

A bright future for the elite athletes?  
The importance of the career path

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## **ABSTRACT**

In order to develop efficient programs for the support of sport career, it is suppose to identify the level of adjustment and the athletes' needs at their transitions after the sport. With this general purpose, this research aims to determine if the athletes that follow a dual career have better social and working integration that those athletes focused exclusively on sport, and if sex and sport performance may have any relation with this social and working integration after retirement. Four-hundred and forty-seven elite athletes participated in the study. It was a quantitative cross-sectional study based on survey. The data collection tool was an online questionnaire. The results show how the sociodemographic profile, the study level, the retirement features, the current relationship with sport and the benefits they perceive given by the sport are different for the athletes solely devoted to sport than the athletes that followed a dual career with studies (convergent or parallel model) or a work. Regarding the sex there were observed differences at the sociodemographic profile, the study level, the employment features, the retirement features and the benefits given by the sport. These results may contribute to identifying athletes that are at risk of suffering difficulties at the retirement transition and specific proposal are describe to prevent those difficulties.

## EXECUTIVE SUMMARY

Developing efficient Support Programs for the Sport Career implies identifying the level of adjustment and needs of the elite athletes during their transition beyond sport. Therefore, this research is based on the following aims: a) To determine if the athletes that follow a dual career path have a better social and working integration than those focused exclusively on sport and b) To determine if the sport performance and gender show any relation with the social and working integration.

The final sample was 447 elite athletes, 62.5% male and 37.5% females. A descriptive quantitative research was done based on a survey applying an on-line questionnaire as data collecting tool.

At the sociodemographic profile there were found more participants single or divorced among the athletes focused solely on sport. Women had fewer children than men. In relation to the sport features comparisons, the sport performance was independent from the type of career path chosen. More men than women chose to focus on sport as unique career. On the other hand, no significant differences were found at training hours between the Dual Career with studies groups and the exclusively to sport group. It was observed that the group that combined sport with a work spend less hours training. Then, it seems that the time for studying is obtained from the time for rest or leisure. This result is in agreement with previous studies where athletes following dual career with studies reported greater fatigue.

Regarding the academic level, as it could be expected, those athletes that did no study during the development of their sport career (those devoted to sport and those that combined sport with working) had a lower level of studies at their retirement than the athletes that combined their sport career with studies (at parallel or convergent model). Those athletes that developed a Dual Career with studies have more frequently an employ related with their studies.

About the retirement transition, those athletes devoted to sport and those that combined sport and working delayed their retirement age longer than the athletes that combined sport and studies. In general, their perception of the retirement process was positive. Although those athletes solely devoted to sport suffer more at this transition. At this point, the unique sport identity could constrain copying the transition to normal life after sport. Those athletes that worked or gave equal importance to sport and studies during their sport career had less economical problems at retirement than the other two groups. So developing a second career option at the same time during the sport career reduces the risk of suffering economical problems at sport retirement (North, & Lavallo, 2004). Regarding the problems at the family environment,

those athletes focused on sport reported them in a higher grade than the other groups. Again the unique sport identity may cause that these athletes do not manage well the family issues.

Nowadays, almost all of the athletes (90.6%) do exercise regularly. The athletes that were focused on sport do less exercise today than the other three groups. Then, that exclusivity on sport is translated into less exercise after their sport career. Following their answers, thanks to their sport career, they developed from a greater to a lower level the following skills: willpower, to know how to set goals, to solve problems, teamwork, self-control and self-confidence. Those that were developing solely the sport career did not perceive that they develop the time management skills.

Many athletes express their gratitude for carrying out this type of research about such a special moment in their life as the sport retirement is. The relevance of this special period it is confirmed by their constant references to their feeling of loneliness and abandonment. The athletes claim for a greater support to face the sport retirement, not only constraining this support to the labor market. Taking in consideration the hard time of this transition the athletes consider they need of a specific psychological support. This support should be as important as it was when they were in the sport career. It should be mention that women find more problems at entering into the labor market than their men counterparts. They point out how difficult is to work into the sport sector.

Finally, some guidelines or recommendations are given to the athlete and the sport stakeholders in relation to: the importance of planning, the relevance of following a dual career, the main role of the coaches, the administration working measures for this group and the need of supporting athletes before, during and after the sport retirement transition.

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## INTRODUCTION



## 1.1. CAREER PATH AND SPORT PERFORMANCE

The European Union coined the term “dual career” (DC) as the career that an elite athlete has in terms of studying and/or working while at the same time pursuing high-performance sport (European Commission, 2012). The pillar of this concept is based on the holistic approach to studying transitions for the athlete proposed by Wylleman and Lavallee (2004). In this model, the athlete is considered a unique entity. It considers different levels: athletic, psychological, psychosocial, academic and vocational, and a fifth one, added recently, financial (Wylleman, Reints & De Knop, 2013). The transitions are the changes the athlete faces on different levels, and they are classified as normative (i.e., expected; for example, travelling abroad due to competition at the mastery stage) and non-normative (i.e., unexpected, such as a serious injury) (Stambulova & Wylleman, 2014). So by the time an athlete is going to retire, he/she has to manage how to be involved in society with peers, how to break into the labor market, how to manage the daily expenses...and those things cannot be learned from one day to another. Pallarés, Azocar, Torregrosa, Selva, and Ramis (2011) propose three types of sport career paths: “linear”, in which the athlete gives exclusive dedication to sport, “convergent”, in which the athlete prioritizes the sport career but he/she maintains another activity (studies or work), and “parallel” in which the athlete places equal importance on the sport career and the alternate activity. A DC is followed in the “convergent” and “parallel” career paths.

Previous studies have reflected on how a DC has some benefits to the athlete. Athletes who follow a DC are better integrated socially, they have more balance in life, and they normally acquire a job that fulfills them after their sport career (Tekav, Wylleman, & Cecir Erpic, 2015; Villanova & Puig, 2014). On the other hand, managing two careers at the same time is not an easy task. The daily schedules are really tight. These athletes accumulate fatigue and make personal sacrifices, as the time to be managed is limited (Ryan, 2015; Tekav, Wylleman, & Cecir Erpic, 2015). Some studies have pointed out that these athletes do not perform well academically (Adler & Adler, 1985; Purdy, Eitzen, & Hufnagel, 1982; Webb, Nasco, Riley, & Headrick, 1998). More recently, other studies have suggested that the academic level of student-athletes is even better than the general population (Albion & Fogarty, 2003; Conzelman & Nagel, 2003; Gonzalez & Torregrosa, 2009; López de Subijana, Barriopedro & Conde, 2015; Muniesa, Barriopedro, Olivan, & Montil, 2010), but these students take more time to finish their degrees. Time management is a key issue for these athletes. Whenever they have a flexible curriculum, their academic performance is as good as their non-athlete peers (De Knop, Wylleman, Van Hoecke, De Martalaer, & Bollaert, 1999).

Moreover, the family environment is also related to the decision of which type of career path the elite athlete follows. Often, parents who completed higher education force their children to keep studying while they are competing (Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015; Vilanova & Puig, 2014). On the other hand, those parents who focus the elite sport career as the unique career path usually lack studies (Vilanova & Puig, 2014). The topic chosen for tertiary education varies with the culture. In countries like Spain or France, athletes typically choose sport sciences studies (Aquilina, 2013; Debois et al., 2015; Honta, 2007; Muniesa et al., 2010), while in some other countries, like Finland or United Kingdom, they choose studies unrelated to sport to change up the daily routine (Aquilina, 2013).

One of the stereotypes the DC athlete has to face is the myth that some of their coaches or even family members hold that following a DC will lower their sport performance. These well-meaning supporters may believe that combining the sport career with another activity may cause the athlete's athletic performance to decline by dividing their attention (Ryan, 2015).

The DC is a dynamic process, as an athlete may change his/her career path from one to another. In fact, the career path is being described as a non-linear path with many normative as well as non-normative transitions from the beginning to the stage of discontinuation (Debois et al., 2015). For example, starting in a high performance center may drive the athlete toward a sport-exclusive path, but after the adaptation process, they may choose the "convergent" path (Ryan, 2015). There are still some gaps in the DC topic, as it is flexible (for example, since personal and athletic careers aren't linear, an athlete may dedicate themselves to sport for a while and later start to study), and it is unknown how many of the elite Olympic athletes chose the DC and what benefits they may have encountered. Vilanova and Puig (2013), with a small research sample, show that about one third of the athletes choose to focus only on their sport career. These athletes are considered the "non-planners", as they live day-to-day without worrying about their life after sport. They worry about it when finish the sport career, not before. They have no guarantee of having a successful transition to the labor market. On the other hand, the "planners" are those athletes who follow a DC and plan their life after sport in advance. The "planners" achieve better jobs and they are happier with their life beyond sport than the "non-planners" (Vilanova & Puig, 2014).

## **1.2. ATHLETES' STRENGTHS, OPPORTUNITIES, WEAKNESSES, AND THREATS**

According to Alferman and Stambulova (2007) resources are factors (internal or external) that facilitate dealing with the different dimensions of the athlete, in this case their academic and sport careers. The internal resources or strengths are intrinsic to the athlete. The perceived competencies, the experience, and the skills that are developed are considered to be strengths (Selva, Pallares, & González, 2013). The external resources are commonly called opportunities. The social support from one's family and from the sport context, the academic measures applied by law in Spain, the support programs, and the sponsors are considered to be opportunities. The athlete's entourage (family, coach, teachers, and friends) has a decisive effect throughout the sports career (Palomo, 2012; Selva et al., 2013).

On the other hand, barriers are the factors that complicate dealing with the different dimensions of the athlete. External barriers are defined as threats. Economic struggles, material difficulties, and legal regulations from the stakeholders are considered to be threats. The type of sport determines its economic impact (González & Torregrosa, 2009; Selva et al., 2013). For a sport, being on the Olympic program makes a significant difference in terms of funding or scholarships for each Olympic cycle. In fact, even within the same sport but depending on the event, the media interest differs (Selva et al., 2013). The age of maximum performance (early or delayed), the competition schedule (calendar and frequency), the sport's economy (professional or amateur), and the support provided by the sport's stakeholders put constraints on an athlete's sport (Henry, 2013; North & Lavallee, 2004). Coming from the athlete, weaknesses are considered to be the internal factors that harm her or his wellbeing (i.e. injuries, lack of motivation...) (Selva et al., 2013). Further, time management is a key element in the dual career.

## **1.3 SEX DIFFERENCES**

At sex differences, Selva et al. (2013) found that one of the main threats women had to deal with is the fact that the women sport has less recognition than the men sport. This recognition is directly related with the economic possibilities of earning money by practicing on women sport. Another threat is the fact that women pursuing a balanced life and building a family means one or two seasons without competing. In terms of receiving a scholarship based on sport performance, they feel abandoned by the sport stakeholders. Indeed, the maternity is normally delayed comparing them with the general population. The lack of support makes them being mother at a mature age (more than 35) with the biological difficulties that implies.

As previous studies pointed out women arise with a higher level of studies while they are still elite athletes than men (López de Subijana et al., 2015). They also managed at individual sport a greater load of training hours, so the time barriers appear at this dual career more frequently than men. Women manage very efficiently their time in order to full fill both careers (Selva et al., 2013).

This academic level does not mean that afterwards their job position will be equally to men once the sport career has finished. In a study with the Spanish Olympic athletes of Barcelona 1992, men had higher incomes per month and their job was more frequently as full time job than women. At that sample their educational level of both groups had no significant differences (Barriopedro, Muniesa, & López de Subijana, 2016). So as the athletes' population follows the same pattern as the general population of Spain where women with the same education acquire worse position with lower salaries than men.

AIMS



## 2.1. GENERAL AIMS

Developing efficient Support Programs for the Sport Career implies identifying the level of adjustment and needs of the elite athletes during their transition beyond sport. Therefore, this research is based on the following aims:

- a) To determine if the athletes that follow a dual career path have a better social and working integration than those focused exclusively on sport.
- b) To determine if the sport performance and gender show any relation with the social and working integration.

## 2.2. SPECIFIC AIMS

The specific aims are:

- a) To identify if there are sociodemographic differences (age, marital status and number of children) regarding the type of career path, sex and sport performance.
- b) To determine if the sport features (sport performance, ADO scholarship, age of starting practicing, age of entering in the mastery stage, age of best sport result and training hours) by type of career path, sex and sport performance.
- c) To analyze if there are differences at the academic profile, their level of education, their parents level of education, the type of studies taken, and the support received by type of career path, sex and sport performance.
- d) To determine if there are differences at the employment nowadays, the way of achieving the first job, regarding the type of career path, sex and sport performance.
- e) To determine if there are differences at the retirement features (age, temporality, wiliness, planning, reasons for retirement, duration of the adaptation period, assessment of the moment of retirement and difficulties found at retirement) regarding the type of career path, sex and sport performance.
- f) To determine if there are differences at the today relation with sport (activities related with sport, frequency and duration of the exercise) by type of career path, sex and sport performance.

- g) To determine if there are differences at the today satisfaction level with life and the perception of the benefits of sport by type of career path, sex and sport performance.

METHODS



### 3.1. SAMPLE

The population targeted in this study was the retired elite athletes named in the official list of the Spanish Government. The size of this group was checked by every sport federation. A purposive sampling was applied over 3605 elite athletes from that population. From all the sent questionnaire, 554 were completed. Seventy-six of them were not included in the data analysis: 48 were from elite athletes that were less than 2 years retired, 27 did not inform about their age or when did they retired and 1 elite athlete was 57 years retired. The final sample was 447 elite athletes, 62.5% male and 37.5% females. Taking into consideration the worse situation ( $p=q$ ) the maximum error associated with a 95% Confidence Interval (CI) was  $\pm 4.3\%$ .

The participants were from 32 different sports (Athletics, Archery, Badminton, Baseball, Basketball, Boxing, Canoeing, Cycling, Fencing, Football, Gymnastics, Golf, Handball, Hockey, Judo, Modern Pentathlon, Horse Riding, Rowing, Rugby, Sailing, Synchronized Swimming, Shooting, Softball, Swimming, Taekwondo, Tennis, Triathlon, Volleyball, Waterpolo, Weightlifting, Winter Sports and Wrestling).

### 3.2. TOOL AND PARAMETERS

For collecting data an “ad hoc” questionnaire was developed. It was mainly focused to evaluate the social and working integration level, and some features of the transition from the sport career to the “normal” life. The questionnaire was based on the previous Social and working integration questionnaire applied by the National Olympic Committee of Spain (Barriopedro, Muniesa, & López de Subijana, 2016) and on the Spanish version from González and Torregrosa (2009) of the Athletes Retirement Questionnaire (ARQ) from Alfermann, Stambulova, and Zemaityte (2004). In order to check the suitability and understanding of the questions, a pilot study with 15 athletes was driven. The final version of the questionnaire had 52 questions (See Appendix 1). Forty-three questions were closed multiple choice while 9 were open questions. The questionnaire was divided into the following sections: sport profile, sociodemographic profile, academic profile, employment, the retirement process and today relation with sport.

The type of career path was valued following the model of Pallarés, Azocar, Torregrosa, Selva, and Ramis (2011). The question had 4 choices for answering: a) I was solely devoted to sport, b) I combined studies and sport but I gave priority to Sport, c) I combined studies and sport but I gave priority to Studies and d) I combined sport and a working activity.

The sport performance was valued based on the best sport result ever achieved in their sport career. Superclass were those athletes whose best sport result was obtained in Olympic Games, World Championships or similar in other sports (Grand Slam in Tennis, UCI Pro Tour first level 3 weeks events in cycling, Six Nations in Rugby and Major in Golf).

### **3.3. PROCEDURE**

A descriptive quantitative research was done based on a survey applying an on-line questionnaire as data collecting tool. Reaching the sample from the Spanish retired elite athlete population was made through different stakeholders: Spanish Sport Council, national sport federations and elite athletes associations using a snowball sampling technique. Data was collected from December 2015 to March 2016.

### **3.4. DATA ANALYSIS**

Data analysis was done with the PASW 21.0 version. Chi-square, Anovas, Student-t, and Kruskal-Wallis tests were applied for data analysis. The risk level was established at .05.

RESULTS

## RESULTS

This results section is organized based on the Dimensions of the Questionnaire. Each parameter will be analyzed depending on: the type of career path, sex and sport performance.

In relation with the type of career path, 16% of the participants informed that they were solely devoted to sport. Thirty-five point three percent of the elite athletes followed a convergent model (sport and studies given priority to sport), 27.1% followed a parallel model (the same priority for sport and studies) and 21.4% combined sport and with a work. Out of these athletes that were working and competing at the same time, 92.1% was remunerated while 7.9% developed a personal project.

As it was specified in the methods section, two categories were considered for sport performance. Fifty-two point eight percent were classified as Superclass while 47.2% were Class.

#### 4.1. SOCIODEMOGRAPHIC FEATURES

##### 4.1.1. Age

The athletes' mean age was different depending on the career path ( $F_{3,475}=14.04$ ;  $p<.001$ ). Those athletes solely devoted to sport and those who combined sport with work presented higher age than those that combined studies and sport. Men had a higher age ( $t_{475}=5.15$ ;  $p<.001$ ) than women, too. There were found no significant difference at age between the two groups of sport performance.

Table 1. Age by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies (N=129)	Sport-Working (N=102)
Mean	41.9	37.5	36.9	41.5
SD	6.2	7.3	8.4	6.4

Table 2. Age by sex and sport performance

	Sex		Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Mean	40.3	36.7	39.0	38.8
SD	7.6	6.9	7.7	7.4

#### 4.1.2. Marital Status

Nineteen point one percent of the athletes were single, 26.2% had a couple, 47.8% were married, 2.5% were divorced and 0.4% were widow. The marital status was not independent from the career path ( $\chi^2(15)=26.5$ ;  $p=.033$ ) neither the sex ( $\chi^2(5)=47.5$ ;  $p<.001$ ) of the athletes. Among those athletes focused exclusively to sport were more frequently divorced and less frequently single. Those athletes that combined their sport career with working had a couple less frequently. On the other hand women had more frequently the single or living with a couple status than men. No significant differences were found depending on the sport performance ( $\chi^2(5)=8.9$ ;  $p=.110$ ).

Table 3. Marital status by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies(N=129)	Sport-Working(N=102)
Single	7.8%	22.6%	21.7%	17.6%
Couple	29.9%	25.6%	31.0%	18.6%
Married	49.4%	44.6%	45.0%	55.9%
Separated	3.9%	3.0%	1.6%	2.0%
Divorced	9.1%	4.2%		4.9%
Widow			.8%	1.0%

Table 4. Marital status by sex and sport performance

	Sex		Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Single	15.8%	24.6%	20.6%	17.3%
Couple	18.1%	39.7%	25.4%	27.1%
Married	56.0%	34.1%	47.6%	48.0%
Separated	3.4%	1.1%	.8%	4.4%
Divorced	6.0%	.6%	5.2%	2.7%
Widow	.7%		.4%	.4%

#### 4.1.3. Number of children

Forty-three point two percent of the elite athletes didn't have children, 16.6% had one, 31.2% had two and 8.4% had 3 children or more. The number of children was not independent from the sport career ( $\chi^2(9)=34.5$ ;  $p<.001$ ) neither the sex ( $\chi^2(3)=37.6$ ;  $p<.001$ ). Those athletes that followed the career path solely devoted to sport, and those who worked had less frequently no child while those that combined sport and working had more frequently 2 children. On the other hand

women had no child and more than 2 children more frequently than men. No significant differences were found depending on the sport performance ( $\chi^2(3)=2.4$ ;  $p=.483$ ).

Table 5. Number of children by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies (N=129)	Sport-Working (N=102)
None	24.0%	48.8%	55.0%	33.7%
One	14.7%	18.5%	10.9%	22.8%
Two	46.7%	25.0%	30.2%	32.7%
Three or more	14.7%	7.7%	3.9%	10.9%

Table 6. . Number of children by sex and sport performance

	Sex		Performance	
	Men (N=298)	Mujeres (N=179)	Superclass (N=252)	Class (N=225)
None	33.1%	60.7%	42.8%	44.2%
One	17.6%	15.2%	18.0%	15.2%
Two	38.5%	19.7%	32.4%	30.4%
Three or more	10.8%	4.5%	6.8%	10.3%

## 4.2. SPORT FEATURES

### 4.2.1. Performance and career path

The sport performance was independent from the career path ( $\chi^2(3)=6.2$ ;  $p=.105$ ) but not of the sex ( $\chi^2(1)=3.9$ ;  $p=.048$ ). A higher percentage of women obtain sport results in Superclass competitions. More men than women were exclusively focused on sport (training and competing) while they were developing their mastery stage in sport ( $\chi^2(3)=15.8$ ;  $p=.001$ ).

Table 7. Performance by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies (N=129)	Sport-Working (N=102)
Superclass	54.6%	56.6%	55.8%	42.2%
Class	45.5%	43.5%	44.2%	57.8%

Table 8. Performance by sex

	Sex

	Men (N=260)	Women(N=160)
Superclass	49.3%	58.7%
Class	50.7%	41.3%

Table 9. Career path by sex

	Career Path			
	Exclusively to Sport (N=73)	Sport>Studies (N=168)	Sport=Studies (N=128)	Sport-Working (N=102)
Men	81.8%	57.7%	56.6%	62.7%
Women	18.2%	42.3%	43.4%	37.3%

#### 4.2.2. ADO Scholarship and being named on the Elite Athletes official list

From 60.7% of the athletes that answered the question (N=272) about the scholarship of ADO (joint venture between National Olympic Committee, Spanish Sport Council and the Spanish Television for sponsoring the elite athletes each Olympic cycle) received an ADO scholarship. This result taking in consideration the total sample (447) was only the 34.6% percent. This parameter was independent from the career path ( $\chi^2(3)=2.4$ ;  $p=.493$ ) and the sex ( $\chi^2(1)=0.5$ ;  $p=.474$ ). However, as it could be expected, a higher percentage of athletes classified as Superclass received this sponsorship from the Government ( $\chi^2(1)=7.1$ ;  $p=.008$ ).

Table 10. ADO Sponsorship (Olympics) by career path

	Career Path			
	Exclusively to Sport (N=52)	Sport>Studies (N=110)	Sport=Studies (N=66)	Sport-Working (N=43)
No	34.6%	36.4%	43.9%	46.5%
Yes	65.4%	63.6%	56.1%	53.5%

Table 11. ADO Sponsorship (Olympics) by sex and sport performance

	Sex		Performance	
	Men (N=158)	Women (N=114)	Superclass (N=159)	Class (N=113)
No	41.1%	36.8%	32.7%	48.7%
Yes	58.9%	63.2%	67.3%	51.3%

From 87.2% that answered the question about being name on the elite athletes' official list (N=452), 87.2% received this recognition. This parameter was independent from the career path ( $\chi^2(3)=0.6$ ;  $p=.887$ ) and the sex ( $\chi^2(1)=0.1$ ;  $p=.957$ ). However, as it could be expected, a higher percentage of athletes classified as Superclass achieved this recognition ( $\chi^2(1)=5.9$ ;  $p=.015$ ).

Table 12. Being name on the elite athletes' official list by career path

	Career Path			
	Exclusively to Sport (N=70)	Sport>Studies (N=161)	Sport=Studies (N=123)	Sport-Working (N=97)
No	10.0%	13.0%	13.8%	13.4%
Yes	90.0%	87.0%	86.2%	86.6%

Table 13. Being name on the elite athletes' official list sex and sport performance

	Sex		Performance	
	Men (N=282)	Women (N=170)	Superclass (N=239)	Class (N=213)
No	12.8%	12.9%	9.2%	16.9%
Yes	87.2%	87.1%	90.8%	83.1%

#### 4.2.3. Age and training hours

The age of starting practicing their sport discipline was not independent from the type of career path ( $F_{3,469}=9.2$ ;  $p<.001$ ). Those athletes that chose combining their sport career with working and those that were focused on sport, started later to practice their sport and the entered in the mastery stage later, too ( $F_{3,471}=30.1$ ;  $p<.001$ ). Two groups of athletes, those focused on sport and those who combined sport and studies, achieved their best sport result at a higher age than the other groups ( $F_{3,468}=28.1$ ;  $p<.001$ ). Those athletes that were working spent less hours training at their mastery stage than the other groups ( $F_{3,468}=14.1$ ;  $p<.001$ ).

Table 14. Age of the sport career and training hours by career path

		Career Path			
		Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies(N=129)	Sport-Working(N=102)
Start to practice age	Mean	10.9	9.7	10.2	12.4
	SD	3.7	3.5	3.8	5.8
Reaching elite level age	Mean	18.2	16.9	16.9	20.4
	SD	2.9	2.7	2.7	4.4

Best sport result age	Mean	25.6	22.9	22.4	27.3
	SD	5.0	4.3	4.9	4.8
Training hours at mastery stage	Mean	27.3	26.7	24.6	18.2
	SD	10.6	12.0	12.4	9.1

At men the starting age at their sport and the age they achieved their best result, were both higher than at women ( $t_{472}=4.9$ ;  $p<.001$  y  $t_{471}=5.8$ ;  $p<.001$ ). Women spent more training hours at the mastery stage than men ( $t_{471}=4.8$ ;  $p<.001$ ). No significant difference was found between sex groups at the age of reaching the elite level ( $t_{471}=0.8$ ;  $p=.434$ ). The athletes classified as Superclass started earlier the mastery stage ( $t_{474}=3.7$ ;  $p<.001$ ) and spend more hours training than the Class athletes ( $t_{471}=3.8$ ;  $p<.001$ ). No significant differences were found at the other age parameters ( $t_{472}=1.5$ ;  $p=.122$  for starting to practice their discipline age and  $t_{471}=0.1$ ;  $p=.925$  for best sport result age).

Table 15. Age of the sport career and training hours by sex and sport performance

		Sex		Performance	
		Men (N=282)	Women(N=170)	Superclass (N=239)	Class (N=213)
Start to practice age	Mean	11.0	10.0	10.3	11.0
	SD	4.3	4.2	4.4	4.1
Reaching elite level age	Mean	18.4	16.8	17.5	18.2
	SD	3.4	3.5	3.6	3.4
Best sport result age	Mean	25.1	22.4	24.1	24.1
	SD	4.7	5.1	5.3	4.7
Training hours at mastery stage	Mean	22.5	27.7	26.4	22.3
	SD	10.3	13.3	12.3	10.9

### 4.3. ACADEMIC PROFILE

#### 4.3.1. Study level

The athletes were asked to report their academic level at the retirement. One point five percent of the athletes didn't finish primary studies, 9.2% had primary studies, 27.7% had secondary studies, 9.5% had vocational education, 13.4% had first level of higher education studies, 30.5% had second level of higher education studies (Bachelor-Grade) and 8.2% had finish postgraduate studies (third cycle studies). The level of their studies at retirement was not independent from

the career path ( $\chi^2(18)=130.2$ ;  $p<.001$ ). Those athletes focused on sport uniquely and those who combined sport and a work, had lower academic level than the groups that combined the sport and studies, even with a convergent or a parallel model. Men showed the same academic level at retirement than women ( $\chi^2(6)=7.0$ ;  $p=.317$ ). No significant differences were found at these parameters between the two groups of sport performance ( $\chi^2(6)=2.1$ ;  $p=.907$ ).

Table 16. Academic level at sport retirement by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies(N=129)	Sport- Working(N=102)
Incompleted Primary	5.2%	0.6%	0.8%	1.0%
Primary	28.6%	4.8%	1.6%	11.8%
Secondary	41.6%	27.4%	20.2%	27.5%
Vocational education	15.6%	4.2%	6.2%	17.6%
1st level higher ed.	1.3%	19.0%	12.4%	14.7%
2nd level higher ed.	7.8%	36.3%	46.5%	17.6%
Postgraduate-3rd cycle		7.7%	12.4%	9.8%

Table 17. Academic level at sport retirement by sex and sport performance

	Sex		Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Incompleted Primary	1.3%	1.7%	1.6%	1.3%
Primary	11.4%	5.6%	7.9%	10.7%
Secondary	25.6%	31.3%	28.6%	26.8%
Vocational education	10.1%	8.4%	10.3%	8.5%
1st level higher ed.	12.1%	15.6%	14.3%	12.5%
2nd level higher ed.	31.0%	29.6%	29.4%	31.7%
Postgraduate-3rd cycle	8.4%	7.8%	7.9%	8.5%

The athletes answered about their academic level at that time (now). Zero-point-four percent did not finish primary studies, 7.1% had primary studies, 13.4% had secondary studies, 11.1% had vocational education, 13% had first level of higher education studies, 30.3% had second level of higher education studies (Bachelor-Grade) and 24.6% had finish postgraduate studies (third cycle studies). Those athletes focused on sport uniquely and those who combined sport and a work, had lower academic level than the groups that combined the sport and studies, even with a convergent or a parallel model ( $\chi^2(18)=179.7$ ;  $p<.001$ ).

Men presented a lower level of finished studies at the time of fulfilling the questionnaire ( $\chi^2(6)=23.3$ ;  $p=.001$ ). No significant differences were found at the academic level between Superclass and Class athletes ( $\chi^2(6)=2.1$ ;  $p=.910$ ).

Table 18. Academic level by career path

	Career Path			
	Exclusively to Sport (N=77)	Sport>Studies (N=168)	Sport=Studies(N=129)	Sport-Working(N=102)
Incompleted Primary	2.6%			
Primary	23.4%	2.4%	0.8%	10.8%
Secondary	35.1%	8.9%	2.3%	18.6%
Vocational education	16.9%	6.5%	7.0%	19.6%
1st level higher ed.	6.5%	17.3%	7.0%	18.6%
2nd level higher ed.	13.0%	34.5%	49.6%	11.8%
Postgraduate-3rd cycle	2.6%	30.4%	33.3%	20.6%

Table 19. Academic level by sex and sport performance

	Sex		Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Incompleted Primary	0.7%		0.4%	0.4%
Primary	10.1%	2.2%	6.0%	8.4%
Secondary	16.4%	8.4%	14.7%	12.0%
Vocational education	11.4%	10.6%	11.1%	11.1%
1st level higher ed.	11.1%	16.2%	13.9%	12.0%
2nd level higher ed.	29.5%	31.8%	29.8%	31.1%
Postgraduate-3rd cycle	20.8%	30.7%	24.2%	24.9%

#### 4.3.2. Type of studies

From those athletes that reached a higher Education study title, 25.4% had a title related with sport and 27.3% was from the Social Sciences and Law topic. Among those athletes focused exclusively on sport and those who combined sport and working, it was more frequent the studied a vocational education. Those who decided to combined sport and studies at the same priority (parallel model) had more frequently studies related with Engineer/Architect ( $\chi^2(21)=65.3$ ;  $p<.001$ ). Men tended to study Engineer/Architect while women tended to study Life Sciences ( $\chi^2(7)=39.6$ ;  $p<.001$ ). No significant differences were found at the type of studies by sport performance ( $\chi^2(7)=9.0$ ;  $p=.250$ ).

Table 20. Type of Education study title by career path

	Career Path			
	Exclusively to Sport (N=28)	Sport>Studies (N=149)	Sport=Studies(N=124)	Sport-Working(N=73)
Sport	10.7%	29.5%	22.6%	27.4%
Sciences	7.1%	2.0%	5.6%	1.4%
Humanities	3.6%	2.7%	2.4%	1.4%
Life Sciencies	7.1%	17.4%	13.7%	9.6%
Social Sc/Law	21.4%	17.4%	25.0%	27.4%
Engineer/Architect	10.7%	17.4%	21.8%	6.8%
Vocational education	39.3%	17.4%	6.5%	26.0%
Double title		17.4%	2.4%	

Table 21. Type of Education study title by sex and sport performance

	Sex		Performance	
	Men (N=214)	Women (N=161)	Superclass (N=197)	Class (N=178)
Sport	25.2%	25.5%	26.4%	24.2%
Sciences	4.2%	2.5%	3.6%	3.4%
Humanities	2.8%	1.9%	1.5%	3.4%
Life Sciencies	7.5%	22.4%	17.8%	9.6%
Social Sc/Law	23.8%	31.7%	25.9%	28.7%
Engineer/Architect	19.6%	3.1%	12.2%	12.9%
Vocational education	14.5%	9.9%	11.2%	14.0%
Double title	2.3%	3.1%	1.5%	3.9%

In Spain the academic level is classified in the General and the Special. General are the “normal” studies: primary, secondary, vocational and higher education. Special are classified as: Sport Coach (normally tough by the Federations), music and dancing.

First of all, in relation with the general education, one third (34.8%) of the athletes that had a title (N=374) had a title related to sport. These sport titles were not independent with the type of career path. Those athletes devoted to sport had more frequently a Vocational Education of Sport (TAFAD) and less frequently the 2<sup>nd</sup> level of higher education studies ( $\chi^2(12)=25.0$ ;  $p=.015$ ) than the other career path groups. No significant differences were found by sex ( $\chi^2(4)=1.1$ ;  $p=.903$ ) neither by sport performance ( $\chi^2(4)=1.4$ ;  $p=.860$ ).

Table 22. Sport titles by career path

	Career Path			
	Exclusively to Sport (N=10)	Sport>Studies (N=60)	Sport=Studies(N=36)	Sport- Working(N=24)
Vocational Ed -TAFAD	50.0%	5.0%	8.3%	12.5%
1st Higher Ed. P.E.	30.0%	20.0%	11.1%	20.8%
2 <sup>nd</sup> Higher Ed. P.E.	10.0%	46.7%	61.1%	41.7%
Post Graduate in Sport	10.0%	23.3%	13.9%	20.8%
Phd in Sport		5.0%	5.6%	4.2%

Table 23. Sport titles by sex and sport performance

	Sex		Performance	
	Men (N=74)	Women (N=57)	Superclass (N=64)	Class (N=67)
Vocational Ed -TAFAD	12.2%	8.8%	9.4%	11.9%
1st Higher Ed. P.E.	17.6%	19.3%	18.8%	17.9%
2 <sup>nd</sup> Higher Ed. P.E.	44.6%	50.9%	46.9%	47.8%
Post Graduate in Sport	20.3%	17.5%	21.9%	16.4%
Phd in Sport	5.4%	3.5%	3.1%	6.0%

In relation with the Special Education, in this case the athletes were asked about their Coaching level. Sixty-six point seven of the athletes had any Coaching level certificated. Eighteen point three percent had a first level certified, 11.5% second level and 36.9% a third level (the highest). This type of education (Coaching) was not independent from the type of career path. The third level of Coaching was more frequent among the athletes devoted to sport and to sport and working than those groups that combined sport and studies ( $\chi^2(9)=27.9$ ;  $p=.001$ ).

No significant differences were found at sex comparison ( $\chi^2(3)=5.3$ ;  $p=.157$ ). Significant differences were found at the comparisons between the sport performance groups ( $\chi^2(3)=10.9$ ;  $p=.012$ ). Superclass athletes were more likely to have achieved the third level of Coaching.

Table 24. Coaching level certified by career path

	Career Path			
	Exclusively to Sport (N=73)	Sport>Studies (N=168)	Sport=Studies(N=128)	Sport-Working(N=102)
None	20.5%	35.7%	44.5%	24.5%
1st Level	17.8%	15.5%	23.4%	16.7%
2nd Level	11.0%	11.3%	10.2%	13.7%
3rd Level	50.7%	37.5%	21.9%	45.1%

Table 25. Coaching level certified by sex and sport performance

	Sex		Performance	
	Men (N=294)	Women (N=178)	Superclass (N=252)	Class (N=220)
None	33.0%	33.7%	33.7%	32.7%
1st Level	15.3%	23.0%	17.5%	19.1%
2nd Level	12.6%	10.1%	7.5%	16.4%
3rd Level	39.1%	33.1%	41.3%	31.8%

#### 4.3.3. Type of Studies taken, time to accomplish those Studies and perceive effort

The type of studies taken was classified into: mandatory attendance (regular in the General Education System), half of attendance, distance learning (once in a while there is an optional lesson with attendance) and on-line (without any attendance in a fixed schedule).

Most of the athletes (84.3%) chose the studies with mandatory attendance, but those which chose combining sport and studies with the priority in sport, rather the half of attendance type of studies ( $\chi^2(9)=17.5$ ;  $p=.041$ ). Eleven percent took half of attendance studies, 3.9% distance studies and 0.4% an online format. No significant differences appeared at the type of studies taken by sex ( $\chi^2(3)=1.4$ ;  $p=.669$ ) neither by sport performance ( $\chi^2(3)=3.6$ ;  $p=.307$ ).

Table 26. Type of Studies taken by career path

	Career Path			
	Exclusively to Sport (N=68)	Sport>Studies (N=166)	Sport=Studies(N=128)	Sport- Working(N=102)
Mandatory attendance	88.2%	77.7%	86.7%	89.2%
Half of attendance	5.9%	18.1%	9.4%	4.9%
Distance learning	5.9%	3.6%	2.3%	4.9%
Online		0.6%	1.6%	1.0%

Table 27. Type of Studies taken by sex and sport performance

	Sex		Performance	
	Men (N=290)	Women (N=175)	Superclass (N=245)	Class (N=220)
Mandatory attendance	84.8%	82.9%	84.1%	84.1%
Half of attendance	10.0%	13.1%	12.7%	9.5%

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Distance learning	4.1%	3.4%	2.9%	5.0%
Online	1.0%	0.6%	0.4%	1.4%

Twenty-eight point two percent of the athletes accomplished their Studies within the time given for a standard student (one year per course) and 26.3% employed 4 or more years than the regular study plan. The athletes that chose to follow the sport career with studies prioritizing the sport employed either the regular study plan-years or 4 or more years to finish their studies ( $\chi^2(15)=37.7$ ;  $p<.001$ ). On the other hand, those athletes focused exclusively on sport and those who combined sport and working, finished their studies at the time specified at the study plan or four or more years later ( $\chi^2(15)=37.7$ ;  $p<.001$ ). It should be noted that only a few of athletes from these two groups studied higher education studies.

No significant differences were found at the time from accomplishing their studies by sex ( $\chi^2(5)=8.3$ ;  $p=.142$ ) neither by sport performance ( $\chi^2(5)=6.7$ ;  $p=.248$ ).

Table 28. Time for accomplishing their Studies by career path

	Career Path			
	Exclusively to Sport (N=48)	Sport>Studies (N=160)	Sport=Studies(N=128)	Sport-Working(N=86)
The time specified in the study plan	35.4%	18.1%	26.6%	45.3%
One year more	18.8%	18.8%	22.7%	16.3%
Two years more	18.8%	11.3%	7.8%	8.1%
Three years more	10.4%	10.0%	7.8%	5.8%
Four years more	10.4%	33.8%	30.5%	15.1%
I haven't finished	6.3%	8.1%	4.7%	9.3%

Table 29. Time for accomplishing their Studies by sex and sport performance

	Sex		Performance	
	Men (N=255)	Women (N=168)	Superclass (N=226)	Class (N=197)
The time specified in the study plan	25.1%	32.7%	26.1%	30.5%
One year more	18.0%	22.0%	21.2%	17.8%
Two years more	12.2%	7.7%	10.6%	10.2%
Three years more	7.8%	9.5%	11.1%	5.6%
Four years more	29.8%	20.8%	23.5%	29.4%
I haven't finished	7.1%	7.1%	7.5%	6.6%

In a scale from 1 to 6, the athletes in general perceived that combining sport and studies was a great effort (4.6 average). Those athletes that combined sport and studies, convergent or parallel model, felt that they made a greater effort for it than those devoted to sport and those developing their sport career and working ( $\chi^2(3)=11.2$ ;  $p=.011$ ). No significant differences at this perceived effort were found by sex ( $Z=1.5$ ;  $p=.136$ ) neither by sport performance ( $Z=0.3$ ;  $p=.796$ ).

Table 30. Perceived effort for combining sport and Studies (Very Low=1 to Very great=6) by career path

	Career Path			
	Exclusively to Sport (N=44)	Sport>Studies (N=166)	Sport=Studies (N=127)	Sport-Working (N=95)
Mean	4.2	4.8	4.8	4.4
SD	1.4	1.1	1.2	1.4

Table 31. Perceived effort for combining sport and Studies (Very Low=1 to Very great=6) by sex and sport performance

	Sex		Performance	
	Men (N=262)	Women (N=171)	Superclass (N=229)	Class (N=204)
Mean	4.5	4.7	4.6	4.6
SD	1.3	1.2	1.2	1.3

#### 4.3.4. Academic Support

In Spain the academic support for the elite athletes is specified in the article 9 of the Royal Decree 2007. From those measures the most common were: changing exam dates (51.3%), percentage of access (27.2%), flexibility at attendance to practical lessons (24.8%) and flexibility with continuous assessment of the European Higher Education Studies System (20.4%).

There were only two items of the academic measures that there were not found significant differences by career path: having Physical Education exemption (15.1%;  $\chi^2(3)=5.5$ ;  $p=.139$ ) and attainment a Coaching certificated by the Spanish Federation (11.7%;  $\chi^2(3)=2.9$ ;  $p=.409$ ).

Twenty-seven point two percent of the athletes benefited of the 3-5% for accessing the university. This percentage was the highest among the group that combined sport and studies prioritizing sport ( $\chi^2(3)=9.2$ ;  $p=.027$ ).

Nineteen point seven percent of the athletes benefited of group of class changes for fixing the training timetables. Although this parameter was the highest among the athletes that combined sport and studies prioritizing sport and the lowest at the athletes that combined sport with a work ( $\chi^2(3)=11.2$ ;  $p=.011$ ).

Fifty one point three percent of the athletes received changes for the exam dates due competitions. The athletes that combined sport and studies received this chance the most frequently while those that worked and developed their sport career and those who were exclusively dedicated to sport were the less frequent ( $\chi^2(3)=19.9$ ;  $p<.001$ ).

Twenty point four percent of the athletes benefited with more flexibility with the continuous evaluation of the courses. The athletes that developed their sport career and study prioritizing the sport received the most frequent help at this point while the group that combined sport and working were the less frequent ( $\chi^2(3)=8.5$ ;  $p=.036$ ).

Twenty four point eight of the athletes benefited with more flexibility at the attendance for practical lesson. This percentage was the lowest among those athletes that combined sport with a work ( $\chi^2(3)=12.5$ ;  $p=.006$ ).

Seventeen point six percent of the athletes benefit for moving their records (marks) from one study center to another one. This benefit was reported in a higher grade by those athletes that combined sport and studies prioritizing sport and it was reported in a lower grade among those that worked ( $\chi^2(3)=15.8$ ;  $p=.001$ ).

Seventeen point four percent of the athletes had a mentor in their study center. This parameter was lower among those that combined sport and a work ( $\chi^2(3)=13.4$ ;  $p=.004$ ).

Finally, a 10.4% of the athletes received other types of helps, but no difference was found by career path groups ( $\chi^2(3)=4.4$ ;  $p=.219$ ). These other help were 68.4% about economical issues (i.e. scholarships, residence, meals, tuition fee, scholar fee and one-on-one lesson) and 31.6% about academic issues (ECTS credits recognition by being athletes or having the content-notes of the lectures).

Table 32. Percentage of academic support measured received (N=simple size) by career path

	Career Path				Total
	Exclusively to Sport	Sport>Studies	Sport-studies	Sport-Working	
3-5 % of accesing the university	15.6% (45)	33.3% (150)	29.4% (119)	18.4% (76)	27.2% (390)
Changing the group of class	11.4% (44)	26.2% (145)	21.6% (111)	9.3% (75)	19.7% (375)

Changing the exam dates	26.7% (45)	56.7% (150)	60.5% (119)	41.3% (80)	51.3% (394)
Flexibility with continuous evaluation	14.3% (42)	27.2% (147)	19.3% (109)	12% (75)	20.4% (375)
Flexibility with attendance to practical lessons	14.3% (42)	29.2% (144)	31.3% (112)	12.3% (73)	24.8% (371)
Physical Education exemption	13.6% (44)	18.5% (146)	16.8% (107)	6.8% (73)	15.1% (370)
Moving the records (marks)	7.3% (41)	26.1% (142)	17.6% (108)	6.8% (73)	17.6% (364)
Mentorship in the study center	14.6% (41)	20.6% (141)	20.9% (110)	2.7% (73)	16.4% (365)
Coaching Certificate by the Spanish Federation	4.9% (41)	10.9% (137)	13% (108)	15.1% (73)	11.7% (359)
Other	16.7% (30)	7.4% (81)	14.3% (70)	5% (40)	10.4% (221)

Women benefited more frequently than men of the following academic measures: 3-5% of places for accessing the university ( $\chi^2(1)=9.3$ ;  $p=.002$ ), changing the group of class for fixing the timetable for training ( $\chi^2(1)=2.9$ ;  $p=.085$ ), changing the exam dates ( $\chi^2(1)=4.6$ ;  $p=.032$ ) and moving the records (marks) from one study center to another one ( $\chi^2(1)=4.0$ ;  $p=.047$ ). No significant differences were found at the other parameters ( $\chi^2(1)=1.9$ ;  $p=.173$  for flexibility with continuous evaluation;  $\chi^2(1)=0.7$ ;  $p=.403$  for flexibility with attendance to practical lessons;  $\chi^2(1)=3.3$ ;  $p=.069$  for Physical Education exemption in secondary school;  $\chi^2(1)=1.7$ ;  $p=.187$  for mentorship in the study center;  $\chi^2(1)=2.6$ ;  $p=.107$  for attaining a Coaching Certificate by the Spanish Federation and  $\chi^2(1)=0.5$ ;  $p=.492$  for others).

No significant differences were found among the academic measures by sport performance ( $\chi^2(1)=1.1$ ;  $p=.303$  for 3-5% of places for accessing the university;  $\chi^2(1)=0.1$ ;  $p=.804$  for changing the group of class for fixing the timetable for training;  $\chi^2(1)=2.1$ ;  $p=.153$  for changing the exam dates;  $\chi^2(1)=1.3$ ;  $p=.262$  for flexibility with continuous evaluation;  $\chi^2(1)=0.02$ ;  $p=.897$  for flexibility with attendance to practical lessons;  $\chi^2(1)=2.9$ ;  $p=.091$  for Physical Education exemption in secondary school;  $\chi^2(1)=0.7$ ;  $p=.396$  for moving the records (marks) from one study center to another one ;  $\chi^2(1)=0.01$ ;  $p=.993$  for mentorship in the study center;  $\chi^2(1)=1.2$ ;  $p=.284$  for attaining a Coaching Certificate by the Spanish Federation and  $\chi^2(1)=1.5$ ;  $p=.216$  for others).

Table 33. Percentage of academic support measured received (N=simple size) by sex and sport performance

	Sex		Performance	
	Men	Women	Superclass	Class
3-5 % of accessing the university	21.8% (238)	35.9% (153)	29.5% (210)	24.9% (181)
Changing the group of class	16.9% (231)	24.1% (145)	19.2% (203)	20.2% (173)
Changing the exam dates	47.1% (242)	58.2% (153)	54.8% (210)	47.6% (185)
Flexibility with continuous evaluation	18.1% (232)	23.9% (142)	22.5% (200)	17.8% (174)
Flexibility with attendance for practical lessons	23.2% (228)	27.1% (144)	25% (200)	24.4% (172)

Physical Education exemption	12.4% (226)	19.3% (145)	18% (200)	11.7% (171)
Moving the records (marks)	14.7% (225)	22.9% (140)	19.4% (196)	16% (162)
Mentorship in the study center	14.3% (223)	19.6% (143)	16.4% (195)	16.4% (171)
Coaching Certificate by the Spanish Federation	9.5% (221)	15.1% (139)	13.3% (195)	9.7% (165)
Other	11.3% (150)	8.3% (72)	13% (108)	7.9% (114)

#### 4.3.5. Academic level of the parents

From the lowest to the highest possible academic level in Spain: 13.8% of the fathers and 15.6% of the mothers did not complete primary school; 21.6% of the fathers and 29.2% of the mothers finished primary school; 18.4% of the fathers and 20.7% of the mothers had secondary school; 11.9% of the fathers and 11.6% of the mothers had accomplish vocational education; 10% of the fathers and 9.5% of the mothers had a 1<sup>st</sup> level of Higher Education; 19.1% of the fathers and 11.8% of the mothers had the 2<sup>nd</sup> level of Higher Education; and finally, 5.3% of the fathers and 1.5% of the mothers had 3<sup>rd</sup> Cycle studies.

The academic level of the parents was not independent from the type career path ( $\chi^2(18)=45.7$ ;  $p<.001$  for the father's academic level and  $\chi^2(18)=55.0$ ;  $p<.001$  for the mother's academic level).

The father of an athlete than had chosen being dedicated to sport, presented more frequently primary studies. Meanwhile the father of an athlete had chosen at equal priority sport and studies (parallel model) presented less frequently primary studies and vocational studies and more frequently 2<sup>nd</sup> level of Higher Education and the 3<sup>rd</sup> cycle of studies.

The mothers of those athletes that were devoted to sport showed more frequently primary studies and less frequently secondary studies. The mothers of those athletes that combined sport and Education (convergent/parallel model) had in higher rate primary studies. The mothers of an athlete that combined sport and working had lower rate of 2<sup>nd</sup> level of Higher Education.

Table 34. Academic level of the father by career path

	Career Path			
	Exclusively to Sport (N=75)	Sport>Studies (N=167)	Sport=Studies(N=129)	Sport-Working(N=101)
Incompleted Primary	17.3%	12.6%	13.2%	13.9%
Primary	34.7%	17.4%	15.5%	26.7%
Secondary	14.7%	22.2%	13.2%	21.8%
Vocational education	9.3%	15.6%	7.0%	13.9%
1st level higher ed.	9.3%	7.2%	16.3%	6.9%

2nd level higher ed.	12.0%	22.2%	24.0%	12.9%
Postgraduate-3rd cycle	2.7%	3.0%	10.9%	4.0%

Table 35. Academic level of the mother by career path

	Career Path			
	Exclusively to Sport (N=75)	Sport>Studies (N=167)	Sport=Studies(N=129)	Sport-Working(N=102)
Incompleted Primary	21.3%	16.8%	7.8%	19.6%
Primary	49.3%	23.4%	20.2%	35.3%
Secondary	8.0%	23.4%	27.1%	17.6%
Vocational education	5.3%	13.2%	10.9%	14.7%
1st level higher ed.	5.3%	8.4%	16.3%	5.9%
2nd level higher ed.	9.3%	13.8%	16.3%	4.9%
Postgraduate-3rd cycle	1.3%	1.2%	1.6%	2.0%

The academic level of the parents was independent by sex ( $\chi^2(6)=2.2$ ;  $p=.902$  for the father's academic level and  $\chi^2(6)=7.9$ ;  $p=.249$  for the mother's academic level) and by sport performance ( $\chi^2(6)=4.3$ ;  $p=.632$  for the father's academic level and  $\chi^2(6)=11.9$ ;  $p=.064$  for the mother's academic level) .

Table 36. . Academic level of the father by sex and sport performance

	Sex		Performance	
	Men (N=295)	Women (N=178)	Superclass (N=250)	Class (N=223)
Incompleted Primary	13.2%	14.6%	17.2%	9.9%
Primary	23.1%	19.1%	21.2%	22.0%
Secondary	19.3%	16.9%	17.6%	19.3%
Vocational education	11.2%	12.9%	10.0%	13.9%
1st level higher ed.	9.2%	11.2%	11.2%	8.5%
2nd level higher ed.	19.0%	19.7%	18.0%	20.6%
Postgraduate-3rd cycle	5.1%	5.6%	4.8%	5.8%

Table 37. Academic level of the father by sex and sport performance

	Sex		Performance	
	Men (N=296)	Women (N=178)	Superclass (N=251)	Class (N=225)
Incompleted Primary	16.2%	14.6%	17.5%	13.5%
Primary	31.1%	25.8%	27.9%	30.5%
Secondary	19.9%	21.9%	21.5%	19.7%
Vocational education	9.8%	14.6%	8.8%	14.8%

1st level higher ed.	9.1%	10.7%	9.2%	10.3%
2nd level higher ed.	12.5%	10.7%	12.4%	11.2%
Postgraduate-3rd cycle	1.4%	1.7%	2.8%	

#### 4.4. EMPLOYMENT

##### 4.4.1. Employment situation and salary

The results showed that the 87.3% of the athletes were working and the 11.8% of the athletes were looking for a job. The differences were not statistically significant among the athletes according to the career path ( $\chi^2(6)=12.2$ ;  $p=.057$ ). However, there is a difference of 10% between the athletes who only trained and those that combined studies and sport in a convergent way, which is, more focused on sport. Also, it was a 12% of differences (non-significant) between the athletes that shared studies and sport with the athletes that combined studies and sport in a similar way. There were not significant differences neither by employment and sex ( $\chi^2(2)=1.0$ ;  $p=.598$ ) nor by sport performance ( $\chi^2(2)=0.3$ ;  $p=.879$ ).

Table 38. Results of employment according to the career path.

	Career Path			
	Exclusively to Sport (N=73)	Sport>Studies (N=168)	Sport=Studies(N=128)	Sport-Working(N=102)
Yes	81.8%	88.1%	91.5%	87.3%
No and is looking for a job	18.2%	8.3%	6.2%	11.8%
No and is not looking for a job		3.6%	2.3%	1.0%

Table 39. Results of employment according to sex and performance.

	Sex		Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Yes	87.6%	88.3%	87.3%	88.4%
No and is looking for a job	10.7%	8.9%	10.3%	9.8%
No and is not lookig for a job	1.7%	2.8%	2.4%	1.8%

The results showed that 60.7% of the athletes had a full time employment, 9.8% a partial time employment, 4.2% a temporary job, 5.9% were businessmen, 4.2% professionals, 14.7% worked as a self-employment and a 0.5% lived with the familiar support. The results were not statistically significant according to the athletes career path ( $\chi^2(15)=15.3$ ;  $p=.805$ ).

There were significant differences by the type of employment according to the sex ( $\chi^2(7)=14.4$ ;  $p=.045$ ). The results pointed out that more women than men had partial time jobs and a lower number of women were businessmen. There were not significant differences according to the sport performance ( $\chi^2(7)=7.3$ ;  $p=.396$ ).

Table 40. Results about the type of employment according to the career path.

	Career Path			
	Exclusively to Sport (N=62)	Sport>Studies (N=145)	Sport=Studies(N=112)	Sport- Working(N=88)
Full time job	56.5%	60.0%	61.6%	63.6%
Partial time job	12.9%	11.0%	8.9%	6.8%
Ocasional job	1.6%	0.7%	0.9%	1.1%
Temporary job	6.5%	4.1%	0.9%	2.3%
Businessmen	8.1%	3.4%	6.3%	8.0%
Professional	4.8%	3.4%	3.6%	5.7%
Self-employment	9.7%	17.2%	17.0%	11.4%
Familiar support			0.9%	1.1%

Table 41. Results about the type of employment according to the sex and performance.

	Sex		Performance	
	Men (N=254)	Women (N=154)	Superclass (N=216)	Class (N=192)
Full time job	60.6%	61.0%	62.5%	58.9%
Partial time job	7.5%	13.6%	11.1%	8.3%
Ocasional job	1.2%	0.6%	0.5%	1.6%
Temporary job	3.1%	3.2%	3.7%	2.6%
Businessmen	8.3%	1.9%	4.6%	7.3%
Professional	5.5%	1.9%	4.6%	3.6%
Self-employment	13.4%	16.9%	13.0%	16.7%
Familiar support	0.4%	0.6%		1.0%

The results about the athletes' salary showed that 4.3% earned less than 600€, 8.5% earned between 600 and 990€, 23.9% earned between 1000 and 1499€, 23.4% between 1500 and 1999€, 16.2% between 2000 and 2499€, 8% between 2500 and 3000€, and 15.7% earned more than 3000€. These results were not statistically significant neither for athletes with different career paths ( $\chi^2(18)=31.9$ ;  $p=.267$ ) nor for athletes classified as Superclass and Class ( $\chi^2(6)=2.5$ ;  $p=.867$ ). However, a greater percentage of men compared to women showed salaries greater than 3000€.

In addition, a greater percentage of women compared to men showed salaries between 1000 and 1499€ ( $\chi^2(6)=31.9$ ;  $p<.001$ ).

Table 42. Salary according to the career path.

	Career Path			
	Exclusively to Sport (N=62)	Sport>Studies (N=146)	Sport=Studies(N=116)	Sport- Working(N=90)
Less than 600 €		4.1%	4.3%	7.8%
Between 600 and 999 €	8.1%	13.0%	5.2%	5.6%
Between 1000 and 1499 €	30.6%	22.6%	19.0%	27.8%
Between 1500 and 1999 €	21.0%	21.2%	28.4%	22.2%
Between 2000 and 2499 €	16.1%	13.7%	19.8%	15.6%
Between 2500 and 2999 €	4.8%	10.3%	6.0%	8.9%
More than 3000 €	19.4%	15.1%	17.2%	12.2%

Table 43. Salary according to sex and performance.

	Sex		Performance	
	Men (N=257)	Women (N=158)	Superclass (N=217)	Class (N=198)
Less than 600 €	3.1%	6.3%	3.2%	5.6%
Between 600 and 999 €	8.6%	8.2%	9.7%	7.1%
Between 1000 and 1499 €	19.1%	32.3%	24.0%	24.2%
Between 1500 and 1999 €	20.6%	27.8%	24.0%	22.7%
Between 2000 and 2499 €	18.3%	12.7%	15.2%	17.2%
Between 2500 and 2999 €	8.2%	7.6%	8.3%	7.6%
More than 3000 €	22.2%	5.1%	15.7%	15.7%

#### 4.4.2. Years in the position and time for the first employment.

The results showed that 70.8% of the athletes had more than 3 years in the position, 9.8% between 2 and 3 years, 9.8% between 1 and 2 years, and 9.6% less than 1 year. These values were statistically significant for the athletes with different career path ( $\chi^2(9)=22.9$ ;  $p=.006$ ). The percentage of athletes with more than 3 years in the position was greater for the athletes that combined studies and working in their elite level career path. Conversely, the percentage was lower for the athletes that combined sport and studies with a greater priority to the sport. The percentage of athletes with less than 1 year in the position was lower for the athletes that combined sport and working and greater for the athletes that combined studies and sport with

greater priority to the sport. The years in the position was independent of the sex ( $\chi^2(3)=2.8$ ;  $p=.418$ ) and the sport performance ( $\chi^2(3)=2.3$ ;  $p=.396$ ).

Table 44. Years in the position according to the career path.

	Career Path			
	Exclusively to Sport (N=64)	Sport>Studies (N=146)	Sport=Studies(N=116)	Sport-Working(N=92)
Less than 1 year	7.8%	15.1%	7.8%	4.3%
Between 1 and 2 years	7.8%	12.3%	10.3%	6.5%
Between 2 and 3 years	12.5%	12.3%	11.2%	2.2%
More than 3 years	71.9%	60.3%	70.7%	87.0%

Table 45. Years in the position according to the sex and performance.

	Sex		Performance	
	Men (N=260)	Women (N=159)	Superclass (N=219)	Class (N=200)
Less than 1 year	7.7%	12.6%	10.0%	9.0%
Between 1 and 2 years	9.6%	10.1%	9.6%	10.0%
Between 2 and 3 years	10.0%	9.4%	7.8%	12.0%
More than 3 years	72.7%	67.9%	72.6%	69.0%

The results pointed out that 41.8% of the athletes had a job before the retirement, 17.5% found the job in the first 2 months, 8% spent between 2 and 6 months, 12.3% between 6 and 12 months, 8.5% between 1 and 2 years, and 11.3% spent more than 2 years. These values were statistically significant different for those athletes with different career path ( $\chi^2(9)=138.5$ ;  $p<.001$ ). The percentage of athletes that worked before the retirement was significantly greater for those athletes that combined sport and working during the development of their career path in the elite level (88%). Additionally, there were a greater percentage of athletes that spent more than 2 years to find a job when they only trained (18.5%).

The time spent when looking for a job was not independent of the sex ( $\chi^2(6)=15.8$ ;  $p=.015$ ). In fact, more women than men spent more than 2 years when finding the job position. Also, less women than men found the job position in the first two months. There were not significant differences in the time spent when obtaining the first job position between the athletes classified as Superclass and Class ( $\chi^2(6)=4.5$ ;  $p=.608$ ).

Table 46. Time spent when looking for the first employment position after the retirement according to the career path.

	Career Path			
	Exclusively to Sport (N=65)	Sport>Studies (N=148)	Sport=Studies(N=118)	Sport-Working(N=92)
He/ She worked before the retirement	12.3%	27.0%	40.7%	88.0%
Between 0 and 2 months	36.9%	18.2%	16.1%	4.3%
More than 2 months and less than 6 months	9.2%	14.9%	5.1%	
More than 6 months and less than 12 months	12.3%	15.5%	16.1%	2.2%
More than 12 months and less than 24 months	10.8%	9.5%	11.9%	1.1%
More than 24 months	18.5%	14.2%	10.2%	3.3%
I did not find a job position		0.7%		1.1%

Table 47. Time spent when looking for the first employment position after the retirement according to the sex and performance.

	Sex		Performance	
	Men (N=263)	Women(N=161)	Superclass (N=221)	Class (N=203)
He/ She worked before the retirement	42.6%	40.4%	40.3%	43.3%
Between 0 and 2 months	21.7%	11.2%	17.2%	18.2%
More than 2 months and less than 6 months	8.4%	7.5%	6.8%	9.4%
More than 6 months and less than 12 months	11.8%	13.0%	13.1%	11.3%
More than 12 months and less than 24 months	7.6%	9.9%	10.9%	5.9%
More than 24 months	7.6%	17.4%	11.3%	11.3%
I did not find a job position	0.4%	0.6%	0.5%	0.5%

#### 4.4.3. Relationship between the first job position with the sport and the academic studies.

The results showed that 50.4% of the athletes had an employment related to the sport. This values was significantly greater for those athletes focused on training or when combining studies and sport (with a greater emphasis in sport). Also the values were lower for those athletes that combined studies and sport in a similar way ( $\chi^2(3)=21.2$ ;  $p<.001$ ). In addition, there was a greater percentage of athletes that had an employment related to the sport for those athletes that were

classified as Superclass ( $\chi^2(1)=3.4$ ;  $p=.039$ ). There were not significant differences between men and women ( $\chi^2(1)=0.9$ ;  $p=.336$ ).

Table 48. Relationships between the first job position with the sport according to the type of career path.

	Career Path			
	Exclusively to Sport (N=63)	Sport>Studies (N=146)	Sport=Studies(N=115)	Sport-Working(N=91)
No	36.5%	41.1%	66.1%	51.6%
Yes	63.5%	58.9%	33.9%	48.4%

Table 49. Relationships between the first job position with the sport according to the sex and performance.

	Sex		Performance	
	Men (N=258)	Women (N=158)	Superclass (N=219)	Class (N=196)
No	47.7%	52.5%	45.2%	54.3%
Yes	52.3%	47.5%	54.8%	45.7%

The results reflected that 65.5% of the athletes had an employment related to their academic studies. This percentage was significantly greater for the athletes that combined studies and sport in a convergent or a similar way and lower for those athletes that were focused exclusively on training or combined sport and working ( $\chi^2(3)=58.5$ ;  $p<.001$ ). Additionally, there was a greater percentage of female athletes that had an employment related to the academic studies compared to male athletes ( $\chi^2(1)=10.8$ ;  $p=.001$ ). Also, there was a greater percentage of athletes classified as superclass with an employment related to their academic studies than the athletes classified as Class ( $\chi^2(1)=4.4$ ;  $p=.035$ ).

Table 50. Relationships between the first job position with the academic studies according to the type of career path.

	Career Path			
	Exclusively to Sport (N=61)	Sport>Studies (N=143)	Sport=Studies(N=116)	Sport-Working(N=91)
No	68.9%	28.0%	15.5%	46.2%
Yes	31.1%	72.0%	84.5%	53.8%

Table 51. Relationships between the first job position with the academic studies according to the sex and performance.

	Sex		Performance	
	Men (N=254)	Women (N=158)	Superclass (N=218)	Class (N=194)
No	40.6%	24.7%	29.8%	39.7%
Yes	59.4%	75.3%	70.2%	60.3%

#### 4.4.4. Second job position and its relationship with the sport.

The 26.6% of the athletes had a second employment. There were not significant differences according to the type of career path ( $\chi^2(3)=0.4$ ;  $p<.943$ ), the sex ( $\chi^2(1)=0.1$ ;  $p=.711$ ), and the performance ( $\chi^2(1)=0.1$ ;  $p=.707$ ).

Table 52. Second job position according to the career path.

	Career Path			
	Exclusively to Sport (N=62)	Sport>Studies (N=146)	Sport=Studies(N=114)	Sport-Working(N=92)
No	72.6%	71.9%	74.6%	75.0%
Yes	27.4%	28.1%	25.4%	25.0%

Table 53. Second job position according to the sex and performance.

	Sex		Performance	
	Men (N=258)	Women (N=157)	Superclass (N=220)	Class (N=195)
No	72.9%	74.5%	72.7%	74.4%
Yes	27.1%	25.5%	27.3%	25.6%

The 28.2% of the athletes had the second job related to the sport. There were not significant differences according to the type of career path ( $\chi^2(3)=1.9$ ;  $p<.594$ ), the sex ( $\chi^2(1)=0.5$ ;  $p=.462$ ), and the performance ( $\chi^2(1)=0.1$ ;  $p=.831$ ).

Table 54. Second job position and its relationship with sport according to the career path.

	Career Path			
	Exclusively to Sport (N=45)	Sport>Studies (N=105)	Sport=Studies(N=87)	Sport-Working(N=75)
No	68.9%	68.6%	77.0%	72.0%
Yes	31.1%	31.4%	23.0%	28.0%

Table 55. Second job position and its relationship with sport according to the sex and performance.

	Sex		Performance	
	Men (N=192)	Women (N=120)	Superclass (N=159)	Class (N=153)
No	70.3%	74.2%	72.3%	71.2%
Yes	29.7%	25.8%	27.7%	28.8%

#### 4.4.5. Ways for reaching the first job position.

The way that the athletes had for obtaining the first job position was not independent of the type of career path ( $\chi^2(33)=166.7$ ;  $p<.001$ ). Specifically, the way for obtaining the first job was using the family and Friends contacts (34.4%). This was the most common way for those athletes that were focused on training. Conversely, it was the less common for the athletes that combined sport and working. The 17.2% of the athletes reached their first job position using direct communication with the Company. This percentage was significantly greater for the athletes that combined sport and studies in a similar way than those athletes that combined sport and working. The 15.3% of the athletes were working before the retirement. This value was significantly greater for those athletes that combined sport and working compared with the athletes that combined sport and studies in a convergent way. The 9.5% of the athletes reached their first job position passing public/ private examinations. Also, the 5.5% of the athletes reached the first job position writing to an open advertisement. This way was greater for the athletes that combined studies and sport and lower for those athletes only focused on training. The 5% of athletes reached the first job position using their institutional contacts (federation, club, local government, etc...). This way was more used by those athletes only focused on training. On the other hand, the 3.8% of the athletes did a self-employment and only the 3.1% obtained his/ her first job position with specific actions for DAN. The athletes that mainly obtained the job position using this way were those focused on combining studies and sport (with a priority of sport). Finally, the way for reaching the first job position was independent of the sex ( $\chi^2(11)=7.1$ ;  $p=.809$ ) and performance ( $\chi^2(11)=11.2$ ;  $p=.424$ ).

Table 54. Ways for reaching the first job position according to the type of career path.

	Career Path			
	Exclusively to Sport (N=45)	Sport>Studies (N=105)	Sport=Studies(N=87)	Sport- Working(N=75)
Direct contact with the company	12.5%	18.2%	28.2%	4.4%
Employment office	6.3%	2.7%	1.7%	1.1%
Advertisements		6.1%	9.4%	3.3%
Public/ private examinations	4.7%	8.8%	9.4%	14.4%

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Family and Friends contacts	45.3%	39.9%	30.8%	22.2%
Specific action as DAN		6.8%	2.6%	
He/ She was working	1.6%	6.1%	10.3%	46.7%
I have not work since my retirement	1.6%			1.1%
They contacted directly to me	7.8%	2.0%	0.9%	
Institutional contact	14.1%	4.1%	3.4%	2.2%
Self-employment	6.3%	4.7%	0.9%	4.4%
Post-practice		0.7%	2.6%	

Table 55. Ways for reaching the first job position according to the sex and performance.

	Sex		Performance	
	Men (N=260)	Women (N=160)	Superclass (N=219)	Class (N=201)
Direct contact with the company	16.5%	18.1%	16.9%	17.4%
Employment office	3.1%	1.9%	1.8%	3.5%
Advertisements	5.8%	5.0%	4.1%	7.0%
Public/ private examinations	8.8%	10.6%	10.5%	8.5%
Family and Friends contacts	33.5%	36.3%	35.6%	33.3%
Specific action as DAN	2.3%	4.4%	4.1%	2.0%
He/ She was working	15.8%	14.4%	12.8%	17.9%
I have not work since my retirement	0.8%		0.5%	0.5%
They contacted directly to me	2.3%	1.9%	3.2%	1.0%
Institutional contact	5.4%	4.4%	6.4%	3.5%
Self-employment	5.0%	1.9%	3.2%	4.5%
Post-practice	0.8%	1.3%	0.9%	1.0%

## 4.5. SPORT RETIREMENT

### 4.5.1. Features of the retirement

The average age of retirement of the athletes was 30 years-old ( $\pm 6.1$ ). The age of retirement was not independent from the career path ( $F_{3,472}=32.6$ ;  $p<.001$ ). The athletes focused on sport and those who worked, had a significantly higher age than those who combine the sport with studies (convergent/parallel model).

Men retired at an age greater than women ( $t_{338}=6.2$ ;  $p<.001$ ). No significant differences were found at retirement age between Superclass and Class ( $t_{471}=0.3$ ;  $p=.788$ ).

Table 56. Retirement age by career path

	Career Path			
	Exclusively Sport (N=77)	Sport>Studies(N=168)	Sport=Studies(N=129)	Sport-Working(N=102)
Mean	32.0	28.7	27.4	33.8
SD	5.7	5.4	5.8	5.3

Table 57. Retirement age by career path sex and Sport Performance

	Sex		Sport Performance	
	Hombres (N=298)	Mujeres (N=179)	Superclass (N=252)	Class (N=225)
Mean	31.3	27.8	30.0	29.9
SD	5.5	6.3	6.6	5.4

The retirement could be featured as radical/gradual, voluntary/involuntary and planned/unplanned. Sixty-seven point four percent of the athletes retired from one day to another, in a radical way. No significant differences appeared by career path ( $\chi^2(3)=5.3$ ;  $p=.153$ ), sex ( $\chi^2(1)=2.3$ ;  $p=.133$ ), neither sport performance ( $\chi^2(1)=0.2$ ;  $p=.637$ ).

Table 58. Temporary nature of the retirement by career path

	Career Path			
	Exclusively Sport (N=77)	Sport>Studies(N=168)	Sport=Studies(N=129)	Sport-Working(N=102)
Radical	76.6%	64.9%	69.8%	61.8%
Gradual	23.4%	35.1%	30.2%	38.2%

Table 59. Temporary nature of the retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Radical	69.8%	63.1%	68.3%	66.2%
Gradual	30.2%	36.9%	31.7%	33.8%

Eighty-two point nine percent of the athletes retired voluntarily. No significant differences appeared by career path ( $\chi^2(3)=6.6$ ;  $p=.085$ ), sex ( $\chi^2(1)=3.4$ ;  $p=.066$ ), neither sport performance ( $\chi^2(1)=0.3$ ;  $p=.862$ ).

Table 60. Willingness nature of the retirement by career path

	Career Path			
	Exclusively Sport (N=77)	Sport>Studies(N=167)	Sport=Studies(N=129)	Sport- Working(N=102)
Voluntary	83.1%	77.2%	87.6%	86.3%
Unvoluntary	16.9%	22.8%	12.4%	13.7%

Table 61. Willingness nature of the retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=298)	Women (N=178)	Superclass (N=251)	Class (N=225)
Voluntary	80.5%	87.1%	83.3%	82.7%
Unvoluntary	19.5%	12.9%	16.7%	17.3%

Thirty-nine point three percent of the athletes planned the retirement. No significant differences appeared by career path ( $\chi^2(3)=3.3$ ;  $p=.354$ ), sex ( $\chi^2(1)=3.2$ ;  $p=.076$ ), neither sport performance ( $\chi^2(1)=0.6$ ;  $p=.429$ ).

Table 62. Planning nature of the retirement by career path

	Career Path			
	Exclusively Sport (N=77)	Sport>Studies(N=168)	Sport=Studies(N=129)	Sport- Working(N=102)
Unplanned	62.3%	57.1%	66.7%	57.8%
Planned	37.7%	42.9%	33.3%	42.2%

Table 63. Planning nature of the retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=298)	Women (N=179)	Superclass (N=252)	Class (N=225)
Unplanned	57.7%	65.9%	59.1%	62.7%
Planned	42.3%	34.1%	40.9%	37.3%

#### 4.5.2. Reason for retirement

The working reasons were the most important for the athletes at their retirement (2.7). The athletes gave the same importance (2.6) to the sport ((lowering the sport performance or achievement perceived, age) and health reasons (mental or Physical tiredness, injuries, sickness). In fourth position (2.3) were the economic (need to increase the incomes) and family reasons (building a family, having children, relatives' duties). The relationships reasons (with coaches, peers, judges, family...) were the sixth place (2.1). In last place (1.9) were valued the academic reasons (finish the studies).

Given that the importance attributed to the different reasons was no independent, a multivariate analysis was applied. The importance given to the different reasons was no independent by the career path ( $F_{21,1143}=2.4$ ;  $p<.001$ ). The univariate contrasts had a significant effect of the type of career path on the importance give to the academic ( $F_{3,385}=3.9$ ;  $p=.009$ ), health ( $F_{3,385}=3.4$ ;  $p=.018$ ) and family reasons ( $F_{3,385}=4.2$ ;  $p=.006$ ). The academic reasons were more important among those athletes that combined sport and studies (at parallel model) and those who worked at the same time they developed their sport career. The health problems were more relevant among those who combined sport and studies (both models convergent/parallel). Finally, the family reasons were more relevant for those that combined sport and working. No significant differences were found by career path at the working ( $F_{3,385}=2.0$ ;  $p=.114$ ), sport( $F_{3,385}=1.6$ ;  $p=.188$ ), relationships ( $F_{3,385}=0.5$ ;  $p=.654$ ) neither economic reasons ( $F_{3,385}=0.6$ ;  $p=.617$ ).

Table 64. Importance given to different reasons for retirement (from 1=no importance to 5= very important) by career path

		Career Path			
		Exclusively Sport (N=56)	Sport>Studies (N=146)	Sport-Studies (N=114)	Sport-Working (N=73)
Working (find a good job)	Mean	2.7	2.5	2.9	2.5
	SD	1.6	1.6	1.7	1.6
Academic (finish the studies)	Mean	1.7	1.9	2.2	1.5
	SD	1.3	1.4	1.5	1.0

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Sport related (lowering the sport performance or achievement perceived, age)	Mean	2.8	2.7	2.4	2.4
	SD	1.5	1.6	1.4	1.4
Relationships (with coaches, peers, judges, family, ..)	Mean	2.0	2.0	2.2	2.0
	SD	1.4	1.4	1.5	1.3
Health (mental or Physical tiredness , injuries, sickness)	Mean	2.6	2.9	2.3	2.5
	SD	1.5	1.6	1.5	1.6
Family (building a family, having children, relatives' duties)	Mean	2.2	2.1	2.0	2.7
	SD	1.5	1.4	1.3	1.6
Economic (need to increase the incomes)	Mean	2.1	2.4	2.3	2.3
	SD	1.5	1.6	1.5	1.5

The importance attributed to the different reasons for retirement was independent by sex ( $F_{7,382}=2.0$ ;  $p=.053$ ) and sport performance ( $F_{7,382}=0.6$ ;  $p=.769$ ).

Table 65. Importance given to different reasons for retirement (from 1=no importance to 5= very important) by sex and sport performance

		Sex		Sport Performance	
		Men(N=235)	Women (N=155)	Superclass (N=204)	Class (N=186)
Working (find a good job)	Mean	2.8	2.4	2.6	2.7
	SD	1.6	1.6	1.6	1.7
Academic (finish the studies)	Mean	1.8	2.0	1.9	1.9
	SD	1.3	1.5	1.4	1.4
Sport related (lower in the sport performance or achievement perceived, age)	Mean	2.5	2.6	2.5	2.6
	SD	1.5	1.5	1.5	1.4
Relationships (with coaches, peers, judges, family, ..)	Mean	2.0	2.2	2.0	2.2
	SD	1.4	1.4	1.3	1.5
Health (mental or Physical tiredness , injuries, sickness)	Mean	2.5	2.8	2.7	2.6
	SD	1.5	1.6	1.6	1.6
Family (building a family, having children, relatives' duties)	Mean	2.2	2.2	2.1	2.3
	SD	1.5	1.4	1.4	1.5
Economic (need to increase the incomes)	Mean	2.3	2.3	2.2	2.4
	SD	1.5	1.5	1.5	1.5

### 4.5.3. Working situation at retirement

Thirty-six point eight percent of the athletes did not have anything related to a work at their retirement, 20.1% only had jobs occasionally, 26.4% had their work mainly solved and 16.7% had their working situation completely solved. This distribution was different depending on the type

of career path ( $\chi^2(9)=67.6$ ;  $p<.001$ ). The percentage of athletes with their working situation mainly or completely solved was significantly higher among those that combined sport and working. In addition, those athletes had in a lower rate nothing. Finally, those athletes that focused solely on sport had in a lower percentage their working situation solved.

The working situation was neither independent by sex ( $\chi^2(3)=7.8$ ;  $p=.050$ ). There were more women than men that at their retirement almost did not have anything, and more men had at that time their working situation mainly solved.

The working situation was independent from the sport performance ( $\chi^2(3)=0.4$ ;  $p=.942$ ).

Table 66. Working situation at retirement by career path

	Career Path			
	Exclusively Sport (N=76)	Sport>Studies(N=167)	Sport=Studies(N=129)	Sport- Working(N=101)
Yes, completely solved	3.9%	10.8%	18.6%	33.7%
Yes, mainly solved	31.6%	19.2%	23.3%	38.6%
No, I had occasional jobs	21.1%	24.6%	15.5%	17.8%
No, I did not have anything	43.4%	45.5%	42.6%	9.9%

Table 67. Working situation at retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=296)	Women (N=178)	Superclass (N=251)	Class (N=223)
Yes, completely solved	17.9%	14.6%	16.7%	16.6%
Yes, mainly solved	29.4%	21.3%	27.5%	25.1%
No, I had occasional jobs	20.3%	19.7%	19.5%	20.6%
No, I did not have anything	32.4%	44.4%	36.3%	37.7%

The perceived degree in which being an elite athlete helped in working terms was not independent from the career path ( $\chi^2(3)=57.7$ ;  $p<.001$ ). Those athletes that combined sport and working perceived that help in a lower degree than the other three groups.

Women perceived that being elite athlete helped to their work in a higher degree than men ( $Z=2.6$ ;  $p=.010$ ). No significant differences were observed between Superclass and Class ( $Z=0.4$ ;  $p=-0.690$ ).

Table 68. Perceived degree in which being elite athlete helped in working terms (1=almost nothing a 4=A lot) by career path

	Career Path			
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	Exclusively Sport (N=76)	Sport>Studies(N=167)	Sport=Studies(N=129)	Sport- Working(N=101)
Mean	3.0	3.1	2.8	2.0
SD	1.0	1.0	1.2	1.0

Table 69. Perceived degree in which being elite athlete helped in working terms (1=almost nothing a 4=A lot) by sex and sport performance

	Sex		Sport Performance	
	Men (N=296)	Women (N=178)	Superclass (N=251)	Class (N=223)
Mean	2.7	2.9	2.8	2.8
SD	1.1	1.1	1.1	1.1

#### 4.5.4. Length of the adaptation period after the retirement

Fifty-three point three percent of the athletes informed that they needed an adaptation process after the retirement. This percentage was significantly lower among those that combined sport and studies following a parallel model, or they worked, and it was higher among those that were devoted to sport and those which followed a convergent model ( $\chi^2(3)=24.3$ ;  $p<.001$ ). This percentage was similar by sex ( $\chi^2(1)=1.1$ ;  $p=.298$ ) and by sport performance ( $\chi^2(1)=0.9$ ;  $p=.351$ ).

Table 70. Need of coping an adaptation process after retirement by career path

	Career Path			
	Exclusively Sport (N=77)	Sport>Studies(N=168)	Sport=Studies(N=129)	Sport- Working(N=101)
No	32.5%	37.5%	58.1%	58.4%
Yes	67.5%	62.5%	41.9%	41.6%

Table 71. Need of coping an adaptation process after retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=297)	Women (N=179)	Superclass (N=251)	Class (N=225)
No	48.5%	43.6%	44.6%	48.9%
Yes	51.5%	56.4%	55.4%	51.1%

Six point three percent of the athletes informed that the time for feeling adapted did not conclude yet, that they missed their life as athletes and they believed they would never stop missing it.

Among those athletes that they felt this adaptation process has already concluded, they estimated that the process' length was 18.5 months ( $\pm 15.3$ ). No significant differences appeared by career path ( $F_{3,205}=0.8$ ;  $p=.522$ ), neither by sex ( $t_{205}=0.1$ ;  $p=.910$ ) nor by sport performance ( $t_{205}=1.1$ ;  $p=.294$ ).

Table 72. Length (months) of the adaptation process to normal life after retirement by career path

	Career Path			
	Exclusively Sport (N=42)	Sport>Studies(N=88)	Sport=Studies(N=46)	Sport-Working(N=30)
Mean	17.6	20.2	18.1	15.7
SD	15.3	17.3	14.9	8.4

Table 73. Length (months) of the adaptation process to normal life after retirement by sex and sport performance

	Sex		Sport Performance	
	Men (N=123)	Women (N=84)	Superclass (N=116)	Class (N=91)
Mean	18.5	18.8	19.6	17.4
SD	16.5	13.5	15.6	15.0

#### 4.5.5. Evaluation of the time of retirement.

Fifteen percent of the athletes considered that they retired too soon, 29.8% that it was before the right time, 47.8% at the right time, and only 5.5% and 1.3% believed that the retired a bit late or too late. This evaluation of the time of retirement was independent from the career path ( $\chi^2(12)=19.4$ ;  $p=.080$ ), sex ( $\chi^2(4)=3.2$ ;  $p=.530$ ) and sport performance ( $\chi^2(4)=3.3$ ;  $p=.524$ ).

Table 74. Evaluation of the time retirement by career path

	Career Path			
	Exclusively Sport (N=75)	Sport>Studies(N=167)	Sport=Studies(N=129)	Sport-Working(N=102)
Too soon	22.7%	16.2%	18.6%	5.9%
Before the right time	20.0%	32.9%	32.6%	28.4%
At the right time	49.3%	46.7%	42.6%	54.9%
A bit late	6.7%	3.0%	5.4%	8.8%
Too late	1.3%	1.2%	0.8%	2.0%

Table 75. Evaluation of the time retirement by sex and sport performance

	Sex	Sport Performance
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	Men (N=295)	Women (N=179)	Superclass (N=251)	Class (N=223)
Too soon	15.9%	15.1%	14.7%	16.6%
Before the right time	28.8%	31.8%	29.5%	30.5%
At the right time	48.5%	46.4%	47.4%	48.0%
A bit late	6.1%	4.5%	6.4%	4.5%
Too late	0.7%	2.2%	2.0%	0.4%

#### 4.5.6. Working integration process after retirement

The athletes in general lived their working integration process in a positive way ( $4.1 \pm 1.6$ ). In a scale from Very Badly (1) to Very Well (6), 47.5% lived it very well or assigned a 5 in the scale, 9.3% lived it very badly and 9.1% assigned a 2 in the scale.

This evaluation of the working integration process was not independent from the type of career path ( $\chi^2(3)=9.2$ ;  $p=.027$ ). The athletes that combined sport and working lived this process in a more positive way than those focused on sport. No significant differences appeared by sex ( $Z=0.2$ ;  $p=.881$ ) neither by sport performance ( $Z=0.2$ ;  $p=.851$ ).

Table 76. How did they lived the working integration process after retirement (1=very badly to 6=very well) by career path

	Career Path			
	Exclusively Sport (N=74)	Sport>Studies(N=166)	Sport=Studies(N=128)	Sport- Working(N=95)
Mean	3.7	4.0	4.3	4.4
SD	1.7	1.7	1.5	1.6

Table 77. How did they lived the working integration process after retirement (1=very badly to 6=very well) by sex and sport performance

	Sex		Sport Performance	
	Men (N=290)	Women (N=174)	Superclass (N=247)	Class (N=218)
Mean	4.1	4.1	4.1	4.1
SD	1.6	1.6	1.6	1.7

Table 78. How did they lived the working integration process after retirement (1=very badly to 6=very well) by career path

	Career Path
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	Exclusively Sport (N=74)	Sport>Studies(N=166)	Sport=Studies(N=128)	Sport- Working(N=95)
Very badly	16.2%	11.4%	3.9%	7.4%
2	8.1%	9.0%	8.6%	10.5%
3	18.9%	16.9%	21.1%	10.5%
4	18.9%	19.3%	17.2%	11.6%
5	18.9%	19.3%	21.1%	26.3%
Very well	18.9%	24.1%	28.1%	33.7%

Table 79. How did they lived the working integration process after retirement (1=very badly to 6=very well) by sex and sport performance

	Sex		Sport Performance	
	Men (N=290)	Women (N=174)	Superclass (N=246)	Class (N=218)
Very badly	9.7%	8.6%	6.9%	11.9%
2	8.3%	10.3%	10.2%	7.8%
3	16.2%	18.4%	17.9%	16.1%
4	18.3%	15.5%	17.9%	16.5%
5	21.7%	20.1%	21.5%	20.6%
Very well	25.9%	27.0%	25.6%	27.1%

Only 12.1% of the athletes received counseling from any support program for their working integration after retirement. This percentage was significantly higher among those athletes that combined sport and studies in a convergent model, and significantly lower among those that combined sport and working ( $\chi^2(3)=16.5$ ;  $p=.001$ ). No significant differences were observed by sex ( $\chi^2(1)=1.0$ ;  $p=.311$ ) neither by sport performance ( $\chi^2(1)=3.7$ ;  $p=.054$ ).

Table 80. Distribution of the athletes that received counseling from any support program for their working integration by career path

	Career Path			
	Exclusively Sport (N=75)	Sport>Studies(N=167)	Sport=Studies(N=129)	Sport- Working(N=102)
No	88.0%	80.2%	92.2%	95.1%
Yes	12.0%	19.8%	7.8%	4.9%

Table 81. Distribution of the athletes that received counseling from any support program for their working integration by sex and sport performance

	Sex		Sport Performance	
	Men (N=295)	Women (N=179)	Superclass (N=251)	Class (N=223)

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No	89.2%	86.0%	85.3%	91.0%
Yes	10.8%	14.0%	14.7%	9.0%

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Forty-three point nine percent of the athletes received counseling from the PROAD (Programa de Atención al Deportista de alto nivel) program of the Spanish Sport Council (SSC). Three point five percent of the athletes received help from the SSC but they did not specify if this help was made through the PROAD. Ten point five percent of the athletes received support from National Olympic Committee (NOC) of Spain. This institution helped 1.8% of athletes through the OAD (Oficina de Atención al Deportista), too. Some athletes combined the support from the NOC of Spain with the High Performance Center (5.3%) or with the PROAD (5%). Twelve point three percent of the athletes received support from the Adecco Foundation (Non-profit organization focused on the working integration of population with difficulties to find a job). Ten point five percent received support directly from the Athletes Assistance Services (SAE) of the High Performance Center of Sant Cugat at Catalonia, 1.8% from the Athletes Associations, 1.8% from the University employment offices, 1.8 % from the Madrid Olympic Foundation (Madrid Region) and 1% received support from their club.

Table 82. Institutions, Foundations and programs that counsel the athletes at their working integration by career path

	Career Path				Total
	Exclusively Sport (N=9)	Sport>Studies(N=33)	Sport=Studies(N=10)	Sport-Working(N=5)	
Adecco	22.2%	15.2%			12.3%
Athletes Associations		3.0%			1.8%
CAR/SAE	11.1%	12.1%		20.0%	10.5%
Club	11.1%				1.8%
NOC Spain		12.1%	10.0%	20.0%	10.5%
NOC Spain /High Performance Center		6.1%		20.0%	5.3%
NOC Spain /OAD-PROAD	11.1%	6.1%			5.3%
NOC Spain OAD			10.0%		1.8%
University employment office		3.0%			1.8%
Spanish Sport Council (SSC)		3.0%		20.0%	3.5%
Madrid Olympic (Madrid Region)	11.1%				1.8%
PROAD	33.3%	39.4%	80.0%	20.0%	43.9%

#### 4.5.7. Difficulties experienced after retirement

The different difficulties experienced by the athletes at the retirement were not independent one to another, and then a multivariate analysis was done.

The degree of difficulties the athletes experienced after their sport retirement was not independent from the career path ( $F_{21,1221}=2.7$ ;  $p<.001$ ). The univariate analysis showed a significant effect of the type of career path on the perceived difficulties with the professional career ( $F_{3,411}=4.6$ ;  $p=.004$ ), the studies ( $F_{3,411}=5.5$ ;  $p=.001$ ), the family ( $F_{3,411}=5.2$ ;  $p=.002$ ) and with economic affairs ( $F_{3,411}=6.6$ ;  $p<.001$ ). The athletes that combined sport with a work or those who combined sport and studies in a parallel model had fewer difficulties with the professional career than the other two groups. On the other hand, the athletes focused solely on sport experience more difficulties at the family sphere than the other three groups. Finally, those athletes than combined the sport with a work or with studies in a parallel model found less economic difficulties than those devoted to sport or those who combined sport and studies in a convergent model.

No significant differences were found by the type of career path on the degree they experienced difficulties with their social network ( $F_{3,411}=2.1$ ;  $p=.096$ ), nor with the leisure activities ( $F_{3,411}=1.2$ ;  $p=.317$ ) neither with their health ( $F_{3,411}=1.3$ ;  $p=.296$ ).

This degree of difficulties experienced after the sport retirement was no independent from sex ( $F_{7,408}=2.8$ ;  $p=.008$ ). Women experienced more degree on difficulties with the social network ( $F_{1,414}=7.9$ ;  $p=.005$ ) and with their health ( $F_{1,414}=4.1$ ;  $p=.044$ ).

No significant differences between men and women were found at experiencing difficulties with their professional career ( $F_{1,414}=0.2$ ;  $p=.679$ ), with studies ( $F_{1,414}=0.6$ ;  $p=.426$ ), with their family ( $F_{1,414}=1.2$ ;  $p=.266$ ), nor with the leisure activities ( $F_{1,414}=1.5$ ;  $p=.222$ ) neither with economic affairs ( $F_{3,411}=0.5$ ;  $p=.494$ ).

Finally, no significant differences were found at the difficulties suffered after the retirement by the sport performance ( $F_{7,408}=1.3$ ;  $p=.233$ ).

Table 83. Degree of perceived difficulties (1=none to 5=a lot) experienced in different dimensions by career path

		Career Path			
		Exclusively Sport (N=64)	Sport>Studies(N=152)	Sport=Studies(N=115)	Sport- Working(N=84)
Professional Career	Mean	2.1	2.2	1.7	1.7
	SD	1.4	1.3	1.1	1.2
Studies	Mean	2.1	1.8	1.5	1.4
	SD	1.5	1.2	1.0	1.0
Family	Mean	2.1	1.5	1.5	1.5
	SD	1.4	1.0	0.9	1.1
Socio network	Mean	1.9	2.0	2.0	1.6
	SD	1.2	1.2	1.3	1.0
Leisure	Mean	2.2	1.9	2.0	1.8
	SD	1.5	1.2	1.3	1.2
Health	Mean	2.2	2.1	1.9	1.9
	SD	1.3	1.3	1.2	1.2
Economic	Mean	2.5	2.4	1.9	1.8
	SD	1.4	1.5	1.2	1.3

Table 84 Degree of perceived difficulties (1=none to 5=a lot) experienced in different dimensions by sex and sport performance

		Sex		Sport Performance	
		Men(N=257)	Women (N=159)	Superclass (N=218)	Class (N=198)
Professional Career	Mean	1.9	2.0	2.0	1.9
	SD	1.3	1.3	1.3	1.3
Studies	Mean	1.6	1.7	1.7	1.7
	SD	1.1	1.2	1.2	1.1
Family	Mean	1.6	1.5	1.6	1.6
	SD	1.1	1.0	1.1	1.1
Socio network	Mean	1.8	2.1	1.9	1.9
	SD	1.1	1.4	1.2	1.3
Leisure	Mean	1.9	2.1	1.8	2.1
	SD	1.2	1.3	1.2	1.3
Health	Mean	1.9	2.2	2.0	2.0
	SD	1.2	1.3	1.2	1.3
Economic	Mean	2.1	2.2	2.1	2.2
	SD	1.4	1.4	1.4	1.4

#### 4.6. CURRENT RELATIONSHIP WITH THE SPORT

The results showed that 90.6% of the athletes do exercise. This percentage was lower for those athletes that only trained ( $\chi^2(3)=9.7$ ;  $p=.021$ ) and higher for the athletes classified as Superclass ( $\chi^2(3)=5.6$ ;  $p=.018$ ). There were not significant differences between male and female ( $\chi^2(3)=1.5$ ;  $p=.228$ ).

The 32.8% of the athletes took part in competitions for veterans. This percentage was significantly lower for those athletes that only trained and those who combined sport and studies with priority for the sport ( $\chi^2(3)=9.7$ ;  $p=.021$ ). In addition, this percentage was significantly higher for those athletes that combined sport and studies in a similar way. Male athletes participated in more competitions than female athletes ( $\chi^2(3)=3.6$ ;  $p=.036$ ). There were not significant differences according to the performance ( $\chi^2(3)=0.01$ ;  $p=.935$ ).

The 69.6% of the athletes were in touch with their coaches. This percentage was not significantly different for: i) those athletes that had different career path ( $\chi^2(3)=1.4$ ;  $p=.701$ ), ii) male and female athletes ( $\chi^2(3)=2.1$ ;  $p=.152$ ), and iii) the athletes classified as Superclass and Class ( $\chi^2(3)=0.9$ ;  $p=.337$ ).

The 47.4% of the athletes showed a job related to the sport. This percentage was significantly lower for those athletes that combined sport and studies in a convergent way ( $\chi^2(3)=16.1$ ;  $p=.001$ ) and greater for those athletes classified as Superclass ( $\chi^2(3)=4.3$ ;  $p=.038$ ). There were not significant differences between male and female athletes ( $\chi^2(3)=0.4$ ;  $p=.527$ ).

The 33.3% of the athletes had a part time job related to sport. This percentage was not significantly different for: i) those athletes that follow different career path ( $\chi^2(3)=6.1$ ;  $p=.105$ ), ii) male and female athletes ( $\chi^2(3)=0.1$ ;  $p=.921$ ), and iii) those athletes classified as Superclass and Class ( $\chi^2(3)=0.2$ ;  $p=.654$ ).

The 67.8% of the athletes go to sport events as a spectator. This percentage was not significantly different for: i) those athletes that follow different career path ( $\chi^2(3)=2.5$ ;  $p=.483$ ), ii) male and female athletes ( $\chi^2(3)=0.4$ ;  $p=.525$ ), and iii) those athletes classified as Superclass and Class ( $\chi^2(3)=1.1$ ;  $p=.295$ ).

The 57.6% of the athletes act as an informal guidance of Young athletes. This percentage was not significantly different for: i) those athletes that follow different career path ( $\chi^2(3)=5.6$ ;  $p=.135$ ), ii) male and female athletes ( $\chi^2(3)=3.0$ ;  $p=.082$ ), and iii) those athletes classified as Superclass and Class ( $\chi^2(3)=1.3$ ;  $p=.264$ ).

Table 85. Current relationship with the sport according to the type of career path.

	Career Path				Total
	Exclusively Sport	Sport>Studies	Sport-studies	Sport-Working	
I do exercise	81.2% (69)	90.5% (158)	93.7% (127)	93.6% (94)	90.6% (448)
I participate in competitions for veterans	21.9% (64)	26.0% (150)	41.5% (123)	40.7% (81)	32.8% (418)
I keep in touch with my coaches	65.6% (64)	70.3% (155)	67.7% (124)	73.8% (84)	69.6% (427)
A job related to sport	56.5% (69)	56.3% (160)	34.4% (125)	43.0% (93)	47.4% (447)
Part time job related to sport	32.3% (65)	36.1% (147)	25.4% (122)	41.0% (83)	33.3% (417)
I go to sport events as a fan	65.6% (64)	64.1% (153)	69.9% (123)	73.2% (82)	67.8% (422)
An informal guidance of Young athletes	44.8% (67)	59.2% (152)	59.5% (121)	62.2% (82)	57.6% (422)

Table 86. Current relationship with the sport according to the sex and performance.

	Sex		Sport Performance	
	Men	Women	Superclass	Class
I do exercise	92.0% (274)	88.6% (175)	93.7% (238)	87.2% (211)
I participate in competitions for veterans	63.7% (251)	72.6% (168)	32.9% (219)	32.5% (200)
I keep in touch with my coaches	72.2% (259)	65.7% (169)	71.6% (210)	67.3% (199)
A job related to sport	48.7% (275)	45.7% (173)	52.1% (242)	42.2% (206)
Part time job related to sport	33.1% (254)	33.5% (164)	32.3% (223)	34.4% (195)
I go to sport events as a fan	69.0% (255)	66.1% (168)	70.1% (224)	65.3% (199)
An informal guidance of Young athletes	61.0% (259)	52.4% (164)	60.3% (219)	54.9% (204)

The 37.9% of the athletes practiced sport more than 3 times per week. The 39.5% of the athletes practiced sport 2 or 3 times per week, 14% once per week, 5.4% less than one time per week and 3.2% only on vacations. These percentages were not significantly different for the athletes that followed different career path ( $\chi^2(12)=11.0$ ;  $p=.527$ ). Additionally, there were not significant differences between male and female athletes ( $\chi^2(4)=9.1$ ;  $p=.059$ ) and between those athletes classified as Superclass and Class ( $\chi^2(4)=4.6$ ;  $p=.328$ ).

Table 87. Frequency distribution of sport practice according to the type of career path.

	Career Path			
	Exclusively Sport (N=68)	Estudios Prior. Dep. (N=158)	Sport=Studies(N=122)	Sport-Working(N=95)
Only on holidays	5.9%	3.8%	1.6%	2.1%
Less than one time per week	7.4%	5.7%	5.7%	3.2%
Once a week	7.4%	17.1%	12.3%	15.8%
Two or three times per week	38.2%	41.1%	36.9%	41.1%
More than three times per week	41.2%	32.3%	43.4%	37.9%

Table 88. Frequency distribution of sport practice according to the sex and performance.

	Sex		Sport Performance	
	Men (N=279)	Women (N=165)	Superclass (N=238)	Class (N=206)
Only on holidays	2.9%	3.6%	2.9%	3.4%
Less than one time per week	3.6%	8.5%	5.0%	5.8%
Once a week	11.8%	17.6%	17.2%	10.2%
Two or three times per week	42.3%	35.2%	38.7%	40.8%
More than three times per week	39.4%	35.2%	36.1%	39.8%

The 31.9% of the athletes practiced sport during trainings of 1 or less hours of time duration. The 58.8% practiced training of 1 or 2 hours of time duration, and the 9.3% did exercises for more than 2 hours. These percentages were not significantly different for those athletes that followed different type of career path ( $\chi^2(6)=6.1$ ;  $p=.411$ ). Also, there were not significant differences between male and female athletes ( $\chi^2(4)=2.1$ ;  $p=.356$ ) and between those athletes classified as Superclass and Class ( $\chi^2(4)=5.7$ ;  $p=.057$ ).

Table 89. Time duration of the sport practice trainings according to the type of career path.

	Career Path			
	Exclusively Sport (N=67)	Estudios Prior. Dep. (N=154)	Sport=Studies(N=122)	Sport-Working(N=95)
One hour or less	22.4%	34.4%	35.2%	29.5%
Between one or two hours	64.2%	55.2%	57.4%	63.2%
More than two hours	13.4%	10.4%	7.4%	7.4%

Table 90. Time duration of the sport practice trainings according to the sex and performance.

	Sex		Sport Performance	
	Men (N=276)	Women (N=163)	Superclass (N=234)	Class (N=205)
One hour or less	31.5%	32.5%	29.9%	34.1%
Between one or two hours	57.6%	60.7%	57.7%	60.0%
More than two hours	10.9%	6.7%	12.4%	5.9%

## 4.7. SATISFACTION AND BENEFITS GIVEN BY THE SPORT.

### 4.7.1. Satisfaction with the sport achievements.

The results showed that the 29.6% of the athletes were fully satisfied with their sport achievements, 49% were enough satisfied, 18.2% considered difficult to answer this question, 2.5% were enough unsatisfied and 0.6% fully unsatisfied. There were not significant differences

for the sport achievements according to the type of career path ( $\chi^2(3)=1.1$ ;  $p=.778$ ) and according to the sex ( $Z=1.3$ ;  $p=.200$ ). However, the athletes classified as Superclass showed greater levels of satisfaction with their sport achievements than the athletes classified as Class ( $Z=3.0$ ;  $p=.003$ ).

Table 91. Satisfaction with the sport achievements according to the type of career path.

	Career Path			
	Exclusively Sport (N=76)	Estudios Prior. Dep. (N=167)	Sport=Studies(N=129)	Sport-Working(N=101)
Fully unsatisfied		0.6%	0.8%	1.0%
Enough unsatisfied	2.6%	2.4%	3.1%	2.0%
It is difficult to answer	19.7%	18.0%	17.8%	17.8%
Enough satisfied	40.8%	49.1%	51.2%	52.5%
Fully satisfied	36.8%	29.9%	27.1%	26.7%

Table 92. Satisfaction with the sport achievements according to the sex and performance

	Sex		Sport Performance	
	Men (N=295)	Women (N=179)	Superclass (N=251)	Class (N=223)
Fully unsatisfied	0.7%	0.6%	0.4%	0.9%
Enough unsatisfied	3.1%	1.7%	2.4%	2.7%
It is difficult to answer	14.9%	23.5%	13.1%	23.8%
Enough satisfied	50.8%	46.4%	50.6%	47.5%
Fully satisfied	30.5%	27.9%	33.5%	25.1%

#### 4.7.2. Satisfaction with the current live.

The athletes' level of satisfaction with the current live was assessed according to the scale (1=Fully unsatisfied to 5=fully satisfied) with four items (I am fully satisfied, this is the happiest moment of my life, I am happy now like when I was competing in sport, I have reached more things that I thought in my life). Generally, the athletes showed levels of satisfaction greater than (3) in all the items of the scale with the exception of the item: if they are happy like when they were competing in sport (2.9).

A multivariate analysis was performed due to the fact that the different degree of agreement were not independent for the different factors assessed. The degree of current satisfactions was independent of the type of career path ( $F_{12,1302}=0.8$ ;  $p=.618$ ), the sex ( $F_{4,435}=1.4$ ;  $p=.233$ ) and the performance ( $F_{4,435}=0.9$ ;  $p=.478$ ).

Table 93. Opinion about the current life (1=fully disagree to 5=fully agree) according to the type of career path.

		Career Path				Total (N=439)
		Exclusively Sport (N=69)	Estudios Prior. Dep. (N=160)	Sport=Studies(N=122)	Sport-Working(N=88)	
I am fully satisfied	Mean	3.5	3.7	3.8	3.6	3.7
	SD	1.2	1.1	1.1	1.2	1.1
This is the happiest moment of my life	Mean	3.1	3.2	3.3	3.2	3.2
	SD	1.3	1.1	1.2	1.2	1.2
I am happy now like when competing in sport	Mean	2.6	2.9	3.0	3.0	2.9
	SD	1.2	1.2	1.3	1.3	1.3
I have reached more things that I though in my live	Mean	3.3	3.2	3.3	3.3	3.3
	SD	1.2	1.2	1.2	1.3	1.2

Table 94. Opinion about the current life (1=fully disagree to 5=fully agree) according to the sex and performance

		Sex		Sport Performance	
		Men (N=270)	Women (N=170)	Superclass (N=233)	Class (N=207)
I am fully satisfied	Mean	3.7	3.6	3.6	3.7
	SD	1.1	1.2	1.1	1.1
This is the happiest moment of my life	Mean	3.2	3.2	3.2	3.3
	SD	1.1	1.2	1.2	1.1
I am happy now like when competing in sport	Mean	3.0	2.8	2.9	2.9
	SD	1.2	1.3	1.2	1.3
I have reach more things that I tough in my live	Mean	3.3	3.2	3.3	3.2
	SD	1.2	1.2	1.2	1.2

#### 4.7.3. Benefits provided by the sport career.

A multivariate analysis was performed due to the fact that the different benefits provided by the sport were not independent among them. The athletes' perceptions for the benefits provided by the sport career were not independent of the type of career path ( $F_{36,1326}=2.0$ ;  $p=.001$ ). The univariate analyses showed a significant effect of the type of career path on the communication skills ( $F_{3,451}=3.1$ ;  $p=.028$ ), time management skills ( $F_{3,451}=3.2$ ;  $p=.025$ ), and knowledge/ skills for the current job ( $F_{3,451}=5.0$ ;  $p=.002$ ). The athletes that combined studies and sport in a similar way considered that the sport provided fewer benefits on communication skills than those athletes that combined sport and working, sport and studies with more importance for sport or those athletes that only trained. The athletes only focused on trainings perceived that the sport

provided less time management skills than the other career path types. Lastly, the athletes that combined sport and studies in a similar way perceived that the sport provided less knowledge/skills for the current job than those athletes that combined sport and studies with a higher priority for the sport.

There were not significant differences according to the type of career path for the level of target setting skills ( $F_{3,451}=1.0$ ;  $p=.405$ ), problem solving skills ( $F_{3,451}=0.3$ ;  $p=.827$ ), self-control and self-regulation skills ( $F_{3,451}=0.03$ ;  $p=.827$ ), self-confidence ( $F_{3,451}=1.7$ ;  $p=.178$ ), will power skills ( $F_{3,451}=0.5$ ;  $p=.719$ ), team-work skills ( $F_{3,451}=1.4$ ;  $p=.233$ ), social relationships ( $F_{3,451}=1.8$ ;  $p=.145$ ), leadership ( $F_{3,451}=1.6$ ;  $p=.193$ ), or physical well being ( $F_{3,451}=0.8$ ;  $p=.472$ ).

Table 95. Assessment of the degree of sport benefits provided (1=Nothing a 5=Too much) according to the type of career path.

		Career Path				Total (N=455)
		Exclusively Sport (N=70)	Sport>Studies (N=162)	Sport=Studies(N =125)	Sport- Working(N=98)	
Target setting skills	Mean	4.2	4.4	4.4	4.3	4.4
	SD	1.0	0.8	0.9	0.9	0.9
Solving problems skills	Mean	4.2	4.3	4.3	4.3	4.3
	SD	0.9	0.9	0.9	0.9	0.9
Self-control and self-regulation skills	Mean	4.2	4.2	4.2	4.2	4.2
	SD	1.0	1.0	0.9	0.9	0.9
Self-confidence	Mean	4.1	4.2	4.0	4.3	4.2
	SD	1.0	1.0	1.1	0.8	1.0
Will power	Mean	4.5	4.6	4.5	4.5	4.5
	SD	0.8	0.7	0.8	0.8	0.8
Team work skills	Mean	4.4	4.4	4.2	4.4	4.3
	SD	0.9	0.9	1.1	0.9	1.0
Communication skills	Mean	4.0	4.0	3.7	4.0	3.9
	SD	0.9	1.1	1.3	1.0	1.1
Time management	Mean	3.7	4.1	4.1	4.1	4.0
	SD	1.0	1.1	1.0	1.0	1.0
Social relationships	Mean	3.9	4.0	3.8	4.1	3.9
	SD	1.0	1.0	1.2	1.0	1.1
Leadership	Mean	4.0	4.0	3.8	4.1	4.0
	SD	1.0	1.0	1.3	1.0	1.1
Physical well-being	Mean	3.9	4.0	4.1	4.1	4.0
	SD	1.1	1.2	1.1	1.1	1.1
Knowledge/Skills for the current job	Mean	3.6	3.9	3.2	3.6	3.6
	SD	1.4	1.4	1.5	1.4	1.4

The level of satisfaction that perceived the athletes about the sport benefits was not independent of sex ( $F_{12,443}=4.5$ ;  $p<.001$ ). The univariate analyses showed a significant effect of sex on the level of athletes' self-confidence ( $F_{1,454}=7.0$ ;  $p=.009$ ) and time management ( $F_{1,454}=12.0$ ;  $p=.001$ ). Male athletes considered that the sport allowed to increase the self-confidence level compared with female athletes. Also, the female athletes perceived that the sport gave more time management skills than the male athletes.

There were not significant differences according to sex for the level of sport benefits on target setting skills ( $F_{1,454}=1.5$ ;  $p=.224$ ), problem solving skills ( $F_{1,454}=0.4$ ;  $p=.549$ ), self-control and self-confidence skills ( $F_{1,454}=1.9$ ;  $p=.171$ ), will power ( $F_{1,454}=0.1$ ;  $p=.825$ ), team work skills ( $F_{1,454}=0.5$ ;

p=.494), communication skills ( $F_{1,454}=0.1$ ; p=.706), social relationships ( $F_{1,454}=0.1$ ; p=.706), leadership ( $F_{1,454}=1.5$ ; p=.216), physical well-being ( $F_{1,454}=2.3$ ; p=.134) and knowledge/ skills for the current job ( $F_{1,454}=0.3$ ; p=.610).

The athletes showed a level of sport benefits independent of the performance ( $F_{12,443}=1.0$ ; p=.483).

Table 96. Assessment of the degree of sport benefits provided (1=Nothing a 5=Too much) according to the sex and performance.

		Sex		Sport Performance	
		Men(N=281)	Women (N=175)	Superclass (N=238)	Class (N=218)
Target setting skills	Mean	4.3	4.4	4.4	4.4
	SD	0.9	0.8	0.9	0.9
Solving problems skills	Mean	4.3	4.3	4.3	4.2
	SD	0.9	0.8	0.9	0.9
Self-control and self-regulation skills	Mean	4.2	4.3	4.3	4.2
	SD	1.0	0.9	0.9	1.0
Self-confidence	Mean	4.3	4.0	4.2	4.2
	SD	0.9	1.1	1.1	0.9
Will power	Mean	4.5	4.5	4.5	4.5
	SD	0.8	0.8	0.8	0.7
Team work skills	Mean	4.3	4.4	4.4	4.3
	SD	1.0	1.0	0.9	1.0
Communication skills	Mean	3.9	3.9	3.9	3.9
	SD	1.1	1.2	1.1	1.1
Time management	Mean	3.9	4.3	4.1	4.0
	SD	1.0	1.0	1.0	1.0
Social relationships	Mean	3.9	3.9	3.9	4.0
	SD	1.0	1.2	1.1	1.0
Leadership	Mean	4.1	3.9	4.0	4.0
	SD	1.0	1.2	1.1	1.1
Physical well-being	Mean	4.1	3.9	4.0	4.0
	SD	1.1	1.1	1.0	1.2
Knowledge/Skills for the current job	Mean	3.6	3.6	3.8	3.4
	SD	1.5	1.4	1.3	1.5

#### 4.8. QUALITATIVE EVALUATION OF THE ATHLETES AFTER THE RETIREMENT.

The questionnaire included one open question that allows them to write/ comment or include all that they consider.

Too many athletes included some information about the need for more support after the sport retirement. The athletes pointed out that the support is required before and after the sport retirement.

“I think that the high level athletes need more help, orientation and support before and after the retirement, mainly which they do not forget us. We tried our best during our best year of our lives for the country. Under the premises of illusions and feelings for our country the sport authorities should account for these efforts after the retirement”.

“There is a need of guidance and follow up from the sport institutions trying to integrate the athletes retired in the society. Some athletes have given all of their lives practicing sport; I remember the cases of Chava Jiménez or Jesús Rollan. I am pretty sure that there are more forgiven athletes in the world, thanks, it is a pleasure to cooperate”.

“Personally, I think, from my own experience, that we have to prepare the athletes to face the retirement, and then to support and help him/ her for the future labour integration”.

On the other hand, there are other athletes that enhanced the importance of support. They consider that it does not being restricted only to the labour context. The psychological support after the retirement is an important issue due to the importance of this transitional period that may include feelings of loneliness, abandonment or neglect from the sport authorities and coaches after the retirement.

“I think that the psychological issues associated to the retirement should be studied in depth in elite athletes. The grants for labour integration are not the only support for the retired athletes. The psychological aids are necessary for facing the new athletes’ scenarios”

“It was very hard the transitional period before and after the retirement. The moment when you consider that you have finished your sport career in the elite level is the most important. I consider that the athlete needs to feel the support because all is new and unknown. Generally he/ she has the feeling that is lost and isolated. I think that the sport authorities should increase the support, aids and grants from a psychological and labour integration perspectives after the retirement. This is not just a job position. The sport is considered a life style from the childhood to the adulthood. The athlete’s mind has growing up in a fictitious

bubble completely isolated from the “regular” world. Please, take this issue into account.”

“It is very hard the social and labour integration when the people consider you a retired with 30 years old. All the values and experiences that you acquired during too many years are not of importance for the society. You pass to the forgiveness overnight.”

“After my retirement I felt like a broken toy that was not useful for the federation, the coaches, the team, etc. The sport authorities should pay attention to the athletes’ integration into the real life and labour conditions after the athletes’ retirement. They have sacrificed too much thing for Spain.”

In addition, There are highlighted some specific comments from the female athletes that have worse situations than the male athletes, both in the work environment and specifically in the Jobs related to the sport.

“About the adaptation to the general life, as a coach or as a worker, if you are a female you have more limitations than the male colleagues. You can find colleagues with lower academic and professional qualification obtaining better jobs than me. Also, they are more appreciated and valued as a sportsman than the sportswomen”.

“It is very hard to work in the sport context if you are a female. My experience is that you can achieve excellent results and be a high qualified worker, but you will earn less money than my teammates and colleagues. In fact, it reflects that I have a lower consideration as a female”.

“Also, we have to take into account is the female situation when competing in a wrestling sport. This fact generated me some limitations for being a coach. This sport is mainly focused on the males’ domination. Particularly, this happens in senior categories but not in youth categories”.

Lastly, there is a need of qualitative studies that complete the information obtained from the athletes’ responses in the questionnaire. On the one hand, It may show that the questionnaire does not account for the athletes’ experience (for example, the athletes consider that the questionnaire does not go in depth when combining sport and working or when the female athletes are pregnant). On the other hand, it may reflect the difficulties when choosing a specific response in the questionnaire (for example, some athletes combined both sport and studies during some years and also sport and working in other periods).



## MAIN FINDINGS



In order to describe the athletes that followed different career paths, men and women, and finally those who achieved a better sport performance, the main findings are summarized.

### **5.1. SOCIODEMOGRAPHIC FEATURES**

A higher age was found among the athletes devoted exclusively to sport and those that combined sport and working than those that followed a Dual Career with studies (at both models).

More participants single and divorced were found in the athletes focused on sport and within the women's group. On the other hand, this group (devoted to sport) had a higher number of children than the other groups. However women had fewer children than men.

### **5.2. SPORT FEATURES-PROFILE**

The sport performance was independent from the type of career path chosen. Nevertheless, this result should be taken with prudence. The wide range of sport disciplines the athletes from this study come may bias the results. As the sport performance from some sport classified as Superclass could not be compared with other. More men than women chose to focus on sport as unique career. The age athletes started practicing their sport was around 10 years old and it matches with the stage of specialization. Those athletes who combined sport and work started later practicing their sport (around 12 years old). A 10-11 years old child in Spain is finishing primary school. This delay of two years of the athletes that work comparing them with the other three groups maintains at the next to ages: the age entering at the mastery stage and the age of the best sport achievement. They reach the mastery stage and at that time, at the studies dimension they are suppose to enter in the higher educational system: university.

Although those athletes that developed their sport career exclusively started practicing their sport at the same age than those athletes that followed a dual career with studies, by the time they entered in the mastery stage another two years delay as the working group of athletes.

Women reach the mastery stage sooner than the men counterparts. This pattern is repeated when comparing Superclass with Class athletes.

On the other hand, no significant differences were found at training hours between the Dual Career with studies groups and the exclusively to sport group. It was observed that the group that combined sport with a work spend less hours training. Then, it seems that the time for studying is

obtained from the time for rest or leisure. This result is in agreement with previous studies where athletes following dual career with studies reported greater fatigue. It is also observed how women spent more hours training than men.

### 5.3. ACADEMIC PROFILE

As it could be expected, those athletes that did no study during the development of their sport career (those devoted to sport and those that combined sport with working) had a lower level of studies at their retirement than the athletes that combined their sport career with studies (at parallel or convergent model). These differences found at the moment of retirement are maintained nowadays.

However, even men and women achieved similar academic level at retirement, now women have a higher academic level than men. This result could be due the difficulties women find at their inclusion into the labour market (Conde, 2013; López de Subijana et. al., 2015).

In relation with the type of studies accomplished, the athletes that worked during their sport career and those focused on sport, had more frequently a Vocational Title (previous academic level to University) and the maximum level of Sport Coaching title from the National Federation. There are more men studying higher educational studies related with technical topics (Engineer or Architect) and more women that chose Life Sciences studies (Medicine, Physiotherapy..).

It is remarkable how among the athletes that earned a higher education title (Bachelor), 1 out of 4 is a title related to sport (Aquilina, 2013).

The athletes that combined sport and studies reported a greater effort dealing with these two fields, than the other two groups (exclusively focused on sport and sport combined with a work). This result is coherent with the fact that athletes stick to the studies in this higher educational level. The real challenge for these athletes is the higher education studies (Conde, 2013; López de Subijana et. al, 2014).

Only half of the athletes received academic support in terms of changing the exam dates. The number of those that received help with the continuous evaluation or with the mandatory attendance to class was reduced to another half (1/4 of those who studied). So, it is confirmed the lack of awareness about their rights as elite athlete mentioned in the article 9 of the royal decree of 2007 in Spain. Or, another option would be, that even if the rights are described in the law, they are not applied in the academic environment as previous studies pointed out (López de

Subijana et. al, 2014). It is remarkable how 1 out of 4 entered in the higher educational level through the percentage explained in the royal decree (3 or 5% depending on the type of studies) for this population. This may suppose that these athlete-students, began their higher educational studies with a lower level of knowledge than their counterparts.

Besides, the parents of the athletes focused solely on sport presented lower level of studies than the other groups that combined sport and studies.

## 5.4 EMPLOYMENT

Following a Dual Career path with studies implies more chances of achieving an employment. Men had more full time and entrepreneur positions than women. Salaries were higher at men comparing them with women, too. All this occurs, even though women reflected a higher qualification level (Barrapedro, Muniesa, & López de Subijana, 2016).

Half of the athletes that worked they did it in the sport sector. Those that had a better sport performance worked more frequently in the sport sector that their counterparts. It could be that the image and popularity may be related with a return on social network and its possibilities to enter into the sport labour market (Puig, & Vilanova, 2006).

As it could be expected, those athletes that developed a Dual Career with studies have more frequently an employ related with their studies. Therefore, having a second vocation could lead into a future work in which someone enjoys it.

Twenty-six percent of the athletes had a second employment and out of this group 28.2% this second work was related with sport. Similar with the general population, the athletes found their first job through social network (34.4%). This way of achieving the first job was more frequent among the athletes devoted to sport than at the other three groups. Then, the social network built during the sport career is essential to enter into the labour market successfully (Vilanova, 2008; Vilanova, & Puig, 2014). A really low percentage (3.1%) of the athletes found their first job thanks to a specific action from the stakeholders for the elite athletes. This means that the Job Centres from the different stakeholders did not have the desirable effect on those athletes.

## 5.5 SPORT RETIREMENT

Those athletes devoted to sport and those that combined sport and working delayed their retirement age longer than the athletes that combined sport and studies. These athletes enrolled in a dual career with studies, retired earlier, so the length of their sport career is shorter. This fact could be due these athletes have a second option for development a career in life after the sport. Men retired later than women. As well as it was explained by Selva et al. (2013) women face three main difficulties: the first one is the lower impact of women's sport, the second one is that for being mother they spend a sport season at least, and the third one are the biological problems that arise for being mother after an adult age.

The decision of retirement was at most of the cases voluntarily (82.9%). This is something positive in terms that the athletes decide when and how to retired. But on the contrary, the retirement was also featured as radical (67.4%), from one day to another, and non-planned (60.7%). These two features could cause adaptation problems at the retirement transition (Stambulova, & Wylleman, 2014).

Regarding the reasons of the sport retirement, the athletes expressed their worries about the labour reasons compare with the other reasons argued. Then, the working integration is the main concern. As Wylleman points out the economic dimension has a big relevance at the time of returning to "normal" life (Wylleman, Reints, & De Knop, 2013).

More than half of the athletes (56.9%) did not have nor had a temporary employment at the time of sport retirement. This fact is even worse among the athletes focused on sport (56.9%) and among those that followed a dual career with studies prioritising the sport (70%). Those that worked while they were competing they had already solved the problem of entering into the labour market. Those athletes that prioritized sport, exclusively or studying, perceived that the being an elite athlete helped them to find a job. Women have worse their labour situation at retirement than men. This data is in agreement with Vilanova and Puig (2014). However, women perceived that sport helped them more to enter into de labour market than men.

Fifty-three percent of the athletes need a time for adaptation after sport retirement. Those athletes focused on sport and those that followed a dual career with studies needed more frequently the adaptation period. It is worrying how 6.3% of the athletes did not get over this transition, this stage in their lives. Taking into account that the sample had 2 years or more retired, this data shows how this group have not adapted to life after sport. The adaptation process took  $18 \pm 5.3$  months. This data is coherent with the one year and a half showed by previous studies

(Wylleman, Reints, & De Knop, 2013). No significant differences were found between groups, so the groups had similar period of time for adaptation.

Regarding the moment of retirement, almost half (47.8%) of the athletes believed it was the right moment while 44.8% expressed it was too early. The fact that the retirement was radical and unplanned could affect this statement.

In general, their perception of the retirement process was positive. Although those athletes solely devoted to sport suffer more at this transition. At this point, the unique sport identity could constrain copying the transition to normal life after sport.

In relation to the support programs, it is remarkable how on 12.1% of the athletes received counselling for their working integration. The programs in which the athletes were enrolled were: the PROAD appears on first place (43%) given that is the national government program, then is followed by the National Olympic Committee (NOC) of Spain and High Performance Centres services with a 10.5%. If we search in the public national data base of the elite athletes in Spain, 3895 of elite athletes (2762 olympic sports, 980 non-olympic sport y 153 paralympics sports) arise at may 2016. Therefore, the administration program's range only support to a 1/5 of the elite athlete population.

Those athletes that worked or gave equal importance to sport and studies during their sport career had less economical problems at retirement than the other two groups. So developing a second career option at the same time during the sport career reduces the risk of suffering economical problems at sport retirement (North, & Lavalle, 2004).

Regarding the problems at the family environment, those athletes focused on sport reported them in a higher grade than the other groups. Again the unique sport identity may cause that these athletes do not manage well the family issues.

Women have more problems with the social network and with health. With respect to the social network taking into account that women had greater training load and that they reached higher levels of education than men, their personal life suffers "personal scarifies" as previous authors showed (Gledhill, & Harwood 2015). In relation to the health, these athletes may found with the fact of bearing with a 10 year of sport career and that the body was not prepare for it. The training load increased in those decades (this study sample) so it may not be at that time many studies of reference to see the consequences of a premature maturation on this population.

## 5.6 CURRENT RELATIONSHIP WITH THE SPORT

Almost all of the athletes (90.6%) do exercise regularly. The athletes that were focused on sport do less exercise today than the other three groups. Then, that exclusivity on sport is translated into less exercise after their sport career. Moreover, those athletes with better sport achievement, practice exercise in a greater amount than their counterparts.

The athletes that followed a parallel model of sport and studies are the group that tended to keep competing in sport (in veterans). Men still competing in veterans are more frequent than women. Having children after the sport career may constrain the possibilities for training and competing as they required many hours and weekly routines.

In Spain, the mother assumes the role in the family of taking care of the children.

Most of the athletes keep linked somehow with the sport world. This means that they are still in touch with their coaches. Those who achieved better sport results had more frequently jobs related with sport. The legacy of the sport image may be transfer into entering in the sport labour market. Most of the athletes attend to sport events as spectators. Half of them train young athletes.

The data related with doing exercise regularly is expressed in a 77.4% of them do exercise twice or three times per week and that their training session are from 1 to 2 hours long in 58.8% of the cases.

## 5.7 SATISFACTION AND BENEFITS GIVEN BY THE SPORT

In relation with their satisfaction with their sport achievement, 78.6% were quite or completely satisfied with them. Those that reached better sport results were more satisfied. This is logical, here they all expected to reach the highest level, and only some of them reached that level.

In general, athletes are satisfied with their life nowadays. Even though, they still miss some of their life competing in sport. Following their answers, they developed from a greater to a lower level the following skills: willpower, to know how to set goals, to solve problems, teamwork, self-control and self-confidence. Those that were developing solely the sport career did not perceive that they develop the time management skills. This skill was more develop among those enrolled in a dual career (studies/work). Sex based, men believe sport helped developing self-confidence while women expressed the time management as the skill they developed most at the sport

career. This last point is in agreement with the perceived barriers found by López de Subijana et al., (2015) and Selva et al. (2013).

## **5.8 QUALITATIVE ASSESMENT OF RETIREMENT**

Many athletes express their gratitude for carrying out this type of research about such a special moment in their life as the sport retirement is. The relevance of this special moment it is confirmed by their constant references to their feeling of loneliness and abandonment.

The athletes claim for a greater support to face the sport retirement, not only constraining this support to the labor market. Taking in consideration the hard time of this transitions the athletes consider they need specific psychological support. This support should be as important as it was when they were in the sport career.

Finally, it should be mention that women find more problems at entering into the labor market than their men counterparts. They point out how difficult is to work into the sport sector.



GUIDELINES



In this research project the data provide by the elite athletes allows to consider some strategies or guidelines assigned to improve general situation of the retired elite athlete from different stakeholders.

A) Having, on one side, the clear relation of planning the retirement and the quality of it, and on the other side, the high number of elite athletes that did not plan their retirement, some measures could be implemented to assist this planning. These measures could be the following described:

The support programs of the elite athletes should emphasis training the skills and psychological resources for planning.

The coaches could contribute by transferring the skills learned in the sport planning to the global life of the athlete.

Federation and clubs should be involved in making the athletes realizes the relevance of planning the career beyond sport.

B) Knowing that combining sport with a second activity, specially with studies in a parallel model, increases the probability of a successful retirement, it should recommended to introduce strategies that facilitate combining sport with studies. Some of the strategies could be the following:

The support programs of the elite athletes should promote the dual career. These programs should provide learning courses on time management skills and efficient study techniques. This course could be given through the High Performance Center Services.

Due the lack of time of the athletes, it is important that someone from the stakeholders should inform them about the educational institutions that have flexible programs, on-line and/or half of attendance course.

On the other hand, and in relation with the universities in Spain, publics or privates, it should be important to gather the information about which of the universities are applying the academic measures of the Royal Decree of 2007 and have support programs for their elite athletes.

Coaches could facilitate their athletes to follow a dual career. They could combine the training and competing calendar, as much as possible, with the academic calendar. They could understand the extra load the academic duties suppose.

Knowing the key role of the coach is fundamental in the career path of any athlete, there is a need of their involvement in order to improve the development of a sport career for a successful retirement. There is a need of future research on the perception of coaches about this reality to take them into account and to count with their help.

It is important to keep the academic measures of the article 9 of the Royal Decree of 2007. The fact that only a few of them receive these helps, and taking in consideration previous studies, the academic measures should be better disseminated among the different stakeholders.

C) Taking in consideration the high number of elite athletes with a not solved working situation at retirement, the Spanish Government should, through the Spanish Sport Council, provide some measures to promote this population entering into the labor market. This measure could be:

As in some other “special” population groups (long length unemployed, over 50 years old, handicap...) the government taxes for employment (Social Security in Spain) could be reduced in the elite athlete population. It could be suggested for elite athletes still competing and for those in their 2-3 year after sport retirement. With this measure a progressive sport retirement could be completed and at the same time they would be entering into the labor market.

It is important to keep working for the gender equality policies and to make a follow-up report of what are the results of the Spanish Sport Council policies after these years.

D) Knowing the high number of athletes that point out the difficulties of this transition and that they demanded support services after retirement, to create a specific service of monitoring their health (physical and emotional) after the sport career could be one possible solution.

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APPENDIX



# Formulario Olympic Studies Center

Estimado Deportista:

Con el fin de mejorar la calidad de la inserción sociolaboral, la Facultad de Ciencias de la Actividad Física y del Deporte, gracias a la financiación del Centro de Estudios Olímpicos del Comité Olímpico Internacional, está llevando a cabo este estudio acerca de la inserción socio laboral de los deportistas de élite.

En este estudio se garantiza que todos los datos estarán sujetos al tratamiento automatizado (Ley Orgánica 5/1992, de 29 de octubre, de Regulación del Tratamiento Automatizado de los Datos de Carácter Personal), respetando la confidencialidad y el anonimato de los datos, ya que la cesión y el tratamiento se efectuará previo procedimiento de disociación, de forma que no puedan ser expuestos en relación con su persona. Esta información aportada es de gran utilidad para los servicios de apoyo a los Deportistas de Élite.

Te enviamos este cuestionario para que lo rellenes on-line. Te rogamos un momento de reflexión para mejorar la inserción socio laboral de futuros deportistas.

Muchas gracias por tu tiempo y la colaboración prestada.

Pd: Para cualquier duda o aclaración la investigadora responsable de este proyecto es Cristina López de Subijana (c.lopezdesubijana@upm.es). (+34913364143).

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**En el caso de que desee recibir la memoria de resultados de este estudio, por favor indíquenos su dirección de mail:**

(Esta dirección solo será utilizada para enviarle a Ud. la memoria)

## PERFIL DEPORTIVO

### 1. Sexo

- Hombre  
  Mujer

### 2. Edad

### 3. Estado civil actual

- Soltero/a  
  Pareja  
  Casado/a  
  Separado/a  
  Divorciado/a  
  Viudo/a

### 4. ¿Tiene hijos?

- No  
  Uno  
  Dos  
  Tres o más

### 5. Deporte en el que compitió cuando fue Deportista de Élite

### 6. Señale los JJOO en los que ha competido

	Sí	No
Alberville 1992	<input type="radio"/>	<input type="radio"/>
Barcelona 1992	<input type="radio"/>	<input type="radio"/>
Lillehammer 1994	<input type="radio"/>	<input type="radio"/>
Atlanta 1996	<input type="radio"/>	<input type="radio"/>
Nagano 1998	<input type="radio"/>	<input type="radio"/>
Sidney 2000	<input type="radio"/>	<input type="radio"/>
Salt Lake 2002	<input type="radio"/>	<input type="radio"/>
Atenas 2004	<input type="radio"/>	<input type="radio"/>
Turin 2006	<input type="radio"/>	<input type="radio"/>
Pekín 2008	<input type="radio"/>	<input type="radio"/>
Vancouver 2010	<input type="radio"/>	<input type="radio"/>
Londres 2012	<input type="radio"/>	<input type="radio"/>
Sochi 2014	<input type="radio"/>	<input type="radio"/>

**7a. Según su opinión, ¿cuál fue su mejor resultado deportivo? (Señalar tipo de Evento Deportivo)**

- Juegos Olímpicos
- Campeonato del Mundo
- Campeonato de Europa
- Prueba de la Copa del Mundo
- Otro:

**7b. Según su opinión, ¿cuál fue su mejor resultado deportivo? (Señalar resultado Deportivo)**

- 1°
- 2°
- 3°
- 4°
- 5°-8°
- Otro:

**8. ¿En el caso de haber sido olímpico, llegó a recibir beca ADO?**

(si no fue olímpico pase a la pregunta siguiente-9)

- Sí
- No

**9. ¿Llegó a alcanzar el nombramiento como Deportista de Alto Nivel (DAN)?**

(Nombramiento en el BOE e inclusión en el listado del CSD)

- Sí
- No

**10. ¿A qué edad comenzó a practicar su disciplina deportiva?**

**11. ¿A qué edad considera que comenzó a competir en el nivel de élite?**

**12. Indique las horas semanales de entrenamiento cuando competía al máximo nivel**

**13. ¿A qué edad logró su mayor éxito deportivo?**

**14. En el periodo de tiempo en que desarrolló su vida deportiva de alto nivel, ¿a qué se dedicaba?**

- Exclusivamente a entrenar
- Compaginaba estudios y deporte, siendo siempre prioritario el deporte
- Compaginaba estudios y deporte y dependiendo del momento dando más importancia al deporte o a los estudios
- Compaginaba trabajo y deporte

**14a. Si compaginaba trabajo y deporte, su trabajo era**

Responda sólo si en la anterior pregunta marcó esta opción

- Remunerado
- No remunerado (prácticas)
- No remunerado (proyecto personal, emprendedor, ...)

**ESTUDIOS****15. ¿Cuál era su nivel de estudios al finalizar su vida deportiva de alto nivel?**

- Primarios incompletos
- Primarios completos (EGB o equivalente)
- Formación profesional o equivalente
- BUP, COU, Secundaria/Bachillerato o equivalente
- Estudios Universitarios grado medio (Diplomatura)
- Estudios Universitarios grado superior (Licenciatura/Grado)
- Estudios Universitarios tercer ciclo (Master/Doctorado)

**16. ¿Cuál es su nivel de estudios actual?**

- Primarios incompletos
- Primarios completos (EGB o equivalente)
- Formación profesional o equivalente
- BUP, COU, Secundaria/Bachillerato o equivalente
- Estudios Universitarios grado medio (Diplomatura)
- Estudios Universitarios grado superior (Licenciatura/Grado)
- Estudios Universitarios tercer ciclo (Master/Doctorado)

**17a. Indique la titulación estudiada**

**17b. ¿De qué forma realizó esos estudios?**

- Presencial
- Semipresencial
- A distancia
- Online

**18. ¿Qué nivel de esfuerzo le supuso, en caso de realizarse, la coordinación entre la formación académica con la práctica deportiva de alto nivel?**

1   2   3   4   5   6

Muy pequeño       Muy grande

**19. ¿Cuál es el nivel de estudios de su padre?**

- Primarios incompletos
- Primarios completos (EGB o equivalente)
- Formación profesional o equivalente
- BUP, COU, Secundaria/Bachillerato o equivalente
- Estudios Universitarios grado medio (Diplomatura)
- Estudios Universitarios grado superior (Licenciatura/Grado)
- Estudios Universitarios tercer ciclo (Master/Doctorado)

**20. ¿Cuál es el nivel de estudios de su madre?**

- Primarios incompletos
- Primarios completos (EGB o equivalente)
- Formación profesional o equivalente
- BUP, COU, Secundaria/Bachillerato o equivalente
- Estudios Universitarios grado medio (Diplomatura)
- Estudios Universitarios grado superior (Licenciatura/Grado)
- Estudios Universitarios tercer ciclo (Master/Doctorado)

**21. En caso de tener una o varias titulaciones académicas oficiales relacionadas con el deporte, señale la más importante:**

- TAFAD
- Maestro/Graduado de Educación Física
- Licenciado/Graduado en CC de la AF y del Deporte
- Master en CC de la AF y del Deporte
- Doctor en CC de la AF y del Deporte

**22. ¿Cuál fue el plazo para completar su formación académica?**

- Lo especificado en el plan de estudios
- Un año más
- Dos años más
- Tres años más
- Cuatro o más años
- No he terminado

**23. Recibió algún tipo de apoyo académico en relación a:**

	Sí	No
Aplicación de la cuota de acceso (plazas) a los diferentes estudios (3% todos y 5% relacionados con deporte)	<input type="radio"/>	<input type="radio"/>
Cambios de grupo de clase para poder entrenar	<input type="radio"/>	<input type="radio"/>
Cambios en las fechas de exámenes para poder asistir a competiciones/concentraciones oficiales	<input type="radio"/>	<input type="radio"/>
Flexibilidad con los sistemas de evaluación continua	<input type="radio"/>	<input type="radio"/>
Flexibilidad con la asistencia a prácticas obligatorias	<input type="radio"/>	<input type="radio"/>
Exención de la asignatura de Educación Física en Secundaria	<input type="radio"/>	<input type="radio"/>
Traslado de expediente	<input type="radio"/>	<input type="radio"/>
Tutorías académicas en mi centro de estudios	<input type="radio"/>	<input type="radio"/>
Convalidaciones de contenidos dentro de la Enseñanzas Deportivas de mi Federación	<input type="radio"/>	<input type="radio"/>
Otra	<input type="radio"/>	<input type="radio"/>

**23a. Si ha respondido otra señale cuál**

**24. ¿Tiene algún tipo de formación como técnico deportivo?**

- No
- Sí, primer nivel, básico o monitor
- Sí, segundo nivel, medio o regional
- Sí, tercer nivel, superior o nacional

**EMPLEO****25. ¿Tiene empleo remunerado en la actualidad?**

- Sí
- No y sí busco empleo
- No y no busco empleo

Si no tiene empleo pase a la siguiente sección; pregunta 35.

**26. ¿Cuál es su situación laboral actual en su empleo principal?**

- Empleo a jornada completa (+ de 30 horas)
- Empleo a jornada parcial (- de 30 horas)
- Empleo ocasional
- Empleo eventual o temporal
- Empresario
- Profesional
- Autónomo/a
- Ayuda Familiar

**27. Su antigüedad laboral en el empleo principal es de**

- Menos de 1 año
- De 1 a 2 años
- De 2 a 3 años
- Más de 3 años

**28. ¿Tiene su empleo principal alguna relación con el mundo del deporte?**

- Sí
- No

**29. ¿Tiene su empleo principal alguna relación con su formación académica?**

- Sí
- No

**30. ¿Tiene un segundo empleo?**

- Sí
- No

**31. ¿Tiene su segundo empleo alguna relación con el deporte?**

- Sí
- No

**32. ¿Cómo obtuvo su primer empleo tras la retirada?**

- Contactando directamente con las empresas
- A través de una agencia de empleo
- Respondiendo a un anuncio de trabajo
- Opositando
- A través de contactos (familiares y/o amigos)
- Gracias a una acción específica para Deportistas de Alto Nivel
- Ya estaba trabajando
- No he trabajado desde mi retirada
- Otra

**Si ha respondido otra indique cuál**

**33. ¿Cuánto tiempo pasó entre su retirada deportiva y la consecución del primer empleo remunerado?**

- Trabajaba ya antes de la retirada
- Entre 0 y 2 meses
- Más de 2 y menos de 6 meses
- Más de 6 y menos 12 meses
- Más de 12 meses y menos de 24
- Más de 24 meses
- No encontré

**34. ¿Cuáles son sus ingresos promedio?**

- Hasta 600 €
- De 600 a 999 €
- De 1000 a 1499 €
- De 1500 a 1999 €
- De 2000 a 2499 €
- 2500 € a 2999
- Más de 3000

## RETIRADA DEPORTIVA

**35. ¿A qué edad se retiró del deporte?****36. ¿Cómo fue su retirada deportiva?**

- Radical
- Paulatina

**37. Su retirada deportiva fue**

- Voluntaria
- Involuntaria

**38. ¿Planificó con antelación su retirada deportiva?**

- Sí
- No

**39. A continuación puede ver una lista de posibles motivos de retirada deportiva. Señale la importancia de estos motivos en su retirada**

	Ninguna importancia = 1	2	3	4	Mucha importancia = 5
Motivos laborales (encontrar un buen trabajo)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivos académicos (terminar estudios)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivos deportivos (descenso de los resultados deportivos o sentimientos de logro, edad)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivos de relación (relaciones con entrenadores, compañeros, árbitros, familia)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivos de salud (cansancio físico o mental, lesiones, enfermedades)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Motivos familiares (deseo de formar una familia, tener hijos, obligaciones familiares)

Motivos económicos (necesidad de aumentar los ingresos)

**40. Al abandonar la práctica deportiva, ¿tenía su situación económica y laboral resuelta?**

- Sí, totalmente resuelta
- Sí, en gran parte
- No, sólo tenía trabajo ocasional
- No, prácticamente no tenía nada

**41. ¿El haber sido deportista de élite le ayudó en el ámbito laboral?**

- Prácticamente no me ayudó nada
- Me ayudó un poco
- Me ayudó bastante
- Me ayudó mucho

**42. ¿Tuvo la impresión de que necesitaba afrontar un proceso de adaptación tras su retirada deportiva?**

- Sí
- No

**43. Si su respuesta es afirmativa, ¿Cuánto tiempo (meses) duró el periodo entre su retirada y su sentimiento de adaptación a la vida después del deporte?**

**44. Su carrera deportiva terminó**

- Demasiado pronto
- Antes del momento adecuado
- En un momento bastante oportuno
- Ligeramente tarde
- Demasiado tarde

**45. ¿Cómo vivió su proceso de integración laboral tras la retirada deportiva?**

1 2 3 4 5 6

Muy mal       Muy Bien

**46. ¿Ha recibido ayuda de algún programa de orientación/apoyo para su integración laboral tras la finalización de su vida deportiva?**

- Sí  
 No

**46a. ¿Cuál?**

**47. ¿En qué grado sufrió dificultades o problemas tras su retirada deportiva en las siguientes áreas?**

	Ninguno=1	2	3	4	Mucho=5
Carrera Profesional	<input type="radio"/>				
Estudios	<input type="radio"/>				
Familia	<input type="radio"/>				
Comunicación (relaciones, red social, amistad)	<input type="radio"/>				
Diversión (hobbys, ocio...)	<input type="radio"/>				
Salud	<input type="radio"/>				
Económicas	<input type="radio"/>				

**48. ¿Cuál es su relación actual con el Deporte?**

	Sí	No
Practico ejercicio	<input type="radio"/>	<input type="radio"/>
Participo en competiciones para veteranos	<input type="radio"/>	<input type="radio"/>
Mantengo contacto con mis entrenadores	<input type="radio"/>	<input type="radio"/>
Tengo una profesión relacionada con el deporte	<input type="radio"/>	<input type="radio"/>
Tengo un trabajo adicional relacionado con el deporte	<input type="radio"/>	<input type="radio"/>
Asisto a las competiciones como espectador	<input type="radio"/>	<input type="radio"/>
Asesoro a jóvenes deportistas de una manera informal	<input type="radio"/>	<input type="radio"/>

**49a. Si practica deporte o actividad física, ¿con qué frecuencia lo hace?**

- Sólo en vacaciones
- Menos de una vez por semana
- Una vez por semana
- Dos o tres veces por semana
- Más de tres veces por semana

**49b. ¿Y cuántas horas por sesión dedica?**

- Una hora o menos
- Entre una y dos horas
- Más de dos horas

## SATISFACCIÓN

**50. ¿Está satisfecho con sus logros deportivos?**

- Completamente satisfecho
- Bastante satisfecho
- Dificultad en responder
- Bastante insatisfecho
- Completamente insatisfecho

**51. En estos momentos, ¿cuál es su opinión sobre su vida?**

	Absolutamente en desacuerdo = 1	2	3	4	Absolutamente de acuerdo = 5
Estoy completamente satisfecho	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este es el momento más feliz de mi vida	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Estoy tan feliz ahora como cuando estaba compitiendo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
He conseguido más de lo que esperaba en la vida	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**52. ¿Qué beneficios para su vida le proporcionó su carrera deportiva?**

Utilice una escala de 1 = nada a 5 = mucho

	Nada=1	2	3	4	Mucho=5
Habilidades de establecimiento de metas	<input type="radio"/>				
Capacidad de resolución de problemas	<input type="radio"/>				
Habilidades de auto-control y auto-regulación	<input type="radio"/>				
Autoconfianza	<input type="radio"/>				
Fuerza de voluntad	<input type="radio"/>				
Capacidad para trabajar en equipo	<input type="radio"/>				
Habilidades de comunicación	<input type="radio"/>				
Gestión del tiempo	<input type="radio"/>				
Relaciones sociales	<input type="radio"/>				
Liderazgo	<input type="radio"/>				
Bienestar físico	<input type="radio"/>				
Conocimientos y habilidades para mi profesión actual	<input type="radio"/>				

**Añada algo si lo considera necesario**