

Serra Puyal, J.R.; Zaragoza Casterad, J. y Generelo Lanaspá, E. (2014). Influencias de “otros significativos” para la práctica de actividad física en adolescentes / Influences from “other influencers” for physical activity practice in teenagers. Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte vol. 14 (56) pp. 735-753
[Http://cdeporte.rediris.es/revista/revista56/artinfluencia509.htm](http://cdeporte.rediris.es/revista/revista56/artinfluencia509.htm)

ORIGINAL

INFLUENCES FROM “SIGNIFICANT OTHERS” FOR PHYSICAL ACTIVITY PRACTICE IN TEENAGERS

INFLUENCIAS DE “OTROS SIGNIFICATIVOS” PARA LA PRÁCTICA DE ACTIVIDAD FÍSICA EN ADOLESCENTES

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Código UNESCO / UNESCO Code: 3212 Salud Pública / Public Health.

Clasificación CONSEJO DE EUROPA / COUNCIL OF EUROPE Classification:
17 Otras: Salud Pública / Others: Public Health

Recibido 23 de enero de 2012 **Received** January 23, 2012

Aceptado 26 de enero de 2013 **Accepted** January 26, 2013

ABSTRACT

OBJECTIVE To assess social influence (social support, social influence and as a model) exerted by "significant others" (father, mother, friends, physical education teacher) in physical activity by gender and cycle, of a representative sample of students in the province of Huesca enrolled in secondary education.

MATERIAL AND METHOD The sample analysis was comprised of 831 individuals from Huesca High School (45.7% men, 54.3% women), between 12 and 16 years old. They answered an adapted version of “Four by one-day Physical Activity Questionnaire” and “Cuestionario de influencias sobre la Actividad Física y la Salud” (Questionnaire about influences on Physical Activity and Health).

RESULTS By a regression process, we obtained a mathematical model where the influence of the physical activity teacher as reference and the social influence of friends explained 11.2% of the physical activity carried out.

DISCUSSION The influence of the physical activity teacher and support from friends were highlighted as positive factors for engaging in physical activity.

KEY WORDS Influence, adolescents, physical activity levels.

RESUMEN

OBJETIVO Examinar la influencia social (apoyo social, influencia social e influencia como modelo) de los “otros significativos” (padre, madre, amigos, profesor de educación física) en la práctica de actividad física según género y ciclo, en sujetos adolescentes.

MATERIAL Y MÉTODOS 831 sujetos de la provincia de Huesca (45,7% hombres y 54,3% mujeres) de entre 12 y 16 años. Contestaron a una adaptación del cuestionario “Four by one-day Physical Activity Questionnaire” y al “Cuestionario de influencias sobre la Actividad Física y la Salud”.

RESULTADOS Los La influencia del profesor de educación física como modelo y la influencia social de los amigos explicaron el 11,2% de la actividad física realizada. Se obtuvieron diferencias significativas para los referentes de género en todos los tipos de influencias sociales.

DISCUSIÓN El apoyo e influencia social diferenciado por parte de los progenitores, en función del género o edad de sus hijos, parece demostrar la importancia que tienen los referentes de género y los estereotipos sexuales, en la influencia sobre la práctica de actividad física en población adolescente.

PALABRAS CLAVE Influencia, adolescentes, niveles de actividad física.

INTRODUCTION

Despite the different benefits generated by regularly engaging in physical activity (PA), only 4.6% of girls and 16.8% of boys in Europe do 60 minutes of moderate or vigorous PA each day, whilst the time spent on sedentary activities is 8 hours a day (Verloigne et al., 2012). In an effort to solve the problem of participation and adherence to PA, different theoretical models have been used to guide research and try to explain the possible factors that may have an influence on the youth population “engaging in PA”. One of the most commonly used theoretical models is the social cognitive model, (Taylor, Baranowski & Sallis, 1994). According to this model, PA can be influenced by interpersonal type factors (influence of significant others, such as fathers, mothers, siblings, friends, teacher and doctor), and environmental type factors (related to the environment at home or at school).

Parents, friends and physical education teachers are potentially important agents, due to their capacity to influence adolescents in terms of their engagement in physical activity (Hohepa, Scragg, Schofield, Kolt & Schaaf, 2007).

The so-called significant others can exert their influence from two perspectives, either directly or indirectly: by indirectly, we refer to the influence of the model that suggests that young people learn from and imitate the physical activity behaviours or patterns of family members or of other social agents. By directly, we refer to the influence of social support (information about physical activity, supply of material and equipment, emotional support, and transport aid); and social influence (referring to persuasion, pressure, approval, expectations, etc.).

Parental influence has been studied through different mechanisms, either as a model or as social support (Trost et al., 2003), although the results are inconsistent (Sallis et al., 2000; Gustafson et al., 2006). Whilst some studies conclude by saying that the parental model (Gustafson & Rhodes, 2006; Pugliese & Tinsley, 2007), parental support (Gustafson & Rhodes, 2006; Pugliese & Tinsley, 2007) and parental stimulation (Pugliese & Tinsley, 2007) are positively related to the PA of adolescents, other studies have not found any relationship between the parental model (Gustafson & Rhodes, 2006; Sallis et al., 2000), parental support (Ferreira et al., 2007) and parental stimulation (Ferreira et al., 2007; Sallis et al., 2000) with PA.

The influence of parents as models is perhaps the most commonly studied dimension in literature. The great majority of studies show that parents who do PA influence and favour the engagement in PA of their children, regardless of their gender (). Others, like the study carried out with Portuguese adolescents by Seabra et al., (2011), find that only an active mother was a predictive factor in the participation in the physical activity of her children, whilst the father's level of engagement in PA had no influence.

Apart from the role played by parents as models, some studies have shown that the social support of parents may be a decisive factor in promoting their children's adherence to an active lifestyle. This has been verified in previous studies that have shown that parents' support and encouragement was positively associated with the PA levels of their adolescent children (Heitzler et al., 2006; Dowda et al., 2007; Robbins et al., 2008; Wenthe et al., 2009). The work carried out by Pugliese et al., (2007) with respect to the role played by parents in the PA of adolescents, revealed that children whose parents were not involved in exerting an influence (either as a model or a social support), with respect to their behaviour, had a greater risk of being inactive than children of parents who were involved in this task.

Adolescents spend a lot of time with their friends and therefore these can also be an important agent of influence on their behaviours (Duncan et al., 2007; Salvy et al., 2009). Beets, Voogel, Forlaw, Pitetti & Cardinal, (2006) point out that friends can influence the behaviour of their peers, and their influence may even be more decisive than that of their parents. The majority of studies (Sallis et al., 2000; Van Der Horst et al., 2007; Kirby et al., 2011) point out the important influence of

friends in engaging in PA, although there are some studies that do not confirm this (Seabra et al., 2011). This is also corroborated by the study by Vilhjalmsón & Thorlindsson, (1998), which concludes by saying that the most power influence for adolescents to engage in PA is having physically active friends.

Studies on social influence have mainly focused on two agents, parents and friends, paying little attention to the influence that can be exerted by physical education teachers. There are discrepancies about the impact of physical education teachers on adolescents' levels of physical activity, although there are very few studies that have studied this impact, despite the fact that, possibly, they are essential in the development of certain habits during adolescence (Ferreira, et al., 2007; Sallis et al., 2000). Whilst some studies have shown that physical education teachers have the most important influence on young people engaging in physical activity (Vilhjalmsón y Thorlindsson, 1998), other studies show a smaller influence (Sallis et al., 2000). Along this line, Seabra et al., (2011) find that only 43% of Portuguese adolescents acknowledge that physical education teachers have a significant influence on their engagement habits. This observation contrasts with other studies performed in our country, which have verified the influence of teachers on the PA levels of young people (Ramos et al., 2007) or the important role played by the PE teacher, in the creation of positive attitudes towards engagement (Moreno y Cervelló, 2004).

The objective of this study is to examine the social influence (social support, social influence or as a model) exerted by "significant others" (father, mother, friends, physical education teacher) in engaging in physical activity, according to gender and cycle, of a representative sample of secondary education students from the province of Huesca.

MATERIAL AND METHODS

SAMPLE

A representative sample was obtained from all public and private Secondary Education institutes in the province of Huesca (Spain), using a selection of cases by stratified sampling, with a confidence interval of 95% and an error of 3%. The centres were selected taking into account geographical, climate and population criteria, in an attempt to cover all the peculiarities of such a varied and extensive province as is the province of Huesca. The population universe was all the male and female ESO (secondary education) students from the province of Huesca (12-16 years old), comprised of 5,389 students from public centres (2,780 boys and 2,609 girls) and 1,863 students from private and authorised centres (1,017 boys and 846 girls). The representative sample was initially 959 individuals. After applying the inclusion criteria (all the individuals had to be studying secondary education in Aragon; and they must have lived in this region for at least three years), the 831 students (45.7% boys and 54.3% girls) decided to sign the consent to take part in the study, with an average age of 13.8 (SD 1.4 years).

INSTRUMENTS

Physical activity levels: to find out the physical activity levels, an adaptation of "Four by one-day Physical Activity Questionnaire" (Cale, 1993) was used. This questionnaire contains a list of activities divided into chronological periods to favour recall, associated with the specific energy cost (Ainsworth et al., 1993). The questionnaire estimates total physical activity, inside and outside the school environment, and it registers all types of physical activity (sport, daily or work) of the previous day. To be able to thoroughly determine the average level of physical activity of an individual, this is done on four occasions; twice in winter and twice in spring. For greater rigour, two of them are on school days (one of them the day after the PE class) and the other two at weekends. The instrument contains a list of activities divided into chronological periods to favour recall.

This instrument has been validated both in the English population (Cale, 1993) and in the Spanish population (Soler, 2004). Prior to its use, we performed a reliability study, obtaining an average value of 0.75 in all items.

Influences of "significant others": to assess the influences of significant others, we use the "Questionnaire of Influences on Physical Activity and Health" adapted from the questionnaire of Bangdiwala et al. (1993) and Taylor et al. (1994). This questionnaire compiles the opinion of individuals about the influence exerted by significant others, such as fathers, mothers, friends and physical education teachers on the engagement in PA of the individuals studied. This is done from different perspectives: influence of social support (How often do different people talk to you about physical activity? and, Are different people important to help you participate in sports and physical activity?); Influence of the model (How often does each of these people carry out physical activity?, and, How often does each one of these people carry out physical activity with you?); Social influence (How often does each of these people encourage you to do physical activity?, and, How much importance does each one of these people place on physical activity?). The social agents that the questions referred to were the father, mother, friends, and physical education teacher. This questionnaire has six answer levels on a Likert type scale with an even number of options (six options that went from "never" to "always") in order to avoid intermediate answers. In the reliability study performed with Cronbach's Alpha, we obtained average values of between 0.6 and 0.9.

PROCEDURES

All centres anonymously completed the questionnaires during the same week of the year and with the same protocol (presence of tutor teacher, sitting in their classrooms, etc). Two different questionnaires were answered in each period: one about the school day and another about the weekend day. In winter, the days selected were Sunday and one weekday without a physical education class. In the spring, the answers were given referring to Saturday and a school day that included a physical education class. Students had to answer at the rate set by the interviewer, following the instructions given on a PowerPoint presentation.

The "Questionnaire of Influences on Physical Activity and Health" was given out just once, at the end of the entire data collection process.

To conduct this study, approval was received from the Clinical Research Ethics Committee of Aragon as well as from the management of each one of the centres.

STATISTICS

After filtering the questionnaires according to the inclusion criteria (answer all the questionnaires, understand all the questions, for it to be a normal day and for the interviewer to consider all the answers to be correct), the data were analysed using the SPSS 15.0 statistical package. Cronbach's Alpha was used to perform the reliability study of the two instruments used. The Mann-Whitney U was used to compare the hypotheses, the Kruskal-Wallis test for the non-parametric tests and the Spearman Rho for non-parametric correlations. A linear regression was used to construct the model to find out the existing degree of relationship between the dependent and the independent variables. The independent variables were all the influence factors referring to social support, influence of the model and social influence, and the independent variable were the physical activity levels of the individuals. The level of significance considered was $P < 0.05$.

RESULTS

INFLUENCE OF SOCIAL SUPPORT

Social support can be provided in several ways (information given to the children and help carrying out physical activity), but the influence of the father, mother, friends and physical education teacher is appreciable and differentiated depending on the gender of the children/friends/students and only of the father depending on the cycle with respect to the information given. With reference to help engaging in PA (for example, accompanying the child to the facilities, providing transport or access to the different places), we only find differences in the case of the father and of the PE teacher depending on the gender, and of the father, mother and PE teacher in the case of the cycle. See table 1.

Table 1. Social support (talk and help engaging in physical activity) for the gender and age variables.

	sex	N	Average range	Sig.	Age (Cycle)	N	Average range	Sig.
Father talks about PA	M	418	425.47	0.008*	1 st	372	428.86	0.006*
	F	391	383.12		2 nd	437	384.69	
Mother talks about PA	M	422	393.73	0.020*	1 st	378	420.98	0.304
	F	401	431.22		2 nd	445	404.37	
Friends talk about PA	M	422	451.31	0.000*	1 st	376	412.82	0.926
	F	401	370.63		2 nd	447	411.31	

Teacher talks about PA	M	427	381.78	0.000*	1 st	379	419.34	0.605
	F	402	450.28		2 nd	450	411.35	
Father helps in PA	M	418	423.41	0.015*	1 st	372	442.46	0.000*
	F	391	384.23		2 nd	437	372.11	
Mother helps in PA	M	422	396.65	0.061	1 st	378	457.8	0.000*
	F	401	427.17		2 nd	445	372.08	
Friends help in PA	M	422	410.33	0.553	1 st	376	430.11	0.087
	F	401	419.97		2 nd	447	402.21	
Teacher help in PA	M	427	386.02	0.000*	1 st	379	449.88	0.000*
	F	402	446.74		2 nd	450	386,47	

* p < 0.05 ; M= male, F= female

INFLUENCE OF THE MODEL

With respect to the influence exerted by the different social agents as a model ("they do PA" and "they do PA with you"), as we can see in table 2, only the influence exerted by mother, friends and physical education teacher as agents who engage in PA, is appreciable and differentiated depending on the gender of the children/friends/students, whilst the influence of the father, mother, friends and physical education teacher as social agents who do PA with the children, is appreciable and differentiated depending on the gender of children/friends/students.

The influence of the father, mother and friends, both as agents engaged in PA, and when they engage in PA with the children, is appreciable and differentiated depending on the age (cycle).

Table 2. Influence of the model (do physical activity and accompany) for the gender and age variables.

	sex	N	Average range	Sig.	Age (Cycle)	N	Average range	Sig.
Father does PA	M	418	399.7	0.537	1 st	372	423.21	0.032*
	F	390	409.65		2 nd	436	388.54	
Mother does PA	M	422	384.85	0.001*	1 st	378	430.4	0.026*
	F	399	438.65		2 nd	443	394.44	
Friends do PA	M	426	466.35	0.000*	1 st	380	446.94	0.000*
	F	400	357.22		2 nd	446	385.01	
Teacher does PA	M	427	385.69	0.000*	1 st	380	405.28	0.228
	F	403	447.09		2 nd	450	424.13	
Father does PA with you	M	418	428.22	0.001*	1 st	371	443.35	0.000*

	F	389	377.98		2 nd	436	370.52	
Mother does PA with you	M	422	379.25	0.000*	1 st	378	440.21	0.000*
	F	399	444.58		2 nd	443	386.08	
Friends do PA with you	M	427	441.81	0.001*	1 st	380	442.67	0.001*
	F	401	385.42		2 nd	448	390.61	
Teacher does PA with you	M	427	396.83	0.019*	1 st	380	411.71	0.671
	F	403	435.28		2 nd	450	418.7	

* p < 0.05 ; M= male, F= female

SOCIAL INFLUENCE

In table 3, we can see the influence of the different social agents studied with respect to the different forms of social influence (encouragement, importance given to PA). The influence exerted by the father, friends and physical education teacher as agents to encourage the young person to engage in PA is appreciable and differentiated depending on the gender of children/friends/students, whilst the influence of the father, mother, friends and physical education teacher as social agents who place importance on engaging in PA, is appreciable and differentiated depending on the gender of children/friends/students.

The influence of the father and mother, as agents who encourage the young person to engage in PA, and the father and friends as social agents who place importance on engaging in PA is appreciable and differentiated depending on the age (cycle).

Table 3. Social influence (encourage and place importance on physical activity) for the gender and age variables.

	sex	N	Average range	Sig.	Age (Cycle)	N	Average range	Sig.
Father encourages PA	M	418	427.31	0.003*	1 st	372	433.95	0.001*
	F	390	380.06		2 nd	436	379.38	
Mother encourages PA	M	422	409.59	0.81	1 st	378	439.6	0.001*
	F	400	413.51		2 nd	444	387.58	
Friends encourage PA	M	427	438.24	0.002*	1 st	380	430.66	0.06
	F	400	388.12		2 nd	447	399.84	
Teacher encourages PA	M	427	394.68	0.007*	1 st	380	425.04	0.269
	F	403	437.56		2 nd	450	407.44	
PA important to father	M	418	420.1	0.043*	1 st	372	424.8	0.019*
	F	390	387.78		2 nd	436	387.18	
PA important to mother	M	422	395.71	0.044*	1 st	378	423.07	0.185
	F	400	428.16		2 nd	444	401.65	
PA important to friends	M	427	452.39	0.000*	1 st	379	432.35	0.036*
	F	400	373.02		2 nd	448	398.48	
PA important to teacher	M	427	394.2	0.002*	1 st	380	420.76	0.484
	F	403	438.07		2 nd	450	411.06	

* p < 0.05 ; M= male, F= female

Table 4 exclusively shows the significant relationships between the different dimensions of social influence of the significant others and the physical activity levels (p< 0.05). We appreciate discreet but significant relationships between the following values.

Table 4. Correlations between the influence factors of the significant others and the physical activity levels.

Father talks about PA	R	0.178	Father encourages PA	r	0.210
	Sig.	0.000		Sig.	0.000
Mother talks about PA	r	0.120	Mother encourages PA	r	0.166
	Sig.	0.001		Sig.	0.000
Friends talk about PA	r	0.215	Friends encourage PA	r	0.196
	Sig.	0.000		Sig.	0.000
Father does PA	r	0.077	PA important to father	r	0.127
	Sig.	0.028		Sig.	0.000
Friends do PA	r	0.221	PA important to mother	R	0.111
	Sig.	0.000		Sig.	0.001
Teacher does PA	r	-0.109	PA important to friends	r	0.193
	Sig.	0.002		Sig.	0.000
Father does PA with you	r	0.151	Father helps in PA	r	0.123
	Sig.	0.000		Sig.	0.000
Friends do PA with you	r	0.229	Mother helps in PA	r	0.086
	Sig.	0.000		Sig.	0.013
Teacher does PA with you	r	-0.072	Friends help in PA	r	0.093
	Sig.	0.038		Sig.	0.007

Using all the influence factors that refer to social support, influence of the model and social influence as independent variables, and the physical activity levels as dependent variable, we obtain a model where the perception that the student has of the physical activity carried out by the teacher explains 5.7% of the entire variability in the execution of this behaviour, and if we add the answer to item "encouragement given by friends" 11.2% is explained (see table 5).

Table 5. Explanatory model of the physical activity level with respect to significant others.

SUMMARY OF THE MODEL					
Model	R	R square	R Square corrected	St. estimati error	Beta standardis coefficients
1	0.240 ^a	0.057	0.047	3.79	-0.240
2	0.334 ^b	0.112	0.091	3.70	-0.267 (1)
					-0.234 (2)
a. Predictive values: (Constant), teacher does PA					
b. Predictive variables: (Constant), teacher does PA (1), friends encourage PA (2)					

DISCUSSION

In this study, we find that with respect to social support, it is the influence of the parents and of the physical education teacher that presents differences depending on the gender of their children/students and also with respect to the education cycle, except in the case of the teacher where these differences appear in all dimensions of social support, except for the dimension "give information about PA":

With respect to the influence of the model, the mother and friends appear as agents whose influence is differentiated depending on the gender and cycle of the adolescents in all dimensions of the model. The influence of the father is significantly different depending on the cycle studied by the children in the case of the dimension "*engages in PA*" and differentiated depending on the gender and cycle with respect to the dimension "*engages in PA with you*". The influence of the PE teacher has a differentiated influence depending on the gender with respect to the dimension "*engages in PA*" and depending on the education cycle in the dimension "*engages in PA with you*".

If we talk about social influence, our study shows that the influence of the father and of friends, presents differences depending on the gender, in the two dimensions of social influence ("*give encouragement*" and "*importance given to PA*"). Depending on the cycle studied by the children, and with respect to social influence, the mother only presents differences in terms of the dimension "*give encouragement*" and depending on gender in terms of the dimension "*importance given to PA*". The PE teacher only presents differences in terms of social influence when referring to the gender of the students in both dimensions of social influence. Our results indicate support in terms of the positive relationship of all the social dimensions with the PA of the adolescents studied. However, the regression analysis enabled us to observe that the student's perception of the physical activity carried out by the teacher explains 5.7% of the entire variability in the execution of this behaviour and if we add the answer to the item "encouragement given by friends", we can explain 11.2%.

The influence of the "significant others", parents, friends and PE teacher, has been considered as one of the factors that can explain the reduction in PA in the youth population in general and in particular in females (Neumark-Sztainer, Story, Hannan, Tharp, & Rex, 2003). The help, support, encouragement, direct support from parents, such as, for instance, to organise physical activities (Anderssen y Wold, 1992), access sports facilities or provide transport (Hoefer y cols., 2001), are positively related to PA among young children and adults. This is also corroborated by the HELENA study (Martín-Matillas et al., 2010), which demonstrates that support and encouragement from relations will favour adolescents' engagement in PA. This is confirmed by other studies that have used subjective and/or objective measurements of PA that support the importance of the family, both from the perspective of support and of social influence, in adolescents' behaviour in terms of engagement (Brockman et al., 2009), or more specifically of parents and friends (Springer et al., 2006; Hohepa et al., 2007; Robbins et al., 2008) or of friends (Gruber et al., 2008). Furthermore, girls with mothers and fathers who have a favourable opinion of sporting activities have greater possibilities of getting involved in them, as studied by Torre (2002). On the contrary, it seems likely that lack of support from the family and the fact that parents may have a more unfavourable opinion of physical activity may be a negative factor that generates divergences in the children's minds about the positive effects of physical activity on health. This, therefore, has an influence on their participation (Shropshire & Carroll, 1997).

The difference in the influence of mothers and fathers has been studied previously, but with contradictory results. The specific social influence and support provided

by the parents, depending on their children's gender or age, which we have found in our study, seems to demonstrate the importance of the gender focal points and sexual stereotypes with respect to influencing adolescents in terms of engaging in physical activity. Although some studies have concluded that the support from both parents seems to be especially influential in the case of girls (Davison, Cutting & Birch, 2003), other studies show clear differences depending on the gender of the parent. Van der Horst, Paw, Twisk, & van Mechelen (2007) demonstrated that the father's support was significant for boys, but not for girls, in terms of engaging in PA. Along that same line, we find the work carried out by Trost et al. (2003), who concluded by saying that parents offered greater support to boys than to girls to carry out PA. The work carried out by Fredricks y Eccles (2005) is especially interesting due to its statement about the socialisation carried out by parents in their children in aspects relating to gender. These authors point out that the socialisation process differs depending on whether it is the father or the mother.

The role of parents as models refers to the relationship between the normal participation of the father in PA and the participation of the children. Gustafson and Rhodes (2006) point out the existence of contradictory studies regarding the relationship between the engagement of parents and the engagement of their children.

Previous studies (Sallis et al. 2000; Ferreira et al. 2007) have shown the existence of a strong relationship between the participation of parents and of children in PA, although it is also true that there are many studies that do not find any relationship between the PA pattern of parents and children (Bangdiwala et al., 1993; Trost et al., 1997; van der Horst et al., 2007). Other studies point out that although parents are important, there are other more decisive factors, such as enjoyment of the activity or fun (Stucky-Ropp & DiLorenzo, 1993; Raudsepp & Viira, 2002). There is also controversy about establishing if the mother's or father's influence is related to the gender of their children. Yang et al., (1996) and Arredondo, Elder, Ayala, Campbell, Baquero & Duerksen (2006), demonstrated that, for boys, the father was probably more of a model to be followed and would therefore influence their participation in PA, whilst mothers had a greater influence as a model in the case of girls. In some studies, the involvement of the parents seems to be especially important for girls (Nouredine, Pender & Wu, 2003). Despite this, in a Spanish study Casimiro (2000) determined that the sporting habits of the parents and especially of the mother is a decisive predictor, in agreement with those authors who point out that the mother's engagement is really more influential for the children (Delgado & Tercedor, 2002).

Some studies, both qualitative ones (Thompson et al., 2010), and quantitative ones (Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2005), have given some idea of the mechanisms that could explain the gender differences in the influence that parents have on the PA their children engage in. These studies suggest that, on the one hand, mothers spend more time with their children, above all in homes where both parents work and on the other hand, that fathers have more perception about the competence of boys than of girls, which means that they give boys more support to carry out PA.

As the adolescents get older, the family influence may get smaller and the relative importance of other social agents may change. The role of friends, in adolescence, is often more important than that of the actual parents (Brustad, Babkes & Smith, 2001). Adolescents are more sensitive to the influence of friends than younger children. For example, adolescents who expressly mention a greater presence of friends in their lives, also inform of greater participation in PA (Salvy, Bowker, Roemmich, Romero, Kieffer, Paluch et al., 2009). There is also evidence that if an adolescent participates in a PA with a friend, they are more likely to adhere to this PA (de Bourdeaudhuij et al., 2005). Even the HELENA study (Martín-Matillas et al., 2010), points out that if friends adhere to PA, this has a greater influence on the adolescents than if their parents engage in PA. Although there seems to be a line of argument that defends the importance of the influence of friends, we have also found recent studies (Seabra et al., 2011), that indicate that only 38% of Portuguese adolescents expressly mention their friends as one of the agents that may favour their own engagement in PA.

There are very few studies about the influence of friends, depending on the gender of the adolescents. Esteve et al. (2005) carried out a study on adolescents whose objective was to analyse the influences of family and friends, in terms of the adolescents' motivation to carry out PA. They concluded that the feedback of friends in general and of the most significant adults is essential for girls. Jiménez, Pérez y García (1999), after a study on boys and girls from Mallorca aged between 16 and 27, conclude that friends have an influence on physical activity, especially in boys rather than in girls. For Voorhees et al. (2005) the simple fact that friends engage in PA is sufficient for young people to also engage in it and this relationship is more powerful for boys than girls.

Studies on factors that influence PA have mainly focused on two sources of social influence (parents and friends), and not much attention has been paid to the possible influences exerted by PE teachers. Some previous studies indicate that teachers in general have little influence (Greendorfer y Lewko, 1978) or that the PE teacher may have a negative influence on the regular engagement in PA of adolescents (Trudeau & Shepard, 2005). Whilst other studies (Matos, Carvalhosa & Diniz 2002; Vilhjalmsson & Thorlindsson, 1998), indicate that friends and the PE teacher have the greatest influence on the engagement of adolescents, regardless of their gender and age. Sallis et al., (2000) reinforce this idea by indicating that teachers have a great potential over the lifestyle and direct participation of adolescents in the execution of sport and/or physical activity.

Different studies (González-Cutre, Sicilia y Moreno Murcia, 2008; Moreno, Hellín, Hellín, Cervelló & Sicilia, 2008 y Viciano, Cervelló, Ramírez, San Matías & Requena, 2003), have shown that the climate of the PE classes in Spain is often ego-orientated and above all that the sessions are developed under a highly management perspective. This could derive in less perception of competence of the adolescents, which, in turn, would influence their current and future engagement. Some studies (Cox & Williams, 2008), carried out with adolescents, indicate that the perception that these have of the support and social influence of their teachers is associated with a greater perception of competence and autonomy. Furthermore, the curriculum of the physical education classes almost exclusively focuses on sport, an approach that often does not correspond to the

demand of the adolescents, above all of the girls. Despite this, in our study, it is observed that girls and first-cycle individuals find a lot of support from the physical education teacher. The reason for these results is not clear. The attitudes of young people towards school and physical education are clearly different depending on the gender (Bramham, 2003), as the girls' attitude towards school is clearly more favourable than that of the boys, but boys declare they are more favourable to the physical education class (Piéron, Ledent, Almond, Airstone, & Newberry, 1996). Some adolescents may consider that the physical education teacher is more involved in promoting physical activity than their social environment is, meaning that adolescents consider the PE teacher provides important support. Thus, for example, Ommundsen, Klasson-Heggebø y Anderssen (2006), show that children who point out that the teacher organises games with them, talks to them about the importance of playing and about PA in class, tend to be more active during school time than their companions, who do not express this. One of the strategies that could favour the positive effect of teachers, as it has been shown, refers to the fact that students should have the chance to choose with respect to different aspects of the tasks and activities proposed, as this can foster greater satisfaction, a positive attitude towards physical activity and, therefore, generate habits for developing a healthy lifestyle (Treasure y Roberts, 2001).

In our study, the first-cycle individuals present differentiated influences from the significant others with respect to second-cycle students. This is in agreement with other previous studies such as that of Leskinen, Telama, & Yang (2000), Shaffer et al. (2005).

The age and above all maturity may directly or indirectly explain how the different social agents can influence the behaviour of engaging in PA (Drenowatz et al., 2010). The capacity of influence of the social agents has been shown to differ among young people depending on the age (Craggs et al., 2011). Thus, for example, in the study by Duncan et al., (2005) we find that younger children perceive greater support from their parents than older children, whilst older children receive more support and social influence in the way of help, information, encouragement, etc. Sallis et al., (2002) point out that the influence of friends is more significant in vigorous PA of younger children and not so much for adolescents; or for example, Bois, et al., (2005) suggest that mothers have a greater potential to influence younger individuals (10-11 years old). This may mean that as the children get older they become more sensitive to a diversified influence of the different social agents (Wagner, Klein-Platat, Haan, Arveiler, Shlienger & Simon, 2002).

The inconsistency found in the different studies on the social influences of the significant others in the engagement in PA has been attributed to different reasons: on the one hand, to methodological differences related to the measures of social dimensions (differences in reliability and validity of the instruments used). On the other hand, this inconsistency has been associated with the assessment of physical activity; more specifically, the use of objective measures (observation or accelerometry) opposed to subjective measures (self reporting). Those studies that have used objective measures of physical activity are more likely to find a significant relationship between the different social dimensions and the physical activity levels of young people.

This study presents different limitations: It is a cross-sectional study so any causal inference is unjustified; the study is geographically carried out in a limited area so our data cannot be extrapolated to other populations; subjective measures have been used to assess PA levels.

In agreement with the results and limitations set out, by way of conclusion, we can say that this study helps explain the complex field of factors that have an influence on adolescents engaging in PA in our country. The varied social influence and support given by the parents, depending on the gender or age of their children, seems to demonstrate the importance that the gender focal points and sexual stereotypes have on the influence on engaging in physical activity in the adolescent population.

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