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Perceived parental educational styles and birth order in athletes

Estilos educativos parentales percibidos y orden de nacimiento en deportistas

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Abstract

The objective of this research was to know the differences in perceived parental educational styles in athletes and physical activity practitioners in function of birth order. The sample consisted of 492 Spanish athletes and physical activity practitioners. To measure the different variables that were used, an *ad hoc* sociodemographic questionnaire, the *Multifactor Self-Assessment Test of Child Adjustment* and *the Oviedo Scale of Infrequency of Response.* The results showed higher levels of maternal permissiveness (p<.05) and paternal restriction (p<.05) in athletes and physical activity practitioners' firstborn and only children. On the other hand, when only athletes were examined, the results showed higher levels of mother permissiveness (p<.05), in firstborn and only children. When physical activity practitioners were analysed, no significant differences (p>.05) were found between parental educational style variables and the birth position of the children. It was concluded that athletes and physical activity practitioners born in first place received an education with greater mother permissiveness and father restriction.

Keywords

number, family, athletes, education.

Resumen

El objetivo de este trabajo fue conocer las diferencias en los estilos educativos parentales percibidos en deportistas y practicantes de actividad física en función del orden de nacimiento. La muestra se compuso de 492 deportistas y practicantes de actividad física españoles. Se utilizó un cuestionario sociodemográfico *ad hoc*, el *Test Autoevaluativo Multifactorial de Adaptación Infantil* y la *Escala de Oviedo de Infrecuencia de Respuesta*. Los resultados mostraron mayores niveles de permisivismo materno (p<.01) y restricción paterna (p<.05) en los deportistas y practicantes de actividad física primogénitos e hijos únicos. Por otro lado, cuando se examinó solamente a los deportistas, los resultados mostraron mayores niveles de

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permisivismo materno (p<.05), en los deportistas primogénitos e hijos únicos. Cuando se analizó a los practicantes de actividad física, no se encontraron diferencias significativas (p>.05) entre las variables de estilos educativos y la posición de nacimiento de los hijos. Se concluyó que los deportistas y practicantes de actividad física primogénitos e hijos únicos recibieron una educación con mayor permisivismo materno y restricción paterna.

Palabras clave

Número; familia; deportistas; educación.

Introduction

The perceived parental educational styles in childhood have shown an important influence in the practice of physical activity and in the field of sport performance, they have indicated a positive or negative influence depending on the educational style adopted by parents (Borawski, Levers-Landis, Lovergreen & Trapl, 2003; Bumpus, Crouter & McHale, 2001; Kimiecik & Horn, 2012; Kristjansson, James, Allegrante, Sigfusdottir & Helgason, 2010; Pate, Mitchell, Byun & Dowda, 2011). On the other hand, birth order has been shown also as a variable with great influence on the psychosocial development of children, influencing anxiety levels, emotional intelligence, overprotection, parental attention time and future achievements (Castells, 2008; Freitas & Piccinini, 2010; Rubio & Sánchez-Nuñez, 2013; Vite, 2003). In addition, there are no previous studies that examined the relationship between birth order and perceived parental educational styles in childhood. Therefore, due to the influence of parental educational styles in sport and physical activity, birth order might present as something interesting in the field of sports and physical activity.

The previous studies that examined birth order and its relationship with other variables of psychosocial development find in the only children: worse emotional adjustment, greater protection, lower social skills, greater vulnerability to criticism, lower emotional intelligence and greater dependence (Castells, 2008; La Rosa, 1998; Pickhardt, 1999; Pitkeathley & Emerson, 1998; Rubio & Sánchez-Núñez, 2013). Thus, La Rosa (1998) found that the first-born children of middle-class families had lower state anxiety levels than first-born and non-first-born children of low socioeconomic status. Rubio and Sánchez-Núñez (2013) also added that first born children showed lower emotional intelligence levels than the first-born from

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families with more than one child. Nevertheless, only Montoya (2000) stands out that the only children could have greater possibility of interacting with their parents than those families with more children. Therefore, this greater interaction can be a powerful tool to establish a strong emotional bond that can prevent different deviant behaviors (Álvarez-García, García, Barreiro-Collazo, Dobarro & Antúnez, 2016). In addition, Vite and Ortiz (2003) showed that mothers have a different upbringing depending on the birth order that children occupy in the family, presenting inconsistency in their behaviors before the prosocial and aversive behaviors of their children. On the other hand, family size was also shown as an influential variable in the achievements obtained in the future by children in a Sanhueza (2009) work in Chile, concerning that when the family increases, the probability of reaching higher achievement levels decrease, although these results do not apply to first born children, who did not show greater achievement levels than families with more children. Once it has been examined the influence of birth order on the different variables of psychosocial development, it is observed that birth order is shown as a capable variable for influencing parental educational styles that parents carry out with their child athletes, and that present important repercussions in sport field.

Among the implications of parental educational styles in sports, previous work has found that authoritarian mothers showed no relationship with having child athletes with international success and protective mothers showed no relationship with having children who compete internationally (González-García, 2017). Furthermore, in another work González-García, Pelegrín and Carballo (in press) indicated that athletes and physical activity practitioners who perceived more support from parents towards physical activity, present greater maternal protectionism, maternal democratic education, paternal democratic education and paternal protectionism. In physical activity area at the health level, children raised by authoritarian mothers showed lower levels of physical activity than children from permissive mothers (Hennessy, Hughes, Goldberg, Hyatt & Economos, 2010; Jago, Davison, Brockman, Page, Thompson & Fox, 2011).

In this work the parental educational styles were categorized following Baumrind's model (1967, 1971) that divides them into: democratic, permissive and authoritarian. In addition to the styles examined by Baumrind, the protective father was added in this study (Clark, Cooper and Creswell, 2013). In this sense, the authoritarian parents stand out for imposing rigid rules,

poor communication, use of punishments and a continuous affirmation of power (Baumrind, 1967, 1971; Belsky, Sligo, Jaffee, Woodward & Silva, 2005; Cabello, Gutiérrez-Cobo & Fernández-Berrocal, 2017). On the other hand, democratic parents are characterized by good communication and affection, giving autonomy to their children and a reasoned set of rules between the rights and duties of the child and parents (García, Pelegrina & Lendínez, 2002; Gfroerer, Kern & Curlette, 2004; Kaufmann et al., 2000; Mansager & Volk, 2004; Warash & Markstrom, 2001; Winsler, Madigan & Aquilino, 2005). On the other hand, permissive parents are characterized by allowing children freedom in their desires whereas their physical survival is not endangered (García et al., 2002; Gfroerer et al., 2004; Kaufmann et al., 2000; Torío, Peña & Rodríguez, 2008). Finally, protective parents are defined by excessive concern for the child, avoiding any situation that may cause stress (Clarke et al., 2013; Costa & Faria, 2017; Spada et al., 2012).

Once influence between parental educational styles in sport and physical activity was shown, and the relation that has birth order with different variables of later development, it is interesting to know how athletes perceived parental educational styles perceived in childhood and how these styles relate with birth order. Therefore, the goal of this work was to know the differences in parental educational styles perceived in athletes and physical activity practitioners according to birth order. The hypothesis established was that first-born athletes (firstborns and only children) will perceive more paternal authoritarian behavior and maternal protection.

Method

Participants

The sample was made up by 492 athletes and physical activity practitioners, 149 were women (30.3%) and 343 were men (69.7) aged between 18 and 64 years old (M = 27.86; SD=9.16). Furthermore, 279 were non-federated (56.7%), 213 were federated (43.3%) and 50 were professional athletes (10.2%). In addition, 239 were individual athletes (48.6%) and 118 were sport athletes (24%). Most participants practiced: bodybuilding (n=76; 15.4%), cycling

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(*n*=39: 7.9%), running (*n*=38; 7.7%), table tennis (*n*=34; 6.9%), soccer (*n*=32; 6.5%) and other sports (*n*=273; 55.6%).

As a criterion of inclusion, athletes and physical activity practitioners over 18 years old were selected from all over the Spanish geography, in order to know how birth order influenced the parental educational styles that they perceived in their childhood. In addition, in order to have athletes and physical activity practitioners over 18 years old, it could be known how birth order influenced their parental educational styles perceived and these findings can be transferred to athletes in education programs.

Instruments

Ad hoc sociodemographic questionnaire. To evaluate sociodemographic factors, a self-created questionnaire was taken. The items assessed aspects related to: athlete biological variables (height, sex, age, etc.); labor and academic variables (studies level, employment situation, etc.), example: "*What is your mother's profession? "" What is your father's educational level? ";* and socio-sporting variables (sport, sports success, professional or amateur, etc.) *"Are you a professional in your sport?"* In the case of groups carried out in this study, the following question was taken from the sociodemographic questionnaire: *"In the order of siblings, I occupy the number ...."*. The total of 28 items, 5 evaluated biological variables, 5 evaluated employment and academic variables and 18 socio-sport variables. Most of the questions were closed-ended, of which there were Likert, dichotomous and polytomic questions.

The Multifactorial Self-Evaluation Test of childhood Adaptation (Hernández, 1998). It was used for the measurement of parental educational styles. This is a self-evaluating test that consists of 175 propositions. Its application can be individual or collective, from 8 to 18 years old. The test self-evaluates the Personal Inadaptation, the Social Inadaptation, the School Inadaptation, the Dissatisfaction with the Family and, finally, the Parental Education Attitudes, which was the scale used in this study, where parental educational styles are evaluated according to children criterion. The athletes were told to respond to the items of parental educational styles, remembering the most frequent educational style perceived in their childhood. Therefore, the questions were asked in a retrospective way, to know in the most

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objective way possible, what their education was like when they were children. The reliability studies, in university and adult sample, obtained a Cronbach alpha coefficient of .91 in the whole test (Hernández, 1998). In this work, a Cronbach's alpha coefficient of .68 was obtained in the sub-scale of Adequate Parent-Mother Education.

The parents education attitudes sub-scale is divided into the following factors for father's education:

- Democratic Education or Care-Personalized Education: It is characterized by a education based on love and care.

- Protectionism: It is characterized by excessive concern and help in children.

- Permissiveness: It is characterized by an excessive concession in the demands of children and in reinforcing caprice behaviors.

- Authoritarian Education or Restriction: It is characterized by an educational style that is the opposite of personalized and permissive education.

The scale is divided into the following factors according to the scale chosen for mother education:

- Care Education - Close to protectionism. It is characterized by a type of education based on love, care and approaching excessive protection.

- Democratic Education or Personalized Education. It is characterized by the respect and appreciation of parents as their children.

- Permissiveness. It is characterized by an excessive concession in children demands and in reinforcing caprice behaviors.

- Authoritarian Education or Restriction. It is characterized by an educational style which is the opposite of personalized and permissive education.

Acquiescence and dishonest participants. To evaluate acquiescence and dishonest participants, we used the Oviedo Infrequence Response Scale (INF-OV; Fonseca-Pedrero, Lemos-Giráldez, Paino, Villazón-García & Muñiz, 2009). This scale is a self-report measure, consisted of 12 items on a Likert scale with 5 response possibilities (1 = "Completely disagree"; 5 = "Completely agree"). The objective of this scale is to detect participants who respond in a random, pseudo-random or dishonest way. Concerning this idea, there are 12 items with attention control questions such as: *"Have you seen someone with glasses?", "In some occasions*

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I have been alone at home", "I have never been to the cinema", etc. This scale guarantees the reliability of the participants' answers because the online questionnaire was carried out. Participants with more than 3 incorrect answers in this test were removed from the sample. In this study, 25 participants who had responded dishonestly to the questionnaire were eliminated.

Process

The study was evaluated and approved by the ethics committee of the Miguel Hernández University. Next, we proceeded to look for participants by contacting the Spanish sports federations, coaches, athletes and physical activity practitioners. We contacted clubs, athletes and physical activity practitioners from all over Spain, also the study was conducted online. The athletes who expressed their interest in participating to the researchers sent an email to receive the research survey. Once the athletes received the survey, they could do it at home through Google Forms. The answers were stored in the Google Drive database, in an Excel format. Once the Excel database was debugged, the file was passed to the SPSS 19 version format.

Data Analysis

For the statistical treatment of the data, the SPSS 19.0 was used. To know the characteristics of the sample, the descriptive statistics of mean, minimum, maximum, frequency, percentage and standard deviation were made. To know the differences of means when the variables were quantitative, the one-way Anova test was used, using a confidence level of 95%.

Results

Firstly, with the objective of knowing the differences in parental educational styles perceived in athletes and physical activity practitioners according to birth order, a one-factor Anova test was performed, in which the sample was subdivided into Firstborn and Only Children (n=223), Second (n=178) and Third in Forward (n=91). In the "Third in Ahead" group, all those born after the third child of the sample were joined. The groups were made up considering the answer to the question of the sociodemographic questionnaire: *"In siblings order, I occupy the number ...."*.

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Table 1.

Mean differences in parental educational styles variables according to birth order in athletes and physical activity practitioners

Parental Educational Styles Variables	Birth Order	*M* (*DT*)	F (*p*)
Assistance-Education Close to Maternal Protectionism	Firstborn and only child	6.43 (1.76)	.47 (.62)
	Second	6.34 (1.67)	
	Third in Forward	6.23 (1.64)	
Maternal Personalized Education	Firstborn and only child	3.22 (1.20)	2.36 (.09)
	Second	3.00 (1.20)	
	Third in Forward	3.27 (1.00)	
Maternal Permissiveness	Firstborn and only child	.26 (.52)	5.40 (.005) **
	Second	.11 (.35)	
	Third in Forward	.20 (.48)	
Maternal Restriction	Firstborn and only child	1.62 (2.12)	1.38 (.25)
	Second	1.70 (2.39)	
	Third in Forward	1.25 (1.73)	
Paternal Assistance Personalized Education	Firstborn and only child	6.05 (1.82)	1.73 (.17)
	Second	5.71 (1.88)	
	Third in Forward	5.96 (1.75)	
Paternal Protectionism	Firstborn and only child	2.45 (1.57)	.69 (.50)
	Second	2.44 (1.60)	
	Third in Forward	2.67 (1.68)	

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Paternal Permissiveness	Firstborn and only child	.23 (.46)	2.27 (.10)
	Second	.15 (.41)	
	Third in Forward	.14 (.41)	
Paternal Restriction	Firstborn and only child	1.60 (2.06)	3.41 (.03)*
	Second	1.41 (1.96)	
	Third in Forward	.97 (1.57)	

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

Table 1, the results showed higher levels of mother permissiveness (p<.01) and father restriction (p<.05) in athletes and physical activity practitioners firstborns and only children.

Secondly, in order to know the differences in parental educational styles in athletes according to birth order, an Anova one-factor test was performed, in which the sample was subdivided into Firstborn and Only Children (n=156), Second (n=135) and Third in Forward (n=66). In the "Third in Ahead" group, all those born after the third of the sample were joined. In this case, to evaluate the group of athletes in the sample, those who practiced physical activity were excluded (n=135).

Table 2.

Mean differences in parental educational styles variables according to birth order in athletes

Parental Educational Styles Variables	Birth Order	*M* (*DT*)	F (*p*)
Assistance-Education Close to Maternal Protectionism	Firstborn and only child	6.51 (1.65)	.86 (.42)
	Second	6.26 (1.76)	
	Third in Forward	6.30 (1.57)	
Maternal Personalized Education	Firstborn and only child	3.16 (1.19)	1.14 (.32)
	Second	3.04 (1.19)	
	Third in Forward	3.30 (1.02)	

Maternal Permissiveness	Firstborn and only child	.24 (.49)	3.85 (.022) *
	Second	.10 (.35)	
	Third in Forward	.22 (.48)	
Maternal Restriction	Firstborn and only child	1.53 (1.88)	2.04 (.13)
	Second	1.68 (2.42)	
	Third in Forward	1.07 (1.33)	
Paternal Assistance Personalized Education	Firstborn and only child	6.05 (1.73)	.77 (.46)
	Second	5.80 (1.85)	
	Third in Forward	5.83 (1.90)	
Paternal Protectionism	Firstborn and only child	2.49 (1.57)	.34 (.70)
	Second	2.40 (1.58)	
	Third in Forward	2.60 (1.71)	
Paternal Permissiveness	Firstborn and only child	.24 (.47)	2.61 (.07)
	Second	.14 (.41)	
	Third in Forward	.12 (.37)	
Paternal Restriction	Firstborn and only child	1.51 (1.94)	1.22 (.29)
	Second	1.33 (1.82)	
	Third in Forward	1.09 (1.76)	

Note. $^{*}p<.05$

Table 2, the results showed higher levels of mother permissiveness ($p<.05$), in first-born athletes and only children.

Thirdly, with the objective of knowing the differences in parental educational styles in physical activity practitioners according to birth order, an Anova one-factor test was performed,

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in which the sample was subdivided into Firstborn and Only Children (*n*=156), Second (*n*=135) and Third in Forward (*n*=66). In the "Third in Ahead" group, all those born after the third of the sample were joined. In this case, to evaluate the group of physical activity practitioners in the sample, the athletes were excluded (*n*=357).

Table 3.

Mean differences in parental educational styles variables according to birth order in physical activity practitioners

Parental Educational Styles Variables	Birth Order	*M* (*DT*)	F (*p*)
Assistance-Education Close to Maternal Protectionism	Firstborn and only child	6.25 (1.98)	.90 (.40)
	Second	6.60 (1.36)	
	Third in Forward	6.04 (1.81)	
Maternal Personalized Education	Firstborn and only child	3.37 (1.22)	2.20 (.11)
	Second	2.88 (1.25)	
	Third in Forward	3.20 (.95)	
Maternal Permissiveness	Firstborn and only child	.31 (.58)	1.88 (.15)
	Second	.13 (.35)	
	Third in Forward	.16 (.47)	
Maternal Restriction	Firstborn and only child	1.85 (2.59)	.03 (.96)
	Second	1.74 (2.30)	
	Third in Forward	1.72 (2.47)	
Parental Assistance Personalized Education	Firstborn and only child	6.07 (2.01)	2.03 (.13)
	Second	5.46 (1.98)	
	Third in Forward	6.32 (1.24)	
Parental Protectionism	Firstborn and only child	2.37 (1.59)	.77 (.46)
	Second	2.55 (1.66)	
	Third in Forward	2.84 (1.62)	
Parental Permisivisiness	Firstborn and only child	.20 (.44)	.14 (.86)
	Second	.16 (.43)	
	Third in Forward	.20 (.50)	
Parental Restriction	Firstborn and only child	1.83 (2.31)	2.71 (.07)
	Second	1.67 (2.35)	
	Third in Forward	.68 (.90)	

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Table 3, there were no found significant differences (p>.05) between parental education style variables and birth order of the children.

Discussion

The objective of this work was to know the differences in parental educational styles perceived in athletes and physical activity practitioners according to birth order. The results showed higher levels of mother permissiveness and father restriction in athletes and physical activity practitioners firstborns and only children. As previous studies showed, children born in the first place and only children have the risk of receiving greater attention from their parents that can lead to negative characteristics, such as excessive concessions, and in this case, a higher restriction is observed by the father (Castells, 2008; Pickhardt, 1999; Pitkeathley & Emerson, 1998; Rubio and Sánchez-Núñez, 2013; Sanhueza, 2009). The only children and first-born at the beginning, have the risk that their parents are not familiar with the task of educating them, coupled with the lack of training and experience can lead to parents committing an erroneous role in education and, subsequently, may have negative implications for the children subsequent development (Alvarez-Garcia et al., 2016; Clarke et al., 2013; Costa & Faria, 2017; González-García, 2017; Spada et al., 2012; Torío et al., 2008). In addition, the negative implications of maternal permissiveness and parental restriction can lead to the failure in sport career and dissatisfaction with their sport practice (González-García, 2017; González-García, Pelegrín & Carballo, 2018; Xie, Fan & Cheung, 2015); and in other areas of life, it can lead them to carrying out greater deviant behaviors, school failure, low self-concept, lower maturity level, less responsibility to commitments, low tolerance to frustration, lower social skills, lower success levels (Belsky et al., 2005; Cabello et al., 2017; Clarke et al., 2013; Costa & Faria, 2017; Rubio & Sánchez-Núñez, 2013; Sanhueza, 2009; Winsler et al., 2005). Therefore, athletes and physical activity practitioners born in the first place, may be at greater risk of receiving more authoritarian father cares and greater permissiveness from their mothers, and this may lead to negative psychosocial characteristics for sport career.

On the other hand, when only athletes were examined in the sample, the results showed higher levels of mother permissiveness in those who were born in first place and only children. When the physical activity and athletes were analysed together, no relationship was found with

parental restriction. As shown in other studies, authoritarian parents are associated with lower levels of physical activity and sports practice (Hennessy et al., 2010; Jago et al., 2011; Pelegrín, González-García & Garcés De Los Fayos, 2017). Therefore, being active athletes their parents may not have such high levels of authoritarianism and thus there are no differences in parental restriction, when only the group of athletes was selected in the sample (Hennessy et al., 2010; Jago et al., 2011; Pelegrín et al., 2017), although when athletes and physical activity practitioners were examined together, differences were found. Following the results obtained in this work, first-born athletes and only children, unlike those born in different positions, can present the following implications in their development: lower maturity levels, low achievement motivation, less responsibility to compromise, aggressiveness, greater intrinsic motivation towards physical activity, etc (García et al., 2002; González-García, 2017; Gfroerer et al., 2004; Hennessy et al., 2010; Jago et al., 2011; Kaufmann et al., 2000; Torío, Peña & Rodríguez, 2008), which are some of the effects that these type of parents can cause. Therefore, within the group of athletes only higher levels of mother permissiveness were found in athletes born in first place.

As a line of future proposal, it is interesting to continue studying the influence of birth order variables with the different athletes emotions, because of the importance of emotional control in sport (Clarke et al., 2013; González-García, 2017) and by the relationship that emotion has shown with birth order in other areas related to sport and physical activity (Castells, 2008; La Rosa, 1998; Pickhardt, 1999; Pitkeathley & Emerson, 1998; Rubio & Sánchez-Núñez, 2013). On the other hand, having athletes and physical activity practitioners older than 18 years in this study, it can be known how birth could influenced their parental educational styles received and these findings can be transferred to young athletes in training. Therefore, it would be interesting to consider birth order as another risk factor in the psycho-sport development of athletes.

As a limitation of this research work, it is highlighted that participants who were only children and firstborn from families with more children were not divided into groups. Therefore, in future work it would be interesting to know how the results evolve taking this division as a starting point. On the other hand, the use of TAMAI questionnaire in a retrospective way can induce to biases of memory in those participants who do not remember

how they were educated in the past by their parents. In addition, the wide age range can also lead to biases in the perception of parental educational styles by older participants. Therefore, it would be interesting to replicate the work with athletes of lower categories to know how the results evolve in these ages.

As conclusions of the present work:

- Athletes and physical activity practitioners born in the first place and only children obtained higher levels of father restriction and mother permissiveness.

- Athletes born in the first place and only children obtained higher levels of mother permissiveness but did not obtain higher levels of father restriction.

- No differences were found between birth order and parental educational styles in physical activity practitioners.

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