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**EVALUATION OF A CAREER ASSISTANCE PROGRAMME FOR
ELITE ATHLETES: SATISFACTION LEVELS AND EXPLORATION
OF CAREER DECISION MAKING AND ATHLETIC-IDENTITY**

**OCENA PROGRAMA POMOČI ZA RAZVOJ KARIERE
VRHUNSKIH ŠPORTNIKOV: STOPNJA ZADOVOLJSTVA TER
PROUČEVANJE KARIERNEGA ODLOČANJA IN ŠPORTNE
IDENTITETE**

Abstract

This aim of this study was to evaluate a career assistance programme for elite athletes. This was achieved by assessing satisfaction levels, as well as by examining the variables of athletic identity and career-related difficulties. Thirty-five athletes completed three measures: a survey to assess the programme, the Career Decision-making Difficulties Questionnaire and the Athletic Identity Measurement Scale. The evaluation of the programme was positive, as satisfaction levels were high, and the level of career decision-making difficulties tended to be reduced in relation to the amount of time spent in the programme. Participants showed difficulties in three aspects of career decision-making: indecisiveness, dysfunctional beliefs and lack of information in the career decision-making process. This suggests that athletes may not feel as confident with their choices as first thought; this is something the programme needs to address. There were differences in difficulties related to career decision-making between groups of athletes that had been involved in the programme for different lengths of time. Athletic identity was shown to be related to dysfunctional beliefs; however, athletic identity did not correlate with global levels of career decision-making difficulties. Further research evaluating similar programmes is warranted in order to assess how effective career assistance programmes are, as well as clarifying the role that dysfunctional beliefs play in the context of career decision making for elite athletes.

Keywords: sport career, career assistance programme, transition, satisfaction, athletic identity, decision-making process

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Izvleček

Cilj raziskave je oceniti program pomoči za razvoj kariere vrhunskih športnikov. V raziskavi smo ocenjevali stopnjo zadovoljstva ter proučili spremenljivke športne identitete in težav, povezanih s karierno. Petintrideset športnikov je izpolnilo tri instrumente: anketo za ocenjevanje programa, vprašalnik o težavah pri kariernem odločanju in lestvico za merjenje športne identitete. Program je bil ocenjen pozitivno in ravni zadovoljstva so bile visoke, s kariernim odločanjem povezane težave pa so se zmanjšale sorazmerno s časom vključitve v program. Sodelujoči so navajali težave, povezane s tremi vidiki kariernega odločanja: neodločenost, disfunkcionalna prepričanja in pomanjkanje informacij v procesu kariernega odločanja. Rezultati kažejo, da čeprav se sprva zdi, športniki niso povsem prepričani v svojo izbiro. Temu se mora v prihodnje posvetiti v večji meri. Med skupinami športnikov, ki so različno dolgo sodelovali v programu, so se pojavile razlike v težavah, povezanih s kariernim odločanjem. Za športno identiteto se je izkazalo, da je povezana z disfunkcionalnimi prepričanji, vendar pa korelacije med športno identiteto in globalnimi ravnmi težav v zvezi s kariernim odločanjem nismo odkrili. Za oceno učinkovitosti programov pomoči za razvoj kariere bi bilo treba še nadalje raziskati podobne programe ter pojasniti vlogo disfunkcionalnih prepričanj v procesu kariernega odločanja vrhunskih športnikov.

Ključne besede: športna kariera, program pomoči za razvoj kariere, prehod, zadovoljstvo, športna identiteta, proces odločanja

INTRODUCTION

Athlete life-skill, and career and education programmes are becoming widespread, offering a wide range of services that provide athletes with the necessary tools to make a satisfactory transition out of their sporting career (Anderson & Morris, 2000). Tutorsport (TS) is a career assistance programme that aims to support elite athletes while they are studying for an undergraduate degree. This programme, created in 1996, was developed by the Sport and Physical Activity Service of the Autonomous University of Barcelona, Spain; it was the first of its kind in the country. So far, over one hundred students have benefited from the programme and successfully completed their undergraduate degrees. Participation in the programme involves the allocation of a personal tutor to each athlete enrolled. The tutors, who are also lecturers at the university, offer initial guidance in the selection and number of subjects to ensure that studying is compatible with training regimes and competitions; they also provide support through regular tutorials during the academic year. Tutors act as mediators between lecturers and athletes, informing the athlete about any relevant information such as deadlines or exam dates, and they may distribute any academic material from sessions that the athlete may have missed due to the demands of competition and training. The tutor assesses the degree of participation and interest in the programme and reports accordingly to the Sports and Physical Activity Service, recommending whether or not the athlete should remain in the programme. Additionally, it is a requirement for participants to pass a number of credits in order to stay in the programme.

One of the areas that TS addresses indirectly is the process of career exploration and career decision-making. Even though the programme is not designed to tackle retirement issues directly, evidence shows that pre-retirement planning during the competitive career in the form of varied activities, such as continuing education, occupational endeavours and activities related to athletes' social network leads to a less problematic process of adaptation after retirement (Cecić Erpič, Wylleman, & Zupančič, 2004). Thus it can be stated that as the programme supports elite athletes during tertiary education, it might play a role in career exploration and adaptive retirement to post-sporting life. Nevertheless, the extent to which athletes engage in the process of career exploration and career decision making is limited (Martens & Lee, 1998). Gati, Krausz and Osipow (1996) developed a theoretical career decision-making model based on a taxonomy of those difficulties associated with career decision making as well as devising the corresponding scale called the Career Decision-making Difficulties Questionnaire (CDDQ). This model comprises three major categories of difficulties associated with career decision making: lack of readiness, which refers to those difficulties that may arise previous to making specific career decision making; lack of information; and inconsistent information, which include difficulties involved during the actual process of career decision making. In a study with a large Australian sample using this model (Albion & Fogarty, 2003) it was shown that athletes who participated in the study had lower levels of motivation in relation to career decision making than the normative data with non-athletes, as reported by Gati et al. (1996). However, it was also reported that the athletes had fewer difficulties related to lack of information about occupations, a result that was attributed to the fact that many athletes are interested in sport or sport-related occupations with which they may already be familiar. Amongst athletes, Albion and Fogarty (2003) found that those who had spent longer in the Athlete Career and Education (ACE) programme were more motivated to engage in career decision making. Other studies comparing the level of career maturity (Martens & Cox, 2000) and career decision difficulties according to Gati et al.'s model (Albion & Fogarty, 2005) between athletes and non-athletes offer inconclusive results, as only a

small difference arose in the former study and in the latter there were no significant differences between groups in the global measure of career decision-making difficulties (CDDQ). Albion and Fogarty (2005) alleged that it is possible that athlete's participation in the ACE programme caused a reduction in the differences between athletes and non-athletes as a result of the support provided to athletes in this area. Despite the athletes' high levels of awareness about the different facets of the ACE programme (Albion & Fogarty, 2003), their degree and areas of participation are unclear, as it was reported that the 69% of the athletes that took part in the programme only had some involvement with it. This lack of homogeneity in the sample regarding participation in the different ACE areas limits the extent to which clear cut conclusions can be made.

There appear to be clearer results regarding the relationship between athletic identity and career decision making. Some studies provide evidence that athletic identity, defined as 'the degree to which an individual identifies with the athlete role' (Brewer, Van Raalte, & Linder, 1993, p. 237) interferes in the process of career exploration. Owens (1994) found that college athletes who identified strongly with the roles of both student and athlete had higher levels of career exploration than college students that identified strongly only with the role of athlete. Shachar, Brewer, Cornelius and Petitpas (2004) found that that athletes who became coaches after retirement without considering any career options displayed higher levels of athletic identity than those who explored other career options. Murphy, Petitpas and Brewer (1996) showed that athletic identity is inversely related to career maturity and Grove, Lavalley and Gordon (1997) also found supportive evidence as athletic identity at the time of retirement was related to anxiety about career exploration and negatively correlated with preretirement career planning. Albion and Fogarty (2005) found that athletic identity positively correlated with the global score for the level of career decision difficulties, as well as with five subscales of the CDDQ, particularly with the subscale analysing dysfunctional beliefs.

Despite the importance of athletic identity and positive career decision making in order to aid athletes' adjustment to sport career transitions, very few studies have evaluated career and education programmes and their satisfaction levels taking these variables into consideration. Generally speaking, Wylleman, Alfermann and Lavalley (2004) indicated the need to assess the programmes' effectiveness and its applicability for all athletes, particularly evaluating its outcomes and its influence upon behaviour change. Albion and Fogarty (2003) provided the results of the first phase of an in-depth prospective evaluation of the ACE programme in Australia; however, there have been very few similar studies, at a European level. Among these, North and Lavalley (2004) assessed how career transition programmes could become more effective by inspecting short- and long-term plans, and planned retirement age. It was concluded that younger athletes and those viewing retirement as distant tended to avoid planning prior to their retirement and that job choice gained importance as the sporting career progressed. Similar results were found in the study by Torregrosa, Boixadós, Valiente and Cruz (2004). Lavalley (2005) assessed the effectiveness of a life development intervention (also delivered by the author of this paper) with retired professional soccer players, finding better adjustment to retirement in the group that participated in the intervention.

The aim of this study was threefold. Firstly, the TS programme was assessed by evaluating the athletes' satisfaction levels toward it. The level of athletic identity of the athlete-students was investigated and its relationship with the career decision-making difficulties explored. Lastly, the areas of career decision-making difficulties in which athletes found particularly difficult were highlighted, and the differences in career difficulties amongst athletes involved in the

programme for different time lengths were examined. It was assumed that the degree of involvement with the programme was rather homogeneous, as participants need to meet certain criteria to remain in the programme. The inclusion of a measure of career decision-making difficulties for elite athletes that were already involved in the programme was to provide an in-depth analysis of the career decision-making process using Gati et al.'s (1996) model as well as determining in which areas related to career decision-making TS and other similar programmes can intervene more efficiently.

METHODS

Participants

Thirty-five athletes (17 male and 18 female; mean age = 21.63, SD = 2.73) took part in the study. All athletes were considered elite athletes as it is a programme enrolment prerequisite that the student be included in the elite athlete lists published annually by the Spanish and Catalan governmental bodies. Participants represented 16 different sports, with the largest numbers involved in field hockey (25.7%; $n = 9$) and athletics (17.1%; $n = 6$); they had been involved with their sports for a mean of 13.83 years (SD = 3.66). All participants had achieved an international competitive level; a percentage of 2.9% had competed at this level for one to two years, 34.3% for three to five years, and 54.3% for six to ten years. Only three athletes, representing 8.6% of the sample, had competed for longer than 10 years at an international level.

Participants were enrolled in 19 different degree programmes; the majority (57.1%; $n = 20$) were in the Social Sciences programmes, some were enrolled in Health Sciences courses (25.7%; $n = 9$), whereas the remaining participants were spread between the Experimental Sciences (14.3%; $n = 5$) and Humanities (2.9%; $n = 1$) departments. The most popular course was Business Management (17.1%; $n = 6$), followed by Journalism (11.4%; $n = 4$), Physiotherapy (8.6%; $n = 3$) and Economics (8.6%; $n = 3$).

Measures

In order to assess TS, a 12-item survey was developed, in line with that of Albion and Fogarty (2003), with items rated on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). In addition, participants were required to complete a form providing demographic information, details about their sport, and subjective information about their performance in their studies, competition and training.

Athletic identity was measured using a Spanish version of the Athletic Identity Measurement Scale (AIMS; Brewer et al, 1993). The scale was translated from English to Spanish and then back translation was performed by researchers fluent both in Spanish and English to ensure correspondence between the scales. The reliability analysis of the Spanish version of the AIMS questionnaire generated an adequate coefficient alpha of .804.

The AIMS consists of 10 items in which respondents are asked to indicate on a 7-point scale (strongly disagree - strongly agree) the extent to which they agree to various statements about attitudes toward sport. High scores indicate higher levels of athletic identity. According to Brewer et al. (1993), principal component analysis yielded one single athletic identity factor (eigenvalue = 6.03). A coefficient alpha of .93 was obtained, providing support for the internal consistency of the scale; the test-retest reliability over a 14-day period was .89. Construct validity was shown by

the high correlation ($r = .83$) between AIMS scores and the subscale measuring the importance of sports competence scale of the Perceived Importance Profile (Brewer et al, 1993).

The Career Decision-making Difficulties Questionnaire (Gati, Osipow, & Krausz, 1996) was also translated to Spanish and back translation was executed to guarantee correspondence between them. The overall reliability of the Spanish version of the CDDQ and its subscales was examined, showing an excellent internal consistency for the scale ($\alpha = .952$). The lack-of-readiness subscale yielded an alpha coefficient of .823 which can be regarded as satisfactory, whereas the lack-of-information subscale produced an alpha coefficient of .962 showing an excellent internal consistency. The inconsistent-information subscale also gave a rather satisfactory reliability ($\alpha = .884$).

The CDDQ starts with some introductory questions that explore whether respondents have made any decisions regarding future occupations and corresponding confidence levels. The scale is composed of 34 items related to attitudes and beliefs about career decision making. The CDDQ is scored on a Likert-type scale ranging from 1 ('Does not describe me') to 9 ('Describes me well'). Higher scores indicate higher levels of career indecision. The scale consists of three dimensions that assess different aspects of career decision-making difficulties: lack of readiness to make a career decision, lack of information and inconsistent information. Lack of readiness is composed of the subscales: lack of motivation ('I know that I have to choose a career, but I don't have the motivation to make the decision now'), general indecisiveness ('It is usually difficult for me to make decisions') and dysfunctional beliefs ('I expect that entering the career I choose will also solve my personal problems'). The second dimension, lack of information, comprises the subscales lack of information about: the career decision-making process ('I find it difficult to make a career decision because I do not know what steps I have to take'), the self ('I find it difficult to make a career decision because I still do not know which occupations interest me'), occupations ('I find it difficult to make a career decision, because I do not have enough information about the variety of occupations or training programs that exist') and ways of obtaining additional information ('I find it difficult to make a career decision, because I do not know how to obtain additional information about myself'). The third category, inconsistent information, contains subscales that examine the unreliable information ('I find it difficult to make a career decision, because I have contradictory data about the existence or the characteristics of a particular occupation or training program'), internal conflicts ('I find it difficult to make a career decision, because I'm equally attracted by a number of careers and it is difficult for me to choose among them') and external conflicts ('I find it difficult to make a career decision, because people who are important to me (such as parents or friends) do not agree with the career options I am considering and/or the career characteristics I desire').

Gati et al. (1996) found good internal consistency for inconsistent information ($\alpha = .89$), and lack of information ($\alpha = .95$), however the lack-of-readiness subscale had lower reliability ($\alpha = .63$). Overall reliability of the scale was .94. Test-retest reliability ($r = .80$) was assessed over a three-day period. Construct validity was shown by convergence with the Career Decision Scale and the Career Decision Self-Efficacy Scale (Osipow & Gati, 1998).

Procedure

Data collection was conducted at the start of the academic year (September – October) as all athletes, both new to the programme and returnees, needed to go to the Sport and Physical

Activity Service to enrol in the programme. The two TS coordinators arranged individual appointments with each of the athletes, informing them beforehand that they would be asked to complete a survey to explore ‘...your opinions about TS, the role that sport plays in your life, and your opinions about your professional career’. On the day of the appointment, at the end of the regular administrative procedures to enrol in the programme, they were asked to complete the survey; all the subjects accepted the proposal. The researchers gave specific directions to the programme coordinators about what explanations and instructions were to be given to the athletes prior to the completion of the questionnaires. Athletes were told that the collected data would contribute to the improvement of the programme, and that it would be employed in a study about elite athletes and their views of the role of sport in their lives and professional career. Confidentiality was ensured and they were told that they could request further information about their results if they wished. Participants took between 30 and 45 minutes approximately to complete all the questions. They were thanked and reminded that they could request their results if necessary. When the data collection ended, the questionnaires were handed directly to one of the researchers who then proceeded to score and enter the data in SPSS.

RESULTS

Initially, descriptive analyses were performed to explore the levels of satisfaction with TS, the athletic identity and the CDDQ scores. In order to explore any differences in career decision-making difficulties between athletes who had been involved in the programme for different time lengths (i.e. less than 1 year, between 1 and 2 years, between 3 and 5 years), various one-way ANOVAs were conducted with the dimensions of the CDDQ as dependent variables and time of involvement with the programme as the independent variable. Correlational analyses were performed to examine interrelationships between CDDQ subscales and levels of athletic identity and other relevant variables of the study. This was complemented with some partial correlations between the time of involvement with the programme and the scales of the CDDQ partialling out the effects of age.

Satisfaction with TS

The majority of the participants (91.4%) had not had any previous experience with any educational, career or life-skills programme before becoming involved with TS. A percentage of 18.2% had been involved with TS for less than a year, whereas a total of 16 participants, representing 48.5% of the sample, had been involved with the programme for one to two years. A total of 11 participants had been involved with TS for more than three to five years, representing a percentage of 33.3% of the participants. The most common ways of knowing about the existence of TS were through a friend (48%), the nearby located Olympic Training Centre (21.2%) and the university (18.2%). A percentage of 8.6% rated their perceived academic achievement as below average in comparison to the rest of the class; 74.3% thought that their academic achievement was average; 14.3% regarded their level as above average; only 2.9% of the sample thought they performed well above average. However, when asked to make the same ranking, but with fellow athletes only 31.4% regarded their level as average, 57.1% believed their academic achievement to be above average and 11.4% as well above average.

In general, the results showed a high level of satisfaction with TS. The mean score for the TS survey was 71.93 (SD = 7.75), out of a possible maximum score of 84, with scores ranging from

54 to 83. The item in which participants scored lower was 'My educational plans are clearer due to my involvement with TS' with a mean score of 4.76 (SD = 1.48) on a 7-point scale; the item with the highest score was 'My parents support my involvement with TS' (M = 6.57; SD = .63) and the second highest was the item 'I am satisfied with the services that TS provides' (M = 6.30; SD = .91). The two items that evaluated the tutors' performance (i.e. their effectiveness and the display of a cooperative attitude) yielded means higher than 6, 6.07 (SD = 1.33) and 6.21 (SD = 1.01) respectively.

There were no differences between males and females in levels of satisfaction toward TS, as shown by an independent t-test ($t = -1.842$, $df = 26$, $p = .077$).

A one-way ANOVA was performed to explore the differences in satisfaction levels toward TS between different lengths of involvement with TS, no differences were found $F(27) = 2.943$, $p = .071$.

Degree of athletic identity

The mean score for the athletic identity measure was 53.82 (SD = 7.95) out of a possible score of 70. The lowest score obtained was 37, whereas the highest was 68. Athletes scored higher than six in a seven-point scale in three out of the ten items that compose the AIMS, the highest being 'I consider myself an athlete' (M = 6.69), and the lowest being the item 'Sport is the only important thing in my life' (M = 2.88). There were no gender differences in the levels of displayed athletic identity as an independent t-test revealed ($t(32) = .078$, $p = .939$). There were no differences in the degree of athletic identity in the function of time of involvement with the programme as revealed by a one-way ANOVA $F(31) = .898$, $p = .419$; nevertheless, the AIMS mean for those that had been involved with TS for less than a year was higher (M = 57.17; SD = 6.24), than for those that had been involved for three to five years with the programme (M = 51.73; SD = 8.17).

Career decision-making difficulties

The mean score for the CDDQ was 2.89 (SD = 1.29). The lack-of-readiness subscale mean was 3.45 (SD = 1.24), the lack-of-information dimension produced a mean of 3.21 (SD = 1.74). Lastly, the third category (inconsistent information) had a mean score of 2.53 (SD = 1.21). The results of all the CDDQ subcategories and the other variables included in the study are displayed in Table 1.

No gender differences were found in global scores for career decision-making difficulties as shown by the independent t-test ($t(25) = .134$, $p = .895$). Males scored significantly higher (M = 2.96) in the lack-of-motivation subscale than females (M = 1.85), as revealed by the Mann-Whitney U, which was found to be 69.5 ($Z = -2.619$; $p = .009$).

A total of 97% of the sample had considered what they wanted to do in the future; the remaining 3% had not taken it into consideration. The mean score for 'To what extent are you confident of your choice?' was 7.19 out of a 9-point Likert-type scale suggesting that participants were fairly confident with their choices.

Several one-way ANOVAs were conducted to examine if there were differences in the level of career decision-making difficulties depending on the length of time athletes had been involved with the TS programme. Thus, time involvement with the programme acted as the independent

Table 1: Means (M) and standard deviations (SD) of the main variables in the study

Variable	M	SD
<i>Satisfaction Tutorsport</i>	71.93	7.75
<i>AIMS</i>	53.82	7.95
<i>Total CDDQ</i>	2.89	1.29
<i>Lack of Readiness</i>	3.45	1.24
Lack of Motivation	2.37	1.46
General Indecisiveness	3.85	1.88
Dysfunctional Beliefs	4.63	1.76
<i>Lack of Information about</i>	3.21	1.74
The Process	3.48	1.91
The Self	3.01	1.75
Occupations	3.29	1.92
Ways of Obtaining Additional	2.98	1.76
Information	2.98	1.76
<i>Inconsistent Information</i>	2.53	1.21
Unreliable Information	2.53	1.39
Internal Conflicts	2.98	1.4
External Conflicts	2.27	1.64

AIMS = Athletic Identity Measurement Scale

CDDQ = Career Decision-making Difficulties Questionnaire

variable, while the CDDQ and its various dimensions were the dependent variables. There were differences in the total score of the CDDQ between the three conditions representing involvement time – less than one year, between one and two years, between three and five years – with the programme, $F(24) = 4.94, p = .017$. A Tukey post hoc test confirmed that there was a difference between the first (less than one year) and third (three to five years involvement) conditions. The three main categories of the CDDQ also showed significant differences in relation to length of involvement with TS: one-way ANOVA with lack of readiness as a dependent variable yielded $F(26) = 4.94, p = .016$; A Tukey post hoc test showed significant differences between the second and third conditions. One-way ANOVA showed that the inconsistent-information dimension was also significant, $F(30) = 5.36, p = .011$ confirmed by the significant differences found in the Tukey test between the first and third conditions. A Kruskal-Wallis one-way ANOVA was performed to test the lack-of-information subscale ($p = .009$); mean scores were 5.06, 3.34 and 2.24 for less than one year of involvement, between one and two years and from three to five years in the programme, respectively. The parametrical and non-parametrical one-way ANOVA performed in all the other sub-dimensions in each of the three categories that compose the CDDQ yielded significant differences between different lengths of programme participation.

Correlational Analyses

Correlational analyses were performed between the various variables included in the study (Table 2). The variable age correlated negatively with the global score of the CDDQ ($r = -.43, p = .026$) and also with the lack-of-readiness subscale ($r = -.57, p = .001$) and the inconsistent-information subscale ($r = -.43, p = .012$). Age also correlated with several sub-dimensions of the CDDQ, amongst which two moderate correlations with general indecisiveness ($r = -.51, p = .005$) and dysfunctional beliefs ($r = -.51, p = .002$) can be highlighted.

Table 2: Correlations between Age, Satisfaction toward Tutorsport, AIMS, Total CDDQ, lack of readiness, dysfunctional beliefs, lack of information, inconsistent information and time with Tutorsport.

Variables	1	2	3	4	5	6	7	8	9
1. Age	1								
2. Satisfaction Tutorsport	-.31	1							
3. AIMS	-.03	.27	1						
4. Total CDDQ	-.43*	.25	.23	1					
5. Lack of Readiness	-.57**	.18	.18	.84**	1				
6. Dysfunctional Beliefs	-.51**	.15	.41*	.57**	.8**	1			
7. Lack of Information	-.43*	.11	.05	.92**	.58**	.31	1		
8. Inconsistent Information	-.43*	.11	.06	.91**	.66**	.34	-.81**	1	
9. Time with Tutorsport	.57**	-.11	-.24	-.53**	-.51**	-.45*	-.53**	-.53**	1

Note: * $p < .05$; ** $p < .01$

AIMS = Athletic Identity Measurement Scale

CDDQ = Career Decision-making Difficulties Questionnaire

The total score for athletic identity did not correlate significantly with the total career decision-making difficulties score ($r = .23$, $p = .248$). The only subscale of the CDDQ that correlated significantly with the level of athletic identity was dysfunctional beliefs ($r = .41$, $p = .021$). Correlations between the AIMS and each of the items composing the dysfunctional beliefs subscale produced a significant correlation ($r = .58$, $p < .01$) with the item 'I believe that a career choice is a one-time choice and a life-long commitment'.

Spearman's rho correlations were also conducted between the length of involvement with the programme and the scales of the CDDQ. Length of involvement correlated negatively with the item 'How do you rate the severity of your difficulties in making a long-term career decision' ($r = -.63$, $p < .01$), the global score for career decision making difficulties ($r = -.53$, $p = .006$), lack of readiness ($r = -.51$, $p = .006$), lack of information ($r = -.53$, $p = .002$), inconsistent information ($r = -.53$, $p = .002$) and various other sub-dimensions of the CDDQ.

Performing the same correlations as before, but partialling out the age variable, also produced significant results. Length of involvement again correlated negatively with lower strength: the CDDQ global score ($r = -.42$, $p = .042$), the item 'How do you rate the severity of your difficulties in making a long-term career decision?' ($r = -.44$, $p = .033$), the lack-of-information-about-the-process-of-career-decision-making subscale ($r = -.45$, $p = .029$), the lack-of-information-about-occupations subscale ($r = -.42$, $p = .039$) and the main category of lack of information ($r = -.41$, $p = .046$).

DISCUSSION

The results indicated high levels of satisfaction with the various facets of the TS programme. A varying level of career decision-making difficulties was recorded in relation to programme participation time, suggesting that the programme may have aided career-making decisions. Exploration of the CDDQ results showed that athletes as a whole had difficulties in the areas

related to dysfunctional beliefs, general indecisiveness and lack of information about the process of career-decision making. The level of dysfunctional beliefs also related to the participant's athletic identity; however, the level of athletic identity did not relate to the global score for career decision making difficulties.

Overall, athletes were satisfied with the TS programme. Satisfaction levels were homogeneous regardless of gender and length of involvement with TS. Exploration of the items showed that participants had the support of their parents and coaches regarding their participation in the programme. In addition, athletes were satisfied with the role and performance of their tutors, a key aspect for the positive functioning of the programme. However, athletes did not believe as strongly that the programme had much influence on the career objectives as they responded that their educational plans were clearer due to the involvement with the programme.

The results showed that there were differences in the level of career decision-making difficulties depending on how long (i.e. less than one year, between one and two years, between three and five years) athletes had been involved with the TS programme. Differences also arose within the three main dimensions of the CDDQ scale, lack of readiness, lack of information and inconsistent information, as well as in most of the 10 subcategories. These results showed that the programme appeared effective in all areas of career decision making according to Gati et al.'s (1996) model by reducing difficulties related to each aspect. Additionally, the global CDDQ score and the three main subcategories related negatively to time of involvement with the programme, suggesting that participation may act as a facilitator of career-related choices. When the effect of age was removed, in order to discard the possibility that the lower difficulties were only the result of maturation, the relationships were maintained.

Athletes in this study displayed fewer difficulties in career decision making compared to the athletes in Albion and Fogarty's (2003) study and the normative results from a non-athletic sample (Osipow & Gati, 1998). However, further exploration of the CDDQ results did show that athletes displayed difficulties associated with lack of readiness to engage in career decision making, particularly in the areas concerning indecisiveness and dysfunctional beliefs. Although these difficulties tended to diminish with age, the results appear contradictory as, according to the Gati et al. model (1996), the dimension of lack of readiness precedes the actual process of career decision making, and these athletes must have already engaged to some degree in career decision making as they are currently studying at the tertiary level. This could be explained as the dimension of indecisiveness refers to general levels of indecisiveness, embracing all decision making, not only career-related decisions. Although this aspect would include career choice, high indecisiveness may have been compensated by the low scores in the lack of motivation subscale, suggesting that athletes were motivated to some extent to engage in career decision making; in this regards, female athletes were significantly more motivated than males to engage in this type of decision.

Another factor that may have enhanced career indecisiveness was the adherence to dysfunctional beliefs, which yielded the highest mean score out of all the CDDQ categories. This subscale, which refers to irrational expectations about career decision making, also correlated with the level of athletic identity. This finding is in line with Albion and Fogarty's (2005) study, which also found that the strongest correlation was with this same subscale; nevertheless, this result is not comparable as they altered the content of the items of this subscale to adapt it to athletes' concerns. A more detailed exploration of this result showed that only the item 'I believe that a career choice

is a one-time choice and a life-long commitment' correlated with the athletic identity levels. That is to say, the more athletes identified with their role, the more they believed that they had to commit to a unique career choice. This response could be due to the still somewhat prevailing belief in Spain of 'a job for life'. Although a total of 97% of the participants answered positively to the closed question 'Have you considered what you want to do for a living after finishing your studies?', reporting high confidence levels with their choice, it is unknown which occupation they had in mind, and it is questionable the extent to which they felt confident with their choices. In fact, the third highest area of difficulty in career decision making was related to a lack of information about the process of career decision making itself. However, this is quite usual as it has been shown in the prospective study by Torregrosa et al. (2004) if we take into account that all the participants are in the mastery stage of their athletic career. Further information would be required to evaluate the feasibility of both the chosen occupation and the coherence of how the decision was made. While this finding needs to be taken into consideration, there is insufficient information to conclude why this result was produced. In line with Albion and Fogarty's (2005) reasoning and the authors questioning of the reliability of the subscale (Gati, Osipow, Krausz, & Saka, 2000) we believe that the operationalisation of dysfunctional beliefs for elite athletes in the context of career decision making requires further exploration. In order to determine whether a belief is irrational and dysfunctional, more information is needed as to how the question is interpreted and answered. Also, as implied earlier, it is possible that cross-cultural differences exist in dysfunctional beliefs; as some authors have indicated in the study of reactions to sport career termination (Alfermann, Stambulova, & Zemaityte, 2004) and patterns in the transition out of the sporting career (Stambulova, Stephan, & Jäphag, 2007) cross-cultural differences do exist, and this could be extended to what is considered a dysfunctional belief in the context of career decision making.

Contrary to previous research, the variable of athletic identity did not correlate with the global level of career decision-making difficulties. Albion and Fogarty (2005) suggested that the inconsistent findings regarding the relationship between athletic identity and career maturity could be due to the athletes' progressive involvement with career assistance and educational programmes. This could be a valid explanation as the lower AIMS mean scores were obtained by participants who had been involved in the programme for longer; however, this did not produce significant results, therefore limiting the extent to which consistent conclusions can be made. Another reason for this non-significant correlation between the CDDQ and athletic identity could be explained by the multidimensional nature of AIMS (Brewer and Cornelius, 2001); they revised the construct validity of the scale finding three factors labelled 'social identity', 'exclusivity', and 'negative affectivity'. In the 10-item version of the AIMS used in this study, the dimension of exclusivity comprises the following items: Item no. 4 'Sport is the most important part of my life', Item no. 5 'I spend more time thinking about sport than anything else' and Item no. 9 'Sport is the only important thing in my life'. As suggested by Albion and Fogarty (2003) when referring to Item no. 4, the dimension exclusivity could be seen as tapping into the notion of identity foreclosure, which refers to the '...tendency to commit to an occupation or ideology without first engaging in exploratory behaviour' (p. 37, Brewer, Van Raalte, & Petitpas, 2000). Interestingly, three out of the four lowest means amongst the AIMS items corresponded to these three items, thus implying that whereas the sample obtained a mean score for athletic identity around the norm scores provided by the authors (Brewer and Cornelius, 2001), this sample scored lower in the dimension (i.e. exclusivity) that is more likely to produce difficulties in career decision

making and career exploration. Also, participants were all studying at a tertiary level, which is much beyond the compulsory stage, implying that they might see themselves in the role of students (i.e. not exclusively athletes). This notion was empirically supported by Owens' (1994) study in which it was reported that college student-athletes who identified strongly with both the student and athlete roles had higher levels of career exploration than college athletes who had a strong and exclusive athletic identity.

This study presented some limitations. The inclusion of an athletic control group would have proved useful not only to enable results comparison, but also to establish a baseline level and norm scores in career decision-making difficulties with Spanish samples. Thus, the inspection of the variables studied in an athletic sample of the same sporting level, not involved in any type of programme, would have been a valid reference to clarify why athletes in this sample had low identity foreclosure. This study did not investigate further the career choices and occupations the athletes may have been considering. Future research should explore the occupations that athletes may contemplate after retirement, specifically if athletes had the intention of applying their field of study to the sports domain, as some authors have indicated it is often the case (Torregrosa, Sanchez, & Cruz, 2004). Future research may also benefit from a combined approach including qualitative methods, particularly to clarify the nature of the dysfunctional beliefs that surround the area of career decision making. An in-depth exploration of the occupations and evaluation of their feasibility may shed some light in the study of dysfunctional beliefs and how they interfere in the process of career decision making. Lastly, the variable of athletic identity should be considered conceptually and methodologically as a multidimensional construct, as the exclusivity dimension can have a high impact on difficulties related to career choice.

In summary, this study assessed how effective the TS programme was by evaluating levels of satisfaction with the programme and measuring the difficulties in relation to career decisions. The programme's effectiveness was not only shown by the athletes' satisfaction with the programme, but also by the declining levels of career decision-making difficulties in relation to programme participation time. However, results showed that athletes scored high in general indecisiveness, dysfunctional beliefs and lack of information about the process of career decision making. This implies that although athletes appeared confident about future occupations, they may feel undecided and unsure about making career decisions. Thus, TS should increase support in these areas, especially for the younger athletes. Athletes with higher levels of athletic identity exhibited a tendency toward dysfunctional beliefs, particularly toward the item 'I believe that a career choice is a one-time choice and a life-long commitment'. Further research is needed into what constitutes a dysfunctional belief in elite athletes. Athletes scored low in those items of the AIMS that imply identity foreclosure, implying that they identified to some extent with the role of student at the moment of the study. Nevertheless, it remains unclear whether athletes that had low identity foreclosure decided to embark on tertiary studies or whether participation in the programme and/or the mere fact of studying contributed to lowering their exclusive athletic identity. Finally, further research evaluating career assistance and life-skills programmes for athletes is warranted in order to determine their effectiveness and to ensure a satisfactory transition from the sporting career and a positive adaptation to post-elite sporting life.

REFERENCES

- Albion, M. J., & Fogarty, G. J. (2003). *Evaluation of the athlete career and education program: Phase 1-2003*. Retrieved June 9, 2006, from <http://www.usq.edu.au/sciences/CORE>
- Albion, M. J., & Fogarty, G. J. (2005). Career decision-making for young elite athletes: Are we ahead on points? *Australian Journal of Career Development, 14* (1), 1-30.
- Alfermann, D., Stambulova, N. & Zemaityte, A. (2004). Reactions to sport career termination: a cross-national comparison of German, Lithuanian and Russian athletes. *Psychology of Sport and Exercise, 5*, 61-75.
- Anderson, D. & Morris, T. (2000). Athlete lifestyle programs. In D. Lavallee & P. Wylleman (Eds.), *Career transitions in sport: International perspective*. (pp. 61-80). Morgantown, WV: Fitness Information Technology.
- Brewer, B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the Athletic Identity Measurement Scale. *Academic Athletic Journal, 15*, 103-113.
- Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles or Achilles' heel? *International Journal of Sport Psychology, 24*, 237-254
- Brewer, B. W., Van Raalte, J. L., & Petitpas, A. J. (2000). Self-identity issues in sport career transitions. In D. Lavallee & P. Wylleman (Eds.), *Career transitions in sport: International perspectives* (29-43). Morgantown, WV: Fitness Information Technology.
- Cecić Erpič, S., Wylleman, P., & Zupančič, M. (2004). The effect of athletic and non-athletic factors on the sports career termination process. *Psychology of Sport and Exercise, 5*, 45-60.
- Gati, I., Osipow, S. H., Krausz, M., & Saka, N. (2000). Validity of the career decision-making difficulties questionnaire: Counselee versus career counsellor perceptions. *Journal of Vocational Behaviour, 56*, 99-113.
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counselling Psychology, 43*, 510-526.
- Grove, J. R., Lavallee, D., & Gordon, S. (1997). Coping with retirement from sport: The influence of athletic identity. *Journal of Applied Sport Psychology, 9*, 191-203.
- Lavallee, D. (2005). The effect of a life development intervention on sports career transition adjustment. *The Sport Psychologist, 19*, 193-202.
- Martens, M. P., & Cox, R. H. (2000). Career development in college varsity athletes. *Journal of College Student Development, 41*, 172-180.
- Martens, M. P., & Lee, F. K. (1998). Promoting life-career development in the student athlete: How can career centres help? *Journal of Career Development, 25*, 123-134.
- Miller, P. S., & Kerr, G. A. (2002). Conceptualising excellence: Past, present, and future. *Journal of Applied Sport Psychology, 14*, 140-153.
- Murphy, G. M., Petitpas, A. J. & Brewer, B. W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. *The Sport Psychologist, 10*, 239-246.
- North, J., & Lavallee, D. (2004). An investigation of potential users of career transition services in the United Kingdom. *Psychology of Sport and Exercise, 5*, 77-84.
- Osipow, S. H., & Gati, I. (1998). Construct and concurrent validity of the career decision-making difficulties questionnaire. *Journal of Career Assessment, 6*, 347-364.
- Owens, S. S. (1994). *The relationship between student-athlete identity and career exploration*. Paper presented at the annual conference of the Association for the Advancement of Applied Sport Psychology, Lake Tahoe, NV.

Shachar, B., Brewer, B. W., Cornelius, A. E. & Petitpas, A. J. (2004). Career-decision making, athletic identity, and adjustment difficulties among retired athletes: a comparison between coaches and non-coaches. *Kinesiologia Slovenica*, 10 (1), 71–85.

Stambulova, N., Stephan, Y., & Jäphag, U. (2007). Athletic retirement: A cross-national comparison of elite French and Swedish athletes. *Psychology of Sport and Exercise*, 8, 101–118.

Torregrosa, M., Boixadós, M., Valiente, L., & Cruz, J. (2004). Elite athletes' image of retirement: the way to relocation in sport. *Psychology of Sport and Exercise*, 5, 35–43.

Torregrosa, M., Sanchez, X., & Cruz, J. (2004). El papel del psicólogo del deporte en el asesoramiento académico – vocacional del deportista de elite. *Revista de Psicología del Deporte*, 13 (2), 215–228.

Wylleman, P., Alfermann, D., & Lavallee, D. (2004). Career transitions in sport: European perspectives. *Psychology of Sport and Exercise*, 5, 7–20.

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