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EUROPEAN STUDENT-ATHLETES' PERCEPTIONS ON DUAL CAREER OUTCOMES AND SERVICES

POGLED EVROPSKIH ŠTUDENTOV ŠPORTNIKOV NA REZULTATE IN STORITVE V PODPORO DVOJNI KARIERI

ABSTRACT

The EU guidelines on dual careers (i.e., sport and education) encourage Member States to implement appropriate dual career services for elite student-athletes. Thus, the purpose of this study was to investigate: i) student-athletes' perceptions regarding their sport and academic career paths; and ii) existing and possible implementations of dual career services. A 25-item semi-structured questionnaire was administered to 221 European elite student-athletes involved in individual and team sports at national and international levels. Differences ($p \leq 0.05$) for nationality, gender, type of sport, and competition level emerged. Female athletes tended to place higher efforts in their academic career, whereas individual sports athletes reported a low support from academic staff. Furthermore, international level athletes perceived a higher impact of sport commitment on their academic career with respect to their national counterparts. Low perceptions emerged for dual career consideration at academic and sport environments, support from faculty staff, and time schedule adaptation at academic and sport levels. In general, student-athletes demanded implementations at academic level (i.e., flexibility, on-line education) and sport support. National academic and sports systems influence student-athletes' perceptions of their dual career, especially at the highest sport level. Flexibility, long-distance learning, and tutoring support should be improved in EU Member States.

Keywords: dual career, sport, education, Europe, challenges

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POVZETEK

Smernice EU glede dvojne kariere (t. j. šport in izobraževanje) spodbujajo države članice, naj omogočijo ustrezne storitve v podporo dvojni karieri vrhunskih študentov športnikov. Zato je bil cilj te raziskave preučiti: i) pogled študentov športnikov na njihovo športno in akademsko kariero in ii) obstoječe in možne izvedbe storitev v podporo dvojni karieri. Polstrukturiran vprašalnik s 25 vprašanji je bil posredovan 221 evropskim vrhunskim študentom športnikom, ki se

ukvarjajo s posamičnimi in ekipnimi športi na državni in mednarodni ravni. Ugotovili smo razlike ($p \leq 0,05$) glede narodnost, vrsto športa in tekmovalno raven. Športnice vložijo več prizadevanj v svojo akademsko kariero, športniki, ki se ukvarjajo s posamičnim športom, pa so navedli tudi premalo podpore s strani akademskega osebja. Poleg tega so športniki, ki tekmujejo na mednarodni ravni, zaznali, da ima predanost športu večji vpliv na njihovo akademsko kariero v primerjavi z drugimi vrstniki iz domače države. Nizki rezultati so bili ugotovljeni pri upoštevanju dvojne kariere v akademskih in športnih okoljih, podpori fakultetnega osebja ter usklajevanju urnikov na akademski in športni ravni. Na splošno so študentje športniki zahtevali izvedbo storitev na akademski ravni (t. j. prilagodljivost, spletno izobraževanje) in v športni podpori. Nacionalni akademski in športni sistemi vplivajo na mnenje študentov športnikov o njihovi dvojni karieri, zlasti na vrhunski ravni športa. V državah članicah EU bi bilo treba izboljšati prilagodljivost, učenje na daljavo in inštruiranje.

Ključne besede: dvojna kariera, šport, izobraževanje, Evropa, izzivi

INTRODUCTION

Sport participation is recognized as a relevant phenomenon affecting the European society by enhancing health, social development and inclusion of European citizens, and protecting athletes from doping, racism, violence, exploitation, and school dropouts (European Commission, 2007). Despite education is considered a crucial process for a sound development of youth athletes and for their future opportunities to enter the labour market (Stambulova and Alfermann, 2009), difficulties in combining sport and education are often present, especially when high training and competition commitments are necessary for top-level athletic performances (Alfermann and Stambulova, 2007; Aquilina, 2013). In fact, athletes experiencing athletic success increase their training schedule to compete in sport events organized at national and international levels. Parallel to sport, academic demands increase from the elementary school to high school and university. Furthermore, in Europe sport is generally organized in private settings (e.g., sport clubs, sport federations) with little or no relationship with the education system, which is ruled by governmental and institutional policies. This organizational separation between sport and education often poses European athletes at risk of sport or academic dropout (Conzelmann and Nagel, 2003; Wylleman and Reints, 2010).

In pursuing both academic and sport paths (i.e., dual career), the athlete's motivation, attitudes, and capabilities are crucial (Guidotti, Minganti, Cortis, Piacentini, Tessitore and Capranica, 2013). Although some studies investigated the athlete's motivation toward academic and sport career (Guidotti et al., 2013; Lupo et al., 2015), career development and transitions (Stambulova and Ryba, 2014; Wylleman and Reints, 2010), and development (Henriksen, Larsen and Christensen, 2014), little information is available on the student-athletes' perceptions of their own

challenges and needs (Aquilina, 2013; Ryba, Stambulova, Ronkainen, Bundgaard and Selänne, 2014). Furthermore, different stakeholders have been recognized as relevant roles in assisting the holistic development and the commitments of elite athletes in higher education, belonging to the meso (i.e., parents, peers, teachers/employers, coaches, sport managers), macro (e.g., sport clubs/federations, educational institutions, and labour market), and policy (e.g., national and European governing bodies) dimensions of dual career (Amsterdam University of Applied Science, Birch Consultants, the Talented Athlete Scholarship Scheme, the Vrije Universiteit Brussel, and European Athlete as Student network, 2016; Guidotti et al., 2015; Capranica and Guidotti, 2016). Although actors belonging to the family, to the sport, and to the academic environments have direct relationships with the athlete, the actors belonging to the sport (e.g., national sports federations/clubs, EU Athlete organizations), education (e.g., schools/universities), work (e.g., career counselling/employment services), and support (e.g., service providers) organizations could present strong connections with the athlete. Finally, relationships between stakeholders included in the macro and policy dimensions also influence dual career through specific policies and financial resources.

Therefore, to structure effective dual career paths for European student-athletes, insights on similarities and differences between Member States are necessary. In this framework, five European partners (e.g., Austria, Estonia, Finland, Italy, Slovenia) participating in the EU Lifelong Learning Programme "Facilitating Higher Education for Athletes - WINNER Education Model" aim to develop a study model for dual career. In considering that different national dual career systems characterize the partners of the project (Aquilina and Henry, 2010), cross-national comparisons could provide valuable information on challenges student-athletes face in different countries, also in relation to their sport settings and academic majors. In particular, in Austria, the Ministry of Sports, the Ministry of Education, and the Austrian Employment Services (AMS) finances KADA, the national agency established in 2006 to support dual careers of elite athletes and to prepare them for post-competitive career opportunities. In Estonia, the Ministry of Education, the National Olympic Committee and Sports Federations regulate dual career at national level, providing flexible study plans, offering scholarships in universities/schools, and safeguarding the professional development of elite athletes through coaching qualifications courses. In Finland, the Ministry of Education and the National Olympic Committee are involved in providing support to elite student-athletes, with sports schools and sports academies being present in every region. In Slovenia, the Ministry of Education, Science and Sport and the Slovenian Olympic Committee regulate dual career at national level by providing counseling and assistance for employment of elite athletes during and after their sporting career (Kolar, 2014). In Italy, a governmental support for elite student-athletes is still lacking despite dual career policies might be in place at local level, with some University offering some study adjustments for elite athletes and/or establishing specific agreements with the National Olympic Committee and Sports Federations (Capranica and Guidotti, 2016).

Thus, the present cross-national study aimed to investigate the student-athletes' dual career perceptions including: i) their sport and academic career development; ii) existing dual career services; and iii) suggestions for possible implementations of available services. It has been hypothesized that differences exist in relation to the nationality, gender, sport typology, and competition level of European student-athletes.

METHODS

Instrument

To collect relevant information a questionnaire was designed using the focus group method (Kitzinger, 1994). In particular, three main areas were deemed crucial to investigate student-athletes' perceptions regarding actual dual career issues and to structure an effective education model: i) the individual satisfaction regarding sport and academic career development; ii) existing dual career services available to student-athletes; and iii) student-athletes' opinions regarding possible implementations of dual career paths. In relation to these three main thematic domains, a 25-item semi-structured questionnaire was developed (table 1). The instrument includes 22 closed-ended items (e.g., 5-point Likert scale: n=19; dichotomous: n=3), and 3 open-response items. To adapt the English version of the questionnaire to different Member State contexts (e.g., Austria, Estonia, Finland, Italy, Slovenia) achieving equivalence in meaning, the back translation method was applied (Su and Parham, 2002). In particular, each country involved two bilingual translators and a monolingual English reviewer in a blind translation procedure. Furthermore, the instrument was administered to a pilot representative national sample (n=10 participants for each country) of student-athletes to receive additional feedbacks, if any. Thus, the final version of the 25-items questionnaire was considered appropriate to be undertaken with Austrian, Estonian, Finnish, Italian, and Slovenian student-athletes. Furthermore, questions regarding nationality, age, gender, type of sport, type of university major, competition level, sport commitment (i.e., weekly hours spent in training and competitions), academic commitment (i.e., weekly hours spent for individual study and class attendance), weekly time conflicts between sport and academic commitments, and main competition typology (e.g., university and sport club) were also addressed.

Table 1. English version of the questionnaire.

ITEM	TEXT	ANSWER TYPOLOGY
Item 1	Are you able to meet the requirements for students at your university (i.e., attendance to class and exam sessions)?	Scale (1-5)
Item 2	Do you feel the university adequately prepares you to enter the labor market after graduation?	Scale (1-5)
Item 3	How do you rate your chances for a future professional career after graduation?	Scale (1-5)
Item 4	How do you rate your efforts to be successful in your studies?	Scale (1-5)
Item 5	Overall, are you satisfied by your university studies as a part of your dual career?	Scale (1-5)
Item 6	Do you think that the dual career is adequately considered at your university?	Scale (1-5)
Item 7	Please, indicate possible improvements of dual career programmes for student-athletes needed at your university.	Open comment
Item 8	Is the development of your sports career successful?	Scale (1-5)
Item 9	Do you think that your involvement in sport is negatively affecting your study outcomes?	Scale (1-5)
Item 10	Are you satisfied by the development of your sports career since having started the university studies?	Scale (1-5)

ITEM	TEXT	ANSWER TYPOLOGY
Item 11	Do you think that your sport system adequately considers your involvement in a university degree?	Scale (1-5)
Item 12	Please, indicate possible improvements of dual career programmes for student-athletes needed in your sport environment.	Open comment
Item 13	Does faculty staff support you in combining your sport and education commitments?	Scale (1-5)
Item 14	Does faculty staff adapt your university schedule to match with your sport schedule?	Scale (1-5)
Item 15	Does sport staff (coach and managers) support you in combining your sport and education commitments?	Scale (1-5)
Item 16	Does sport staff adapt your sport schedule to match with your university schedule?	Scale (1-5)
Item 17	Do your family, friends, and peers support you in combining your sport and education commitments?	Scale (1-5)
Item 18	In terms of time management, are you pleased with your capacity to combine your sports and studies?	Scale (1-5)
Item 19	Please, indicate possible improvements in organization for better combining your sport and university commitments	Open comment
Item 20	Do you experience decreased efforts in sport (i.e., time dedicated to training or training quality) due to your university studies?	Dichotomous (Yes/No)
Item 21	If Yes: Have your sport performance and success in competitions decreased?	Scale (1-5)
Item 22	Do you experience decreased efforts in your study (i.e., attendance to class and individual study) due to your sport commitment (i.e., time dedicated to training and competition)?	Dichotomous (Yes/No)
Item 23	If Yes: Has your academic achievement decreased?	Scale (1-5)
Item 24	Is there any consulting or tutoring support at your university regarding dual career?	Dichotomous (Yes/No)
Item 25	If Yes: Are you satisfied with the support provided?	Scale (1-5)

Participants

According to the focus group, inclusion criteria for student-athletes were: i) to be enrolled in a University course; ii) to compete in organized sport for at least 10 years; iii) to participate in competitions at national or international levels; and iv) to be involved in sport practice ≥10 hours·week^{-1}. Potential participants were identified through information provided by clubs, sport federations, universities, or from national records of student-athletes.

Procedures

Participants were contacted electronically and asked to provide their consent to participate in the study. They were assured that there were no right or wrong answers and the confidentiality of their responses. Each participant anonymously completed the questionnaire and submitted responses were electronically archived.

Statistical Analysis

Participants' nationality, gender, type of sport, and competition level were considered as independent variables to conduct the statistical analysis. Different statistical approaches were selected in relation to data typology. In particular, for Likert scale items the following stages were performed: i) a multivariate analysis of variance (MANOVA) to evaluate main effects ($p \leq 0.05$) in relation to independent variables; ii) in presence of main effects, one-way ANOVA were applied to ascertain differences ($p \leq 0.05$) between groups with Bonferroni post hoc corrections; and iii) calculation of Cohen's effect sizes (ES) for significant differences, interpreting values 0-0.2=trivial, 0.3-0.6=small, 0.7-1.2=moderate, and >1.2=large, respectively (Hopkins, 2006).

For dichotomous items, a Chi-square test was applied to verify differences ($p \leq 0.05$) in relation to independent variables.

To verify the influence of the context on student-athletes' dual career perceptions, aspects related to both the sports and the academic environments (scale items: 5, 6, 10, 11, 13, 14, 15, 16, 21, and 23; dichotomous items: 20 and 22) were also analysed by means of a one-way ANOVA ($p \leq 0.05$) for scale items and the McNemar-test ($p \leq 0.05$) for dichotomous responses (Eliasziw and Donner, 1991).

Finally, a qualitative analysis of open comments was performed in three main phases: i) in-depth text analysis in each partner's country; ii) translation of the text from the each partner's language into English operated by a bilingual translator; and iii) qualitative content analysis (Mayring, 2000) and global interpretation of data during a project meeting using the focus group method. Based on the coherence in the content, open comments were organized in clusters and the frequency of occurrence was computed. Statistical analyses were conducted in SPSS (21.0; SPSS, Inc., Chicago, IL).

RESULTS

Respondents

A final sample of 221 student-athletes met the inclusion criteria and participated in the study (table 2). National samples showed no difference for age, gender, main competition typology, and study commitment. Conversely, differences ($p=0.009$) emerged for type of sport, competition level, sport commitment, and weekly time conflicts between sport and academic commitments. In particular, type of sport showed a higher ($p=0.02$) proportion of Italian student-athletes involved in individual sports with respect to their Slovenian counterparts. Furthermore, a higher number ($p<0.05$) of Austrian and Italian athletes competing at international level with respect to Slovenian and Estonian subgroups emerged. For sport commitment, Estonian and Finnish student-athletes reported lower training and competition time with respect to their Austrian, Italian and Slovenian counterparts ($p<0.0001$). Finally for weekly time conflicts between sport and academic commitments, Italian student-athletes reported higher values ($p<0.0001$) with respect to the other national groups.

Table 2. Characteristics of the sample.

VARIABLE		OVERALL	COUNTRIES				
			AUT	EST	FIN	ITA	SLO
Sample size	**n**	**221**	46	26	49	50	50
Age	**(years)**	**23.4±3.6**	23.4±1.9	21.6±2.8	22.9±2.4	23.9±3.4	23.4±3.6
Gender (%)	**F**	**46.9**	40.2	30.8	57.1	50.0	48.0
	M	**53.1**	59.8	69.2	42.9	50.0	52.0
Type of sport (%)	**Individual**	**71.7**	69.5	63.5	79.6	86.0	56.0
	Team	**28.3**	30.5	36.5	20.4	14.0 ‡	44.0
Competition level (%)	**National**	**43.0**	19.6	46.2	65.3	32.0	52.0
	International	**57.0**	80.4 *‡	53.8	34.7	68.0 *	48.0
Main competition typology (1=never; 5=always)	**University**	**1.7±1.1**	1.5±1.0	2.5±1.3	1.4±0.8	1.7±1.1	1.6±1.2
	Sport club	**4.5±1.0**	4.3±1.1	4.3±0.9	4.4±0.9	4.5±1.1	4.6±0.8
Sport commitment	**(hours·week^{-1})**	**17.7±5.8**	18.9±6.1 *#	13.4±3.8	14.1±4.9	20.4±4.9 *#	19.6±5.0 *#
Study commitment	**(hours·week^{-1})**	**20.9±13.9**	18.5±11.2	23.8±13.9	23.7±11.6	22.6±17.6	17.0±10.9
Time conflicts between study and sport schedules	**(hours·week^{-1})**	**8.8±8.1**	6.6±5.0	6.7±4.6	6.4±4.7	15.3±12.2 **	7.1±4.2

Note: AUT=Austria; EST=Estonia; FIN=Finland; ITA=Italy; SLO=Slovenia. # Different from FIN (p≤0.05); * Different from EST (p≤0.05); ‡ Different from SLO (p≤0.05); Ŧ Different from AUT (p≤0.05); ¥ Different from ITA (p≤0.05); ** Different from other groups (p≤0.05).

General findings

Results of 5-point likert scale closed-ended items are presented in tables 3a and 3b. In general, scores <3 pt emerged in relation to: i) faculty staff adapting the university schedule to match the sport schedule (item 14); ii) the perceived support from faculty staff (item 13); iii) the consideration of a dual career path at both university (item 6) and sport (item 11) levels; iv) the perceived negative impact of the sport involvement on academic outcomes (item 9); and v) sport staff adapting of the sport schedule to match the academic schedule (item 16).

Intermediate values (range: 3-4 pt) accounted for: i) the perception that the university is adequately preparing student-athletes to enter the labor market (item 2); ii) the athlete's capability to meet his/her academic requirements (item 1); iii) the perceived support from the sport staff (item 15); iv) the perceived efforts to be successful in studies (item 4); v) the perceived chances for a future professional career after graduation, the satisfaction regarding university studies, the satisfaction regarding the development of the sport career from starting the university studies, the satisfaction regarding the capacity to combine sport and academic commitments (item 3, 5, 10, 18); and vi) the perceived sport success (item 8). Finally, the highest scores (4.4±1.7 pt) emerged for family/friends/peers support (item 17). The multivariate analysis showed main effects for all the considered independent variables (nationality: Wilks's Lambda=0.560, p=0.001; gender: Wilks's

Table 3a. Results of Likert scale closed-ended items in relation to nationality.

Item	AUT	EST	FIN	ITA	SLO	p and ES values
Item 1	3.3±0.8	3.8±0.7	3.8±1.0	3.0±1.4 *#	3.2±1.2 #	p<0.02, ES range=0.5-0.7
Item 2	3.3±0.8	3.7±0.9	3.5±1.0	3.0±1.0 *	2.9±1.0 *#	p<0.02, ES range=0.6-0.8
Item3	3.9±0.9	3.6±1.1	3.9±0.8	3.4±0.9	2.9±1.2 Ŧ#	p<0.0001, ES=0.9-1.0
Item 4	3.5±1.0	3.1±1.0	3.4±0.9	3.7±1.0	3.5±1.1	
Item 5	3.7±1.2	3.8±0.8	3.4±1.0	3.7±1.2	3.0±1.0 ¥Ŧ*	p<0.01, ES range=0.6-0.8
Item 6	2.6±1.3	3.0±1.4	2.5±1.1	2.4±1.4	2.7±1.2	
Item 8	3.8±1.0	4.2±0.9	3.3±0.9 Ŧ¥*	4.0±0.6	3.4±0.9 ¥Ŧ*	p<0.01, ES range=0.5-1.0
Item 9	3.6±1.2 ‡#*	2.7±1.2	2.7±1.2	2.9±1.4 ‡	2.2±1.1	p<0.05, ES range=0.5-1.2
Item 10	3.8±1.1 #	3.6±1.1	3.1±1.1	3.6±1.0	3.4±1.0	p=0.027, ES=0.6
Item 11	2.8±1.4	2.9±1.1	3.0±1.2	2.1±1.3 #	2.8±1.1	p=0.004, ES=0.7
Item 13	2.6±1.4	3.0±1.2	2.6±1.1	2.2±1.3	2.7±1.2	
Item 14	1.6±0.8 ‡#	2.3±0.8	2.7±1.1	1.8±1.1 #	2.3±1.3	p<0.01, ES range=0.5-1.1
Item 15	3.4±1.3	3.8±1.2	3.8±1.1	3.1±1.4 #	3.4±1.0	p=0.044, ES=0.6
Item 16	2.4±1.4	3.4±1.4	3.3±1.3	2.4±1.4 *#	2.8±1.1	p<0.01, ES=0.6-0.7
Item 17	4.6±0.6	4.7±0.5	4.1±0.9	4.2±1.1	4.0±1.2 *Ŧ	p<0.02, ES=0.6-0.8
Item 18	3.3±1.1	3.6±1.3	3.4±1.1	3.8±1.1	3.4±1.0	

Note: AUT=Austria; EST=Estonia; FIN=Finland; ITA=Italy; SLO=Slovenia. # Different from FIN; * Different from EST; ‡ Different from SLO; Ŧ Different from AUT; ¥ Different from ITA.

Table 3b. Results of Likert scale closed-ended items in relation to gender, type of sport and competition level.

	Gender			Type of sport			Competition level		
Item	**F**	**M**	**P and ES values**	**IND**	**TEAM**	**P and ES values**	**NAT**	**INT**	**P and ES values**
Item 1	3.6±1.0	3.2±1.2	p=0.024, ES=0.3	3.3±1.2	3.6±1.0		3.8±0.9	3.1±1.2	p<0.0001, ES=0.7
Item 2	3.3±1.0	3.2±1.0		3.2±1.0	3.2±0.9		3.2±1.0	3.2±1.0	
Item 3	3.6±1.0	3.5±1.1		3.6±1.1	3.4±1.0		3.4±1.1	3.6±1.0	
Item 4	3.6±0.9	3.3±1.1	p=0.024, ES=0.3	3.5±1.0	3.3±1.0		3.4±1.1	3.5±1.0	
Item 5	3.6±1.1	3.4±1.2		3.5±1.1	3.6±1.0		3.4±1.0	3.5±1.2	
Item 6	2.7±1.3	2.5±1.2		2.5±1.2	3.0±1.2	p=0.007, ES=0.4	2.5±1.2	2.7±1.3	
Item 8	3.7±0.8	3.7±1.0		3.7±0.9	3.6±0.9		3.4±0.8	3.9±0.9	p<0.0001, ES=0.6
Item 9	2.7±1.2	2.9±1.3		2.8±1.3	2.7±1.2		2.5±1.2	3.0±1.3	p=0.004, ES=0.4
Item 10	3.5±1.1	3.4±1.1		3.5±1.1	3.6±1.0		3.3±1.0	3.6±1.1	p=0.013, ES=0.3
Item 11	2.8±1.2	2.7±1.3		2.6±1.3	3.0±1.1	p=0.047, ES=0.3	2.8±1.2	2.6±1.3	
Item 13	2.7±1.3	2.5±1.2		2.5±1.2	2.9±1.3	p=0.028, ES=0.3	2.5±1.2	2.7±1.3	
Item 14	2.3±1.2	2.0±1.1	p=0.05, ES=0.3	2.1±1.1	2.2±1.1		2.3±1.1	2.0±1.1	
Item 15	3.6±1.2	3.3±1.2	p=0.045, ES=0.3	3.5±1.2	3.4±1.1		3.5±1.2	3.4±1.2	
Item 16	3.0±1.4	2.8±1.3		3.0±1.4	2.6±1.2	p=0.047, ES=0.3	3.1±1.3	2.7±1.4	p=0.05, ES=0.3
Item 17	4.3±1.0	4.3±0.9		4.3±0.9	4.2±1.1		4.1±1.1	4.5±0.8	p=0.002, ES=0.4
Item 18	3.5±0.9	3.5±1.2		3.6±1.1	3.4±1.0		3.5±1.1	3.5±1.1	

Note: F=Female; M=Male; IND=Individual sports; TEAM=Team sports; NAT=National; INT=International.

Lambda=0.857, p=0.03; type of sport: Wilks's Lambda=0.852, p=0.021; competition level: Wilks's Lambda=0.560, p=0.031). Conversely, no interaction between factors was observed.

Scale items analysis

Regarding nationality (table 3a), univariate analysis showed effects ($p \leq 0.05$) for the perceived difficulties in meeting the academic requirements (item 1), perceptions that the university is adequately preparing student-athletes to enter the labour market after graduation (item 2), perceived chances for a future professional career after graduation (item 3), satisfaction regarding university studies as a part a dual career (item 5), perceived sport success (item 8), perception of a negative influence of sports involvement on study outcomes (item 9), satisfaction regarding the development of the sports career since having started the university studies (item 10), perception regarding the consideration from the sport system of student-athlete's involvement in a university degree (item 11), schedule adaptation from both faculty staff (item 14) and sport staff (item 16), support from the sport staff (item 15), and perceived family, friends, and peers support in combining their sport and education commitments (item 17).

For gender (table 3b), females showed highest ($p \leq 0.05$) perceived ability to meet the academic requirements (item 1), required efforts to be successful in studies (item 4), schedule adaptations from faculty staff (item 14), and perceived support from the sport staff (item 15).

With respect to team sports student-athletes (table 3b), individual sports athletes reported lowest ($p \leq 0.05$) consideration for their dual career path from both the academic (item 6) and the sports sides (item 11), and support from faculty staff (item 13). Conversely, they also reported the highest adaptation of sport staff in matching their sport and academic schedules (item 16).

Finally for competition level (table 3b), student-athletes competing at national level showed lowest ($p \leq 0.05$) perceived success in their sport career (item 8), negative impact of their sport involvement on their academic outcomes (item 9), satisfaction regarding their sports career since having started their university studies (item 10), and family, friends, and peers support (item 17). Furthermore, they also reported the highest ($p \leq 0.05$) ability to meet academic requirements and schedule adaptation from the sport staff to match their sport and academic commitments.

Dichotomous items and associated scale items analysis

Concerning dichotomous items, nationality determined a significant effect for item 20 ($\chi^2=18.4$, $p=0.001$) and item 22 ($\chi^2=47.4$, $p<0.0001$) only (figure 1). In particular for item 20, no difference was observed for gender, type of sport, and competition level. Conversely, Italian and Slovenian student-athletes reported a lower perception of decreased efforts in sport (i.e., time dedicated to training or training quality) due to their university studies compared with their Austrian (ITA: $\chi^2=4.0$, $p=0.04$; SLO: $\chi^2=5.9$, $p=0.015$, respectively), Estonian (ITA: $\chi^2=9.6$, $p=0.002$; SLO: $\chi^2=11.9$, $p=0.0006$, respectively), and Finnish (ITA: $\chi^2=5.4$, $p=0.02$; SLO: $\chi^2=7.5$, $p=0.006$, respectively) counterparts. Positive responses to item 20 (n=99), showed no difference for perceived decreased performance and success in sport competitions in relation to nationality, gender, type of sport, and competition level (item 21: 3.0±1.0 pt).

Regarding item 22, Austrians showed the highest value in relation to perceived decreased efforts in attendance to class and individual study due to the time dedicated to training and competition with respect to other national groups (EST: $\chi^2=11.8$, $p=0.0006$; FIN: $\chi^2=15.4$, $p<0.0001$; ITA:

χ^2=13.3, p=0.0002; SLO: χ^2=45.9, p<0.0001). Conversely, the opposite trend emerged for Slovenian student-athletes with respect to Estonian (χ^2=9.9, p=0.001), Finnish (χ^2=11.8, p=0.0006), and Italian (χ^2=14.5, p=0.0001) counterparts. For competition level, the highest perception (χ^2=11.4, p=0.003) of decreased academic outcomes emerged for international athletes (YES=72%; NO=28%) compared with national counterparts (YES=51%; NO=49%). Conversely, no difference emerged in relation to gender and type of sport. Positive responses to item 22 (n=138), showed a difference for nationality in relation to perceived decreases of academic achievements (item 23; p=0.024). Post-hoc analysis confirmed only a difference (p=0.01, ES=0.9) between Italian (3.8±1.1 pt) and Finnish (2.8±1.2 pt) subgroups. Conversely, no difference was observed in relation to gender, type of sport and competition level.

For item 24, independent variables did not show effects in relation to the presence of consulting or tutoring support for dual career at student-athletes' university. Among those who provided a positive response (n=91), Finnish student-athletes resulted less satisfied (2.6±1.0) with the support provided (item 25) compared to Austrian (4.4±0.7 pt, p<0.0001, ES=2.1), Estonian (3.9±1.1 pt, p=0.024, ES=1.2) and Slovenian (3.6±0.9 pt, p=0.002, ES=1.1) counterparts. A lower satisfaction (p=0.001, ES=1.5) emerged also for Italian student-athletes (3.2±0.9 pt) with respect to their Austrian (4.4±0.7 pt) counterparts. Conversely, no difference in relation to gender, type of sport and competition level emerged.

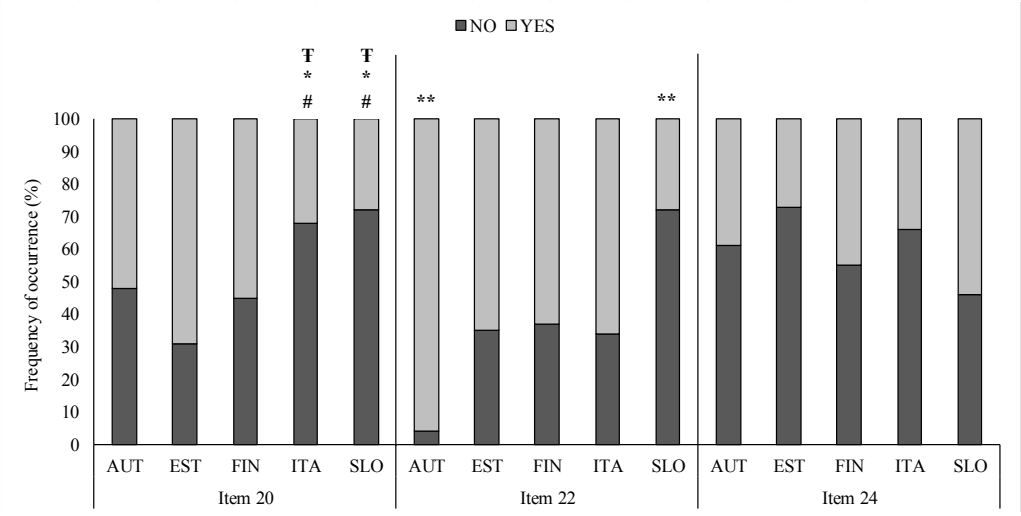

Figure 1. Results of dichotomous items in relation to nationality.

Note: Note: AUT=Austria; EST=Estonia; FIN=Finland; ITA=Italy; SLO=Slovenia. # Different from FIN (p≤0.05); * Different from EST (p≤0.05); ‡ Different from SLO (p≤0.05); Ŧ Different from AUT (p≤0.05); ¥ Different from ITA (p≤0.05); ** Different from other groups (p≤0.05).

Comparison in relation to items related to both the sports and the academic environments

Table 4 shows that respondents experienced decreased efforts in their studies due to their sport involvement (item 22) to a greater extent (p=0.0001) with respect to that determined by a negative influence of academic commitment on sports achievements (item 20). Furthermore, the sport context was perceived as more flexible in providing support (item 13 and 15: p=0.0001) and schedule adaptations (item 14 and 16: p=0.0001) with respect to the academic one. Conversely,

no difference was observed in relation to student-athletes' satisfaction (items 5 and 10), the consideration that their dual career received from both the sport and the academic sides (items 6 and 11), and their perceived reduced performance (items 21 and 23).

Table 4. Comparison on perceptions regarding the influence of the sports and the academic environments on dual career outcomes.

	Sports		Academics			
	Yes	No	Yes	No	p	χ^2
Item 20 and 22: Reduced efforts (%)	44.8	55.2	62.7	37.3	0.0001	19.048
	Score (pt.)		Score (pt.)		p	ES
Item 5 and 10: Satisfaction	3.5±1.1		3.5±1.1		0.935	-
Item 6 and 11: Consideration	2.7±1.3		2.6±1.3		0.270	-
Item 13 and 15: Support from staff	3.4±1.2		2.6±1.3		0.0001	0.3
Item 14 and 16: Schedule adaptions	2.9±1.2		2.1±1.1		0.0001	0.3
Item 21 and 23: Reduced performance	2.9±1.0		3.2±1.1		0.089	-

Qualitative analysis

In open comments (items: 7, 12, 19), student-athletes mentioned 295 themes in relation to possible improvements of dual career paths. Key issues resulted the flexibility and off-campus exams (13%), the support and understanding of the student-athletes' needs from both the academic and the sport environments (12%), and the flexibility in class attendance (11%). Further, on-line study material, inter-institutional communication/cooperation, teachers' availability, and lecture schedule were also recognized as important aspects (6%). Other features (i.e., credit recognition, long term study planning, tutorship etc.) accounted for lowest percentages of occurrence (≤3%).

DISCUSSION

Major findings of the present study highlight that student-athletes recognize education as a key aspect of their personal development and for future employment at the end of their sport career. In fact, results substantiate their capability to endure a dual career, especially in presence of a high family/friends/peers support. Conversely, the lack of institutional consideration and support represents a negative key issue, especially when the academic context provides limited flexibility to help student-athletes in combining their dual career commitments. Furthermore, student-athletes' perceptions of their dual career path differ in relation to their nationality, gender, type of sport and competition level.

Previous research (Aquilina, 2013) showed that pursuing both sport and academic careers is related to the need to focus on more than one aspect of life in talented athletes. In fact, transferability of skills learned in one area, intellectual stimulation, sense of balance, frustration with the experience of having dedicated time exclusively to elite sport, feeling more secure, and effective transition into post-athletic career have been identified as key reasons to be involved in a dual career. Furthermore, the prioritization of the educational status and career planning is associated with positive post-sport life adjustments (Debois, Ledon, Argiolas and Rosnet, 2012;

Park, Lavallee and Tod, 2013; Stambulova and Alfermann, 2009). However, the involvement in elite sport in absence of support structures could also collide with the importance of completing the education path, leading to personal concerns, lower examinations results, stress, drop-out and mental breakdown (Christensen and Sørensen, 2009). Nevertheless, the investigated sample confirmed that education is a key aspect of athletes' personal development to increase chances for future employment at the end of their sport career. In fact, positive results emerged in relation to the ability to meet academic requirements and the satisfaction concerning both academic and sport achievements. In addition, confirming previous findings (Pummell, Harwood and Lavallee, 2008) family/friends/peers support plays a key role in helping student-athletes to balance the different layers of their development (i.e., athletic, psychological, psychosocial, and educational).

Although education is an important component of the individual, regardless of gender, female athletes might prioritize academic career because women's sport provides limited opportunities to pursue a professional athletic career (International Olympic Committee, 2014; Pfister, 2010). In line with the literature (Castagnetti and Rosti, 2009), in the present study women resulted more confident to meet their academic requirements with respect to male athletes, probably due to more efforts devoted to study (Doupona Topic, 2005) in addition to their capability to negotiate the support from academic and sport staff.

In this study, the student-athletes' satisfaction regarding their academic and sport achievements were overall positive, indicating a high level of self-realization of the need to meet the academic and sport challenges of a dual career observed in previous research (Aquilina, 2013). As expected, a lower satisfaction regarding sport achievements in national athletes emerged. In general, the impact of the sport involvement on academic outcomes of athletes seems to be strictly related to their competitive level (i.e., local, regional, national, or international), which determines different career trajectories (Stambulova and Alfermann, 2009). Surely, to reach the top-level relevant efforts are required by elite athletes being highly involved in sport related activities (Ericsson, 2006). As expected, national athletes perceived a lower negative impact of their sport involvement on academic outcomes, whereas international level athletes perceived difficulties in meeting class attendance and examination requirements, probably related to a higher training volume and intensity in addition to frequent travels abroad (Aquilina, 2013). In this framework, it is possible to position the frequent quest for flexibility of academic requirements, on-line study material and long-distance learning emerging from the qualitative analysis of data. Participants highlighted that the implementation of several services (i.e., flexibility and off campus exams, support and understanding of the student-athletes' needs from both the academic and the sport environment, flexibility in class attendance, on line study material, teachers' availability, and lecture schedule) could be crucial to increase the effectiveness of their dual career. These results confirmed previous findings in this field (Gosper, McNeill, Phillips, Preston, Woo, and Green, 2010), which reported that students tend to consider positive the introduction of on-line teaching tools, which allow them a certain flexibility to better organize their own time.

The present study highlighted that individual and team sports athletes perceived differently the consideration received from both the sport and academic environments toward their dual career. Furthermore, individual sport athletes reported a lower support from academic staff, but a higher flexibility for schedule adaptation from sport staff with respect to their team sports counterparts. Since type of sport determines different demands on athletes, required capacities for performance excellence, and career transition trajectories (Wylleman and Reints, 2010), it could be speculated

that training schedule in team sports is not flexible due to the number of actors involved in sport practices (e.g., players, coaches, assistants, managers). Conversely, a more flexible path could be structured in individual sports, where more personal relationships between athletes and sport staff may be established. Furthermore, the lack of consideration regarding dual career emerged in the present study calls for a higher involvement and cooperation of both sport and faculty staff to facilitate student-athletes' dual career.

At interpersonal level, the present findings confirm that a dual career path is pursued through the combined effort of different actors supporting the elite athletes (Larsen, Alfermann, Henriksen and Christensen, 2013; Capranica and Guidotti, 2016). In providing encouragement, reinforcement, and support, family, friends, and peers are perceived as having a key role in helping athletes to balance their sport and education commitments (Pummell, et al., 2008). Conversely, sport and especially academic staff have been perceived as less supportive of the needs and challenges student-athletes face, especially when adjustments are indispensable in the presence of overlapping academic and sport schedules. The absence of proper interpersonal support could negatively affect the completion of the educational path (Christensen and Sørensen, 2009; Park et al., 2013). Therefore, an effective relationship between athletes and sport staff (i.e., coaches, assistants, and managers) is a core element to support them in pursuing both academic and sport achievements (Larsen et al., 2013). Conversely, Henriksen et al. (2014) observed that the lack of supportive training groups and role models, little understanding from non-sport environment, no integration of efforts among different parts of the environment, and an incoherent organisational culture are associated with dual career issues in youth athletes. The present study highlights the need to increase the sport staff's awareness regarding the importance to ensure dual career opportunities of elite student-athletes. In particular, their active involvement in the developmental process of talented athletes could play a crucial role to ensure a balanced career path, especially in presence of conservatory academic systems. Although faculty staff was perceived as unavailable to meet student-athletes' needs and to provide the necessary flexibility toward dual career students, a recent survey revealed that Italian university teachers are personally willing to be supportive and to provide them with flexible educational paths (Guidotti, Lupo, Cortis, Di Baldassarre and Capranica, 2014). However, the presence of institutional constrains actually limits the teacher's personal decision to adopt flexible attendance and exam schedules. Surely, a better cooperation between bodies responsible for sport and education could be a strategic factor for the implementation of the dual career of student-athletes (Sotiriadou and De Bosscher, 2013).

Successful sport environments are characterized by a strong, open, and cohesive organizational culture based on integrated values concerned with the balance of the players' daily lives in school and sport (Henriksen, Stambulova and Roessler, 2010; Larsen et al., 2013). However, Members States present important differences in sport environments and organization (Aquilina and Henry, 2010; Henry, 2013). Despite the European Commission strongly recommends the institutional support and consideration of dual career across Member States (European Commission, 2012), at present dual career policies are still at an embryonic stage in many European countries (Amsterdam University of Applied Sciences et al., 2016). Not surprisingly, different academic/sport systems across Europe had an impact on the perceived support and availability of dual career services of participants in this study, and their satisfaction regarding the quality of the educational path (Aquilina and Henry, 2010; Sotiriadou and De Bosscher, 2013). Furthermore, differences in perceived efficacy of education to enter the labor market mirrored the economic situation, employment strategies, and unemployment rates at national level (Council of the

European Union, 2015; European Commission, 2015). In considering that available information on dual career approaches and services in place in Europe is fragmentary (Amsterdam University of Applied Sciences et al., 2016), policy makers should enforce a harmonized methods of data collection between Member States (Capranica and Guidotti, 2016). In fact, since the European Commission placed a great emphasis on guaranteeing student-athletes' dual career (European Commission, 2007; 2012), several measures have been put in place across Europe. However, the present study highlighted the need to further improve dual career services in European Member States and to sensitize both academic and sport contexts toward the sports and academic commitments of student-athletes.

CONCLUSIONS

To our knowledge, the present study is the first attempt to investigate student-athletes' perceptions and opinions regarding their dual career path through a semi-structured tool and involving a wide cross-national sample. In particular, findings highlight that universities should develop a culture that both challenges (i.e., maintain high expectations) and supports (i.e., provide the necessary programs and services) talented students to meet or exceed their own expectations, as well as the expectations of their respective institutions (Horton, 2011). Moreover, sport organizations should consider appropriately the provision of tutors to assist their athletes in pursuing a university degree. A prerequisite underpinning this process is to structure sustainable and adequate dual career services for students-athletes, which could enable them to pursue both sport and academic achievements. Therefore, the present investigation provides relevant insights on major issues and challenges of dual career paths across Europe, which will be the starting point to structure an effective study model envisioning a reduced compulsory attendance for lectures/classes, the possibility to spread courses over more than one semester, the organization of blocks of intensive learning with gaps for training/competition in between, the delivery of online learning and distance learning skills, flexible exam schedules, and the establishment of inter-institutional agreements to allow student athletes to have access to online examination under the supervision of local academic staff.

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Conflicts of interest

None declared.

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