

Age, place of sport initiation, and coacher' education in under-16 Spanish track and field athletes in relation to their events

Edad, lugar de inicio, formación de los entrenadores en atletas españoles cadetes en relación a sus pruebas

Faculty of Health, Physical Activity & Sport,
Catholic University of St. Anthony, Murcia.
(Spain)

Dr. José Manuel Palao | Dr. Antonio Calderón

jmpalao@pdi.ucam.edu | acluquin@pdi.ucam.edu

Dr. José Arturo Abraides | Dr. Enrique Ortega

aabraides@pdi.ucam.edu | eortega@pdi.ucam.edu

Abstract

The purpose of this study was to find out the age, place that sport initiation took place, and the characteristics of track & field coaches and monitors during athletes' formative years in relation to different events or types of disciplines. The sample was composed of the 636 athletes (322 males and 314 females) that participated in the Spanish Youth Athletics Championship in the years 1997 and 2003 (average age was 15.13 years). The variables studied were: gender; type of event (sprint, endurance, jumps, throws, and octathlon-pentathlon), age at initiation, place of initiation, number of coaches that athletes have had, and degrees of the coach with whom they started and at the time of the Championship. The age of initiation for the Spanish athlete studied was 10-11 years. These values are similar to those that experts recommend. The place of initiation for practicing sport for less than half of the athletes was in school. These values are below those recommended by the experts. A high percentage of current coaches and monitors with adequate educational formation were observed.

Keywords: Coacher. Education. Track and field athletes.

Resumen

El objetivo del estudio fue conocer la edad, el lugar de iniciación, y las características de los atletas en formación en relación a los diferentes tipos de pruebas o disciplinas. La muestra fueron 636 atletas (322 masculinos y 314 femeninos) que participaron en el Campeonato de la Juventud de los años 1997 y 2003 (edad media de 15,13 años). Las variables estudiadas fueron: género, tipo de prueba (velocidad, resistencia, saltos, lanzamientos, y pruebas combinadas), edad de iniciación, lugar de iniciación, número de entrenadores que los atletas han tenido, y la formación de los entrenadores con los que se iniciaron y los actuales (momento del Campeonato). La edad de iniciación de los atletas españoles estudiados se sitúa entorno a 10-11 años. Estos valores son similares a las recomendaciones de los expertos. El lugar de iniciación a la práctica deportiva fue para menos de la mitad de los participantes el colegio. Estos valores están por debajo de los valores recomendados por los expertos. Un elevado porcentaje de los actuales entrenadores y monitores de los atletas tienen un adecuado nivel de formación.

Palabras clave: Entrenador. Formación. Atletas.

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Introduction

The characteristic of initiation to sport practice influences the sport life of the athletes (ex. the years of practice influences the degree of development of the different capacities). In track and field, the different athletic events require different capacities and different practice conditions. The experts recommend an age of initiation around 10-12 years. This initiation should be generic, multilateral, and orientated toward formation both athletically and in general (Bompa, 1999; Contreras, De la Torre, & Velázquez, 2001; Delgado, Gutierrez, & Castillo, 1997). Further, the figure of the coach or monitor is determinant in children's initial contact of with sport and in their development as an athlete (Abbott, Button, Pepping, & Collins, 2005). The educational level of the coach or monitor is one of the determining factors in the adhesion of their athletes, athletes' creation of healthy habits, positive attitudes about the sport, values, etc. (Álamo, Amador, & Pintor, 2002; Cohen, 1998; Jiménez, Rodríguez, & Castillo, 2002; Montiel, 1997; Prata, 1998; Williams, & Wilson, 1998; Saura, 1996). The purpose of this study was to find out the age, place that sport initiation took place, and the characteristics of athletics coaches and monitors during athletes' formative years in relation to the athlete's different events or types of disciplines.

Methods

The sample was composed of the 636 athletes (322 males and 314 females) that participated in the Spanish Youth Athletics Championship in the years 1997 and 2003 (average age was 15.13 years). The variables studied were: gender, event (sprint, endurance, jumps, throws, and octathlon-pentathlon), age at initiation, place of initiation, number of coaches that athletes have had, and degrees of the coach with whom they started and the coach at the time of the Championship. The variable dealing with education of the coaches was categorized as: national coach, monitor, university degree, no formal education, both university degree and national coach, had no coach, and don't know. An ad-hoc questionnaire to register the studied variables was used. Descriptive (frequency and percentage) and inferential (Chi-square test) statistical tests were done using SPSS 12.0 software.

Results

The age the athletes initiated their sports participation is very similar between events and one year later in males than in females (11.3 years and 10.4 years, respectively). With regard to the place of initiation, the results show that between eight and nine of every 10 athletes started in school or in a sports club. 47% of boys and girls began in school, while 39% of boys and 34% of girls started in clubs. By event, similar values were found in general. A significances differences was found in the reduced number of male athletes that both initiated their athletic experience in school and practiced octathlon ($p < 0.004$).

Table 1. Place of initiation for under-16 Spanish athletes participating in the Spanish Youth Athletics Championships of 1997 and 2003.

Gender	Event	Age	Place of Initiation (%)					
			School	Club	City Organized	Others	No response	Don't remember
Male (n=322)	Sprint	11.5	44.78	44.78	7.46	0.00	1.49	1.49
	Endurance	10.8	44.95	42.20	10.09	0.00	0.92	1.83
	Jumps	11.3	53.97	31.75	9.52	1.59	3.17	0.00
	Throws	11.9	52.05	31.51	12.33	2.74	1.37	0.00
	Octathlon	10.3	11.11	66.67*	11.11	0.00	0.00	11.11
	Total	11.3	47.35	38.94	9.97	0.93	1.56	1.25
Female (n=314)	Sprint	10.5	49.44	31.46	16.85	0.00	1.12	1.12
	Endurance	10.0	47.30	33.78	14.86	0.00	2.70	1.35
	Jumps	10.3	39.71	39.71	16.18	0.00	2.94	1.47
	Throws	10.8	50.00	33.82	14.71	0.00	0.00	1.47
	Pentathlon	10.0	50.00	28.57	14.29	0.00	7.14	0.00
	Total	10.4	46.96	34.19	15.65	0.00	1.92	1.28

Legend. Information about age is expressed in averages and information about place of initiation is expressed in percentages. * Statistical significant of Chi-square test $p < 0.004$.

The average number of coaches both by gender as well as by event is 2 ± 1 coaches. A 2.8-3.6% of the athletes participating in these Championships indicated that they have not had a track & field coach, and 10-16% of athletes did not know the educational level of their coaches.

With regard to education of the initial coach, 28-30% of the coaches had the monitor coaching certificate, and 22-27% had the national coaching certificate with or without a university degree. However, one of every 10 athletes started training under a coach without educational formation (usually former athletes, other athletes, or parents). Statistical significance by event was not found.

In relation to education of the current coaches, almost 60% of the athletes were coached by national coaches. The role of the monitors was reduced to half with respect to the time of sport initiation. Significant differences by events were not found.

Table2. Educational level of initial coach is the athletes that participated in the under-16 Spanish National championships (1997 and 2003).

Gender	Event	National coach		Monitor		University degree		University degree and national coach		No formal education		No coach		Don't know	
Male	Sprint	14	21.2	22	33.3	6	9.1	10	15.2	4	6.1	2	3.0	8	12.1
	Endurance	23	21.7	32	30.2	17	16.0	15	14.2	4	3.8	2	1.9	13	12.3
	Jumps	19	30.6	18	29.0	5	8.1	6	9.7	2	3.2	1	1.6	11	17.7
	Throws	15	21.4	16	22.9	11	15.7	7	10.0	4	5.7	3	4.3	14	20.0
	Octathlon	3	33.3	2	22.2	3	33.3	0	0.0	0	0.0	1	11.1	0	0.0
	Total	74	23.3	91	28.7	43	13.5	14	4.4	38	12.0	9	2.8	48	15.1
Female	Sprint	13	14.9	29	33.3	12.0	13.8	12.0	13.8	2.0	2.3	1	1.15	18.0	20.7
	Endurance	13	17.6	20	27.0	6.0	8.1	15.0	20.3	6.0	8.1	5	6.76	9.0	12.2
	Jumps	12	18.2	21	31.8	8.0	12.1	7.0	10.6	0.0	0.0	4	6.06	14.0	21.2
	Throws	17	25.8	16	24.2	12.0	18.2	9.0	13.6	1.0	1.5	1	1.52	10.0	15.2
	Pentathlon	2	15.4	6	46.2	1.0	7.7	4.0	30.8	0.0	0.0	0	0.00	0.0	0.0
	Total	57	18.6	92	30.0	39	12.7	9	2.9	47	15.3	11	3.6	51	16.6

Table3. Educational level of current coach in athletes that participated in the under-16 Spanish National championships (1997 and 2003).

Gender	Event	National coach		Monitor		University degree		University degree and national coach		No formal education		No coach		Don't know	
Male	Sprint	34	52.3	7	10.8	6	9.2	8	12.3	1	1.5	1	1.5	8	12.3
	Endurance	53	50.0	17	16.0	9	8.5	11	10.4	2	1.9	5	4.7	9	8.5
	Jumps	29	46.8	12	19.4	7	11.3	5	8.1	1	1.6	1	1.6	7	11.3
	Throws	33	45.2	8	11.0	13	17.8	4	5.5	4	5.5	1	1.4	10	13.7
	Octathlon	5	55.6	0	0.0	2	22.2	1	11.1	1	11.1	0	0.0	0	0.0
	Total	154	48.9	44	13.9	37	11.7	29	9.2	9	2.8	8	2.5	34	10.8
Female	Sprint	28	32.6	13	15.1	20	23.3	7	8.1	0	0.0	5	5.8	13	15.1
	Endurance	26	35.1	18	24.3	9	12.2	10	13.5	2	2.7	1	1.4	8	10.8
	Jumps	30	46.2	7	10.8	6	9.2	5	7.7	0	0.0	3	4.6	14	21.5
	Throws	34	52.3	7	10.8	7	10.8	5	7.7	0	0.0	2	3.1	10	15.4
	Pentathlon	8	57.1	3	21.4	1	7.1	2	14.3	0	0.0	0	0.0	0	0.0
	Total	126	41.4	48	15.8	43	14.1	29	9.5	2	0.6	11	3.6	45	14.8

Discussion and conclusions

The age of initiation for the Spanish athlete studied was around 10-11 years. Female athletes started sooner than males to practice track and field. These values are similar to those that experts recommend. Therefore, Spanish athletes have enough time to get an adequate learning and training process. Future studies should be done to find out the type of work done during the formative period.

It was observed that the place of initiation for practicing sport for less than half of the athletes was in school. These values are below those recommended by the experts. These data show the necessity to organize promotional campaigns in schools and reorganize the role of schools for sport initiation in Spain. Few athletes

that start in school participate in multi-event disciplines. This result may be because this discipline requires time and more knowledge and/or perspective from the coaches. Therefore, octathlon and pentathlon athletes had the highest percentage of coaches with track and field national degrees and/or university degrees. These results seem to demonstrate that coaches with higher formation have a tendency to orientate their athletes toward multi-events (although this tendency was not significant).

In relation to coach formation, the high percentage of athletes' current coaches and monitors with adequate educational formation is values similar to other results of studies done in formative years (Abbott, Button, Pepping, & Collins, 2005; Álamo, Amador, & Pintor, 2002; Williams & Wilson, 1998), although these studies were done in male, youth sport in schools. However, a high participation of national coaches in the initial stage is observed, an aspect that should be monitored because it may mean that there are insufficient monitors. These results show the need to include information about formative years in the continuing education of national coaches. Future research should further study the coaches with university degrees but without specific track and field certification.

The results only show a part of the reality, as these data came from the athletes that participated in the National Championship and further only included what the athletes knew or remembered about their coaches (10-15% of athletes did not know the educational formation of their coaches). More studies should be done to find out the way in which the starting and formation process is done in the different sports.

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