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Parents About Parenting Dual Career Athletes: A Systematic Literature Review.

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Authors statement

Antonio Tessitore: Conceptualization, Methodology, Data curation, Formal analysis, Writing- Original draft preparation.

Laura Capranica: Conceptualization, Methodology, Data curation, Formal analysis, Writing- Reviewing and Editing.

Caterina Pesce: Conceptualization, Methodology, Formal analysis, Writing-Reviewing and Editing

Nadine De Bois: Conceptualization, Methodology, Formal analysis.

Masar Gjaka: Data curation, Formal analysis, and Editing.

Giles Warrington: Conceptualization, Methodology, Writing-Reviewing and Editing

Ciaran Mac Donncha: Conceptualization, Methodology, Writing-Reviewing and Editing

Mojca Doupona: Conceptualization, Methodology, Formal analysis, Project administration, Funding acquisition

Formal analysis; Funding acquisition.

Objectives: To establish the scientific literature on the parents' view as supporters of dual career (DC) athletes, and to highlight practical implications for the development of education programmes to empower parents in this role. Methodology: The systematic literature review included four electronic databases, from which 438 articles published in English between 1999 and 2019 were retrieved. Results: A total of 14 studies achieved the eligibility criteria (i.e., focus on DC, involving parents as participants) for inclusion. Results show that the 14 studies included in the review were characterised by sample sizes <15 to >50 parents of individual and/or team sports athletes, involving data collection based on interviews, semi-structured interviews focus groups, questionnaires and a survey. A thematic synthesis highlighted a two primary constructs: the individual level and the inter-individual level, respectively. The individual level comprised two main themes: Approach to both Sport and Education, and Stressors and Coping, which included five aspects of parenting. The inter-individual level presented three themes: Relationship with the Athlete; Relationship with the Sport Environment and Relationship with the Academic Environment. Conclusions: Findings highlighted a relevant parental role in supporting DC athletes and partial information on parental support strategies. In conclusions, the limited sample size and typology of sports, and the partial representativeness of countries have impacted the global application of the main findings. Furthermore, the need of an educational programme for parents and the need of regular parents-athlete-teacher/coach engagement were considered crucial to facilitate successful parental interventions at academic and/or sports levels and to limit the potential negative effects of DC parenting.

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Abstract

4 Objectives: To establish the scientific literature on the parents' view as supporters of dual career 5 (DC) athletes, and to highlight practical implications for the development of education 6 programmes to empower parents in this role. *Methodology:* The systematic literature review 7 included four electronic databases, from which 438 articles published in English between 1999 8 and 2019 were retrieved. Results: A total of 14 studies achieved the eligibility criteria (i.e., focus 9 on DC, involving parents as participants) for inclusion. Results show that the 14 studies included 10 in the review were characterised by sample sizes <15 to >50 parents of individual and/or team 11 sports athletes, involving data collection based on interviews, semi-structured interviews focus groups, questionnaires and a survey. A thematic synthesis highlighted a two primary constructs: 12 13 the individual level and the inter-individual level, respectively. The individual level comprised 14 two main themes: Approach to both Sport and Education, and Stressors and Coping, which 15 included five aspects of parenting. The inter-individual level presented three themes: Relationship with the Athlete; Relationship with the Sport Environment and Relationship with the Academic 16 17 Environment. *Conclusions:* Findings highlighted a relevant parental role in supporting DC athletes 18 and partial information on parental support strategies. In conclusions, the limited sample size and 19 typology of sports, and the partial representativeness of countries have impacted the global 20 application of the main findings. Furthermore, the need of an educational programme for parents 21 and the need of regular parents-athlete-teacher/coach engagement were considered crucial to 22 facilitate successful parental interventions at academic and/or sports levels and to limit the 23 potential negative effects of DC parenting.

24

Keywords: parenting student-athletes; student-athletes; support entourage; sport and education;
European dual career guidelines.

27	Parents About Parenting Dual Career Athletes: A Systematic Literature Review
28	Athletes have the right to combine their sport and educational/vocational careers (e.g.,
29	"dual-career", DC) to guarantee their holistic development (Capranica & Millard-Stafford, 2011;
30	Stambulova & Wylleman; 2015) and to enhance their transition from sport to the labour market at
31	the end of their competitive years (European Commission, 2007; International Olympic
32	Committee, 2014). In practice, DC differs according to contexts and cultures (Stambulova &
33	Ryba, 2013, 2014). Whilst in some countries (e.g., Australia, Canada, New Zealand, Qatar, United
34	States) student-athletes are well recognized and considered eligible under specific rules for a
35	variety of DC programmes (Australian Institute of Sport, 2020; Aspire Institute, 2020; High
36	Performance Sport New Zealand, 2020; National Collegiate Athletic Association, 2020; U
37	SPORTS, 2020), African, Asian, European, and South American countries present a wide range of
38	fragmented DC policies and interventions in support of the athlete's holistic development, ranging
39	from a laisser-faire approach to established national policies (Amsterdam University of Applied
40	Sciences et al., 2016; Aquilina & Henry, 2010; Quinaud et al., 2020; Sum et al., 2017; Tshube &
41	Feltz, 2015). In particular, cultural features and organizational aspects at an education and sporting
42	levels, ranging from competitive and organized inter-academic leagues to competitive sport
43	organized at the club level, largely influence the interpretation of approaches to DC and the
44	definition of student-athletes in settings in which DC is in place (Bennett et al., 2020; Camirè,
45	2014; Capranica & Guidotti, 2016).
46	In Europe, by recognizing that athletes play a significant societal role (European
47	Commission, 2007) and that sport has a relevant impact on the European economy (Kleissner &

Grohall, 2015), the European Parliament (2015, 2017) and the European Commission (2012, 48

49 2014, 2019) encourage national DC policies, support the cooperation between different DC

50 stakeholders, promote the exchange of DC best practices, and encourage the implementation of

51 DC services at sport and education levels (Amsterdam University of Applied Sciences et al., 2016;

52 Capranica & Guidotti, 2016). To describe the relationship between sport and academic (or work)

53	careers three main pathways have been proposed (Pallarés et al., 2011). First, a "linear path", with
54	athletes focusing only on their sport career and not considering that only very few of them reach a
55	professional status, which allow a capitalization for the life course. Second, a "convergent path",
56	with athletes prioritizing their sport career and reducing their emphasis on academic endeavours or
57	work commitments, which does not promote a balanced comprehensive approach and may
58	preclude them from achieving their full potential from a holistic development perspective. Third, a
59	"parallel path", where athletes place equal importance to their sporting and academic careers,
60	which is the actual European DC model to realize their full potential as European citizens.
61	The European financing programmes in the area of DC provided significant opportunities
62	for scholarly endeavours to address several aspects of European student-athletes (European
63	Commission, 2019), which determined an increased number of academic studies recently
64	summarized in two reviews (Guidotti et al., 2015; Stambulova & Wylleman, 2019). Several
65	authors have proposed a holistic approach encompassing various stages and transitions occurring
66	at sport, educational/working, and psychosocial levels, with the aim of enhancing positive
67	adjustments, to prevent disengagement/drop out experiences, and to avoid psycho-emotional,
68	social and physical consequences when retirement from sport occurs (Comeaux & Harrison, 2011;
69	Cotè, et al., 2014; Park et al., 2013; Stambulova et al., 2009, 2020; Torregrosa et al., 2004;
70	Wylleman et al., 2004). In particular, a growing trend in recent research has been placed on the
71	athletes' supportive entourage, including coaches, teachers, parents, peers, and support staff, who
72	are urged to anticipate and detect DC athletes' needs, and to help athletes progress towards
73	autonomy (Li & Sum, 2017; Stambulova & Wylleman, 2019). Although the athletes are
74	principally responsible for their DC pathway, a supportive entourage is needed to optimize the
75	organization of their academic and sporting activities (Amsterdam University of Applied Sciences
76	et al., 2016). In this context, one of the main goals of the European policy on DC is to promote
77	and prioritise a structured systematic approach to DC. This is based on a strong scientific
78	underpinning, with clear systematic DC structures and partnership approaches, which include the

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79 education of all the DC stakeholders involved (Stambulova & Wylleman, 2019). Therefore, the 80 tendency for DC programmes that are primarily ad hoc, piecemeal, and relying heavily on the 81 goodwill of persons in key organizational or institutional positions at an academic and sport level 82 could be overcome. Recently, a meta-synthesis (Li & Sum, 2017) and a survey (Condello et al., 83 2019) on the elite athletes' view of their DC paths highlighted that parents play a major role as DC 84 supporters. In particular, an athlete-centric perspective of a systematic approach to DC 85 development of elite athletes proposed a three-level construct (e.g., individual, interpersonal, and external), in which parents and their attitudes towards DC are considered relevant social agents 86 87 (Guidotti et al., 2015; Li & Sum, 2017).

88 Parents play a pivotal role in assisting athletes during and after their sporting career as 89 supporters, social agents, and sponsors (Li & Sum, 2017; Harwood & Knight, 2015), also offering perspectives towards education and in assisting during career transitions (Elliott et al., 2018). 90 91 Furthermore, parents also provide logistical and financial support, especially when sport clubs or 92 federations do not offer funds/resources (e.g. equipment, training camp, and travel costs) 93 necessary for preparation to competition at the highest level (Geraniosova & Ronkainen, 2015). 94 Despite two literature reviews (Lindstrom Bremer, 2012; Knight et al., 2017), a position paper 95 (Harwood & Knight, 2015), and a special issue of the Sport, Exercise, and Performance 96 Psychology (Harwood & Knight, 2016) substantiating a growing interest in parental involvement 97 in sport, these contributions do not necessarily consider the crucial role parents play as DC 98 supporters. In fact, the scholarly understanding of parental experiences of DC athletes in varying 99 contexts, sports, and cultures remains very limited. Of the information available, some authors 100 have claimed that successful athletic talent developmental environments should include parents 101 supporting the athletes' sporting goals (Henriksen & Stambulova, 2017), and envisaged structural 102 interventions to enhance the communication between sport staff and parents (Stambulova et al., 103 2020). Therefore, there is a need to consider the crucial role of parents as DC supporters.

104	It is important to appreciate that parents are not always fully equipped to provide optimal
105	levels of support for their talented athletic progeny. Several studies have reported that parents
106	might perceive themselves unprepared to take the main responsibility of supporting the sports and
107	education choices of their children, especially if they have no specific knowledge on DC (Elliott et
108	al., 2018; Knight & Harwood, 2015, Thrower et al., 2016, 2017, 2019; Wyllemann et al., 2007).
109	Thus, the European Commission supported the Collaborative Partnership
110	"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
111	support parenting DC athletes based on a solid theoretical background and scientific underpinning
112	(Capranica et al., 2018). Therefore, the main purpose of the present systematic analysis of the
113	current scientific literature was to establish and critically appraise the existing relevant scientific
114	contributions on the parents' view as supporters of DC athletes, and to highlight practical
115	implications for the development of education programmes to empower parents in this role.
116	Method
117	In agreement with the aim of the XXXXXXX project (Capranica et al., 2018), the
118	research question for this study was framed on the role of parental support for DC of student-
119	athletes. Thus, the a-priori-specified eligibility criteria encompassed: a) focus on DC (yes/no); b)
120	direct involvement of parents as participants in the study; and c) main findings being on parenting
121	athletes as students. In line with the literature (Moher et al., 2010), the design consisted of: 1)
122	Search strategy and identification of relevant papers; 2) Content appraisal of selected papers; 3)
123	Assessment of the quality of studies; 4) Summary the evidence; and 5): Interpretation of the
124	findings). The identification of relevant papers was based on a search strategy limited to peer-
125	review manuscripts published in English between 1999 and 2019.
126	Search Strategy and Identification of Relevant Papers
127	The following combinations of keywords and Boolean operators were formulated through

a consultation with partners of the XXXXXXX consortium: 1) "student-athlete*" AND "dualcareer*" OR "transitional career*" AND "Parent*" OR "Famil*"; 2) "student-athlete*" OR "Elite-

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130	athlete*" AND "Support*" OR "Influence*" OR "Pressure*" AND "Parent*" OR "Famil*"; 3)			
131	"Interaction between parents and coaches" "Parental Support" AND "Athletes" AND "Dual-			
132	career". The asterisks (*) were utilized to pull all derivations of the affiliated root word (i.e.,			
133	Famil* = family, families, familiar, etc.).			
134	To provide a detailed procedure for planning and conducting an accountable and replicable			
135	identification of relevant scientific contributions, four electronic databases were used: "Web of			
136	Science" (previously known as Web of Knowledge), which is an online subscription-based			
137	scientific citation indexing service that gives access to multiple databases that reference cross-			
138	disciplinary research, with a large index of scientific, technical and social sciences literature;			
139	"Scopus", which is the largest abstract and citation database of peer-reviewed literature covering a			
140	comprehensive overview of the research output in the fields of science, technology, medicine,			
141	social sciences, and arts and humanities; "SPORTDiscus", which is a comprehensive database			
142	with a robust coverage of sport, kinesiology and more; "Education Resources Information Center			
143	(ERIC)", which is the world's most widely used index to educational-related literature.			
144	Furthermore, an internet search using the "Google Scholar" search engine			
145	(www.googlescholar.com) was conducted to locate recognized international and national			
146	publications directly addressed to the topic under consideration. Finally, to allow the identification			
147	of relevant papers not found during the electronic search, the snowballing technique was applied.			
148	From the achieved preliminary list of potential relevant contributions, duplicates were then			
149	eliminated. Two researchers belonging to the XXXXXXX consortium independently screened			
150	relevant papers by the titles and if necessary, the abstracts, and the full texts. Before the final			
151	inclusion or exclusion, a common decision was reached for each study. Figure 1 presents the			
152	"PRISMA" flow chart of the study selection process.			
153				
154	Insert Figure 1 About Here			

156 Content Appraisal of Selected Papers

The included papers were sorted chronologically from 1999 to 2018, with an alphabetical 157 158 order of the first author (and of the second author, when necessary), and bibliographical codes 159 were assigned (Table 2). Two independent reviewers used a predefined data extraction form, 160 which considered the following parameters: a) year of publication; b) data collection methods; 161 (e.g., questionnaires, semi-structured interviews, interviews, survey, focus groups; c) sample size 162 and characteristics of parents (e.g., gender, continent and country); d) characteristics of athletes (e.g., age and type of sport); e) parenting DC athletes outcome details; f) DC main findings 163 164 (Tables 1 and 2). A thematic analysis was performed to provide a synthetic overview of major 165 findings deemed relevant for generating inferences on parenting DC athletes. An iterative process 166 involving discussions among the research team to reach an agreement on the identification of themes conveying important aspects about the research topic under investigation allowed the 167 168 categorization of each paper.

169 **Quality Appraisal of Selected Papers**

Two authors independently performed the quality appraisal of the selected papers by 170 171 means of the assessment tools for qualitative studies reported in the Appendix D of Hawker et al. 172 (2002) and in the Appendix 5 of Lorenc et al. (2014). Operationally, nine appraisal questions (i.e., "Abstract and title", "Introduction and aims", "Method and data", "Sampling", "Data analysis", 173 174 "Ethics and bias", "Results", "Transferability or generalizability" and "Implications and 175 usefulness") were evaluated using a 4 point (pt.) Likert scale comprising of: "good" (4 pt.) when 176 full and clear information was provided; "fair" (3 pt.) when information was not complete or clear; 177 "poor" (2 pt.) when minimal or unclear information was present; or "very poor" (1 pt.) when there 178 was a lack of relevant information (Table 3). Thus, total scores ranging from 9 pt. to 36 pt. were 179 interpreted as high quality (30-36 pt.), medium quality (24-29 pt.), low quality (9-23 pt.), 180 respectively (Lorenc et al., 2014).

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Summary of Findings

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	Journal Pre-proof The identification process (Figure 1) resulted in an initial database of 438 articles. After a
	careful removal of duplicates, the screening of the remaining 317 articles resulted in, 25 articles
ft	Ifilling the first main criterion of involving parents as participants. Following the further
1	screening relative to the focus on DC (not only on sport career), 14 articles were retained for the
	final analysis and critical evaluation.
	Tables 1 and 2 report the characteristics of the final 14 selected scientific studies, whereas
	in the text squire brackets include the bibliographical codes of the selected papers. Data collection
(encompassed interviews [1, 2, 7, 11,14], semi-structured interviews [5, 6, 10], focus groups [4],
	focus groups and semi-structured interviews [8, 9], questionnaires [12, 13], and a survey with
1	requirements to articulate in a written form [3], respectively. Regarding the countries of the data
(collection, the majority of papers (n=8) included European countries (United Kingdom: [2, 3,
	4,14]; Finland: [12,13]; Norway: [11]; and Portugal: [6]). Oceania (Australia: [9, 10] and Northern
	America (Canada: [1, 5] were represented in two studies, whilst Africa (South Africa: [7]), and
	Asia (South Korea: [8]) in one study, respectively. In terms of sport classifications of the athletes
	represented of the selected articles, nine studies [1, 5, 7, 9, 10, 11, 12, 13, 14] included parents of
i	athletes competing in different sports, three studies [2, 3, 8] encompassed parents of tennis
	players, and two studies [4, 6] involved parents of soccer players. In considering the number of
	parents participating in the investigations, ten studies involved ≤ 15 parents [1, 2, 5, 6, 7, 8, 9, 10,
	11, 14], one study [4] between 15 and 50 parents, and three studies [3, 12, 13] >50 parents,
	respectively. With the exception of three studies [4, 11, 14], a prevalence of mothers (around 65%)
	compared to fathers (around 35%) emerged. Regarding the age of the athletes as students, U14
	were considered in seven studies [2, 3, 4, 5, 6, 8, 9], U16 in ten studies [2, 3, 4, 5, 6, 9, 10, 12,
	13,14], U19 in six studies [3, 5, 9, 10, 13, 14], whereas two studies did not mention the specific
	age of the athletes included [7, 11]. The quality appraisal resulted in 93% (13 out of 14 studies)
	attaining final scores ranging from 32 to 36 points (i.e., good), with only one study (7%) attaining

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207	a final score of 25 points (i.e., medium). Thus, none of the studies was excluded from the final		
208	analysis and critical appraisal.		
209			
210	Insert Tables 1 and 2 About Here		
211			
212	Qualitative Analysis of Parental Experiences		
213	According to the literature (Guidotti et al., 2015; Li & Sum, 2017), the thematic analysis		
214	identified two main constructs: the individual level and the inter-individual level, respectively.		
215	The individual level comprised two main themes: 1) Approach to both Sport and Education,		
216	encompassing aspects pertaining the parent's emphasis and perspectives on sport and/or academic		
217	achievements, as well as parents entrusting coaches, teachers or sports schools for the child's		
218	holistic development through a DC programme; and 2) Stressors and Coping, including aspects		
219	related to the parent's relationships with family members and other parents. The inter-individual		
220	level presented three themes: 1) Relationship with the Athlete, incorporating the parental support		
221	to the student-athletes' emotional, lifestyle, logistics, and financial needs; 2) Relationship with the		
222	Sport Environment (including aspects related to the parent's knowledge of specific sport-related		
223	organization and demands, as well as quality of communication with the sport staff; and 3)		
224	Relationship with the Academic Environment, comprising aspects related to the parent's		
225	knowledge of specific academic-related organization, demands, and opportunities for distance		
226	learning, as well as quality communication with the educational staff. Details of the thematic		
227	analysis and mapping synthesis of the two-level construct of the included papers are summarised		
228	in Table 3.		
229			
230	Insert Table 3 about Here		
231			
232	Narrative Synthesis		

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233 Sport is one of the most salient aspects of modern culture, with a need for a desired 234 increase in the proportion of youth engaging in organized sports and physical activity (European 235 Commission, 2018; World Health Organization, 2018). Empirical evidence supports the parental 236 role during the earlier phases of the sport participation stage, which is crucial for increasing the 237 chances to develop the potential of future athletes [1]. In considering the long-term pathway 238 leading to elite sports, sport parenting can be seen as challenging, demanding, expensive, and 239 forever-changing, with relevant family sacrifices in several emotional, logistics, and financial 240 aspects (Knight et al., 2017).

In summarizing the parents' perspectives as DC supporters of athletes as students, the present study intended to contribute to the definition of an education programme tailored on the actual needs of the parents and guardians of athletes as students (Capranica et al., 2018). With respect to the literature focusing on the athletes' opinion about parental support, guidance and influence on the combination of their sport and school careers (Condello et al., 2019; Elliott et al., 2018; Stambulova & Wylleman, 2019), the present systematic review summarizes the current status of the parents' perspective of their role in supporting their DC progeny.

248 Despite the important parental role in supporting DC athletes, it emerged that 14 249 contributions over a 20-year period reflect the dearth of scientific literature in this area, indicating 250 that research in this field is still in its infancy phase (Edmonson & McManus, 2007). Furthermore, 251 the selected studies provided data on a limited number of parents, a restricted variation in the 252 typology of sports, and a partial representativeness of countries, which may limit the global 253 application of the findings of the current literature (Knight et al., 2017). The main findings of the 254 present study indicate a multi-faceted nature of parental experiences, mirroring the different 255 national educational, sporting, and DC structure and policies. Despite the challenges of developing 256 a consistent parenting model suitable for DC athletes to fit every situation and circumstance, the 257 systematic approach of this work and its thematic analysis represent a starting point for 258 understanding the parenting phenomenon of DC athletes and contribute to the development of a

sound theoretical construct for further investigations on parenting student-athletes across sportsand countries.

261 In light of the potential cultural differences of the co-authors, the consensus method was 262 deemed especially important to maintain the collegiality of decisions on the labelling of the 263 themes and aspects of parenting (Tastle & Wierman, 2007). Based on the literature (Guidotti et al., 264 2015; Li & Sum, 2017), a synthesized two-level construct of the present systematic review 265 emerged, encompassing individual (e.g., parental beliefs and styles, and psychological and 266 emotional stressors and coping) and interpersonal (e.g., support to the athlete's needs, and 267 interactions/relationships with the staff of the sports and academic environments) themes and 268 related aspects. This construct posits that parenting DC athletes is strongly associated with the 269 diversity of parenting styles and it is conceivable that the more effective the interactions of parents 270 with their children and their academic and sport environments, the greater the support will be 271 provided to the student-athletes' needs and to the DC success (Sax & Wartman, 2010).

The Individual Level: How Parents Perceive DC and Cope with Stress Related to the Sport and School Lives of Their Children

274 The parents' beliefs and perceptions of DC are fundamental for preparing the future of 275 their children and in identifying parental responsibilities, inter-individual relationships, social 276 adjustments and challenges. Irrespective of the sport discipline of their children, parents of DC 277 athletes attribute a value to education and recognize the difficulty for athletes to combine their 278 academic and sport commitments [6, 12]. Besides values and beliefs, parents face a wide range of 279 challenges and stressors, which could vary in relation to specific sports disciplines [3, 4]. In 280 particular, parents of tennis players reported stress related to: 1) competition attendance and 281 support; 2) coaches' behaviours and responsibilities; 3) finance; 4) time management; 5) siblings' 282 request of attention and/or resentment; 6) logistics aspects at club/federation levels; and 7) 283 developmental aspects at educational and sports levels [3]. Conversely, findings on stressors for parents of talented youth soccer players comprised of: 1) academy processes and quality of 284

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285 communication; 2) match-related aspects; 3) sport-family role conflict; and 4) school support and 286 education issues [4]. In any case, the need of an early education programme for parents on the 287 psychological and emotional demands of the athletes' transition from the initiation stage to the 288 development and mastery sport career stages (Wylleman et al., 2004) has been highlighted and 289 interactive workshops providing reliable and clear information is strongly envisaged [4, 6]. 290 Indeed, an educational programme for parents and regular parents-athlete-teacher/coach meetings 291 are deemed crucial to foster their positive roles, wellbeing, and stress management of parents [3], 292 and to facilitate successful parental interventions at academic and/or sports levels and to limit the 293 potential negative effects of parenting DC athletes [6, 9].

294 The Inter-Individual Level: The Relationships of Parents with Their Talented Child and

295 Her/His Sport and Academic Environments

The general influence of parents on the children's development and transition to adult life 296 297 is well established, although it is not well known how parents help their talented progeny coping 298 with several stressful situations during their sport and academic career [3]. In supporting the 299 educational and sport developmental pathways of their children, parents have to consider several 300 aspects of effective DC support at the athlete's personal and inter-personal levels (Guidotti et al., 301 2015; Li & Sum, 2017), including 1) pastoral care; 2) respect and empathy; 3) time management 302 and goal setting; 4) connectedness to school; and 5) connectedness to sport (O'Neill et al., 2017). 303 In the life of a student-athlete, parents are considered as central social agents [6], with their role 304 changing over time [7], starting from the first stage of sport involvement, namely the "initiation 305 stage", to the "development stage", parents provide both moral and financial support, being in 306 general happy to be part of a wider "supporting team" of their children's sport activity and being 307 connected with other athletes' parents during sport tournaments and social events [8]. During the 308 "mastery stage", parents continue to enjoy their children's involvement in sports, which is 309 considered relevant for both the physical and psychological development of their children [2]. 310 Although during the "initiation stage" both parents are responsible for initially getting their

311 children interested in sport with a main emphasis in experiencing fun and excitement [1, 8], in the 312 "development stage" the parental involvement increases parallel to the growing interest for their 313 children's sport, with the mothers providing emotional and nurturing support and the fathers 314 offering technical advices [6]. Despite both parents playing a supportive role in their child's 315 sporting and academic endeavours, independent and interactive contribution of mothers and 316 fathers have been reported. Interestingly, the present systematic review highlighted a lower 317 involvement of fathers as participants in the included academic studies, possibly due to their 318 limited time and their perceptions of being marginally involved in the daily organization schedules 319 of the child with respect to the mothers [10]. Nevertheless, both mothers and fathers reported 320 concerns and worries about the future sport career of their children [8]. In particular, some authors 321 claimed that fathers tend to play a more dominant role in shaping their children's sport 322 experiences (Coakley, 2011), also having an important role on lowering the burnout symptoms in 323 the sports domain when combined with a simultaneous low level of psychological control, 324 whereas maternal affection playing a role on lowering the burnout symptoms in the academic domain when not combined with psychological control [13]. 325 326 The present systematic review highlighted a major concern of parents related to the health

327 and wellbeing of their children, as well as their parental role in helping the athlete progressing 328 towards independence and personal balance. Indeed, to maintain and/or enhance the health and 329 wellbeing of their children and to prevent and/or reduce unnecessary stress possibly leading to 330 risky behaviours, parents of student-athletes have to develop their capability of reading the 331 athletes' responsiveness and body language [5]. In this respect, the recently revised position stand 332 of the International Society of Sport Psychology could be considered a valuable resource to 333 provide information on the multiple demands of DC and the dangers associated with the inability 334 of athletes to cope with career development and transition (Stambulova et al., 2020).

Another relevant aspect of the parental support of DC athletes concerns the financial
burden, which increases from the "initiation stage" to the "mastery stage". In fact, parents

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337 typically sustain the expenses for the sport activity (e.g., the annual fees of youth academies and 338 the purchase of sport equipment), which is considered vital for training and competitions in some 339 disciplines [2, 4, 7, 10]. Furthermore, parents also sustain the education expenses (e.g., tuition 340 fees, the purchase educational material, and extra lessons when needed) and tend to prevent the 341 athletes' engagement in distracting activities such as paid employments [2]. These "financial sacrifices" can impact on the whole family budget, which could be a source of stress [3] and 342 343 reverberate on family conflicts or rivalries [7]. Moreover, the financial burden is particularly 344 demanding and stressful for the single parents (often mothers) who have to fulfil also domestic 345 roles [7, 10], and for the athletes who could feel guilty for draining financial resources from their 346 family [10]. In general, families receive no or modest external financial aid from sports clubs or 347 federation, generating a sort of "policy vacuum" for the sporting career of the athletes [11]. In considering DC a multi-stakeholder phenomenon (European Commission, 2012; 348 349 Capranica & Guidotti, 2016), connectedness of parents to the academic and sport staff is crucial 350 (Camirè, 2014). At an educational level, both academic and social domains are relevant for the athlete (Comeaux & Harrison, 2011). A particular concern relates to the amount of missed classes 351 352 due to training and competition [10], which could hinder the reciprocal meaningful functional 353 relationship between the student-athletes and their academic environment (e.g., classmates, 354 faculty, and counsellors) with effects on the athletes' social interactions within and beyond the 355 classroom, as well as their acquisition of knowledge to make effective choices for their academic 356 development (Comeaux & Harrison, 2011). Additionally, the proximity of schools and university 357 to high-performance training facilities contributes to the successful management of a DC 358 (Aquilina, 2013; Amsterdam University of Applied Sciences et al., 2016). As a consequence, in 359 many countries sports schools providing flexibility and resources for the development of talented 360 athletes have been established. Nevertheless, when these sport schools are located far from the 361 actual residence of the family, parents might consider the relocation of the whole family near the 362 sport school or have their children living in a sport academy, thus delegating their guiding role to

363 the sport club [11]. Another possible option for athletes is to enrol in distance learning degrees, 364 which might be particularly suitable for DC (European Commission, 2012). Actually, the recent 365 COVID-19 pandemic lockdown presented a unique challenge to traditional academic institutions, with the educational landscape rapidly proposing several innovative and flexible solutions to 366 367 mitigate the loss of direct face-to-face learning exposure during this time. The rapid shift to 368 emergency teaching included the use of synchronous and asynchronous delivery of lectures using 369 a variety of teleconferencing technologies in place of in-person lectures and on-line assessments 370 replacing traditional summative examinations (Basilaia & Kvavadze, 2020). This quick transition 371 to the online form of education and the appraisal of the student experience may be useful in 372 guiding the future development and delivery of blended academic programmes, which will 373 provide greater flexibility and further assist and facilitate student-athletes pursuing their studies. 374 At a sport level, coaches, parents, and athlete routinely interact and there is a need to 375 establish an effective and positive coach-athlete-parent relationship (Lisinskiene et al., 2019), 376 also important to manage efficiently the parental logistical support of training and competitions 377 arrangements. To achieve effective interaction and communication between parents and sport 378 staff, it could be envisaged that clubs and academies engage psychologists for intervention 379 programmes designed to foster a positive relationship between coaches and parents (Lisinskiene et 380 al., 2019), or DC tutors thereby educating parents and enhancing their awareness of essential DC 381 policies and services in place at local, national, and international sport levels.

In the absence of flexible academic and/or sport curricula, student-athletes often have difficulty in managing effectively full-time academic and sport workloads (Amsterdam University of Applied Sciences et al., 2016). Regardless of the type of school and sport, athlete-friendly schools and supportive programmes tailored to meet the needs of student-athletes DC paths represent a crucial "support network" able to anticipate possible problems and to suggest effective solutions [11, 14]. Additionally, the development of core planning and organisational skills such as time management and goal setting could enhanced through the sharing of the annual

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389	periodization of trainings and competitions between teachers, coaches and parents [14] (O'Neill et
390	al., 2017). According to several recommendations on DC (Amsterdam University of Applied
391	Sciences et al., 2016; Capranica & Guidotti, 2016; Condello et al., 2019; European Commission,
392	2012; Stambulova & Wylleman, 2019; Sanchez-Pato et al., 2017; Swedish Sport Confederation,
393	2018; Wylleman et al., 2017), prepared and dedicated DC staff in both the educational institutions
394	and sport bodies is important to help student-athletes' progresses and to monitor their wellbeing.
395	In fact, parents recognize that qualified tutors are relevant to minimize barriers and to support the
396	DC path of their children [10, 11, 14].
397	In response to the growing DC awareness, educational institutions and sport bodies from a
398	number of European nations have developed programmes that address distinctive DC aspects by
399	means of a variety of approaches (Amsterdam University of Applied Sciences et al., 2016), but
400	there is still a need for the adoption of a systematic evaluation of their effectiveness and impact for
401	the student-athletes, their parents, the institution, and the sport system (Navarro et al., 2019).
402	Methodological Reflections
403	Two main considerations influenced the approach taken: 1) the awareness of the
404	complexity and variety of parental interrelations due to the different individual's beliefs,
405	perceptions, approaches, and previous and actual experiences in family, academics, and sporting
406	contexts; and 2) the intention to provide a sound evidence-base approach to the development a
407	parenting programme primarily grounded on the parents' perceived needs and challenges. Thus,
408	the main limitation of this systematic literature review was the deliberate exclusion of articles
409	related to support from other sources (e.g., athletes, siblings, coaches, teachers, etc.). Despite its
410	limitation, the present review may provide important information to stimulate future research on
411	the dynamic and evolving phenomenon of parenting student-athletes and the effects of
412	determinants of positive or negative parental relationships in support of DC.
413	Future Research and Practical Implications

414	The present analysis highlights that parenting student-athletes is a long-lasting process
415	requiring efforts to prompt inclusive DC measures and support programmes for parents who could
416	greatly contribute to the advancement of a European DC culture. In summarizing the parents'
417	views of parenting DC athletes, the present review and synthesis revealed commonalities with key
418	findings of the literature on sport parenting and on DC transitions, specifically addressing the need
419	of a cohesive and inclusive social support network in addition to personal efforts (Harwood &
420	Knight, 2015, 2016; Capranica & Guidotti, 2016; Li & Sum, 2017; Stambulova & Wylleman,
421	2019). Therefore, a thorough understanding of parents' experiences is necessary to include parents
422	as an essential component for the development of a DC culture. The proposed two-level construct
423	represents a cultural shift in the relationships among four respective parties: parent, student
424	athlete, academic staff, and sport staff. Accordingly, the response from academic institutions and
425	sport bodies to the phenomenon of parental involvement should progress from active resistance to
426	assigned services and professional DC personnel to respond to parent's needs and concerns. In the
427	meantime, whilst considering that parenting an elite athlete as student could reveal both positive
428	and negative aspects, it is essential that educational programmes for parents take into account their
429	typical lack of experience regarding operational strategies and limited information on specific
430	policies and services currently available. Indeed, the interplay between the individuals, the socio-
431	cultural environments, and the organizational aspects of DC setting requires further investigations
432	taking into account different contexts (Storm et al., 2014).

The potential effect of stressors and costs of DC parenting urges scholars towards the identification of a DC parenting model based on cross-national and cross-sports research on the parents' views of their supportive role and actual needs (Kamberelis & Dimitriadis, 2005; Parker & Tritter, 2006). In considering that several socio-cultural DC contexts are present worldwide, the gathering of parents' views of their DC supportive role could prove invaluable in identifying relevant aspects of parenting student-athletes in relation to: 1) the athletes' needs; 2) the parent's need of information on the sport, academic, and DC policies and services; and 3) the most

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440	appropriate educational resource to empower their parental support. Furthermore, a concept
441	mapping methodology involving a system-based approach to integrate ideas and knowledge across
442	parents on specific approaches as to how different DC aspects relate could improve the
443	development of our theoretical knowledge and provide a sound basis for directing effective
444	policies and interventions (Trochim, 1989; Trochim et al., 2008). In conclusion, the present review
445	provided the necessary systematic review of the evidence base for further applied works.
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69 Captions to figure and tables.

70 Figure 1. PRISMA flowchart of the different phases of the systematic review.

70 Table 1. A brief summary of the included contributions (in a chronological order), including

702 bibliographic code and reference, country of the participating parents, aim/focus of the study,

703 sample size, and main findings/conclusions.

704 Table 2. Mapping synthesis of the selected papers (n=14).

705 Table 3. Mapping synthesis of the two-level construct of the selected papers (n=14), including

706 *individual and interpersonal levels, their relative themes, factors, and bibliographic codes.*

707

Table 3.

Mapping Synthesis of the Two-Level Construct of the Selected Papers (N=14), Including Individual and Interpersonal Levels, Their Relative

Themes, Factors, and Bibliographic codes.

Levels	Themes	Factors	Bibliographical Codes
		Emphasis on sport and school achievement	1, 4, 8, 11, 12, 13, 14
_	Approach to both Sport and Education	Success perspective in sport vs. education	6, 7, 10, 11, 12, 13, 14
		Trust and respect of coaches and teachers	2, 3, 5, 6, 8, 9, 11
		Integration into the dual career programme	2, 4, 8, 9, 14
ua	Education	Feedback on athlete's academic, personal and sport development	4, 5, 9, 10
Individual		Transfer of responsibility child's education and athletic development to the sports schools	12
Indi		Pushy parents (i.e., pressuring their child or pushing the image of their child forward) and other parents' behaviours	2, 3, 4, 10
	Stressors and	Managing split-family and work schedules with the sport commitment of the athlete	3, 4, 10
	Coping	Sibling inequality and guilt	3, 4
	Coping	Facilitator programme for parents	8,9
		Necessity to relocate the family near the sport school	12
		Athlete's lifestyle management and monitoring the signs and symptoms of wellbeing/health/behavioural risks	1, 2, 3, 4, 5, 8, 9, 10, 11, 14
	Relationship with the Athlete	Emotional anchoring parental role in fostering the athlete's independence, personal balance and coping with stress	2, 4, 5, 6, 7, 8, 9, 14
		Financial support	1, 2, 3, 4, 6, 7, 8, 10
		Logistic support	1, 2, 3, 4, 8, 11, 14
		Support for missed classes, school assignments, and exams	3, 4, 9, 10, 14
		Athlete's time management in balancing sport, school, family and social life	3, 4, 5, 6, 10
ıal		Management of school and sport conflicts	3, 4, 5, 14
npi		Management of rivalry/conflicts/inequality of sibling/peers	3, 4, 7, 10
ivi		Questioning and reminding of the athlete's experiences and goal setting	5,9
Ind		Taking decisions about education and support on career transition	3, 4
Inter-Individual	Relationship with	Quality communication with coaches and sport staff	2, 3, 4, 5, 8, 14
In	the Sport	Knowledge about a sport and time management at training and competitions	1, 2, 3, 4, 7, 8
	Environment	Dual career awareness of sport bodies	6, 8
	Liiviioiiiient	Parents as qualified coaches	11
	Relationship with	Quality communication regarding education	3, 14
	the Academic	Different educational set-ups/distant learning	9, 14
	Environment	School support and anticipation of unequal treatments	14

Table 1.

A Brief Summary of the Included Contributions (in a Chronological Order), Including Bibliographic Code and Reference, Country of the Participating Parents,

Aim/Focus of the Study, Sample Size, and Main Findings/Conclusions.

E	Bibliography Code and Reference	Country	Aim/Focus of the Study	Sample Size (# fathers , # mothers)	Main Findings/Conclusions
1	Coté (1999)	Canada	Patterns in the dynamics of families of talented athletes through their development in sport.	6 parents (3 fathers, 3 mothers)	Different themes characterize each phase of a child's participation in sport and important changes occur at family levels. The role of parents changes from a leadership role (sampling years) to a follower/supporter one (investment years). The role of family is a complex phenomenon because of the diversity of family context. Parents emphasize both school and sport achievement.
2	Wolfenden & Holt (2005)	UK (England)	Players', coaches' and parents' perceptions of talent development in elite junior tennis during the specializing years.	4 parents (1 father, 3 mothers)	Complex interactions between players, parents, and coaches associated with involvement in elite junior tennis encompass: 1) Emotional Support; 2) Tangible Support; 3) Informational Support; 4) Sacrifices; 5) Pressure; and 6) Relationship with Coaches.Parents fulfilled an important role in providing financial and emotional support and having expectations for their child's achievement. Family time and social lives are scarified due to tennis. A multifaceted social setting involves complex relationships between players, parents, and coaches., especially when parents became over-involved in competitive settings.
3	Harwood & Knight (2009)	UK	Perceived stressors experienced by British tennis-parents and emphatic understanding of key participants in the youth sport development process.	123 parents (41 fathers, 74 mothers, 4 sets of joint responses)	Core themes of parental stressor included: 1) the processes of competition; 2) the behavior and responsibilities of coaches; 3) financial and time demands placed upon the family; 4) sibling inequalities and resentment; 5) inefficiencies and inequalities attributed to tennis organizations; and 6) developmental concerns related to educational and future tennis transitions. A need to educate and support parents through the motivational and emotional processes of competition, the parental role in financial, social, and educational support emerged.
4	Harwood, Drew & Knight (2010)	UK (England)	Experiences of academy football parents across the specializing stage and stressors associated with younger and older players.	41 parents (25 fathers, 16 mothers)	Parental stressor encompassed: 1) academy processes and quality of communication; 2) match-related factors; 3) sport-family role conflict; and 4) school support and education issues. Parents identified uncertainty of their son's retention in the academy and quality of communication with staff being somewhat excluded and treated with a lack of empathy.
5	Tamminen & Holt (2012)	Canada	Development of a grounded theory of the ways adolescent athletes cope in sport and the related parents' and coaches' role.	10 parents (4 fathers, 6 mothers)	Parents use specific strategies to help athletes learning about coping, including questioning and reminding, providing perspective, sharing experiences, dosing stress experiences, initiating informal conversations, creating learning opportunities, and direct instruction.

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6	Domingues & Gonçalves (2013)	Portugal	Parental beliefs, expectations, behaviours and social support in youth sport.	11 parents (not specified)	Parents tend to influence the child's relation to and persistence in sport. Parents's involvement and behaviours vary during the early, middle, and elite years of the athletic talent development. Parents' educational beliefs are reflected in some lifelong learning social skills found in sport.
7	Holl & Burnett (2014)	South Africa	Relationships between elite athletes and their significant others during their sporting life	5 parents (not specified)	Parental guidance and support influence the initial children' engagement, dedication, and success in sport. Mother-daughter and father-son relationships present differential influences, with mother generally providing emotional support and father supporting coaching and financial resources.
8	Park & Kim (2014)	South Korea	Experiences of parents of elite tennis players and the athletes' perceptions of their parents' influence and support.	15 (4 fathers and 11 mothers)	Parents influence the initiation of the athletes' sporting careers and the need for education programmes for parents and coaches on effective support for young athletes emerged. Parents and athletes appreciate the communications with each other, but they report some difficulties in communicating with the other stakeholders.
9	Hardcastle, Tye Glassey & Hagger (2015)	Australia	Development and evaluation of future training programs to maximize adaptive life skills in young high-performance athletes.	8 parents (not specified)	To achieve continuity and reinforcement of a Developing Champions programme, involvement of parents and coaches is needed. Internet and social media could promote key self-regulation skills such as self-monitoring and goal setting or to prompt discussion and experiences of dealing with stress or anxiety. Coach-parent- player meetings could allow them to share the programme's approach and to provide players and parents with feedback on players' academic, personal and sport specific development.
10	O'Neill, Calder & Allen (2015)	Australia	Identification of gaps between parents and student-athletes' views to maximise the effectiveness of parental support.	10 parents (1fathers, 9 mothers	Parents are well motivated to provide emotional and tangible support for their talented child but rarely receive any formal training on how to help their child's responding to stress, mainly related to: 1) sibling relationships; 2) physical demands on the child; 3) finances; and 4) <i>over the top and pushing</i> parents (i.e., pressuring their child or pushing the image of their child forward).
11	Kristiansen & Houlihan (2017)	Norway	The role of private sports schools in the development of elite athletes and the financial support of parents.	8 parents (4 fathers, 3 mothers, 1 not specified)	Parents of young athletes attending sports schools tend to transfer responsibility for their child's athletic and educational development to the schools, which offer a stable, technical, high-quality, systematic and in-house sport and education resources for the youth student-athlete.
12	Sorkkila, Aunola & Ryba (2017)	Finland	Burnout symptoms and profiles of student- athletes in relation to the athletes' and parents' success expectations.	448 parents (188 fathers, 260 mothers)	Different mothers' and fathers' parental expectations, guidance and support likely influence the athlete's well-functioning and/or sport/school burnouts.
13	Aunola, Sorkkila, Viljaranta, Tolvanen, Ryba (2018)	Finland	The role of mothers' and fathers' parenting behaviors on the symptoms of school and sport burnout in adolescent athletes.	449 parents (191 fathers, 258 mothers)	Parents play a role in adolescent athletes' symptoms of school and sport burnout during the transition to upper secondary school. Although parental affection and support seem to protect athletes from the symptoms, this protective association is evident only if not combined with high parental psychological control. Interventions aiming at increasing parental knowledge of beneficial and harmful ways to be

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				involved in athletes' lives is needed.	
Knight, Harw 14 Sellars (2018	1	The role and factors of the social support network in facilitating a dual career.	13 (7 fathers, 6 mothers)	role in creating expectation of continu on work. It is envisaged that parents,	heir parents, who are perceived to play a critical aing education and in helping them to catch up , coaches, teachers, and organizational support telligence' and a cognitive awareness of the lete.

Table 2.

Mapping Synthesis of the Selected Papers (n=14).

Characteristics of the studies	Methodology	Bibliography Code
Data collection methods	Questionnaires	11, 13
	Semi-structured interviews	5, 6, 14
	Interviews	1, 2, 7, 9, 12 13
	Survey	3
	Focus groups	4, 8, 10
Continent	North America	1, 5
	Europe	2, 3, 4, 6, 11, 12, 13, 14
	Oceania	9, 10
	Africa	7
	Asia	8
Parents' Sample	<15 parents	1, 2, 5, 6, 7, 8, 9, 10, 12, 14
	16-50 parents	4
	> 50 parents	3, 11, 13
Type of sport of student-		
athletes	Individual and Team Sports	1, 5, 7, 9, 10, 11, 12, 13, 14
	Only Team Sport	4, 6
	Racquet Sports	2, 3, 8
Age of student-athletes	U12	3, 4

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U14	3, 4, 6, 8, 10	
U16	2, 3, 4, 5, 6, 10, 11, 13, 14	
U19	3, 10, 14	
Not available	7, 9, 12	

Figure 1.

PRISMA Flowchart of the Different Phases of the Systematic Review.



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- Fourteen articles were reviewed to identify and map relevant aspects in parenting student-athletes.
- Parents have a relevant role in supporting athletes in their sport and academic paths.
- Scientific information on parental strategies in support of DC athletes is limited.
- Parents of DC athletes can benefit from an education programme tailored on their actual needs.

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Declaration of interests

 \boxtimes The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: