

A HOLISTIC APPROACH TO THE DUAL CAREER OF THE STUDENT-ATHLETE

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Perceived Barriers to Dual Career Success and the Importance of Athlete Identity in Dual Career Student-Athletes with Disability

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Abstract

The aim of this study was to quantify the perception of barriers to the achievement of dual career success and the relevance of their identity in student-athletes with disabilities in Spain. A total of 87 Spanish student-athletes with disabilities completed the questionnaires 'Perceptions of dual career student-athletes' (ESTPORT), the 'Exercise Benefits/Barriers Scale' (EBBS) and the 'Athletic Identity Measurement Scale' (AIMS). The highest scores were found for the barrier 'Students' schedules are not flexible' (3.30 ± 1.34), followed by 'The university/educational institution is far from my training centre' (3.07 ± 1.45) and 'I do not have enough support from the university/educational institution' (3.00 ± 1.38). The results related to the benefits and barriers of exercise show that student-athletes agree most with 'I think people in exercise clothes look funny' (2.84 ± 1.05) and 'Exercise facilities do not have convenient hours for me' (2.79 ± 1.05). Finally, in relation to the results of the sport identity of student-athletes with disabilities, they give the highest scores regarding their degree of agreement to 'I have many sport-related goals' (5.79 ± 1.74) and 'I consider myself an athlete' (5.68 ± 1.68). In conclusion, student-athletes with disabilities showed a medium and high perception of barriers, mostly related to distances and timetable and support received, showing high scores related to their perception as athletes.

Keywords: athlete identity, barriers, disability, dual career, student-athlete.

1. Introduction

There are an estimated 80 million people with disabilities in the European Union, equivalent to 15% of the EU population (Priestley et al., 2016). This population is potentially less likely to have a professional sporting career than non-disabled people (Wareham et al., 2017), which is an additional form of social exclusion.

Social exclusion is a multidimensional reality that is linked to numerous aspects such as social status, education, health, income, or access to social services (Silver & Miller, 2003). From a social perspective, inclusion should not be seen as the antithesis of exclusion, but as a dimension of positive social development that must be reconciled with the objectives of promoting social well-being and the development of individuals at different levels (Anttiroiko & de Jong, 2020).

Causes that can lead to social exclusion include reduced opportunities for access to higher education, unequal access to the labour market or lack of participation in social activities such as sport (Labonté et al., 2012).

Sport is one of the main means for social integration (Kamberidou et al., 2019). It has been successfully used for the inclusion of special populations at risk of exclusion including people with disabilities (Kiuppis, 2018). In this sense, sport has proven to be an effective tool for achieving social inclusion of people with disabilities, as it gives them the opportunity to showcase their talents and skills and to challenge stereotypes associated with their condition (Blauwet & Willick, 2012).

Four dimensions have been identified through which social inclusion processes can be organised: spatial, relational, functional and empowerment (Bailey, 2005). Sport can contribute to the inclusion process of people with disabilities by: reducing barriers that prevent access to shared sport practice spaces (spatial); generating a sense of belonging to sport institutions, clubs etc., that allow people with different backgrounds to share a common interest (relational); providing the opportunity to develop their capacities and skills within the framework

of sport practice (functional); and developing social support networks that increase community cohesion and support for the individual (empowerment).

The process of social inclusion of athletes with disabilities is not without barriers. Three types have been defined: individual, social, and environmental (Jaarsma et al., 2014). Individual barriers refer not only to physical or architectural obstacles (Rimmer et al., 2004) but also to self-imposed limits by disabled athletes themselves (Haslett et al., 2017). In many cases they are caused by a lack of assistance or inadequate guidance. Social barriers are associated with the lack of preparation of members of sport organisations to adapt to the specific needs of athletes with disabilities (Martin, 2013). Environmental barriers refer to the general lack of mobility aids for people with disabilities and the civic sense to reverse this situation (Hästbacka et al., 2016).

Sport is as much a pillar of social inclusion as education or employment. In our societies, access to higher education, obtaining paid employment or practising a high-level sport without restrictions are factors that foster social inclusion (Asís Roig, 2017). Students with disabilities are generally less likely to have access to university education than students without disabilities (Biewer et al., 2015). Access to Higher Education is significantly relevant as it improves the employability of people with disabilities. Among people with only secondary education, people without disabilities are 23% more likely to be employed (Adams & Holland, 2006). However, this difference is reduced to 15% among people with a university degree. This means that people with disabilities who have successfully completed higher education are more likely to find employment and enjoy a stable situation. In this sense, the promotion of dual careers for athletes with disabilities can be an effective way to achieve their social inclusion.

Defined as a priority objective in the “White Paper on Sport” (Commission & Directorate-General for Education Sport and Culture, 2008), the Dual Career model has been implemented with notable success in universities across Europe since then (Storm et al., 2021). Once the model has been consolidated, the Dual Career should evolve to be extended to other sectors of the population, such as athletes

with disabilities, with specific adaptations to reduce barriers to its implementation.

In disabled sport it is necessary to develop sporting skills that are at the same level as their non-disabled counterparts (Grandisson et al., 2012). This sometimes involves many hours of hard work and training to achieve the required performance. This means that these disabled athletes have greater needs derived from their abilities (Bellieni, 2015) and, therefore, show a greater risk of social exclusion as they are unable to reconcile their demanding sporting lives with academic training to secure a future (Collins et al., 2014).

Dual careers are a necessary step in this process. Athletes with disabilities have valuable personality traits and attitudes such as commitment and leadership, which can add value to the university ecosystem (Thomas & Smith, 2009). Similarly, these skills can materialize in increased performance of the student-athlete in their academic progress (Stambulova, 2016), serving as a role model for other people with disabilities to enter higher education (Leake & Stodden, 2014).

Paradoxically, scientific research has not yet focused on the promotion of dual careers in athletes with disabilities (Magnanini et al., 2022). Scientific publications are practically non-existent, which makes this field a priority area for analysis and action. The aim of this study was to quantify the perception of barriers to the achievement of dual career success and the relevance of their identity in student-athletes with disabilities in Spain.

2. Material and methods

2.1. Design

The study design was descriptive and cross-sectional, with non-probability convenience sampling. The STROBE statement (Vandenbroucke et al., 2014) was followed for the research design and development of the manuscript. Study participants gave their consent to participate prior

to data collection and were informed of the research objectives and the confidentiality of the data obtained during the research. The institutional ethics committee reviewed and authorized the protocol designed for data collection, in accordance with the code of the World Medical Association and the Declaration of Helsinki (code: CE012101).

2.2. Participants

The sample size was calculated using Rstudio 3.15.0 software (Rstudio Inc., USA). The significance value was set at $\alpha=0.05$. The standard deviation (SD) was established attending to perceived barriers of previous studies (SD=0.75) (Mateo-Orcajada et al., 2022). With an estimated error (d) of 0.16, the required sample size for a 99% confidence interval (CI) was 85 subjects.

The final sample consisted of 87 student-athletes with disabilities from Spain. The inclusion criteria were: a) have a physical, sensory (visual or hearing) disability or cerebral palsy; b) have been a member of a sports federation for at least three years; and c) to be currently enrolled in the last years of compulsory education (pre-university education), a university degree, a university master's degree, or a doctorate.

2.3. Instruments

The 'Perceptions of dual career student-athletes' (ESTPORT) questionnaire (Sánchez-Pato et al., 2016), the 'Exercise Benefits/Barriers Scale' (EBBS) (Sechrist et al., 1987) and the 'Athletic Identity Measurement Scale' (AIMS) (Visek et al., 2008) were used for data collection.

The 'Perceptions of dual career student-athletes' (ESTPORT) questionnaire is a validated questionnaire which allows the measurement of student-athletes' perception regarding their dual career (Sánchez-Pato et al., 2016). The internal consistency of the questionnaire is high, as

Cronbach's alpha coefficients are above 0.70, this being the lower limit accepted as reliable (Corbetta, 2007; Sánchez-Pato et al., 2016). It has been used in previous research about dual career (Abenza-Cano et al., 2020; Gavala-González et al., 2019). Cronbach's alpha coefficient of the scale corresponding to the barriers with the sample used in this research was $\alpha=0.817$, understood as a high reliability (Corbetta, 2007). This questionnaire is composed of 84 items with different types of response options (Likert scale, multiple choice, and short answer), with most of the questionnaire items using the Likert scale. To obtain information about sociodemographic and contextual variables such as gender, age, level of sports professionalisation, stage of sports career, level of education, or work situation, sociodemographic questions were included to describe the sample. Furthermore, to know the difficulty of reconciling sporting and academic life, question 20 about dual career barriers of student-athletes was also included. These questions used a Likert scale from 1 (strongly disagree) to 5 points (strongly agree).

Also, the EBBS was developed in response to a need for an instrument to determine the perceptions of individuals concerning the benefits of and barriers to participating in sport activities (Sechrist et al., 1987). The resulting instrument was tested for internal consistency (Cronbach's $\alpha=0.954$), validity of its constructs (variance explained: 65.2%), and test-retest reliability (ICC=0.89) (Sechrist et al., 1987). Cronbach's alpha coefficient of the scale corresponding to the barriers with the sample used in this research was $\alpha=0.795$, understood as a high reliability (Corbetta, 2007). From this survey, the items about the barrier scale were included in this research. The questions used a four-response, Likert-type format with responses ranging from 4 (strongly agree) to 1 (strongly disagree).

Finally, to measure the athletic identity, the 'Athletic Identity Measurement Scale' (AIMS) was used (Vissek et al., 2008). The scale has shown an internal reliability coefficient of 0.81 (Vissek et al., 2008). Cronbach's alpha coefficient of the scale corresponding to the barriers with the sample used in this research was $\alpha=0.889$, understood as a high reliability (Corbetta, 2007). The AIMS requires participants to answer seven items designed to assess aspects of athletic identification,

with the athlete's role measured on a scale ranging from 1 (strongly disagree) to 7 (strongly agree).

2.4. Procedure

Data collection was carried out from the Universidad Católica San Antonio de Murcia (Spain). For the distribution of the questionnaire, the sports service of the university itself was contacted. The questionnaire was also distributed through the ONCE Foundation and the Spanish Paralympic Committee. These organisations then distributed the questionnaire by e-mail to all athletes with disabilities in their databases, specifying that only those who were studying at pre-university, undergraduate or postgraduate level should complete the questionnaire.

Participants first completed and signed the informed consent form, informing them of the research objectives and procedures, and then completed the questionnaire anonymously and individually, without academic or competitive pressures, and without the presence of their coaches or teachers. The participants did not receive any additional indications or explanations about the purpose of the questionnaire, other than those indicated in the questionnaire itself. The questionnaire was made available via the GoogleForms® platform and was completed by the participants in 20-30 minutes. All data were collected anonymously.

2.5. Statistical analysis

The normality of the data was initially assessed with the Kolmogorov-Smirnov test, homogeneity with the Levene's test, and sphericity with the Mauchly test. The descriptive analysis of quantitative variables showed mean values and standard deviations, while frequencies and percentages were calculated for qualitative variables. The statistical analysis was performed using the SPSS statistical package (v.25.0; SPSS Inc., IL, United States).

3. Results

Socio-demographic, education, type of disability, sports career, distribution of time and dual career variables are described in Table 1.

Table 1. Socio-demographic, education, type of disability, sports career, distribution of time and dual career variables

Variables	Item	Athletes with disabilities (n=87)
Socio-demographic	Age	23.98±5.78
	Gender	Male: 54(62.1%) Female: 33(37.9%)
Education	What do you study?	Vocational Education: 30(34.5%) Bachelor's Degree: 45(51.7%) Master's degree/Ph.D.: 12(13.8%)
Disability	Type of disability	Hearing: 16(18.4%)
		Visual: 19(21.8%)
		Physical: 34(39.1%) Cerebral palsy: 18(20.7%)
Sports career	Level professionalisation	Amateur: 23(26.4%) Semi-professional: 32(36.8%) Professional: 32(36.8%)
		Stage sports career
	Distribution of time	How many hours do you spend per week studying/going to class?
How many hours do you train / compete per week?		18.75±24.54
Dual career	Difficulty in combining studies and sport	Very easy: 2(2.3%) Easy: 10(11.5%) Medium: 38(43.7%) Difficult: 31(35.6%) Very difficult: 6(6.9%)

Table 2 shows the results related to the perception of barriers in the dual career of student athletes. Student-athletes showed average or high scores on all items. In this respect, the highest scores are obtained for the barrier 'Students' timetables are not flexible' (3.30 ± 1.34), followed by 'The university/educational institution is far from my training centre' (3.07 ± 1.45) and 'I do not have enough university/educational institution support' (3.00 ± 1.38). In contrast, student-athletes perceive the barriers 'I have to take care of my family' (1.93 ± 1.19), 'The cost of education is high' (2.51 ± 1.40) and 'My current job does not allow me to study enough' (2.51 ± 1.30), followed by 'I find myself unable to balance study and training time' (2.54 ± 1.31) to a lower extent.

Table 2. Dual career barriers of student-athletes

Item	SD	D	N	A	SA	Mean \pm SD
	f(%)	f(%)	f(%)	f(%)	f(%)	
The university/educational institution is far from my home	19(21.8)	14(16.1)	22(25.3)	13(14.9)	19(21.8)	2.99 \pm 1.44
The university/educational institution is far from my training centre	20(23.0)	10(11.5)	19(21.8)	20(23.0)	18(20.7)	3.07 \pm 1.45
I find myself unable to balance study and training time	24(27.6)	24(27.6)	15(17.2)	16(18.4)	8(9.2)	2.54 \pm 1.31
My current job does not allow me to study enough	30(34.5)	8(9.2)	31(35.6)	11(12.6)	7(8.0)	2.51 \pm 1.30
I have to take care of my family	49(56.3)	9(10.3)	17(19.5)	10(11.5)	2(2.3)	1.93 \pm 1.19
I am usually tired	19(21.8)	12(13.8)	26(29.9)	22(25.3)	8(9.2)	2.86 \pm 1.27
I lose the rhythm of the academic year	16(18.4)	20(23.0)	19(21.8)	23(26.4)	9(10.3)	2.87 \pm 1.28
I lose touch with my classmates	21(24.1)	21(24.1)	13(14.9)	22(25.3)	10(11.5)	2.76 \pm 1.37
The cost of education is high	30(34.5)	17(19.5)	16(18.4)	14(16.1)	10(11.5)	2.51 \pm 1.40
I do not have enough university/educational institution support	19(21.8)	12(13.8)	19(21.8)	24(27.6)	13(14.9)	3.00 \pm 1.38
Students' timetables are not flexible	11(12.6)	15(17.2)	19(21.8)	21(24.1)	21(24.1)	3.30 \pm 1.34
Training's timetables are not flexible	26(29.9)	14(16.1)	17(19.5)	21(24.1)	9(10.3)	2.69 \pm 1.39

SD: *strongly disagree*; D: *disagree*; N: *neutral*; A: *agree*; SA: *strongly agree*.

The results related to exercise benefits and barriers show that student-athletes agree to a greater extent with 'I think people in exercise clothes look funny' (2.84 ± 1.05) and 'Exercise facilities do not have convenient timetables for me' (2.79 ± 1.05). In contrast, they mainly disagree with those related to the support received from their family ('My family members do not encourage me to exercise' [1.45 ± 0.88]) and partner ('My spouse (or significant other) does not encourage exercising' [1.45 ± 0.85]) (Table 3).

Table 3. Exercise benefits and barriers

Item	SD	D	A	SA	Mean±SD
	f(%)	f(%)	f(%)	f(%)	
Exercising takes too much of my time	18(20.7)	32(36.8)	25(28.7)	12(13.8)	2.36±0.96
Exercise tires me	19(21.8)	22(25.3)	34(39.1)	12(13.8)	2.45±0.98
Places for me to exercise are too far away	22(25.3)	30(34.5)	30(34.5)	5(5.7)	2.21±0.89
I am too embarrassed to exercise	64(73.6)	12(13.8)	4(4.6)	7(8.0)	1.47±0.91
It costs too much to exercise	42(48.3)	29(33.3)	11(12.6)	5(5.7)	1.76±0.88
Exercise facilities do not have convenient timetables for me	10(11.5)	29(33.3)	17(19.5)	31(35.6)	2.79±1.05
I am fatigued by exercise	29(33.3)	30(34.5)	27(31.0)	1(1.1)	2.00±0.83
My spouse (or significant other) does not encourage exercising	64(73.6)	12(13.8)	6(6.9)	5(5.7)	1.45±0.85
Exercise takes too much time from family relationships	30(34.5)	20(23.0)	25(28.7)	12(13.8)	2.22±1.07
I think people in exercise clothes look funny	15(17.2)	11(12.6)	34(39.1)	27(31.0)	2.84±1.05
My family members do not encourage me to exercise	66(75.9)	8(9.2)	8(9.2)	5(5.7)	1.45±0.88
Exercise takes too much time from my family responsibilities	32(36.8)	27(31.0)	19(21.8)	9(10.3)	2.06±1.00
Exercise is hard work for me	25(28.7)	30(34.5)	26(29.9)	6(6.9)	2.16±0.95
There are too few places for me to exercise	42(48.3)	24(27.6)	15(17.2)	6(6.9)	1.83±0.95

SD: *strongly disagree*; D: *disagree*; A: *agree*; SA: *strongly agree*.

Finally, related to the results of the athletic identity of student-athletes with disabilities (Table 4), participants showed average or high scores regarding their identity as athletes. Specifically, they give the highest scores with respect to their degree of agreement to 'I have many goals related to sport' (5.79 ± 1.74) and 'I consider myself an athlete' (5.68 ± 1.68). In contrast, the lowest scores are shown for 'Most of my friends are athletes' (4.71 ± 1.75) and 'I feel bad about myself when I do poorly in sports' (4.78 ± 2.00).

Table 4. Athletic identity

Item	SD	D	SwD	N	SwA	A	SA	Mean \pm SD
	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	
I consider myself an athlete	1(1.1)	6(6.9)	5(5.7)	8(9.2)	11(12.6)	13(14.9)	43(49.4)	5.68 \pm 1.68
I have many goals related to sport	3(3.4)	5(5.7)	4(4.6)	5(5.7)	8(9.2)	15(17.2)	47(54.0)	5.79 \pm 1.74
Most of my friends are athletes	2(2.3)	11(12.6)	11(12.6)	13(14.9)	16(18.4)	17(19.5)	17(19.5)	4.71 \pm 1.75
Sports are the most important part of my life	1(1.1)	4(4.6)	8(9.2)	12(13.8)	11(12.6)	19(21.8)	32(36.8)	5.45 \pm 1.61
I spend more time thinking about sports than anything else	5(5.7)	10(11.5)	9(10.3)	10(11.5)	15(17.2)	13(14.9)	25(28.7)	4.83 \pm 1.94
I feel bad about myself when I do poorly in sports	7(8.0)	9(10.3)	8(9.2)	11(12.6)	15(17.2)	11(12.6)	26(29.9)	4.78 \pm 2.00
I would be very depressed if I were injured and could not compete in sports	4(4.6)	8(9.2)	9(10.3)	8(9.2)	12(13.8)	16(18.4)	30(24.5)	5.11 \pm 1.91

SD: *strongly disagree*; D: *disagree*; SwD: *somewhat disagree*; N: *neutral*; SwA: *somewhat agree*; A: *agree*; SA: *strongly agree*.

4. Discussion

In the present study, the views on perceived barriers of 87 student-athletes with disability were collected. The sample consisted mainly of males. This could be due to the "double whammy" that disabled

women usually suffer when they want to practice sports and become professionals in this field, as they are marginalized both because of their gender and their disability (Culver et al., 2022; Deegan, 2018; Güven et al., 2019; Pérez-Tejero & Ocete-Calvo, 2018), in addition to having less structural and social (Culver et al., 2022), and financial support (Clark & Mesch, 2018) in the pursuit of their dual career success, as well as negative experiences with male coaches who inappropriately addressed their gender and/or disability (Alexander et al., 2020). This could lead to a higher drop-out rate from sport or education among women (Güven et al., 2019), and therefore fewer women combine higher education and sports in adulthood. However, this needs to be further analyzed in future studies.

About their studies, a significant percentage of respondents were studying vocational studies, while the vast majority were studying for their undergraduate degree. In this regard, the Education 2030 Framework for Action (Smith et al., 2020) highlights that while the tertiary education provision has increased rapidly, there is still a wide disparity in access, particularly at the university level, not least due to disability. This is also reflected in the enrolment of people with disabilities in university degrees, which is significantly lower than their peers (European Commission, 2018), even though in Spain, they have a quota of places for access by law (Boletín Oficial del Estado, 2014). The problem seems to lie not as much in access, but in the barriers, they perceive to succeed in their university careers because of the lack of adaptations to their disabilities or the lack of support at institutional and faculty levels (Arnold et al., 2017; Black et al., 2014; Myers & Parker, 2018). This may lead them to opt for an education in which they are likely to achieve easier academic success, such as vocational education.

On the other hand, most of the respondents indicated that they were at the beginning or at the peak of their sporting career. In this regard, the biographical trajectories of people with disabilities are different from those of people without disabilities, since the timing of sporting transitions is not necessarily aligned with age (Heller & Parker Harris, 2012), and often reflects a delay because of infantilization and lack of

recognition in the social sphere (Soláns, 2014). Furthermore, whether the disability is congenital or acquired will cause the progression through the different stages of sport training to be different and, in the latter, variables such as the chronological age and maturational state of the subject when the disability is acquired, the process of adaptation and accommodation to the deficit, previous sports experiences, and social support may affect it (Mendoza Laiz et al., 2018).

The aim of this study was to quantify the perception of barriers to the achievement of dual career success in student-athletes with disabilities in Spain. Athletes with disabilities were found to have average or high scores on most of the barriers. This is consistent with previous studies that have pointed to the difficulties that people with disabilities have in achieving success in academic or sporting lives. (European Commission, 2018; Wolbring & Lillywhite, 2021).

More specifically, some of the barriers perceived by this group as highest were those of a geographical and logistical nature for the athlete, with the increased complexity and costs of transport, especially if it must be adapted (Reina-Vaillo, 2018). For athletes with disabilities, issues related to the difficulty of getting to the place of training or study, the lack of a car park for people with disabilities, and the distances between journeys, among others, were stress factors (Arnold et al., 2017), especially for those who moved in wheelchairs or had significant mobility limitations (Crawford & Stodolska, 2008).

Lack of institutional support was also found to be one of the barriers with the highest scores. Previous studies have pointed to the absence of support staff from the university to advise and guide the student-athlete throughout the process as one of the main barriers in non-disabled athletes (Sánchez-Pato et al., 2017). In the light of the results of this research, this barrier is also affecting disabled athletes, in addition to the fact that people with disabilities are particularly vulnerable to the lack of equal opportunities in the education system (Claeys-Kulik et al., 2019), with few opportunities at the institutional level (López-Flores et al., 2021).

Another aim of the present research was to quantify the relevance of their identity for student-athletes with disabilities in Spain. It was found

that participants showed moderate or high values for all items related to their identity as athletes. This is relevant given that involvement in sports could be a valuable socializing agent and may provide opportunities for countering stereotypes and stigmas that society often places on disabled individuals (Kissow, 2015). Therefore, sport could be an important element of socialisation and integration for student-athletes with disabilities, being aware of its importance in their lives and giving it a relevant place in their order of priorities.

This research presents the novelty of being the first to analyse perceived barriers and identity as athletes in student-athletes with disabilities in the Spanish context. However, it is not without its limitations. Among them is the heterogeneity of the population analysed, being necessary in future research to analyse whether aspects such as gender, level of studies, sporting level, etc. could affect the parameters analysed.

5. Conclusions

In conclusion, Spanish student-athletes with disabilities presented a moderate to high perception of barriers to the success of the dual career, especially those barriers of a geographical and logistical nature and those related to the support of the academic institution. In addition, they present moderate to high values in the importance they give to their identity as athletes.

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