing more than 0.30, confirmed the reliability of the measurement of three latent dimensions of motivation (Table 1).

Insert Table 1 here.

Table 2 shows the correlation of the three factors and other variables such as gender, nationality, discipline, the education of mothers and fathers and respondents' direction into sports. There is a strong link between the gender of the respondents

and their motivation for study ($r = 0.203$, $p = < 0.05$), showing that women are more motivated for education than men are. Important is also the link with the motivation for dual career which is higher among the Slovenian respondents ($r = -0.187$, $p = < 0.05$). The mothers of Norwegian athletes have higher education than the mothers of the Slovenian athletes ($r = 0.411$, $p = < 0.01$) and there is a strong link between the education of fathers and the education of mothers ($r = 0.566$, $p = < 0.01$). Very interesting is also the correlation between the nationality and the direction into sports ($r = -0.191$, $p = > 0.05$) and between the education of mothers and the direction into sports ($r = -0.187$, $p = < 0.05$). The Slovenian respondents were oriented towards sports mainly by themselves whereas the Norwegian respondents were oriented mainly by their more educated parents.

Insert Table 2 here.

The research included also the analysis of the average values of Academic Motivation (AM), Student Athletics Motivation (SAM) and Career Athletics Motivation (CAM) in relation to the respondents' gender. The analysis results show that women have statistically significantly better results for academic motivation ($M = 0.39$, $SD = 0.91$) than men ($M = 0.07$, $SD = 0.80$), ($p = < 0.05$). Further, they are more motivated for sports career ($M = 0.18$, $SD = 0.85$) than men ($M = -0.13$, $SD = 0.90$) while men are more motivated for dual career ($M = 0.19$, $SD = 0.79$) than women ($M = -0.05$, $SD = 0.91$).

The largest differences in terms of the average values were shown in the education of fathers and the education of mothers in relation to the country. The Mann-Whitney test was used.

Discussion and Conclusions

The aim of this research was to examine how the athletes who compete in quite specific disciplines where winter conditions are essential coordinate their sports career and their education in view of their frequent absence from their place of residence and education due to preparations, trainings and competitions. Considering the Norwegian school system being supportive to winter athletes, which Baldishol (personal communication, November 27, 2015) stated in the interview, and that the "Olympiatoppen" consortium, established in 1988, among others, supports student-athletes (Augustad, Bergsgard & Hansen, 2006), it was expected that Norwegian athletes would experience less problems in coordinating school and sports obligations. At the same time, they had finished a certain level of their studies before fully entering their sports career, while most of the Slovenian respondents (63.6 %) left schooling due to their sports career already in secondary schools or later at higher levels of education. The reason for these differences lies partly in the nature of the Norwegian competition system for athletes up to 16 years old. Namely, the system is not competitive; only athletes after the age of 17 can enter national championships and the teams participating in international competitions are formed only for a particular match and are later dismissed. In Norway, there are no national teams for athletes of this age, etc.

The SAMSQA-EU questionnaire helped us observe the links between the three factors of motivation: (1) Academic Motivation (AM), (2) Student Athletics Motivation (SAM) and (3) Career Athletics Motivation (CAM) and other socio-demographic variables. Fortes et al. (2010) established that athletes are on average more motivated towards good academic results than any other population and Gaston-Gayles (2005) further stated that female student-athletes are more motivated for study than men are, which was confirmed also in our study. It was found out that female athletes in both examined countries are more motivated than men. Further, it was established that the Slovenian athletes are more motivated for their sports career which may be directly linked to the Slovenian system of competitions which allows even 10-year-old children to compete in cross-country skiing, ski jumping or biathlon races to win the national championship title. Our research showed only minor links between the factor of motivation for schooling and the factor of motivation for sports. This indicates that the Norwegian as well as Slovenian student-athletes are extremely motivated for academic and sports careers, even though they prioritise their sports career since the elite student-athletes are extremely motivated for sports (Simons et al., 1999). However, the statements of Cosh and Tully (2014) and Lally and Kerr (2005) that this is often the reason for athletes neglecting their academic achievements or education in general were not confirmed. A strong link between the parents' education (particularly mothers') and their country and a very strong link between the education of fathers and mothers were established, too. In view of the above it can be concluded that more educated (Norwegian) parents contributed significantly to their children's involvement in sports, whereas the Slovenian athletes would generally choose their sports career by themselves. This goes hand in hand with the traditional orientation of Nordic countries (notably Norway and Sweden) towards Nordic sports with which children and young people get familiar at a very early stage of their lives. The children perceive these sports as a part of their play or a lifestyle, which is also the primary goal of the Norwegian doctrine concerning the development of children under the age of 12 (Norges skiforbund, 2016).

The above findings could be usefully applied for the improvement of Slovenian education and sports systems, since the Norwegian application of such system proved to be extremely successful. This is demonstrated also with the results of the Norwegian athletes in the sport and academic areas. Slovenia will need a legislative intervention to enable reasonable adjustments of higher education for the elite student-athletes through regulatory arrangements, which would facilitate their academic career and even greater sporting performance.

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Table 1: Cronbach's Alpha test

	Cronbach's Alpha	N
Factor 1 Motivation for study (AM)	0.878	14
Factor 2 Motivation for sports (SAM)	0.738	14
Factor 3 Motivation for dual career (CAM)	0.694	10

Key: N=number; Cronbach's Alpha interpretation: $\alpha \geq 0.8$: excellent reliability; $0.7 \leq 0.8$: very good reliability; $0.6 \leq 0.7$: moderate reliability.

Table 2: Two-way connection of individual variables

	AM	SAM	CAM	Gender	Country	Sports discipline	Father's education	Mother's education	Direction into sports
AM	1								
SAM	-.011	1							
CAM	-.013	.025	1						
Gender	.203*	.133	-.099	1					
Country	-.044	-.187*	.179	-.047	1				
Sports discipline	.078	.139	-.098	-.215*	-.406**	1			
Father's education	.071	-.029	-.051	-.001	.360**	-.134	1		
Mother's education	.003	-.083	-.072	.033	.411**	-.147	.566**	1	
Direction into sports	.030	-.003	-.110	-.026	-.191*	.105	-.155	-.187*	1

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

Table 3: Factorial results of the SAMSAQ-EU questionnaire

Questions	Factor		
	1	2	3
I am confident that I can achieve a high grade point average this year.	.542		
It is important to me to learn what is taught in my courses.	.742		
I am willing to put in the time to earn excellent grades in my courses.	.714		
The most important reason why I am in school is to play my sport.			.301

The amount of work required in my courses interferes with my athletic goals.			.449
I will be able to use what is taught in my courses in different aspects of my life outside of school.	.562		
I chose to play my sport because it's something I'm interested in as a career.			.315
I have some doubt about my ability to be a star athlete on my team.		-.590	
I chose (or will choose) my major because it is something I am interested in as a career.	.677		
Earning a high grade point average is not an important goal for me this year.			.458
It is important to me to learn the skills and strategies taught by my coaches.		.323	
The time I spend engaged in my sport is enjoyable to me.		.577	
It is worth the effort to be an exceptional athlete in my sport.		.633	
Participation in my sport interferes with my progress towards earning a college degree.			.385
I get more satisfaction from earning an "A" in a course toward my major than winning a game in my sport	.455	-.417	
During the years I compete in my sport, completing a college degree is not a goal for me.			.390
My goal is to make it to the professional level or the Olympics in my sport.		.671	
I have some doubt about my ability to earn high grades in my courses.			.548
I am confident that I can make it to an elite level in my sport (Professional/Olympics).		.726	
I am confident that I can earn a college degree.	.576		
I will be able to use the skills I learn in my sport in other areas of my life outside of sports.		.508	
I get more satisfaction from winning a game in my sport than from getting an "A" in a course toward my major.		.530	
It is not important for me to perform better than other students in my courses.			.508
I am willing to put in the time to be outstanding in my sport.		.702	
The content of most of my courses is interesting to me.	.696		
The most important reason why I am in school is to earn a degree.	.454		
It is not worth the effort to earn excellent grades in my courses.			.571
Within an academia environment, I find it more challenging to face difficult tasks.	.329		
For me studies are important to achieve knowledge and skills.	.802		
For me, it is important to train seriously to improve my performance.		.594	
The achievement of a degree is important to enrich my knowledge.	.700		
In sport, I find stimulating those situations requiring high performances and being difficult to perform.		.356	
Situations that allow me to test my capacities stimulate me.	.363	.499	
Difficult situations bother me.			.393
It's important for me to obtain a degree because it will help me to find a job.	.588	.400	

Extraction method: Principal Axis Factoring.

Rotation method: Varimax with Kaiser Normalization.