



## A COMPARATIVE SOCIO-DEMOGRAPHIC ANALYSIS BETWEEN POPULAR RACES' RUNNERS AND THE REST OF THE POPULATION IN SPAIN

### ANÁLISIS SOCIODEMOGRÁFICO COMPARATIVO ENTRE CORREDORES POPULARES Y EL RESTO DE LA POBLACIÓN EN ESPAÑA

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#### ABSTRACT

The purpose of this study was to analyze the socio-demographic characteristics of popular races' runners (PRRs) and establish differences with the rest of the Spanish population. It was analyzed the survey conducted in 2010 about sport habits in Spain. A final sample consisting of 8,389 interviews with participants with ages ranging between 15 and 97 years was drawn. The descriptive results revealed that 3.5% of the interviewees were PRRs. Afterwards, a model of logistical regression was executed in order to identify the cohorts that were more likely to belong to the non-PRRs group once the possible interaction effects or confusion among variables had been controlled. Here, the results showed that women were more likely to belong to the non-PRRs group ( $OR = 6.55$ ). Regarding age, the possibility of belonging to the non-PRRs group progressively increased as the age factor also increased. It was also ascertained that the possibility of pertaining to the non-PRRs group increased insofar as the educational level decreased. Finally, neither socio-economic status nor participants' town population size was associated with being a PRRs group member.

#### KEY WORDS:

Spain, popular races, running, cultural capital, social class.

#### RESUMEN

El objetivo de este estudio fue analizar las características sociodemográficas de los corredores populares y establecer diferencias con el resto de la población española. Se analizó la encuesta del año 2010 sobre hábitos deportivos en España. La muestra final estuvo formada por un total de 8.389 participantes, con edades de entre 15 y 97 años. Los resultados descriptivos revelaron que el 3,5% de la población residente en España pueden ser considerados corredores populares. Asimismo, para identificar qué variables sociodemográficas estuvieron más asociadas a la posibilidad de no ser corredor popular, se procedió con regresión logística, donde las variables fueron ajustadas al resto de variables en aras de controlar sus posibles efectos de interacción o confusión. Los resultados mostraron que las mujeres tienen más posibilidad de pertenecer al grupo de no corredores populares ( $OR = 6,55$ ). Además, se observó que la posibilidad de pertenecer al grupo de no corredores es mayor a medida que aumenta la



edad y también a medida que desciende el nivel académico. Finalmente, se encontró que ni el estatus socioeconómico ni el tamaño poblacional estuvieron asociados al hecho de ser corredor popular.

### **PALABRAS CLAVE:**

España, carreras populares, correr, capital cultural, clase social.

### **INTRODUCTION**

In the last few decades, popular running events throughout the world have been on the rise (Scheerder, Breedveld & Borgers, 2015). As its very name indicates, a popular race is a running event that usually passes through streets, squares, and/or parks and that tends to be organized by sports clubs, associations or administrative institutions such as town halls or municipal districts. Oddly enough, despite the high level of citizens' participation, very little is known about the socio-demographic characteristics of the participants.

For its part, the Spanish Center for Sociological Research (*Centro de Investigaciones Sociológicas*, hereafter CIS), between 1980 and 2010, and every five years, has been undertaking regular and diverse surveys on sporting habits in that country, including a survey in the year 2014. These surveys have provided useful data. For instance, they have shown an increase in the percentage of runners during the first decade of the 21<sup>st</sup> century, from 3.8%, in the year 2000, to 5.1%, in 2010 (Tejero-González, 2015). Nonetheless, not all runners are popular races' runners (hereaf-

ter PRRs). There are those, for instance, who, despite jogging on a regular basis, do not partake in popular races. In contrast, there are individuals who do not practice jogging regularly, but, do, however, participate in popular running races.

In this regard, in the survey on sporting habits in Spain carried out by the CIS in 2010, included questions not previously formulated about the participation in sporting events such as marathons, half marathons, and popular races of lesser distances, asking participants not only if they had already participated in some of these events, but also if they had the intention of participating again in the future. Furthermore, the CIS polls not only provide information about the sex, age, the educational level and size of the population of the runners' town of residence, but also inform about socio-economic status of the participants.

In terms of the latter indicator, i.e., the socio-economic level of the runners, the CIS (n.d.) not only uses a highly qualified *ad hoc* procedure for its surveys; but, also, cross-references multivariable information relative to job occupation, employment status, and economic activity (either for the participant surveyed or for the person with highest income level at the participant's home), which, in turn, allow researchers to identify people according to the following socio-economic categories: non-qualified workers (laborers, braceros, etc.), qualified workers (craftsmen, foremen, managers, etc.), traditio-



nal middle class member (autonomous workers, small businesses owners, etc.), new middle class member (office clerks, functionaries, service workers, etc.), high or middle high social class member (business people, high executives, etc.). Also, as mentioned above, the CIS polls also collected data about the educational level of the participants. This set of information represents an added value with regard to other sporting habits surveys undertaken for other institutions in Spain, since it enables one to investigate the sporting practice attending, with sociological rigor, the social class factor (Bourdieu, 1978; Kahma 2012).

In view of this, it is reasonable to think that popular races' running might be related to the singularities of the diverse social classes to which participants belong. As such, the purpose of this study was to analyze the socio-demographic differences between Spanish popular race's runners (PRRs) and the rest of the population.

## METHOD

### *Participants and ethical considerations*

The present study is based on the CIS survey on Spain' sporting habits, undertaken in 2010, and in which 8.925 personal interviews were carried out at the homes of participants. From this initial database, sampling units were selected with complete data on the variables of the present study. The final sample consisted of 8.389 interviews from participants with ages ranging between 15 and 97 years. The CIS provided and authorized the

use of the data, and the Ethics Committee of the researchers' institution approved the research.

### *Variables*

This study's variables were the following: (a) PRRs vs. non-PRRs, (b) age (c) educational level, (d) socio-economic status, and (e) participants' town population size.

### *PRRs vs. non-PRRs*

All the participants surveyed were asked two sets of questions regarding their sporting habits: (a) whether they had previously run in any of the following races: marathon (42,125Km.), half-marathon, or popular race of a lesser distance; and (b) whether they intended to participate in any other popular races in the future. Depending on their responses, the participants were divided into two groups, those who answered positively to both questions were termed PRRs (popular races' runners), and the rest of participants were categorized as non-PRRs. since they explicitly stated willingness to no longer participate in a popular race, which can be interpreted as lack of adherence to participate in popular races.

### *Age*

Regarding age, seven categories were established: (a) between 15 and 24 years, (b) between 25 and 34 years, (c) between 35 and 44 years, (d) entre 45 and 55 years, (e) between 55 and 64 years, (f) between 65 and 74, and (g) 75 years or more.

### *Educational level*

With respect to educational level, there were three categories: (a)



no formal or only primary school level education, (b) secondary education level or equivalent, and (c) university level education.

#### Socio-economic status

Five socio-economic categories were established: (a) non-qualified workers, (b) qualified workers, (c) traditional middle class, (d) new middle class, and (e) high or middle high social class.

#### Participants' town population size

Seven categories of population size in the participants' town of residence were established: (a) less than 2,000, (b) between 2,001 and 10,000, (c) between 10,001 and 50,000, (d) between 50,001 and 100,000, (e) between 100,001 and 400,000, (f) between 400,001 and 1,000,000, and (g) more than 1,000,000.

### DATA ANALYSIS

Two types of statistical tools were used in the analysis of data. On the one hand, descriptive statistics were used to determine frequencies of cases ( $N$ ) or percentages (%); on the other hand, in order to identify which socio-demographic variables were associated with being or not being PRRs, logistic regression was run with two models. The first model was a non-adjusted logistic regression, where the variables were not adjusted to any other. The second model was multinomial logistic regression, where each variable was adjusted to all the rest in order to control for possible interaction or confusion effects. These logistic regressions were undertaken by establishing as reference those categories that had reached the highest percentage of

PRRs. Furthermore, both, the *odds ratio* ( $OR$ ) and the confidence intervals ( $CI$ ) at 95% were inferred. The signification probability values were established at 0.05 ( $p < .05$ ). The calculations were performed with an IBM's SPSS Statistics 23 package (IBM Corporation, USA).

### RESULTS

The results of this study are presented on Table 1. On it, it can be seen that, of the sample ( $N = 8,389$ ), 3.5% (i.e., 290 people) were classified as PRRs. The descriptive statistics showed that the cohorts with the higher percentages of PRRs were the following: men (6.1%), participants between 15 and 24 years of age (6.6%), citizens with university educational level (4.8%), participants belonging to high or middle high social class (4.3%), and residents in cities with more than one million people (3.9%). Moreover, the first model of logistical regression was applied without adjusting any of the variables to any of the rest of the variables. Afterwards, a second model of logistical regression was executed in order to identify the cohorts that were more likely to belong to the non-PRRs group once the possible interaction effects or confusion among variables had been controlled. In this regard, the results showed that in the variable sex, women were more likely to belong to the non-PRRs group ( $OR = 6.55$ ). In the variable age, the possibility of belonging to the non-PRRs group progressively

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**Table 1. Socio-demographic data: Spanish popular races' runners (PRRs) vs. non-PRRs. Logistic regression.**

Socio-demographic variables	Sample size	PRRs		Logistic Regression - Possibility of pertaining to the group on non-PRRs)					
		Yes	No	Model 1			Model 2		
	N	%	%	OR*	IC / CI (95%)	P	OR*	IC / CI (95%)	P
Sample size	8,389	3.5	96.5	—	—	—	—	—	—
<i>Gender</i>									
Men	4,116	6.1	93.9	1	—	—	1	—	—
Women	4,273	0.9	99.1	<b>6.84</b>	4.88-9.58	<.001	<b>6.55</b>	4.67-9.18	<.001
<i>Age (in years)</i>									
15-24	1,078	6.6	93.4	1	—	—	1	—	—
25-34	1,616	5	95	1.35	0.97-1.88	.071	<b>1.47</b>	1.04-2.07	.027
35-44	1,623	4.7	95.3	<b>1.41</b>	1.01-1.97	.040	<b>1.54</b>	1.09-2.17	.013
45-54	1,356	2.9	97.1	<b>2.32</b>	1.56-3.44	<.001	<b>2.43</b>	1.62-3.65	<.001
55-64	1,062	0.9	99.1	<b>7.41</b>	3.80-14.46	<.001	<b>7.18</b>	3.67-14.06	<.001
65-74	841	0.8	99.2	<b>8.40</b>	3.84-18.35	<.001	<b>7.22</b>	3.29-15.88	<.001
≥ 75	813	0.6	99.4	<b>11.39</b>	4.57-28.35	<.001	<b>8.21</b>	3.27-20.62	<.001
<i>Educational level</i>									
University	1,384	4.8	95.2	1	—	—	1	—	—
Secondary education or equivalent	2,366	4.4	95.6	1.07	0.78-1.47	.639	<b>1.33</b>	1.01-1.75	.044
No formal or only primary school level education	4,639	2.6	97.5	<b>1.90</b>	1.39-2.58	<.001	<b>1.90</b>	1.31-2.74	.001
<i>Socioeconomic status</i>									
High or middle high social class	1,317	4.3	95.7	1	—	—	1	—	—
New middle class	1,650	3.2	96.8	1.39	0.94-2.03	.092	0.94	0.62-1.42	.793
Traditional middle class	1,527	2.4	97.6	<b>1.82</b>	1.19-2.77	.005	1.15	0.72-1.84	.544
Qualified workers	2,744	3.9	96.1	1.10	0.79-1.53	.554	0.89	0.60-1.31	.569
Non-qualified workers	1,151	3.1	96.9	1.40	0.91-2.14	.120	0.82	0.51-1.34	.446
<i>Population size (Number of inhabitants)</i>									
> 1,000,000	492	3.9	96.1	1	—	—	1	—	—
400,001-1,000,000	550	2.5	97.5	1.53	0.76-3.10	.229	1.64	0.80-3.36	.171
100,001-400,000	2,100	3.3	96.7	1.18	0.70-1.98	.526	1.19	0.70-2.03	.505
50,001-100,000	1,044	3.7	96.3	1.03	0.59-1.81	.904	1.06	0.60-1.83	.829
10,001-50,000	2,118	3.6	96.4	1.06	0.63-1.77	.801	1.09	0.64-1.85	.738
2,001-10,000	1,392	3.7	96.3	1.03	0.60-1.76	.899	1.01	0.58-1.77	.949
≤ 2,000	693	2.9	97.1	1.35	0.71-2.56	.355	1.15	0.56-2.23	.665

Abbreviations: PRRs = Spanish popular races' runners, OR = odds ratio, CI (95%) = confidence interval of 95%, P = probability of statistical significance. Model 1: Non-adjusted logistic regression. Model 2: Logistic regression adjusted for all variables in the Table. \* The statistically significant OR are presented in boldfaced text.

increased as the age factor also increased: 25-34 years ( $OR = 1.47$ ), 35-44 years ( $OR = 1.54$ ), 45-54 years ( $OR = 2.43$ ), 55-64 years ( $OR = 7.18$ ), 65-74 years ( $OR = 7.22$ ), and 75 years or more ( $OR = 8.21$ ). In the variable educational level, it was ascertained that the possibility of pertaining to the non-PRRs group increased insofar as the edu-

cational level of the survey participants decreased: secondary education or equivalent ( $OR = 1.33$ ) and no formal or just primary education ( $OR = 1.90$ ). Finally, neither socio-economic status nor participants' town population size variable were associated with being a non-PRRs group member ( $p > .05$ , in all the categories).



## DISCUSSION/CONCLUSION

The first finding in this study was that 3.5% of Spanish residents, aged 15 years or above, can be considered PRRs (with adherence to the sport), that is people who have not only participated in one popular running race, but also express their intention of continuing to participate in the future. Given that, in Spain, the number of citizens aged 15 years or above was of almost 40 million at the time of the survey in 2010 (Instituto Nacional de Estadística [National Institute of Statistics], n.d.), it can be concluded that the number of PRRs in that country is about 1.400,000. A fact that reveals that the popular races not only are expression of public health, but it is also a significant economic sector, because to participate in most of the popular races held in Spain it is necessary to pay the corresponding registration fee.

Seen from this perspective, it is possible that participation in such events may not only be the result of a down-up effect, where popular running races would have the sole motive of responding to a growing demand for social sport; but, also, as a result of a top-down effect, where sports marketing and the influence of the organizational entities have found an opportunity for economic growth.. This however, is not incompatible with the social reality of a deep economic crisis in which Spain had fallen in 2010 (Mateos & Penadés, 2013), given that, such events, beyond the cultural and sporting festivity that represent, can also be interpreted as a low-cost health and entertainment

product (i.e., with low fees and high participation rates).

Despite this information, it is worth pointing out the substantial difference in participation levels between men and women, given that only 0.9% of the latter showed a PRRs' profile, that is, of every 100 PRRs, only 14 were women. In this regard, although it is true that in Spain there exist some institutions that organize popular running races exclusively for women and get high rates of participation, for instance, "La Carrera de la Mujer" (*The Women's Run*), it seems reasonable to continue to study this phenomenon and intensify socio-political action in order to foster women's partaking in these events (Birrell, 2000; Hargreaves, 2004).

As for the age factor, the results of this study are also clear: the percentages of runners decrease as age increases. For example, 6.6% of PRRs are in the range of 15-24 years; 5% of PRRs were between ages 25-34; 4.7% were between 35 and 44, and so on until reaching just 0.6% among runners of 75 years or more. It can be interpreted in this regard that a possible motive is the high energy expenditure resulting from the running (Hall, Figueroa, Fernhall & Kanaley, 2004), especially when is practical in a context of increased demand or performance as it is the case of the popular races. Which should not mean necessarily lack of exercise by adults; for example, it is known that the practice of walking increases demographically as age increases (Eyler, Brownson, Bacak & Housemann, 2003).



The results concerning the educational level were also consistent, showing that, as the educational level decreased, so did the percentages of PRRs. Specifically, 4.8% of PRRs had university level studies, 4.4% had secondary level studies or equivalent, whereas only 2.6% had elementary studies or no studies at all. This is also corroborated by the logistical regression analysis. This, assuming that the educational level of participants is an indicator of their “*cultural capital*” (Stempel, 2005; Wilson, 2002), another possible conclusion would be that in Spain, participation in popular running races is associated with cultural capital, in a such a way that the higher the educational resources and level of knowledge, the higher is the probability of becoming popular race runner.

Apparently inconsistent with the latter are the results on the variable socio-economic status, where it was found that participation in popular running races is independent of the belonging to any of the aforementioned social classes. In this sense, and being conscious of other studies that show the correlation between socio-economic status and academic level (Stempel, 2006; Wilson, 2002), it is worth mentioning that the analyses in this study were carried out controlling for the interaction effects or confusion among all the variables. Therefore, another relevant conclusion from the perspective of social class is that participation in popular race events in Spain does not correlate with social class. In addition, if you consider that the

population size of the city where they reside participants was not associated to the non-PPRs group, it could be concluded that, in Spain, popular races are, indeed, popular in as much as they are accessible to the general population, independently of socio-economic status and place of residence.

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