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DUAL CAREER OF EUROPEAN STUDENT-ATHLETES: A SYSTEMATIC LITERATURE REVIEW

DVOJNA KARIERA EVROPSKIH ŠTUDENTOV ŠPORTNIKOV – PREGLED LITERATURE

ABSTRACT

In the last decade, a growing interest emerged in the promotion of the combination of education and elite sport commitments (i.e., dual career, DC) of European student-athletes. Thus, this study attempted to provide a systematic review of scientific contributions on DC in Europe. Published studies between 2007 and 2014 on DC of European student-athletes were considered. Descriptive and thematic analyses provided an overview of publication activity, scholars' contributions, research methods, National representation, challenges in relation to individual, interpersonal, socio-environmental and policy dimensions (i.e., micro, meso, macro, and global, respectively) of DC, and the current stage (i.e., nascent, intermediate, and mature) of this research area. A final sample of 49 scientific contributions highlighted: 1) An emerging academic conversation on several dimensions of DC in Europe; and 2) Methodological challenges of this research path. Findings suggest that DC is an emerging research area, multidisciplinary in its nature. The specific terminology needs to be consolidated and the lack of contributions focused on interpersonal factors related to DC (i.e., support from family, peers, coaches, and teachers) calls for further research in this field. According to the European guidelines on DC, cross-national comparisons are strongly recommended, especially applying longitudinal research designs and integrating qualitative and quantitative methodologies. This study has not only provided a better understanding of the conceptual approach of research on DC within the existing literature, but also a potential guide for future research in this area and policy actions across Member States.

Keywords: dual career, student-athlete, sport, education, literature review

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IZVLEČEK

V zadnjem desetletju narašča zanimanje za spodbujanje usklajevanja izobraževalnih in športnih obveznosti (tj. dvojna kariera, DK) evropskih študentov-športnikov. Članek ponuja pregled znanstvenih prispevkov na področju DK v Evropi. Obravnavane so študije, objavljene med letoma 2007 in 2014 na področju DK evropskih študentov-športnikov. Opisna in tematska analiza ponuja pregled objavljenih prispevkov, raziskovalnih metod, pregled držav, ki obravnavajo omenjeno problematiko, izzive v povezavi z individualnimi, medosebnimi, družbeno-okoljskimi in političnimi razsežnostmi (tj. mikro, mezo, makro in globalno) DK in trenutni položaj (tj. razvijajoče se, vmesno in zrelo) tega raziskovalnega področja. Končni vzorec 49 znanstvenih prispevkov kaže, da se: 1) pojavljajo akademske razprave o različnih razsežnostih DK v Evropi; in 2) metodološki izzivi. Ugotovitve kažejo, da je DK nastajajoč raziskovalni prostor, ki je po svoji naravi multidisciplinaren. Utrditi je potrebno specifično terminologijo. Avtorji so zaznali pomanjkanje prispevkov, ki se osredotočajo na medosebne dejavnike (tj. podporo družine, vrstnikov, trenerjev in učiteljev), zato pozivajo k nadaljnjim raziskavam na tem področju. V skladu z evropskimi smernicami o DK, so zelo priporočljive mednarodne primerjave, še posebej pa uporaba longitudinalnih raziskovalnih modelov in integracija kvalitativnih in kvantitativnih metod. Poleg tega, da študija omogoča boljše razumevanje konceptualnega pristopa raziskav na področju DK s pomočjo obstoječe literature, ponuja tudi napotke za prihodnje raziskave na tem področju in predlaga ukrepe.

Keywords: dvojna kariera, študenti športniki, šport, izobraževanje, pregled literature

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INTRODUCTION

Sport is a growing social and economic phenomenon that strongly contributes to the strategic objectives of the European Union (EU), playing a key role for personal development, individual fulfilment, solidarity, tolerance and fair play of European citizens (European Commission-EC, 2007). In particular, the protection of youth athletes has been deemed crucial to guarantee their athletic development, educational/vocational rights, and opportunities to emerge in the society and integrate into the labour market at the end of their sport career (Capranica and Millard-Stafford, 2011). An athletic career at local, regional, national, or international level is a multistage process (Alfermann and Stambulova, 2007), requiring a long-term deliberate practice (Ericsson, 2006). In particular, elite athletes spend 20-30 hour week⁻¹ in training and competition activities, struggling to combine them with the 30 hour week⁻¹ necessary for a satisfactory career in higher education (Aquilina, 2013). Being European elite sport mainly developed at private level (i.e., sport clubs), athletes encounter several difficulties in reconciling sport and educational commitments, which often lead to sport or academic dropouts (Wylleman and Reints, 2010; Donnelly and Petherick, 2004; Conzelmann and Nagel, 2003).

In Europe, the term “dual career” (DC) has been recently introduced to indicate the specific challenges elite athletes face in combining sport and educational demands (EC, 2007). In this framework, the European Parliament commissioned three studies regarding the DC across European Member States (European Parliament, 2003; Amara, Aquilina, Henry and PMP Consultants, 2004; INEUM Consulting and TAJ, 2008). Findings highlighted profound differences between countries in supporting student-athletes, ranging from consolidated and institutionalized measures to the absence of structures to ensure a successful DC path. Since the enforcement of the Lisbon Treaty in 2009, the legal competence of the EU to regulate the sport area has been established and policy actions concerning youth development, employment, education and training of elite athletes have been implemented (EU Workplan 2011-2014, 2014-2017). Furthermore, the EC addressed sport related issues through its official documents (EC, 2007, 2011b, 2012b), Calls for Proposals/Tenders (EC, 2009, 2010, 2011a, 2012a, 2013b), and the EU Erasmus+ 2014-2020 programme, which allocated a relevant budget to support trans-national partnerships (EC, 2013a, 2014b). In particular, among the 95 European funded projects in the field of sport (EC, 2014a), nine projects were focused on dual career (i.e., “ATHLETES2BUSINESS”, 2009; “Dual Career for Young Athletes in Europe - DC SPORT”, 2009; “FIFPro online Academy”, 2009; “INTECS Network Building: Preparatory Actions for Establishing a Network of International Training and Education Centers for Winter Sports”, 2009; “Facilitating Higher Education for Athletes - WINNER Education Model”, 2013; “Improving player associations support for dual careers”, 2013; “Networks of knowledge”, 2013; “Developing an Innovative European Sport Tutorship Model for the Dual career of athletes”, 2014; “Gold in Education and Elite Sport”, 2014) investing an overall amount of 2.847.578,00 € (range: 194.038,00-624.639,00 €). Thus, the EC strongly encourages the dialogue between sport and educational bodies to structure flexible academic curricula for student-athletes in higher education and to assist them with post-athletic career opportunities (EC, 2012b). Actually, the recent introduction of the Youth Olympic Games for athletes aged 14-18 years (International Olympic Committee, 2009) urged sport academies to intensify their programmes so that an imbalance between sport and academic commitments could occur also at high school level (Capranica and Millard-Stafford, 2011).

A substantial scientific literature on DC focuses on American student-athletes, who are considered important for the university system (Aries, McCarthy, Salovey and Banaji, 2004; Shulman

and Bowen, 2001). Conversely, limited research has been carried out on European counterparts (Aquilina, 2009). From the seminal study of De Knop, Wylleman, Van Hoecke and Bollaert (1999), different dimensions affecting the DC phenomenon in Europe have been considered. Nevertheless, there is a lack of information regarding the main research trajectories and methodologies applied in this field, which could be crucial to map major outcomes/gaps to plan future research in this area. Thus, the present study aims to provide a systematic literature review (SLR) of scientific contributions on DC of student-athletes to assess the current stage (i.e., nascent, intermediate, and mature) of this research area according to Edmonson and McManus (2007). In considering that several individual, psychosocial, social, and policy factors may facilitate and/or interfere with student-athletes' career choices, to mirror the multifaceted and multidisciplinary aspects of DC a theoretical framework including the categorization of retrieved studies in four main dimensions (i.e., micro, meso, macro, and global) will be proposed. To offer an overview of the relevant contributions, a description of the research methodology, including the search strategy and the analysis of publication activity, research methods and settings of selected publications will be provided. Finally, future research and European DC actions will be envisioned.

METHODS

To ensure an accountable, replicable and updateable SLR on European DC, before the actual search a detailed procedure for planning, conducting and reporting stages was defined. In considering that the term "dual career" to identify the combination of elite sport and education in European student-athletes officially appeared in the White Paper on Sport (EC, 2007), a chronological interval between January 2007 and December 2014 was set. The planning stage addressed the definition of the problems in clear, unambiguous and structured questions, which allowed the a priori determination of the reasons for inclusion and exclusion selection criteria. In particular, to be considered eligible for the SLR, studies had to meet the following selection criteria: i) to be related to athletes' DC; ii) to include the term "dual career" in the keywords or at least once in the text; iii) to be published after the year 2007; iv) to be carried out in European Member States; v) to be journal articles, books, or book chapters; and vi) to have at least an English written abstract. No limits on characteristics of samples and research designs were imposed. Operational definitions and clarification of terms included the following keywords: "dual career", "student-athlete*", "sport*", "elite sport*", and "academic*". The use of the asterisk at the end of a word was deemed relevant to allow searches for different suffixes. To maximize the effectiveness of the searching process different keyword combinations were applied on four main electronic databases: Google Scholar, Sportdiscus, PsycARTICLES, and Web of Knowledge. A careful removal of duplicates was planned before the analysis of retrieved articles. To overcome the rigidity of the mechanistic search and to allow the identification of relevant papers not identified during the electronic search, the snowballing technique was also applied.

Selected studies were assigned a bibliography code. Each contribution was categorized in relation to the topic (i.e., focused on DC; addressing DC related issues) and the micro (i.e., individual student-athletes), meso (i.e., interpersonal relationships of student-athletes with family, peers, educators, coaches and managers), macro (i.e., the sport and education environments), and global (i.e., organizational and Governmental policies) dimensions of DC. In case a univocal dimension was not recognizable, studies were considered as multidimensional. Then, detailed tables classifying scientific areas, research designs (i.e., theoretical, experimental, and mixed approach),

data collection methods (i.e., qualitative and quantitative), and sample characteristics (i.e., size, gender, competition level, type of sport, age) were created. To provide a synthetic overview of major findings reported in selected studies, a thematic analysis was performed. Furthermore, the representation of European Member States included in the studies was verified, also in relation to the policy approach toward the DC in place (Aquilina & Henry, 2010).

RESULTS

General findings of scientific contributions

Among the 721 contributions identified through the electronic search strategy. Based on title, publication year, keywords, and abstract, 667 studies were excluded. The remaining 54 studies met at least three inclusion criteria. Additional 25 and 10 scientific contributions were identified through a less restrictive selection approach and the snowballing technique, respectively. During the in-depth examination, 40 contributions were rejected, whereas 26 and 23 studies were classified as perfectly fitting the aim of the SLR and relevant although not presenting the term “dual career”, respectively. Thus, the retained papers (n=49) included 43 journal articles, 2 books, 3 book chapters, and 1 official report. Among the journal articles, 35 research studies (code: 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 25, 27, 28, 29, 31, 34, 35, 37, 38, 39, 40, 41, 46, 49), six reviews (code: 10, 17, 30, 32, 42, 47), 1 invited commentary (code: 33), and 1 brief report (code: 24) were identified (Table 1 and Table 2).

Since 2007, the interest toward the study of DC of European student-athletes tended to increase, reaching a peak in 2014 (n=11 studies). Only 15 contributions used the term “dual career” in the title or in the keywords (code: 8, 9, 11, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 49), 9 papers (code: 2, 3, 4, 5, 6, 10, 12, 13, 28, 48) presented keywords related to the DC issue, whereas the topic was not recognizable in the keywords of 19 contributions (code: 7, 25, 27, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 45, 46, 47). Finally, no keyword was provided for 6 studies (code: 1, 18, 26, 36, 43, 44).

Study typology, research design, and sample characteristics

Table 3 reports the characteristics of the selected scientific contributions. In general, 17 studies presented a theoretical approach, 30 studies adopted an experimental approach, and only 2 studies applied a combined theoretical and experimental approach. Furthermore, the cross-sectional research design resulted the mostly applied, with both qualitative and quantitative data collection methods well represented.

Regarding the experimental samples, a total number of 1269 participants (range: 1-400 subjects) were included in the selected studies. Nevertheless, a lack of information emerged in 6 papers (code: 9, 31, 34, 38, 40, 46). In general, student-athletes of different ages (i.e., youth, adult, former athletes), genders, competition levels (i.e., youth elite, elite, and sub-elite) and sport typology (i.e., individual and team sports) were investigated. In particular, the majority of studies considered mixed samples for gender and sport typology, and elite competition level for both youth and adult student-athletes. Finally, Radtke and Coalter (2007) and Aquilina and Henry (2010) considered educational services in sport schools and in European university environments, respectively.

Thematic area, thematic analysis and major findings reported in the selected studies

Scientific contributions addressing a DC related issue resulted slightly higher (51%) with respect to those specifically focused on DC (49%). In general, the majority of the studies concentrated on

Table 1. Contributions focused on DC of student-athletes included in the SLR.

Year	Authors	Abbreviated reference	Dual career dimension	Dual career term	Code
2007	Radtke and Coalter	*	Macro	Yes	1
2009	Christensen and Sørensen	<i>Eur Phys Educ Rev</i> , 15, 115-133	Micro	No	2
2009	Emrich, Fröhlich, Klein and Pitsch	<i>Int Rev Sociol Sport</i> , 44, 151-171	Macro	No	3
2009	Jonker, Elferink-Gemser and Visscher	<i>High Abil Stud</i> , 20, 55-64	Micro	No	4
2010	Aquilina and Henry	<i>Int J Sport Pol Politics</i> , 2, 25-47	Global	Yes	5
2010	MacNamara and Collins	<i>Psychol Sport Exerc</i> , 11, 353-362	Micro	No	6
2010	Mateos, Torregrosa and Cruz	<i>Kinesiology Slovenica</i> , 16, 30-43	Macro	No	7
2012	Borggreffe and Cachay	<i>Eur J Sport Soc</i> , 9, 57-80	Macro	Yes	8
2012	Breslauer, Bujan and Horvat	<i>Zbornik radova Međimurskog veleučilišta u Čakovcu</i> , 3, 7-13	Macro	Yes	9
2012	Caput-Jogunica, Ćurković and Bjelić	<i>Sport Science</i> , 5, 21-26	Global	Yes	10
2012	Lupo, Tessitore, Capranica, Rauter and Doupona-Topic	<i>Kinesiology Slovenica</i> , 18, 47-56	Micro	Yes	11
2012	Romar	<i>Acta Universitatis Palackianae Olomucensis. Gymnica</i> , 42, 5-41	Micro	Yes	12
2012	Van Rens, Elling and (on-line) Reijgersberg	<i>Int Rev Sociol Sport</i> (2015), 50, 64-82	Macro	No	13
2013	Ābeļkalns and Geske	<i>Lase Journal of Sport Science</i> , 4, 47-60	Macro	Yes	14
2013	Aquilina	<i>Int J Hist Sport</i> , 30, 374-392	Micro	Yes	15
2013	Guidotti et al.	<i>Sport Sciences for Health</i> , 9, 51-58	Micro	Yes	16
2013	Henry	<i>Int J Hist Sport</i> , 30, 356-373	Global	Yes	17
2013	McCormack and Walseth	<i>Soccer and Society</i> , 14, 887-897	Macro	No	18
2014	Guidotti, Lupo, Cortis, Di Baldassarre and Capranica	<i>Kinesiology Slovenica</i> , 20, 36-46	Meso	Yes	19
2014	Pavlidis and Gargalianos	<i>Strategies</i> , 27, 42-45	Global	Yes	20
2014	Lupo et al.	<i>EJSS (in press)</i>	Micro	Yes	21
2014	Ryba, Stambulova, Ronkainen, Bundgaard and Selänne	<i>Psychol Sport Exerc (in press)</i>	Micro	Yes	22
2014	Stambulova, Engström, Franck, Linnér and Lindahl	<i>Psychol Sport Exerc (in press)</i>	Micro	Yes	23
2014	Wartenberg, Borchert and Brand	<i>Sportwissenschaft (in press)</i>	Macro	Yes	24

* Report to the Scottish Institute of Sport Foundation.

Table 2. Contributions related on DC of student-athletes included in the SLR.

Year	Authors	Abbreviated reference	Dual career dimension	Dual career term	Code
2007	Stambulova, Stephan and Japhag	<i>Psychol Sport Exerc</i> , 8, 101-118	Micro	No	25
2008	Petry, Steinbach and Burk	**	Global	Yes	26
2008	Pummell, Harwood and Lavallee	<i>Psychol Sport Exerc</i> , 9, 427-447	Micro	No	27
2009	Platts and Smith	<i>Int J Sport Pol Politics</i> , 1, 323-339	Global	No	28
2009	Stambulova and Alfermann	<i>IJSEP</i> , 7, 292-308	Macro	No	29
2009	Stambulova, Alfermann, Statler and Côté	<i>IJSEP</i> , 7, 395-412	Macro	No	30
2010	Henriksen, Stambulova and Roessler	<i>Psychol Sport Exerc</i> , 11, 212-222	Macro	No	31
2010	Wylleman and Reints	<i>Scand J Med Sci Spor</i> , 2, 88-94	Multidimensional	No	32
2011	Capranica and Millard-Stafford	<i>IJSPP</i> , 6, 572-579	Macro	Yes	33
2011	De Bosscher, Shilbury, Theeboom, Van Hoecke and De Knop	<i>ESMQ</i> , 11, 115-141	Global	Yes	34
2011	Enoksen	<i>Scand Sport Studies Forum</i> , 2, 19-43	Micro	No	35
2011	Wylleman, De Knop and Reints	#	Multidimensional	No	36
2012	Debois, Ledon, Argiolas and Rosnet	<i>Psychol Sport Exerc</i> , 13, 660-668	Micro	No	37
2012	Larsen, Alfermann and Christensen	<i>Sport Science Review</i> , 21, 51-74	Macro	Yes	38
2012	Sakka and Chatzigianni	<i>J Sport Soc Issues</i> , 36, 195-222	Global	Yes	39
2013	Larsen, Alfermann, Henriksen and Christensen	<i>Sport Exerc Perform Psychol</i> , 2, 190-206	Macro	Yes	40
2013	Mortensen, Henriksen and Stelter	<i>Sport Science Review</i> , 12, 305-327	Micro	No	41
2013	Park, Lavallee and Tod	<i>Int Rev Sport Exerc Psychol</i> , 6, 22-53	Multidimensional	No	42
2013	Sotiriadou and De Bosscher	‡	Global	No	43
2013	Stambulova and Ryba	¥	Multidimensional	Yes	44
2014	Barker, Barker-Ruchti, Rynne and Lee	<i>Int J Sports Sci Coach</i> , 9, 255-270	Multidimensional	No	45
2014	Henriksen, Larsen and Christensen	<i>IJSEP</i> , 12, 134-149	Macro	Yes	46
2014	Stambulova and Ryba	<i>Int Rev Sport Exerc Psychol</i> , 7, 1-17	Macro	Yes	47

Year	Authors	Abbreviated reference	Dual career dimension	Dual career term	Code
2014	Van Vuuren-Cassar, Swain, Rossato and Chatziefstathiou	<i>T</i>	Micro	Yes	48
2014	Debois, Ledon and Wylleman	<i>Psychol Sport Exerc (in press)</i>	Micro	Yes	49

** In B. Houlihan, & M.Green (Eds.), *Comparative Elite Sport Development: Systems, Structures and Public Policy* (pp.115-146). London: Elsevier.

In N.L.Holt, & M.Talbot (Eds.), *Lifelong Engagement in Sport and Physical Activity: Participation and Performance across the Lifespan* (pp. 63-76). New York: Routledge. ‡ P. Sotiriadou, & V. De Bosscher (2013), *Managing high performance sport*. Oxon: Routledge.

¥ N.B. Stambulova, & T.V. Ryba (2013), *Athletes' careers across cultures*. London: Routledge.

† In K. Armour (Ed.), *Pedagogical Cases in Physical Education and Youth Sport* (pp. 263-276). Oxon: Routledge.

Table 3. Characteristics of the included studies on DC of student-athletes.

Characteristics of the Studies		Bibliography code
Study typology	Theoretical	8, 10, 17, 20, 26, 28, 29, 30, 32, 33, 36, 39, 42, 43, 44, 47, 48
	Experimental	2, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23, 24, 25, 27, 31, 34, 35, 37, 38, 40, 41, 45, 46, 49
	Mixed approach	1, 5
Research design	Cross-sectional	1, 2, 3, 5, 7, 9, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 25, 27, 31, 38, 40, 41, 45, 46, 49
	Longitudinal	4, 6, 23, 24, 34, 35, 37
Data collection typology	Qualitative	1, 2, 6, 15, 18, 22, 27, 31, 37, 38, 40, 41, 45, 46, 49
	Quantitative	3, 4, 7, 9, 11, 12, 13, 16, 19, 21, 24, 25
	Mixed approach	5, 14, 23, 34, 35
Data collection methods	Telephone interviews	1
	In-depth interviews	2, 6, 23, 27, 31, 34, 35, 37, 38, 40, 41, 45, 46, 49
	Life story interviews	15, 18, 22
	Analysis of secondary sources (i.e., scientific literature)	1, 14, 31, 34, 38, 40, 46
	Participant observations	31, 38, 40, 46
	Evaluations of educational services for elite athletes	5
	Validated questionnaires/surveys/templates	7, 11, 16, 21, 23, 25
	Tools compiled for specific research purposes	3, 4, 5, 7, 9, 12, 13, 14, 19, 24, 34, 35

Characteristics of the Studies	Bibliography code
Age	
Youth student-athletes (age range: 14-18 years)	2, 3, 4, 6, 14, 24, 27, 31, 35, 38, 40, 41, 46
Adult student-athletes (age range: 19-36 years)	7, 9, 11, 12, 14, 15, 16, 18, 21, 22
Former athletes (no specific age range)	13, 15, 25, 37, 45
University professors	19
Gender	
Female	18, 37, 48
Male	2, 38, 40, 49
Mixed	3, 4, 6, 7, 11, 12, 13, 15, 16, 19, 21, 22, 23, 24, 25, 27, 35, 41, 45,
Type of sport	
Individual	6, 12, 27, 31, 35, 37, 46
Team	2, 18, 38, 40, 48
Mixed	3, 4, 7, 11, 13, 15, 16, 21, 22, 23, 24, 25, 41, 45, 49
Competition level	
Youth elite	2, 3, 4, 6, 12, 23, 24, 31, 35, 38, 40, 41, 46, 48,
Elite	7, 13, 14, 15, 18, 21, 25, 34, 37, 45, 49
Sub-elite	27
Mixed	16, 43

* Refers to codes specified in Table 1 and Table 2.

micro (n=17) and macro (n=17) dimensions of DC, highlighting that research has mainly focused on the individual student-athlete's sphere (i.e., experiences, perceptions on career transitions, motivations, achievements, and reasons for dropout) and on the effectiveness of practices in sport and educational environments (i.e., elite schools of sport in different countries, career assistance programmes, educational mobility, talent development programmes). Global aspects related to organizational and governmental policies on DC and the management of top-level sport across Europe are well represented (n=9), whereas 5 contributions categorized as multidimensional analysed the complex phenomenon of career transitions in sport. Finally, 1 study only was related to the meso dimension (i.e., teachers' perception regarding student-athletes and DC paths) of DC (Table 1 and Table 2).

Coherently with the multidimensional nature of the DC of student-athletes, several thematic areas have been identified, including psychological aspects (code: 11, 16, 21, 38), athletes' life and their career transitions (code: 6, 25, 27, 29, 30, 32, 36, 37, 41, 42, 44, 45, 49), evaluation of DC programmes and issues and challenges of a DC path (code: 2, 3, 4, 7, 8, 9, 12, 13, 14, 15, 18, 19, 20, 22, 23, 24, 35, 47), political/organizational related aspects of the sport and educational environments (code: 1, 5, 10, 17, 26, 28, 34, 39, 43), and athletic development practices (code: 31, 33, 40, 46, 48).

Studies related to psychological aspects reported that the deployment of motivation, self-awareness and the ability to work hard are crucial to successfully pursue a DC (code: 38). Furthermore, a limited validity and reliability of large-scale psychometric instruments for studying DC motiva-

tions in European student-athletes emerged, which calls for the development of tools adapted to specific cultural contexts (code: 11, 16, 21).

The selected contributions focused on athletes' life and their career transitions highlighted that a sport career is a dynamic, multidimensional, multilevel, and multifactor phenomenon in which the transition from a stage to another is considered a process rather than an event (code: 6, 25, 45, 49). In particular, normative and non-normative stages (code: 42, 49) modulated by nationality/culture issues (code: 25, 29, 44) and with factors in turn facilitating/constraining the course of athletes' life depending on the stage of the career emerged (code: 37, 49), determining consistent transitional challenges. Nevertheless, the possession and appropriate deployment of a range of skills, motivations, strategies, belief, and optimism allowed athletes to successfully negotiate these challenges and cope with career transitions (code: 6). Furthermore, the suitable coordination of different layers of athletes' development (i.e., athletic, psychological, psychosocial, and educational) and the prioritization of the educational status and career planning were associated with positive post-sport life adjustments (code: 25, 29, 30, 37, 42). In this framework, career support and lifestyle management services (i.e., lifestyle skills, transitional skills), especially for youth athletes (code: 41), and parents/peers/social support were considered crucial helping athletes to prepare for and/or cope with career transitions (code: 27, 30, 32, 36).

Concerning the evaluation of DC programmes across Member States and issues and challenges of a DC path, contrasting results emerged. In fact, some studies reported that athletes' involvement in DC programmes in special schools of sport (i.e., where athletes are able to combine sport and academics) determine positive academic outcomes and perceived satisfaction (code: 4, 9, 12, 23, 24, 47). Conversely, other studies reported higher individual social costs not matched by comparable success in sport performance and difficulties in career decision-making (code: 3, 7, 12, 13). In fact, the difficulties in combining sport with the academic demands due to the involvement in top-level sport, especially at young ages, could lead to personal concerns, lower academic outcomes, stress, perceived negative impact of sport on studies, drop-out, lack of motivation and mental breakdown (code: 2, 12, 35). Although the sport environment tends to perceive positively elite sport training embedded in the school system due to the availability of crucial resources (i.e., staff, sports facilities, and time), the academic environment tends to consider this structural coupling as problematic. In particular, certain preconditions are deemed necessary to adapt the logic of elite sport to the logic of schools (code: 8).

Concerning the university environment, the transition period from early youth to youth age group resulted difficult, with students-athletes making multiple mistakes in the management of their study path (code: 14). In particular, the lack of institutional support in higher education in some countries (code: 19, 20) challenge elite athletes in their educational path. In this framework, the mobility within European countries or to the United States (where sport is embedded in educational system) was perceived as an effective strategy to effectively combine sport and academics (code: 18, 22). However, student-athletes claimed that their decision to pursue a DC path was due to a need to focus on more than one aspect of their life, their capability to transfer life skills learned in one area, the intellectual stimulation, the sense of balance, their frustration for having dedicated time exclusively to elite sport, their feeling to be more secure, their perceived better transition into post-athletic career, and their perceived better sport performance in a sport friendly academic environment (code: 15). Interestingly, teachers reported to be available to provide DC services (i.e., flexibility, additional work in case of missed class attendance, on-line

reception, tutoring support, and e-learning) to elite athletes, which could be a crucial point to enhance European DC effectiveness (code: 19).

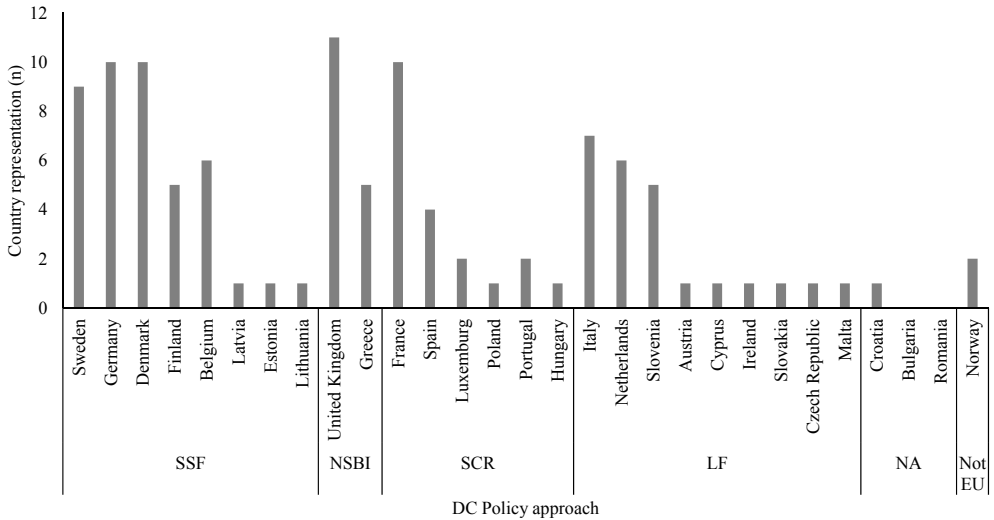
Regarding the sport environment, athletic development could determine positive and negative impact on DC of talented athletes. In particular, no single model can be applied to design training and competitions for youth athletes, due to the complexities of the sport system. However, the protection and the enhancement of both sport and personal skills of the youth athletes should be considered the ultimate goal of coaches and sport managers (code: 33, 48). Although school education is considered crucial for the development of the athletes, it is also perceived as rival to the sport in terms of time (code: 31). Therefore, sport staff should play a relevant role in supporting elite athletes' adherence to a DC path. Actually, sport environments should empower a strong relationship between players and sport staff based on integrated sport and education values, which could help the athletes balancing their daily lives (code: 31, 40). Conversely, a lack of supportive training groups and role models leads to undue misunderstanding and incoherent sport and academic conducts (code: 46).

Regarding policy/organizational-related aspects of the sport and educational environments, studies showed a variety of approaches and policies in place across Member States (code: 1, 5). Actually, the EU recommendations on DC (EC, 2012) could relate not only to the sport area but also to the workers' rights, the protection of minors, the safeguard of the free movement of citizens, and the abolishment of discrimination (code: 17, 28). Although the EU strongly recommends the implementation of social conditions in support of top-level athletes (EC, 2007; 2012), in several countries specific policies are not available (code: 26), or still at an embryonic stage (code: 39). Some authors (code: 26, 28) claimed that a barrier could derive from the sport environment due a lack of financial resources and its determination in maintaining a well-established autonomy. Furthermore, at academic level the observed substantial differences of DC between and/or within countries (code: 1, 5) could determine a number of national strategies, systems and/or special arrangements, which render difficult the definition of minimum quality requirements for DC services (EC, 2014a). Nevertheless, the importance to guarantee proper DC support to elite athletes was deemed one of the key aspect for top-level sport and several indications have been provided (code: 10, 26, 34, 43).

Representation of Member States in scientific papers and European funded projects

Out of 28 EU Member States, 26 countries were represented in the papers, with only Bulgaria and Romania resulting not included in scientific contributions. Figure 1 shows the representation of the European Member States in selected studies in relation to the DC policies (Aquilina & Henry, 2010). Although not included in the European Union, Norway is represented. Overall, the countries included in the "State as Sponsor/Facilitator" and in the "National Sporting Bodies as Intermediary" approaches resulted the most represented. The majority of the studies involved between one and three countries, whereas only 4 contributions included a higher representation (code: 1, 11, 32, 46). Unfortunately, 7 studies did not provide sufficient information to identify specific Countries (code: 10, 15, 16, 19, 22, 36, 43). Finally, in considering that the book of Stambulova & Ryba (2013) presented aspects related to career assistance and transitions in different continents, the country count considered the chapters related to European Member States only.

Figure 1. Frequency of occurrence (n) of countries represented in the selected studies in relation to their policy approach toward DC.



Note: SSF=State as a Sponsor/Facilitator; NSBI=National Sporting Bodies as Intermediary; SCR=State-centric Regulation; LF=Laisser Faire; NA=Not available information on dual career policy approach; Not EU=Not included in the European Union.

DISCUSSION

The main findings of this study highlighted: 1) an emerging academics conversation on several dimensions of DC of European student-athletes; 2) a methodological variety in the study of DC in Europe.

Despite the persisting EU investment in this field encouraged scholars and European Member States in addressing this issue to meet the EC guidelines (2012b), the use of the term “dual career” is still not well consolidated. In fact, many investigations related to DC aspects of European student-athletes were included only after the adoption of the in-depth searching approach of snowballing technique. Interestingly, the scientific literature uses the term DC also for issues not strictly related to student-athletes. This emphasizes the need of a coherent, systematic, and specific focus on this population. In searching relevant literature on DC, the use of the keyword “student-athlete” proved to be crucial when retrieving information. In future studies, the systematic use of the term “dual career” is strongly recommended to properly direct scholars interested in investigating the specific challenges student-athletes face in combining the sport domain and the educational or work domains.

Since 2011 a considerable increase in publication activity and methodological approaches has been observed, coherently with the multidisciplinary nature of this research area and with the multiplicity of institutional approaches in supporting elite student-athletes. According to the archetypes of methodological fit in field research (Edmonson and McManus, 2007), at present DC research could be considered entering its intermediate stage, being characterized by provisional theories, interviews, or not-validated tools. In fact, the lack of a “gold standard” technique to

assess DC factors in specific National contexts and valid and reliable tools suited to large-scale, cross sport, and cross-country limits the generalizability of findings (Lupo et al., 2012; Guidotti et al., 2013; Lupo et al., 2014). Although the variability in the methodological approaches to DC could be considered limited in scope, it provides a starting point for understanding the DC phenomenon. Surely, future empirical studies based on longitudinal research designs could provide further relevant information on the effectiveness of DC paths across Europe. However, it is important to recognize cultural, social, and policy factors differing across Member States and sport settings, which also challenge the identification of research topics suitable to investigate DC for an overall European elite athlete population.

In considering the multi-facet nature of the DC phenomenon, the framework considered in this study allowed the analysis of contributions focused on micro (i.e., individual), meso (i.e., interpersonal), macro (i.e., social) and global (i.e., policy) dimensions. Findings highlighted a majority of studies (35%) focused on the personal sphere of the student-athletes. The micro dimension of DC strongly relies on self-reported life histories and questionnaires to investigate perceived reasons for maintaining or ceasing involvement in sport and/or education, perceived career transition factors, and motivation towards academic and sport careers (Aquilina, 2013; Guidotti et al., 2013; Ryba et al., 2014). However, there is a need to develop tools based on sound theoretical constructs validated across Member States and sport disciplines (Lupo et al., 2014), which vary considerably in the European context. Surely, the significant improvements in DC require looking beyond the athlete.

Another dimension of major interest for researchers (35%) resulted the evaluation of the macro dimension of DC, specifically related to the effectiveness of practices in sport and educational environments. In general, findings highlighted several challenges student-athletes face in relation to their sport discipline and educational paths. Although some effective programs and best practices emerged in presence of a positive relationship between sport and educational bodies, findings resulted too confined to specific settings (Jonker et al., 2009; Henriksen et al., 2010). In fact, opposite results were also reported (Emrich et al., 2009; Henriksen et al., 2014), indicating that no single program could be considered suitable for this population. In this respect, the EC efforts in investigating the minimum quality requirements for dual career services (EC, 2014a) could provide further insights for future investigations. In fact, the efforts of the EU calls for proposals represent a broad perspective in the quest to understand and support socio-environmental factors fostering progress in DC paths. In particular, the EU attempt to invest on the creation of international partnerships and networks emerged as a key aspect to solve DC related issues, in line with the EU guidelines on DC (2012b). In this vein, a crucial strategy should increase the dialogue between academic institutions and sport organizations in the promotion of DC paths for student-athletes, involving also agencies that could play a key role in integrating former athletes in the labour market. In this regard, since 2004 the European Athlete as Student (EAS) Network fosters cross-national cooperation for the identification of the best practices in DC and promotes exchanges between sport and education decision makers at local, National, and EU levels to overcome resilience of educational and sport institutions (EAS, 2014). Furthermore, in providing funding opportunities for projects in DC during the 2014–2020 years, the European Commission strongly persists in supporting the implementation of dialogues between educational and sport bodies in this respect (EC, 2013a, 2014a, 2014b).

Some researchers (18%) were interested in the global dimension of DC. From the seminal study of Aquilina and Henry (2010) efforts were directed towards the identification of different ap-

proaches to DC in Member States, also considering specific geographical areas (Caput-Jogunica et al., 2012). In particular, Henry (2013) highlighted the trans-policy aspects of DC, viewed as a means for the rights of citizenship of European student-athletes. Finally, some authors (Petry et al., 2008; De Bosscher et al., 2011) called for an investment of resources in support of the elite student-athletes. In light of the DC guidelines (EC, 2012), Member States are expected to implement their policies in a near future, thus representing an interesting area for research for sociologists, economists, and political scientists.

Surprisingly, researchers showed a limited interest (2%) in the meso dimension of DC. Despite the student-athlete is the main actor of a DC path, his/her social life and the inter-personal climate with parents, relatives, peers, coaches, and managers play a relevant role in supporting his/her determination to combine sport and education. In fact, it could be speculated that the multiplicity of stakeholders and their different role in the developmental years of the youth athlete might challenge the consistency and coherency of an effective support to DC paths. Therefore, further studies are needed to provide relevant insights on the influences of inter-personal relationships on career expectations and trajectories of student-athletes in their developmental years.

Interestingly, the majority of studies (37%) have been conducted in northern European countries (i.e., Denmark, Norway, Sweden, Finland, Estonia, Latvia, Lithuania and United Kingdom), especially those characterized by a State as Sponsor/Facilitator policy approach toward the DC of student-athletes. These findings suggest that States facilitating the education of talented elite athletes also support scientific interests in this research field. Actually, cross-national studies and projects could play a relevant role in the identification of best practices to reduce the sport and/or academic dropout, to promote the successful retirement of their elite athletes, and to guide multi-sector (i.e., governments, sport organizations, and education bodies) efforts in managing sport and education for future European citizens. Surely, an integrated approach formulating more complex research questions involving different scientific areas and research designs could have a tremendous impact on the progress of European DC of student-athletes. In fact, investigating issues, obstacles and challenges from an integrated and holistic point of view could not only provide a better understanding but also increase the generalizability of findings into practical applications, allowing effective interventions and triggering a virtuous circle of interactions.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

The present analysis of the early approaches and further evolutions of studies on DC provided a sound ground for future studies and for the promotion of the EU commitment in this field. This work contributed to systematize the definition, delimitations, and trends in the area of DC as precursor of future research and interventions. In particular, the efforts of researchers and EU policy makers appeared crucial. However, the complex individual, interpersonal, social/environmental and policy aspects at National level of DC in different EU Countries determine difficulties in supporting one perspective, theory or approach to understand the combination of sport and education of European student-athletes. Surely, researchers and decision makers envisioning the promotion of the combination of sport and education of elite athletes should consider an ecological framework, which necessitates the cooperation of trans-disciplinary and cross-national expertises. Thus, future studies should: 1) Explore the intertwined relationships between different dimensions of DC, integrating qualitative and quantitative methodologies

to achieve both deep insights and generalization of findings and actions; 2) Develop scales to measure the effectiveness of DC paths for student-athletes.

To conclude, the present SRL has not only provided a better understanding of the conceptual approach of research on DC within the existing literature, but also a potential guide for subsequent stages of related research.

REFERENCES

- Alfermann, D., & Stambulova, N. B. (2007). Career transitions and career termination. In Tenenbaum, G., & Eklund, R. C. (Eds.) *Handbook of sport psychology* (pp. 712-736). New York: Wiley.
- Amara, M., Aquilina, D., Henry, I., & PMP Consultants (2004). Education of elite young sportspersons in Europe. Brussels: European Commission: DG Education and Culture.
- Aquilina, D. (2009). Degrees of success: negotiating dual career paths in elite sport and university education in Finland, France and the UK. Doctoral dissertation, Loughborough University.
- Aquilina, D. (2013). A study of the relationship between elite athletes' educational development and sporting performance. *International Journal of the History of Sport*, 30(4), 374-392. doi: <http://dx.doi.org/10.1080/09523367.2013.765723>
- Aquilina, D., & Henry, I. (2010). Elite athletes and university education in Europe: a review of policy and practice in higher education in the European Union Member States. *International Journal of Sport Policy and Politics*, 2(1), 25-47. doi: <http://dx.doi.org/10.1080/19406941003634024>
- Aries, E., McCarthy, D., Salovey, P., & Banaji, M.R. (2004). A comparison of athletes and non-athletes at highly selective colleges: academic performance and personal development. *Research in Higher Education*, 45(6), 577-602. doi: 10.1023/B:RIHE.0000040264.76846.e9
- Capranica, L., & Millard-Stafford, M.L. (2011). Youth sport specialization: how to manage competition and training? *International Journal of Sports Physiology and Performance*, 6(4), 572-579.
- Caput-Jogunica, R., Čurković, S., & Bjelić, G. (2012). Comparative analysis: support for student-athletes and the guidelines for the universities in Southeast Europe. *Sport Science* 5(1), 21-26.
- Conzelmann, A., & Nagel, S. (2003). Professional careers of the German Olympic athletes. *International Review for the Sociology of Sport*, 38, 259-280. doi: 10.1177/10126902030383001
- De Bosscher, V., Shilbury, D., Theeboom, M., Van Hoecke, J., & De Knop, P. (2011). Effectiveness of national elite sport policies: a multidimensional approach applied to the case of Flanders. *European Sport Management Quarterly* 11(2), 115-141. doi: <http://dx.doi.org/10.1080/16184742.2011.559133>
- De Knop, P., Wylleman, P., Van Hoecke, J., & Bollaert, L. (1999). Sports management - A European approach to the management of the combination of academics and elite-level sport. In S. Bailey (Ed.), *Perspectives - The interdisciplinary series of physical education and sport science, Vol 1 School sport and Competition* (pp. 49-62). Oxford: Meyer and Meyer Sport.
- Donnelly, P., & Petherick, L. (2004). Worker's playtime? Child labour and the extremes of sporting spectrum. *Sport in Society*, 7, 301-321. doi: <http://dx.doi.org/10.1080/1743043042000291659>
- Emrich, E., Fröhlich, M., Klein, M., & Pitsch, W. (2009). Evaluation of the elite schools of sport - Empirical findings from an individual and collective point of view. *International Review for the Sociology of Sport* 44(2-3), 151-171. doi: 10.1177/1012690209104797
- Edmonson, A.C., & McManus, E. (2007). Methodological fit in management field research. *The Academy of Management Review*, 32(4), 1155-1179.
- Ericsson, K.A. (2006). The influence of experience and deliberate practice on the development of superior expert performance. In K.A. Ericsson, N. Charness, P. Feltovich & R.R. Hoffman (Eds.), *Cambridge handbook of expertise and expert performance* (pp. 685-706). Cambridge: University Press.

- European Athlete as Student - *The Dual Career Network*. Retrieved May 30th, 2015, from <http://www.dualcareer.eu/>
- European Commission (2007). *White Paper on Sport*. Retrieved May 30th, 2015, from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0391&from=EN>
- European Commission (2009). *Call for Proposals - Preparatory action in the field of sport*. Retrieved May 30th, 2015, from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:C2009/111/08&from=EN>
- European Commission (2010). *Call for Proposals - Preparatory action in the field of sport*. Retrieved May 30th, 2015, from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:C2010/133/09&from=EN>
- European Commission (2011a). *Call for Proposals - Preparatory action in the field of sport*. Retrieved May 30th, 2015, from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:C2011/131/09&from=EN>
- European Commission (2011b). *Developing the European dimension in sport*. Retrieved May 30th, 2014, from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0012:FIN:EN:PDF>
- European Commission (2012a). *Call for Proposals - Preparatory action: European partnership on sports*. Retrieved May 30th, 2015, from [http://minutes.belfastcity.gov.uk/\(S\(c0iju2mnl3wzqgmt0vb3nhzj\)\)/documents/s64674/PL%20Com%209Aug12%20European%20Partnership%20on%20Sports%20APP1.pdf](http://minutes.belfastcity.gov.uk/(S(c0iju2mnl3wzqgmt0vb3nhzj))/documents/s64674/PL%20Com%209Aug12%20European%20Partnership%20on%20Sports%20APP1.pdf)
- European Commission (2012b). *Guidelines on dual careers of athletes - Recommended policy actions in support of dual careers in high-performance sport*. Retrieved May 30th, 2015, from [http://www.ua.gov.tr/docs/default-source/gen%C3%A7lik-program%C4%B1/dual-career-guidelines-\(%C3%A7ift-kariyer-rehberi\).pdf?sfvrsn=0](http://www.ua.gov.tr/docs/default-source/gen%C3%A7lik-program%C4%B1/dual-career-guidelines-(%C3%A7ift-kariyer-rehberi).pdf?sfvrsn=0)
- European Commission (2013a). *Call for Proposals - Erasmus+ programme*. Retrieved May 30th, 2015, from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOC_2013_362_R_NS0004&from=EN
- European Commission (2013b). *Call for Proposals - Preparatory action European partnership on sports*. Retrieved May 30th, 2015, from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:C2013/120/08&from=EN>
- European Commission (2014a). *Calls for proposals/tenders - Sport*. Retrieved May 30th, 2015, from http://ec.europa.eu/sport/calls/index_en.htm
- European Commission (2014b). *Transnational collaborative projects*. Retrieved May 30th, 2015, from http://ec.europa.eu/sport/opportunities/sport_funding/transnational_collaborative_projects_en.htm
- European Parliament (2003). *Combining sport and education: support for athletes in the EU Member States*. Luxembourg: European Parliament.
- Guidotti, F., Minganti, C., Cortis, C., Piacentini, M.F., Tessitore, A., & Capranica, L. (2013). Validation of the Italian version of the Student Athletes' Motivation toward Sport and Academics Questionnaire. *Sport Sciences for Health*, 9(2), 51-58. doi: 10.1007/s11332-013-0145-x
- Henriksen, K., Larsen, C. H., & Christensen, M. K. (2014). Looking at success from its opposite pole: The case of a talent development golf environment in Denmark. *International Journal of Sport and Exercise Psychology* 12(2), 134-149. doi: <http://dx.doi.org/10.1080/1612197X.2013.853473>
- Henriksen, K., Stambulova, N. B., & Roessler, K. K. (2010). Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise* 11, 212-222. doi:10.1016/j.psychsport.2009.10.005
- Henry, I. (2013). Athlete development, athlete rights and athlete welfare: a European Union perspective. *International Journal of the History of Sport*, 30(4), 356-373. doi: <http://dx.doi.org/10.1080/09523367.2013.765721>

- INEUM Consulting, & TAJ (2008). *European Commission Study on training of young sportsmen/women in Europe*. Brussels: European Commission.
- International Olympic Committee (2009). *Final Report 2005-2008*. Retrieved May 30th, 2015, from www.olympic.org/Documents/IOC_Interim_and_Final_Reports/2005-2008_IOC_Final_Report.pdf
- Jonker, L., Elferink-Gemser, M. T., & Visscher, C. (2009). Talented athletes and academic achievements: a comparison over 14 years. *High Ability Studies* 20(1), 55–64. doi: 10.1080/13598130902863691
- Lupo, C., Guidotti, F., Goncalves, C.E., Moreira, L., Doupona Topic, M., Bellardini, H., Tonkonogi, M., Allen, C., Capranica, L. (2015). Motivation Toward Dual-Career of European Student-Athletes. *European Journal of Sport Science*, 15(2), 151-160.
- Lupo, C., Tessitore, A., Capranica, L., Rauter, S., & Doupona-Topic, M. (2012). Motivation for a dual career: Italian and Slovenian student-athletes. *Kinesiologia Slovenica*, 18(3), 47-56.
- Petry, K., Steinbach, D., & Burk, V. (2008). Germany. In B. Houlihan & M. Green (Eds.), *Comparative Elite Sport Development: Systems, Structures and Public Policy* (pp 115-146). London: Elsevier.
- Ryba, T.V., Stambulova, N.B., Ronkainen, N.J., Bundgaard, J., & Selänne, H. (2014). Dual career pathways of transnational athletes. *Psychology of Sport and Exercise* (Epub). doi: <http://dx.doi.org/10.1016/j.psychsport.2014.06.002>
- Shulman, J.L., & Bowen, W.G. (2001). *The game of life*. Princeton: Princeton University Press.
- Stambulova, N.B., & Ryba, T.V. (2013). *Athletes' careers across cultures*. London: Routledge.
- Wylleman, P., & Reints, A. (2010). A lifespan perspective on the career of talented and elite athletes: perspectives on high-intensity sports. *Scandinavian Journal of Medicine and Science in Sports*, 2, 88-94. doi: 10.1111/j.1600-0838.2010.01194.x