

Dual career of junior athletes: Identifying challenges, available resources, and roles of social support providers

Carrera dual de deportistas junior: identificando retos, recursos disponibles, y roles de apoyo social

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Abstract

Balancing between two different commitments, sport and education, has been demonstrated as one of the significant challenges for dual career athletes, namely student athletes. Since EU guidelines on dual careers of athletes was published, a number of studies have been conducted on the topic of dual careers. One of the Erasmus+ Sport projects, Dual Career for Junior Athletes (DCJA), has been designed to identify three main aspects regarding the dual career of junior athletes, aged between 15 and 19-year-old: the barriers and challenges, resources and skills, and the roles and views of the support staff of the student-athletes. Applying a two-fold methodology based on the literature and the EU funded projects reviews, the findings show that there is a clear need of further research on the topic of dual career focused on the junior athletes' needs, coping strategies development, and general aspects of their life. The findings in this study will inform following studies of DCJA project to fill the research gaps identified.

Key words: Dual Career, junior athletes, students athletes, sport and education.

Resumen

El equilibrio entre dos compromisos diferentes, el deporte y la educación, ha sido evidenciado como uno de los desafíos importantes para los deportistas de carrera dual, denominados estudiantes-deportistas. Desde que se publicaron las directrices de la UE sobre la carrera dual de los deportistas, se han realizado una serie de investigaciones sobre el topic de la carrera dual. Uno de los proyectos Erasmus + Sport, Dual Career for Junior Athletes (DCJA) ha sido diseñado para identificar tres aspectos relativos a la Carrera Dual del deportista junior, comprendidos entre 15-19 años: las barreras y retos, los recursos y habilidades, y los roles y puntos de vista del personal de apoyo de los estudiantes-deportistas. Mediante una metodología de investigación doble, basada en la revisión de la literatura y de los proyectos financiados a nivel europeo, se obtuvieron hallazgos que muestran que existe una clara necesidad de más investigación en el tema de la carrera dual centrada en las necesidades, desarrollo de capacidades de afrontamiento y aspectos generales de la vida de los deportistas junior. Los hallazgos de este estudio sentarán la base para los siguientes estudios del proyecto DCJA para solventar los vacíos de investigación identificados.

Palabras clave: Carrera Dual, deportistas junior, estudiantes deportistas, deporte y educación.

Introduction

Balancing between two different commitments, sport and education, has been demonstrated as one of the significant challenges for Dual Career (DC) athletes, namely student athletes (European Commission, 2012). Research has emphasised that it is integral to understand DC athletes' lives at a different stage and development (Graczyk, Wylleman, Nawrocka, Atroszko, Moska et al., 2017). A DC is defined as an integration of sport with academic or vocational work, which can provide benefits (e.g. social, health-related, developmental, and financial) (Harrison, Vickers, Fletcher, & Tylor, 2020; Reints, 2011) to athletes during their sporting career and after transitioning out of sport (European Commission, 2007, 2012). In the Duty of Care in Sport Review (2017), it is highlighted that schools should be informed to enable them support talented young athletes who are pursuing DCs.

With the notion of early specialisation in sport, the issues related to DC may arise even at the stage of primary school, but the likelihood will be enhanced when athletes have increasing training hours and competitions while having academic workloads in adolescence and early adulthood (Sallen, Hemming, & Richartz, 2018). As other domains related to early specialisation such as music and dance, a small number of talented young people can develop a professional level of career in the end (Ronkainen & Ryba, 2018); they might need to make a decision on their commitment to sport, music, and dance in adolescence to accelerate their elite career path ways (Patrick, Ryan, Alfeld-Liro, Fredricks, Hrudá et al., 1999). Wylleman and Rosier (2016) identified that adolescent athletes at age of 12-13 already start their excessive training and competition and they will transition from junior level to senior level at the age of 18-19, usually coinciding with the beginning of their undergraduate studies at universities (Sánchez, García, & Rosique, 2018). With regard to this, issues of burnout, psychological distress, and injuries associated with increasing demands in sport and education have been reported (Rosen, et al., 2016; Sorkkila, et al., 2017). Hence, the importance of understanding talented young athletes' DC pathways has been underlined (Ronkainen & Ryba, 2018).

Researchers have also stressed the need of applying a holistic perspective to understanding DC athletes from different aspects such as psychological, psychosocial, and financial levels (Wylleman & Lavallee, 2004; Wylleman & Rosier, 2016). Condello, Capranica, Doupona, Varga & Bulk (2019) also claimed that DC athletes' experiences are influenced by different

factors such as individual athlete characteristics, support providers (e.g. parents, teachers, coaches, peers), educational institutions, and national governing bodies. Nevertheless, researchers argued that DC athletes can balance their sporting and non-sporting careers if they develop relevant competencies such as DC management, career planning, emotional awareness, and social intelligence and adaptability along with structured supporting systems (De Brandt, 2017; De Brandt, Wylleman, Torregrossa, Defruyt, & Van Rossem, 2017; Li & Sum, 2017). The influence of the institutional approach in the management and in the establishment of the environment can be especially relevant for student-athletes (Morris, et al., 2020), as well as strategies applied by tutors, mentors or support providers, as it has been concluded by previous Erasmus+ Projects (López-Flores, Penado, Avelar-Rosa, Packevičiūtė, & Ābelkalns, 2020; Sánchez-Pato, Isidori, Calderón, & Brunton, 2017). As described above, junior athletes are facing increased pressure on combining sport and education, hence there is an increased risk of dropout. Such dropout can happen based on personal characterisation, motivation and volition (Baron-Thiene & Alfermann, 2015), and identity development process (Pummell, Harwood and Laveallee, 2008).

The present study was designed to answer three research questions to inform a 3-year Erasmus+ Sport project Dual Career for Junior Athletes (DCJA): 1) What are the barriers and challenges that junior athlete face to balance between sport and education?, 2) What resources/coping skills are available for them to cope with such barriers and challenges?, and 3) What are support providers' (e.g. coaches, parents, sport governing bodies) roles and views on junior athletes' DC and their need to support junior athletes? The Holistic Athletic Career model (HAC) (Wylleman, 2019) was used as the theoretical framework. In the HAC model, there are six levels of development of high-performance athletes: athletic, psychological, psychosocial, academic/vocational, financial, and legal (see Figure 1). The model guided the study to understand junior athletes at different levels, which their challenges and barriers could be identified from; this was to answer the first research question in the current study. The target population in this study are student athletes aged between 15 and 19-year-old who are in the 'development' or 'mastery' stage at athletic level, puberty/adolescence at psychological level, and the 'secondary education'/'higher education (e.g. Year 1 and 2)' at academic and vocational level (Knight, Harwood & Sellars, 2018; Wylleman, Reints & De Knop, 2013). These helped the researchers to identify the key

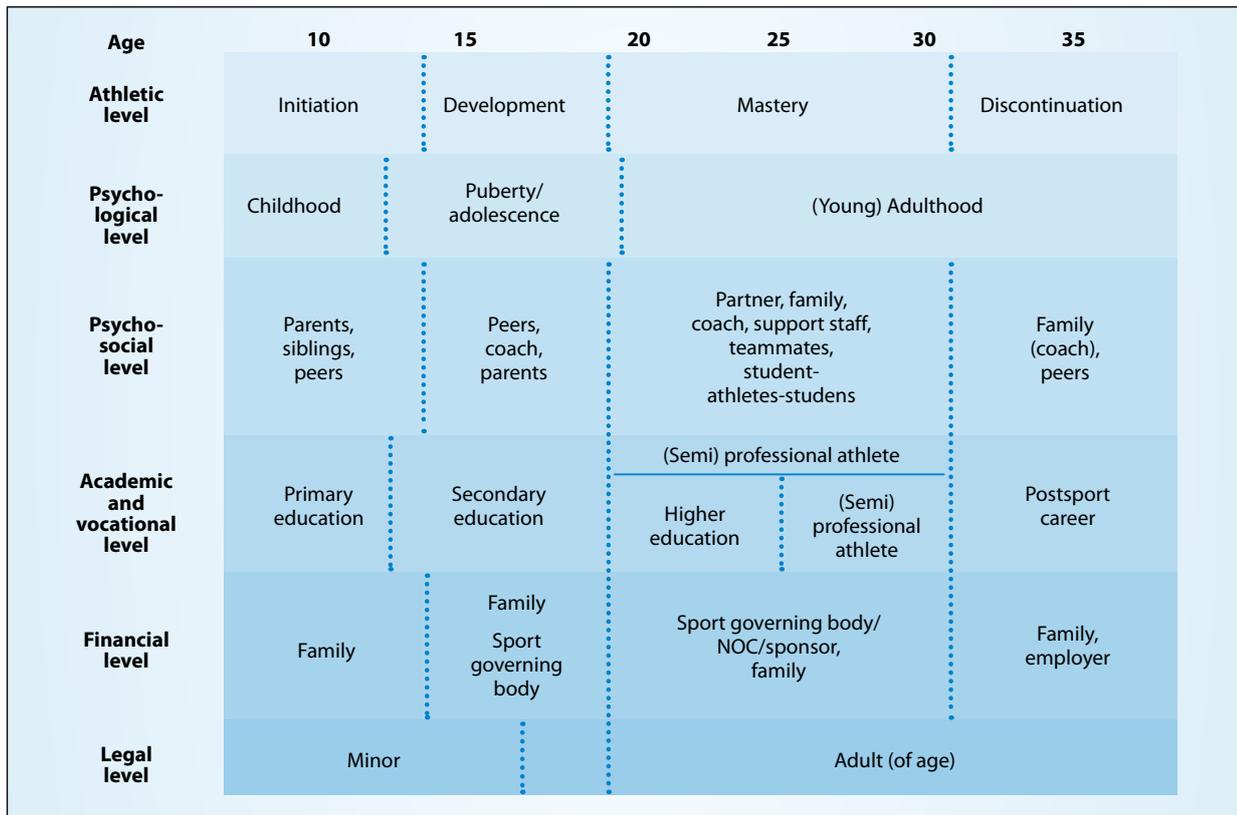


Figure 1. The Holistic Athlete Career Model (Wylleman, 2019).

words for the current study. As indicated in the model, key stakeholders such as peers, coach, parents, family, and sport governing body were considered when we analysed the data to answer the third research question.

Method

Due to the unique characteristic of the study, which observes the influence of European funding in the study of DC, the methodology has been two folded, including a systematic academic review and a European funding project results review.

The systematic review was conducted following the PRISMA protocol (Moher, Liberati, Tetzlaff, Altman, & PRISMA Group, 2009). Figure 2 shows PRISMA flow chart with details of the procedure. The initial search of databases was conducted using Web of Science and SCOPUS databases, based on the access and number of records. The keywords applied were “junior athlete”, “adolescent athlete”, “young athlete”, “dual career”, “student athlete”, and “elite sport”. The publication dates were narrowed down to year 2014-2020 to focus only on the most recent data and, moreover, to make this period coincide with the funding of the Erasmus + programme. The filtering process was

focused primarily on peer reviewed research papers, books, and book chapters describing DC in the context of junior athletes. Non sport related and theoretical articles were excluded.

The first step of the database search was conducted by the third author. The second step was performed by the first and second authors independently using the criteria agreed in the initial stage and the discussion of outcomes followed. A table was prepared to ensure that relevant information is structured in a manner allowing comprehensiveness and ease of comparison. The table included the headings of Year, Article, Source or University (if thesis), Authors, Nationality of Sample, Research questions & aims/objectives, and Findings, which enabled the authors to present key content needed for data analysis within the table and cross check the findings.

The initial database search showed 2,398 results in Web of Science and 2,866 results in SCOPUS. For each database, the following list of Boolean operators were entered:

SCOPUS database search:

TITLE-ABS-KEY ("junior* athlete*") OR TITLE-ABS-KEY ("adolescent* athlete*") OR TITLE-ABS-KEY ("young* athlete*") OR TITLE-ABS-KEY ("dual* career*") OR TITLE-ABS-KEY ("student* athlete*") OR TITLE-ABS-KEY

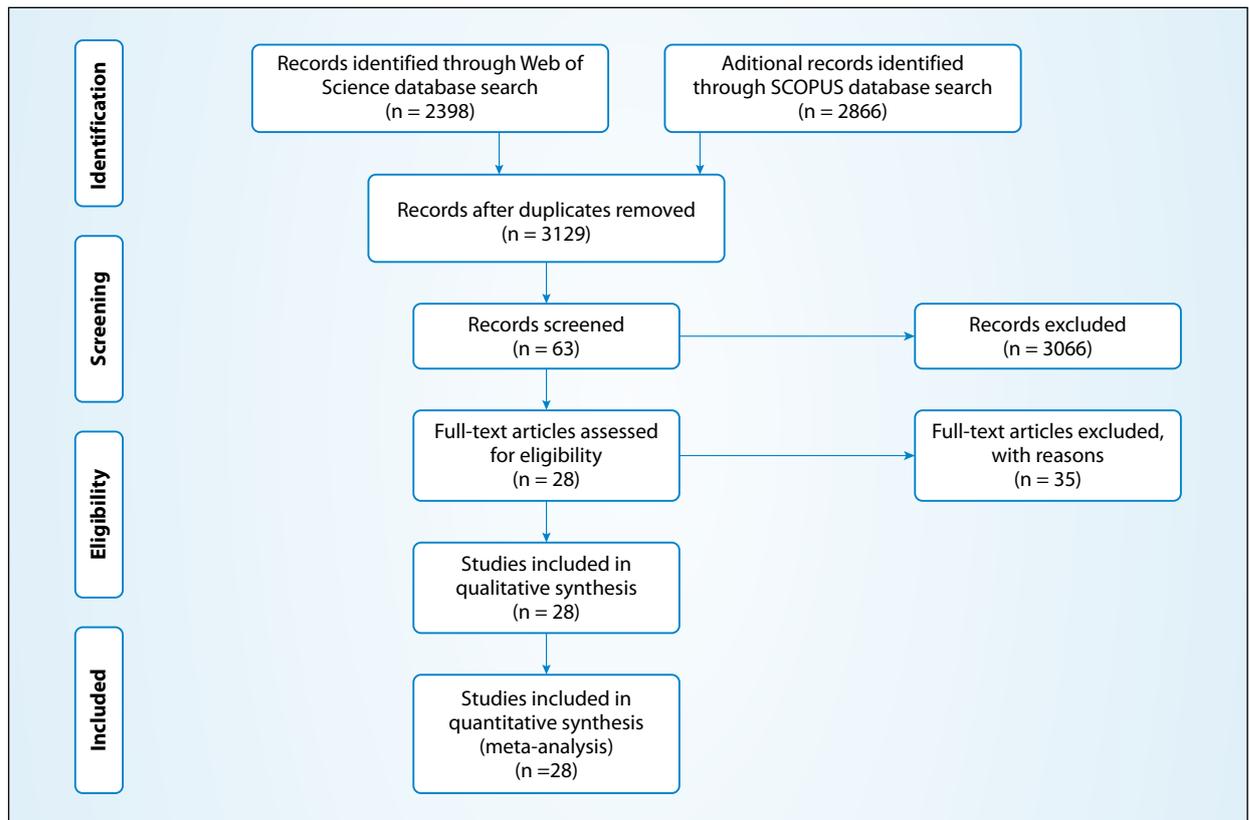


Figure 2. Flow chart illustration of the quality assessment of included studies, based on the PRISMA methodology (Moher et al., 2009).

("elite* sport*") AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "cp") OR LIMIT-TO (DOCTYPE, "ch") OR LIMIT-TO (DOCTYPE, "bk")) AND (LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "ARTS") OR LIMIT-TO (SUBJAREA, "ECON") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "MULT") OR LIMIT-TO (SUBJAREA, "HEAL")) AND (LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015) OR LIMIT-TO (PUBYEAR, 2014))

For Web of Science database, the following search terms were used:

TOPIC: ("junior* athlete*") OR TOPIC: ("adolescent* athlete*") OR TOPIC: ("young* athlete*") OR TOPIC: ("dual* career*") OR TOPIC: ("student* athlete*") OR TOPIC: ("elite* sport*")

Refined by: WEB OF SCIENCE CATEGORIES: (SPORT SCIENCES OR HOSPITALITY LEISURE SPORT TOURISM OR PSYCHOLOGY APPLIED OR PSYCHOLOGY OR EDUCATION EDUCATIONAL RESEARCH OR SOCIOLOGY OR SOCIAL SCIENCES INTERDISCIPLINARY OR MANAGEMENT) AND DOCUMENT TYPES: (ARTICLE OR BOOK CHAPTER OR BOOK) Timespan: 2014-2020.

For the Web of Science, the topic term was used, which comprises of title, abstract, key words.

Following the step, the references were downloaded to Zotero software to check for duplications. After the check the total of 3,129 results were screened for potential relevance based on the titles and abstracts, excluding the theoretical studies and non- sports related results.

A total number of 63 records were selected based on the criteria explained above in the screening of abstracts. Those 63 results were then assessed for the eligibility in full text articles by the first and second authors. A total number of 28 articles were selected to be included in the study, and further 35 were excluded with reasons.

In the final stage of the analysis the following information was put into an Excel table: title, source or university, authors, country of study, date of publication, research question/aims and objectives, method and theoretical framework, findings.

The analysis focused on measuring our three research questions: barriers/challenges, available recourses and coping skills/strategies, and support providers.

Moreover, a complementary search on the Erasmus+ projects results has been carried out. Gray literature matters (Cairo, Green, Forsyth, Behler, & Raldiris,

2020), but the case of DCs and its promotion at the European level can be more relevant, evaluating the previous work funded by the European Commission. Being a competitive and public call for applications, all the results of the approved and financed projects are available in the *Results* section of the EACEA's website (https://eacea.ec.europa.eu/erasmus-plus/selection-results_en).

In this research process, six previous calls' results have been reviewed: 2014, 2015, 2016, 2017, 2018, and 2019. A total number of 59 funded projects were selected by the European Commission categorized under the topic of "Promote education in and through sport with special focus on skills development, as well support the implementation of the EU Guidelines on Dual Careers of Athletes" that is, under the topic of DCs. Each project funded has its own "Project Card", a short description or abstract of the project aims, its methodology and expected outcomes, as well as the detailed partners involved in the consortium. The 59 projects under the category of DC were selected for our project card reviewing and analysis, and a specific search of the keywords "junior athlete" and "adolescent athlete" was carried out.

Results

The 26 peer reviewed journal articles between 2014 and 2020 were reviewed which were published in 18 different journals, with the *Psychology of Sport and Exercise* being the subject of four records, the *Sport in Society* three, the *International Review for the Sociology of Sport* two, the *International Journal of Sports Science and Coaching* two, the *Kinesiology Slovenica* two and the rest of them one (See Table 1)

Most articles analysed (25 out of 26 articles) focussed on a single country and only one article investigated different European countries.

The dominant research method was qualitative research (16 articles) including semi-structured interviews, interviews and pattern matching, visual methods and low structured interviews, and desk-based method. There were seven journal articles to apply a quantitative method and three journal articles to apply a mixed method.

To answer the three research questions in the current study, the aims/objectives and findings of each study (see Table 1) were analysed under three themes: Barriers and Challenges for Junior Athletes with DC, Available Resources and Coping Skills/Strategies for Junior Athletes, and Support Providers' Roles and Views. Seven out of the 26 articles presented the

findings related to barriers and challenges that junior athletes faced to balance their sporting and educational commitment. The findings of eight articles were associated with available resources and coping skills/strategies for junior athletes. Two articles focussed on coaches' and teachers' perceptions on DC respectively. However, the findings of the rest of the articles (n=6) were not directly in relation to the research questions.

Barriers and Challenges for Junior Athletes with DC

Junior athletes' barriers and challenges at the academic level addressed in the HAC model were mostly identified in the literature, which can affect other level such as psychological level (e.g. stressors). Junior athletes with DC encountered various stressors in terms of balancing sport and education with different aspects (e.g. scheduling, fatigue, coaches, and finances) (Cosh & Tully, 2015). Ryan, Thorpe, and Pope (2017) reported that their participants had a difficulty of managing their academic commitments due to a lack of time, being away from the locations of study, and training/competitions schedules.

It is interesting to note that the findings from Thomsen and Norgaard's (2020) study showed that educational engagement does not promote sport performance. Although this study limited to one sport, football, it made a point that the junior athletes in their study tended to believe that DC pathways made success in either area harder to achieve. In line with this, Harrison, et al. (2020) found out that DC difficulties were increased when the junior athletes' level of education increased (i.e., from school to university and from university to vocation). In the case of Slovakia, it was found that junior athletes might develop a negative attitude towards their DC by their educational institutions (Geranosova & Ronkainen, 2015).

Nevertheless a majority of the findings demonstrated their barriers and challenges at the academic level – combining sport and education, some researchers also pointed out that unexpected life events such as injuries, illnesses, social life events (e.g. the death of a family member) were highlighted to be taken into account when understanding their challenges and barriers (Aarresola, Itkonen, & Laine, 2017).

Available Resources and Coping Skills/Strategies for Junior Athletes

Schubring and Thiel (2014) identified four different coping strategies: distancing, rationalization, active agency, self-discipline, and responsibility transfer. Some competences that may help student athletes

Table 1. Characteristics of the results of the review.

Year	Article	Source or University (if thesis)	Authors, Nationality of Sample	Research questions & aims/objectives	Findings
Qualitative Approach					
2014	Coping With Growth in Adolescent Elite Sport	Sociology of Sport Journal	Schubring, A; Thiel, A. Germany	How adolescent elite athletes cope with problematic growth experiences?	The empirical analysis reveals typical strategies, which can be grouped into: (a) distancing, (b) rationalization, (c) active agency, (d) self-discipline, and (e) responsibility transfer
2015	Developing young athletes: The role of private sport schools in the Norwegian sport system	International Review for the Sociology of Sport	Kristiansen, E., Houlihan, B. Norway	To analyse the increasingly prominent role of private sports schools in the development of elite athletes in Norway.	For young talented athletes and their parents, the selection of the appropriate developmental pathway is clearly problematic. The lack of a coherent policy response to this problem (balancing educational and sport development ambitions from the federations and Olympiatoppen and the positioning by the Norwegian College of Elite Sport (NTG) and other private institutions of sports schools as the policy solution.
2015	Stressors, Coping, and Support Mechanisms for Student athletes combining Elite sport and tertiary education: implications for practice	The Sport Psychologist	Cosh, S.; Tully, P.J. Australia	To examine the stressors that student athletes report encountering, as well as the coping strategies and support mechanisms that they draw upon, to integrate sport and education; thereby informing how to best support student athletes.	All athletes in the study indicated encountering a number of stressors in combining sport and education. Four overarching themes were identified: scheduling, fatigue, coaches, and finances Receiving high levels of practical and emotional support from coaches and parents and cited this support as being crucial in their ability to overcome the stressors associated with combining sport and education.
2015	The experience of Dual career through Slovak Athletes' Eyes	Physical Culture and Sport Studies and Research	Geraniosova, K.; Ronkainen, N. Slovakia	To examine how Slovak athletes experience dual career	In Slovakia, athletes may be facing a negative mindset towards the dual career concept by their educational institutions. The athletic careers of some of the participants were shown to be not linear. Only few professional athletes in Slovakia have dual career structures in place.
2017	"Sport has always been first for me" but "all my free time is spent doing homework": Dual career styles in late adolescence	Psychology of Sport and Exercise	Ryba, T.V.; Stambulova, N.B; Selänne, H.; Aunola, K.; Nurmi, J-E Finland	To examine how and to what extend adolescent Finnish Athletes narrate and integrate significant life events in sport and education into their identities and future narratives in order to delineate the different styles of athletes' career constructions	Many young athletes are motivated to excel in both sport and education. Coaches, teachers, school counsellors, and sport psychology service providers are encouraged to take seriously small-talks and chit-chats in their everyday encounters with young athletes as a means for prompting meaning-making and probing the boundaries of their imagined futures.
2017	The policy and practice of implementing a student-athlete support network: a case of study	International Journal of Sport Policy and Politics	Ryan, C.; Thorpe, H.; Pope, C. New Zealand	To examine the experiences of high-performance athletes undertaking tertiary education within the New Zealand context and in so doing gain a deeper understanding of how implementation of the AFTN policy has impacted these athletes' abilities to engage in a student-athlete dual career.	Whilst each of the student athletes acknowledge receiving some form of support from university's staff to help facilitate Dual careers, most participants still felt that more could be done to enhance this process.
2017	Student Athletes in my Classroom: Australian Teachers' Perspectives of the Problems Faced by Student Athletes Balancing School and Sport	Australian Journal of Teacher Education	O'Neill, M.; Calder, A.; Hinz, B. Australia	To examine teachers' perceptions of problems faced by high performance student athletes in juggling the demands of their multifaceted lives	The amount of missed class time due to training and competition puts added pressures on student athletes to 'catch up' with subject content and assignments on return to school. All teachers recognised that it was unrealistic for student athletes to manage two full-time workloads if there was little or no flexibility in the delivery of the curriculum. Teachers reported that the main issues they observed related to balancing timetables, student tiredness, time management, disrupted connectivity to school life, and the need for students to set both short- and long-term goals.

Year	Article	Source or University (if thesis)	Authors, Nationality of Sample	Research questions & aims/objectives	Findings
2017	Young athletes' significant experiences in sport: critical sociological reflections on athlete development	European Journal for Sport and Society	Aarresola, O.; Itkonen, H.; Laine, K. Finland	To provide a sociological perspective on athlete development by using the theoretical framework of socialization and life course.	First, normative-institutional experiences were related to the rationalized sports system. Second, personal development experiences were related to skills learning and personal recognition, forming lifestyles and overcoming adversities. Third, social capital experiences were built through family, friends, and coaches, and were utilized as resources in competitive sports. Fourth, unexpected life events consisted of injuries, illnesses, and various social life events, such as the death of a family member.
2018	Supporting adolescent athletes' dual careers: The role of an athlete's social support network	Psychology of Sport and Exercise	Knight, C. J.; Harwood, C. G.; Sellars, P. A. UK	To understand the role of the social support network in facilitating a dual career in sport and education, and gain insights into the factors that may optimize the provision of such support.	Results indicate that athletes require particular types of support within their home, at school, and in their sport context to be able to manage their dual career. However, a range of individual and group-level factors may influence the extent to which such support is available to athletes.
2018	School, family and then hockey!' Coaches' views on dual career in ice hockey	International Journal of Sports Science and Coaching	Ronkainen, N. J.; Ryba, T. V.; Littlewood, M.; Selaenne, H. Finland	To examine Finnish ice hockey coaches' attitudes and practices surrounding players' education.	All study participants agreed that dual career was important for all athletes, either as an alternative life plan if the dreams of professionalism would not become true, or for facilitating the transition out from professional sport to the job market. Yet, there was a great diversity in the degree of integration of these attitudes to the coaching practice, from being an integral aspect of daily communication, to a topic that was taken up only in formal developmental discussion with players.
2018	Understanding youth athletes' life designing processes through dream day narratives	Journal of Vocational Behavior	Ronkainen, N. J.; Ryba, N. V. Finland	To understand youth elite athletes' dreams for the future and prominent life themes	A visual task, like the one used in the present study, can help young people move towards a more creative mode of life design not bound to rationalising and dominant discourses about future lives and courses of action. Even more importantly, such task can help young people in making links between their present lifestyle and possible future scenarios, and trigger them to think what they can do today to achieve some of the dreams they have identified.
2020	Grades for goals? Challenging associations between educational engagement and improved football performance among Danish male elite players	Soccer and Society	Thomsen, K. R.; Norgaard, J. Denmark	To investigate the phenomenon of dual career in Danish male football, with a specific focus on the notion that educational engagement promotes football performance	The study does not support the notion that educational engagement promotes football performance: Few or no sport-related benefits are found in the players' perceptions of their educational engagement, making them prone to believe that dual career paths make success in either arena harder to achieve.
2020	Factors influencing Flemish elite athletes' decision to initiate a dual career path at higher education	Sport in Society	Defruyt, S.; Wylleman, P.; Kegelaers, J.; De Brandt, K. Belgium	To gain insight in the factors taken into consideration by athletes when deciding to initiate a dual career (DC) in Higher Education (HE).	Many different considerations, related to different levels of development (i.e. athletic, psychological, psychosocial, academic/vocational, financial), can influence athletes' decision to initiate a DC in HE.
2020	Elite female soccer players' dual career plans and the demands they encounter	Journal of Applied Sport Psychology	Harrison, G. E.; Vickers, E.; Fletcher, D.; Taylor, G. UK	To provide an investigation of players' dual career plans and the demands they encounter.	Dual career difficulty was found to increase as players' level of education increased (i.e., from school to university and from university to vocation). Suitable support systems (e.g., university support, family support) were found to play an integral role in the dual career demands faced by participants, with players receiving varying levels of support from their educational institutions and soccer clubs.
2020	Identity tensions in dual career: the discursive construction of future selves by female Finnish judo athletes	Sport in Society	Kavoura, A.; Ryba, T. V. Finland	To explore whether and how dual career (DC) policies and practices in Finland guide female judo athletes' imaginings about their future.	Differences were found in the ways the athletes in the different age groups constructed their future athletic, civic and gendered selves.

Year	Article	Source or University (if thesis)	Authors, Nationality of Sample	Research questions & aims/objectives	Findings
2020	Reproduction and opportunity: A study of dual career, aspirations and elite sports in Danish SportsClasses	International Review for the Sociology of Sport	Skrubbeltrang, L. S.; Karen, D.; Nielsen, J. C.; Olesen, J. S. Denmark	To analyse the patterns of retention in SportsClasses of promising young athletes in Denmark.	The program produced elements of both reproduction and opportunity but that the patterns strongly favoured the retention of boys compared to girls.
2015	Student Athletes Identity and Motivation towards Dual Career: The context matter	Kinesiologia Slovenica	Fernandes, A.; Moreira, L.; Gonçalves, C. Portugal	To validate a measure of athletic identity among Portuguese college students and analyse the effects of 3 different types of college policies on identity and motivation	The findings show that the micro and meso environment of the university seems to shape the perceptions and feelings of the students about their participation in sport.
2015	Personal characteristics as predictors for dual career dropout versus continuation- a prospective study of adolescent athletes from German Elite Sport schools	Psychology of Sport and Exercise	Baron-Thiene, A.; Alfermann, D. Germany	To identify the personal characteristics that predict dropout versus continuation among dual career athletes from different sports who attend sports schools.	Physical complaints (injuries and lost of fitness), motivation, and volitional skills are important predictors of sport career dropout versus continuation.
Quantitative Approach					
2016	European student Athletes' perceptions on dual career outcomes and services	Kinesiologia Slovenica	Fuchs, P.X.; Wagner, H.; Hannola, H.; Niemisalo, N.; Pehme, A.; Puhke, R.; Marinsek, M.; Strmecki, A.; Svetec, D.; Brown, A.; Capranica, L.; and Guidotti F. Europe	to investigate: i) student athletes' perceptions regarding their sport and academic career paths; and ii) existing and possible implementations of dual career services.	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.
2017	Student athletes' perceptions of four dual career competences	Revista de Psicología del Deporte	De Brandt, K.; Wylleman, P.; Torregrossa, M.; Defruyt, S.; van Rossem, N. Belgium	To identify the perceptions of 107 Flemish elite student athletes of the importance, possession, and need to develop four dual career competencies	Confirmed the relevance (high importance) of the four DC competencies in a sample of Flemish student athletes, and recommends that gender differences be considered in the development of student athletes' DC competencies
2018	Facilitating dual careers by improving resistance to chronic stress: effects of an intervention programme for elite student athletes	European Journal of Sport Science	Sallen, J.; Hemming, K.; Richartz, A. Germany	To present an appropriate intervention programme and its evaluation: stress-resistance training for elite athletes (SRTEA)	In line with the intention of the intervention, the results of the quasi-experimental evaluation study showed short- and midterm, small to medium-sized effects. The subjective experiences of the participants with the intervention programme are mostly positive.
2018	Youth athletes' sustained involvement in elite sport: An exploratory examination of elements affecting their athletic participation	International Journal of Sports Science and Coaching	Wendling, E.; Flaherty, M.; Sagas, M.; Kaplanidou, K. USA	To identify the underlying structure of components affecting the sport participation of 1258 elite youth athletes from the USA through a principal component analysis of 23 items related to motives and barriers to participation and created for this study.	A six-component solution was proposed, including college and professional aspirations and competence beliefs, coach and peer relationships, pressures from parents and coach, intrinsic and self-determined extrinsic motivation, external barriers, and non-self-determined extrinsic motivation.
2020	Spanish female student athletes' perception of key competencies for successful dual career adjustment	International Journal of Sport and Exercise Psychology	Perez-Rivases, A.; Pons, J.; Reguela, S.; Viladrich, C.; Pallares, S.; Torregrossa, M. Spain	To examine Spanish female student athletes' perceptions of (a) generic DC competencies; (b) difficult DC situations they experienced and how successfully they coped; and (c) specific DC competencies related to successful coping with experienced DC scenarios.	Results showed that participants perceived the need to better develop all their DC competencies (e.g., "Ability to resolve conflicts"; "Ability to use your time efficiently"). The two most frequently experienced DC scenarios were social life and missing significant days of study, and the two less experienced were the selection of a study plan and leaving home and family. Participants reported prioritising different competencies depending on the specific DC scenario they were coping with. No differences in the competencies prioritised for successful and less successful coping were observed.

Year	Article	Source or University (if thesis)	Authors, Nationality of Sample	Research questions & aims/objectives	Findings
Mixed Method					
2015	Searching for an optimal balance: Dual Career experiences of Swedish adolescent athletes	Psychology of Sport and Exercise	Stambulova, N.B.; Engström, C.; Franck, A.; Linner, L.; and Lindahl, K. Sweden	To examine adolescent's student athletes' dual career experiences (sport, studies and private life) during the first year at national elite sport schools	Student athletes' adaptation at RIGS (Swedish abbreviation of national elite sport schools) was related to coordinating different layers of their development (athletic, psychological, psychosocial, and educational) in order to search for, and (possibly) obtain an optimal balance between sport, studies and private life. A transition is seen as a process of athletes' coping with transition demands using (and developing) their external (e.g., social support) and internal (i.e., personal) resources, as well as dealing with possible transition barriers in order to feel adjusted.
2017	Walking the line: how young athletes balance academic studies and sport in international competition	Sport in Society	Kristiansen, E. Norway	To identify (a) the perceived role of important stakeholders such as coaches, schools, parents, federations, and the national Olympic committee for the young athletes in the weeks leading up to the EYOF; and (b) the young athletes' EYOF experiences with a focus on perceived stressors by using the transactional framework.	Pursuing a dual career is often a challenging balancing act for the young student athletes. Identified the importance of supportive parents, schools that adapt the workload for the student athletes, and a federation that recognizes the important role of parents and schools.
2017	The importance of the type of sport and life experience in the dual career in elite sport based on the analysis of Poland	Baltic Journal of Health and Physical Activity	Graczyk, M.; Wylleman, Paul.; Nawrocka, A.; Atroszko, P. A.; Moska, W.; Tomiak, T.; Krzysztofak, H. Poland	To check whether the type of sport is important for the development of the dual career in professional sport.	It turned out that the type of sport does not affect the course of the dual career in professional athletes.

manage their DC were identified and demonstrated: DC management, Career Planning, Mental Toughness, and Social Intelligence and Adaptability. (De Brandt, et al., 2017). Ronkainen and Ryba (2018) applied 'visual methods' to understand youth elite athletes' dreams for the future and important life themes. The Finish participants were asked to make some visual representations of their dream days, which were used in following interviews. They demonstrated that such visual task could help young people develop their creative life design/plan and make associations between their current lifestyle and future one. In another study conducted in Finland to explore if and how DC policies and practices assist female judo athletes' picturing their future, the researchers identified the difference in the way athletes constructed their future depending on the age groups. Although this study investigated different age groups from the target age group in the study, it was worth reviewing because they presented how junior athletes develop their ideas and goals on future career in depth compared to other age groups.

A number of researchers claimed that support structure is crucial to support DC athletes to cope with such barriers and challenges. Although young athletes have a strong motivation to pursue DC, support services should be offered by support providers such as coaches, teachers, school counsellors, and sport

psychologist (Ryba, Stambulova, Selänne, Aunola, & Nurmi, 2017). In Ryan, et al.'s (2017) study, it was found that junior athletes appreciate some support they have received from university's staff members, but they still felt that more support could be in place to balance their DC. As Ryba, et al. (2017) claimed, Geranosova and Ronkainen (2015) also argued that support systems played a crucial role in help junior athletes cope with the DC demands. Fuchs, et al. (2016) also urged the support offered by universities (i.e. providing relevant programmes and support services). In terms of external support needed, Kristiansen and Houihan (2017) pointed out the lack of a coherent policy response to the junior athletes' issue of balancing educational and sport development commitments.

Knight, Hardwood, and Sellars (2018) reported that DC athletes required different types of support depending on their own context such as their home/family, school, and sport. However, they also pointed out that other factors at individual and group levels might influence how much support they could access. In relation to external support, the practical and emotional support from coaches and parents was found to be crucial to cope with the stressors caused by DC (Cosh & Tully, 2015). One study reviewed in this paper implemented and evaluated an intervention,

Stress-Resistance Training for Elite Athletes (SRTEA). The results showed short- and midterm, small to medium-sized effects. They also claimed that the feedback from their participants was mostly positive.

Support Providers' Roles and Views

Two articles reviewed in this study provided support providers' views on junior athletes' DC. O'Neill, Calder, and Hinz (2017) examined schoolteachers' perceptions on issues encountered by high-performance student-athletes while Ronkainen, Ryba, Littlewood, and Selänne (2018) investigated Finnish ice hockey coaches' perspectives on their players' education. In O'Neill, et al.'s (2017) study, it was found that all teachers appreciated that it was not possible for student-athletes to manage two commitments without any academic flexibility. Teachers identified some major issues that student athletes had by their observations: balancing timetables, tiredness, time management, a lack of sense of belonging to school life, and goal settings. The researchers also pointed out that student-athletes had more pressure to catch up with missing classes, assignments, and exams when they returned to school after their training and competitions. In the case of coaches, coaches appreciated that DC was important for all student athletes, but "there was a great diversity in the degree of integration of these attitudes to the coaching practice, from being an integral aspect of daily communication, to a topic that was taken up only in formal developmental discussion with players" (Ronkainen, et al., 2018, 44).

Erasmus + Sport Projects Results focused on Junior Athletes

The results of the search of keywords on the Erasmus+ projects grey literature made evident that the main focus of the projects was on the adult and former athletes. Only 14 of the 59 projects funded referred to "YOUNG" athletes or students, nevertheless, the term was used to refer young people over eighteen years old. One project, Trainer 1.0 Beta, focused the target people aged between 14 and 18 years old, similar to the conceptualization of "JUNIOR" that was established for DCJA project. Until the 2019 call, DCJA is still the first project that refers and focuses its target on "JUNIOR" student-athletes.

In other words, the issue of DC was addressed from the perspective of higher education students and adults, for either the reconciliation of academic and sports life or employability after finishing their stage

in elite sport, but not from the perspective of junior athletes.

In the case the Erasmus+ Sport projects, each of them had several acting partners involved (5-10), but the impact of their results and intellectual outputs should be extended to other territories and the European Union in general.

In this sense, it is common for project activities to be limited to the territories of the countries that make up the consortium. This makes it difficult to obtain results that represent the reality of the European framework as a whole and limits the possibilities of research outcomes. However, there are also some examples of success stories in the field of European projects that have largely contributed to enriching the scientific literature in the topic of DC (Defruyt, Wylleman, Torregrossa, Schipper-van Veldhoven, Debois et al., 2019; De Brandt, Wylleman, Torregrossa, Schipper-Van Veldhoven, Minelli et al., 2018).

Currently, it is not possible to review the results of funded projects as the information has not been updated on the project cards. However, the reference to the financing of the project is not frequently found in scientific articles related to the DC, beyond those that have been found and cited as references in this article.

Discussion

The findings in the present study provide an overview of the existing evidence associated with the experience of junior athletes with DC and further need of structured support systems for them. Despite efforts to promote the implementation and support for student-athletes with DC, clearly including junior athletes (European Commission, 2012, Guideline 6), the results of the current study indicate that the implementation of the DC in European countries is still limited in particular for junior athletes, which requires more attention and investigation. Morris, et al. (2020) investigated DC development environments in European countries and identified some support programmes/provision at secondary schools and higher education institutions.

While their findings built up the foundation in the area of investigating support systems/services for junior athletes, the details of such support programmes need to be further investigated to see if they address junior athletes' challenges and barriers with a holistic approach addressed in the HAC model, not only limited to athletic development (Morris, et al., 2020).

The Erasmus+ programme has been implemented since 2014 with an initial budget of 14 billion for promotion of education, training, and youth and sport (European Commission, 2013). Within the Sport call, and more concretely, in the DC topic results, we have found that the total amount of the projects funded from 2014 to January 2020 sums more than 20 million euros. Although the financial support has proved to be medium or big commitment by the Education, Audiovisual and Culture Executive Agency, our results address the issues of a lack of international consortium's papers, which resulted in a lack of outputs in the form of papers. This gives an insight into the need of further research and publications to provide empirical evidence on junior athletes' experience and needs. Both external (support from support providers, intervention, visual method) and internal resources (competences) were identified. Although they showed some diversity within seven articles, it should be further investigated on how they develop their own coping skills/strategies and if they have any support/opportunities to do that.

The geographical location of the results that we found (or the DC programs that they are referring to), prove some good practice in Northern European countries (Kristiansen & Houlihan, 2017; Stambulova, Engstrom, Franck, Linner, & Lindahl, 2015), as well as by other programs outside the European Union, such as Australia and New Zealand (O'Neill, Calder, & Hinz, 2017; Ryan, Thorpe, & Pope, 2017). Based on the findings in those countries, more research on the same topic should be conducted in other countries to identify more good practice to share and some other issues and barriers that should be addressed.

The findings in this study support the findings in literature that junior athletes face challenges and barriers in terms of juggling two commitments (Baron-Thiene & Alfermann, 2015). Researchers also emphasised on the importance of support system/services to overcome such difficulties (De Brandt et al., 2017). Although it is beyond the scope of the current study to identify support system/services in different countries, research on such support systems/services for junior athletes should be conducted along with research on their experience and needs.

In relation to support from support providers, the findings in this study highlighted a gap in the literature that studies on social support providers for junior athletes were very limited. The evidence showed that support from coaches and teachers was mainly identified, which is in line with the findings from the literature (e.g. Knight, et al., 2018; Kristiansen & Roberts, 2010). Nevertheless, the perspective of the

parents and family members (e.g. siblings), friends, teammates should be explored to understand this matter in a broad perspective (Knight, et al., 2018). In the same line, practitioners and policy makers at academic and sports institutions have not been investigated in the literature at an organisational level and strategies. It will be worth investigating in the future study that such private and public bodies develop a support scheme in order to comply with the DC Guidelines (2012). It is also identified that most of the reviewed papers in this study were published in the journals of psychology, coaching, sports sociology, education, and policy. We suggest that the topic of DCs of junior athletes may need to be studied in the area of sport management to provide implications to sport organizations and educational institutions that are in a position to implement structured support systems (Torregrossa, Regüela, & Mateos, 2020) and bridge the gap between research findings and practice. This may also contribute to developing a better strategy by bringing these scientific results closer to the institutions, which will enable them to implement an evidence-based schemes and initiatives.

Conclusion

It is evident from the findings that there is a clear need of further research on the topic of DC focusing on junior athletes to assess their needs, coping skills, and available resources to provide empirical evidence, which can help establish a customized support systems/services for junior athletes. It is hoped that the identified gap in the literature motivates researchers in this area as a consortium to make an effort to boost scientific and intellectual results as well as contribute to different sport disciplines in order to achieve a better dissemination and higher impact in practice.

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