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ORIGINAL

NARRATIVES OF ADOLESCENTS WITH AN ACTIVE AND SEDENTARY LIFESTYLE

NARRACIONES DE ADOLESCENTES CON ESTILOS DE VIDA ACTIVOS Y SEDENTARIOS

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ABSTRACT

This study sought to analyse the narratives of adolescents who have adopted an active or a sedentary lifestyle, and to identify psychological, behavioural, social and environmental variables related to an active and a sedentary lifestyle among adolescents. Narrative interviews were conducted with 2 girls (1 active and 1 sedentary) and 2 boys (1 active and 1 sedentary). Thematic analysis identified a number of key personal, social and environmental influences on physical activity (PA) that distinguished the two groups of students, through their childhood and adolescence. These included PA history, the value of sedentary behaviours, social support from family and friends for PA, safety and PA facilities in the local neighbourhood, PA participation in school besides Physical Education (PE), primary and secondary school and experiences in PE, PE teachers and PE peers, PA and health knowledge and perception of PE goals, and attitudes toward school and PE.

KEYWORDS: Physical activity, Physical Education, lifestyle promotion, adolescents, qualitative research.

RESUMEN

Nuestra investigación trata de analizar las narraciones de adolescentes que han adoptado diferentes estilos de vida e identificar las variables psicológicas, comportamentales, sociales y ambientales relacionadas con un estilo de vida activo y una vida sedentaria. Se aplicaron entrevistas de carácter narrativo a 2 niñas (1 activa y 1 sedentaria) y 2 niños (1 activo y 1 sedentario). El análisis temático ha identificado las categorías que distinguen a los dos grupos de estudiantes, a lo largo de su infancia y adolescencia, específicamente: historia de la actividad física (AF); valor de los comportamientos sedentarios; apoyo social de la familia y amigos a la AF; seguridad física y las instalaciones en el barrio; participación en AF extracurricular en la escuela; la escuela primaria y secundaria y experiencias en Educación Física (EF); profesores y compañeros de EF; conocimiento de la AF y la salud; y actitudes hacia la EF y la escuela.

PALABRAS CLAVE: Actividad física, Educación Física, promoción de estilos de vida, adolescentes, investigación cualitativa.

INTRODUCTION

Despite the well-established benefits to biological and psycho-social health associated with regular physical activity (PA) participation (Janssen & LeBlanc, 2010), large proportions of young children and adolescents show low levels of PA and sedentary lifestyles. This problem is more dramatic among girls (Kimm et al., 2002), students with disabilities (Fitzgerald, 2006) and those from lower socio economic groups (WHO, 2009). In addition, research examining participation throughout childhood and adolescence has shown that PA rates generally decline rapidly with age (Findlay et al., 2010; Trost et al., 2002). In Portugal, cross-sectional studies are congruent with these findings (Carreiro da Costa & Marques, 2011; Seabra et al. 2008) and, on the other hand, evidenced that the incidence of adults that met the recommended amount of PA is low (Marques et al., 2012). Therefore, because PA habits developed early in life may persist into adulthood (Gordon-Larsen et al., 2004; Kjonniksen et al., 2009; Malina, 2001), understanding the factors that influence young people to become active in their daily life and why some of them prefer to adopt a sedentary lifestyle seems to assume a real research value.

Studies based on an ecological approach have examined the factors associated with PA among youth (Bauman et al., 2012; Sallis et al., 2000; Van der Horst et al., 2007). These reviews have presented findings suggesting differential effects for personal (biological, psychological, behavioural), social and physical environmental correlates of adolescents' PA. Research examining individual influences on PA has identified personal beliefs and cognitions as crucial when attempting to understand PA participation (Wang et al., 2002; Wang & Liu, 2007). For example, Telama et al. (2005) with the purpose of investigating the relation of different lifestyles and PA patterns among 12- and 15-year-old boys and girls in Belgium and Finland identified perceived physical competence and task orientation as the main correlates of adolescents' PA. Regarding social influences, past studies indicated parent and peer support (Davidson & Jago, 2009; Dowda et al., 2007) and parents' activity levels (Mota & Silva, 1999; Fuemmeler et al., 2011) to be associated with PA among youth. Additionally, the fundamental role that school and Physical Education (PE) can assume in the promotion of active and healthy lifestyles has been well documented (Tappe & Burgeson, 2004; Trudeau & Shepard, 2005). In terms of environmental variables, previous investigations showed that accessibilities to facilities, aesthetics, and social environment were associated with PA participation (Mota et al., 2009), as well low neighbourhood crime incidence (Ferreira et al., 2006).

In the research of the factors associated with PA participation, quantitative methods are more common than qualitative (Allender et al., 2006). However, there are a number of investigations (Azzarito & Solomon, 2005; Bruening et al., 2009; Enright & O'sullivan, 2010; Sinelnikov & Hastie, 2010; Wright et al., 2003) that have shown that a qualitative approach provides ways of understanding young people and their relation with PA rarely talked about in literature. These

investigations have applied distinct qualitative procedures and emphasized children's perspectives with regard to PA participation under different contexts. Hence, qualitative methods may be helpful in gaining a deeper insight not only into the factors associated with PA but also how these change over time.

Therefore, based in social-ecological models of health behaviour (Sallis & Owen, 1999), the current study sought to investigate several factors that interacted to promote or constraint individuals' participation in PA through childhood and adolescence. Specifically, this paper reports on narratives of four adolescents who have adopted different lifestyles. Specifically, the aims of the present study were as follow: 1) to analyse the narratives of adolescents who have adopted an active and a sedentary lifestyle; and 2) to identify psychological (motivations, attitudes, perceptions), behavioural, social and environmental variables related to an active and a sedentary lifestyle among adolescents.

RESEARCH METHODOLOGY

This study was conducted in city centre secondary school in Lisbon. The Portuguese Data Protection Authority approved the procedures and protocols for the study and informed consent was secured from the students and their parents. Furthermore, the school administration allowed the researchers to conduct research on school premises.

A qualitative methodology consisting in the realization of one narrative interview was adopted. Interviewed participants were drawn from a large sample of a quantitative survey about lifestyles and PA. Questions collected information on leisure-time activities, PA and sport participation, perceived physical competence, goal orientation, motivational climate in PE classes and attitudes towards school and PE. The survey was completed by 60 students (29 male and 31 female, average age = 17.7 ± 0.6 years) in the 12th grade (corresponding to 17-18 years age), from 4 PE classes. Critical to the strength of this research, the use of this survey enable the researches to purposely select, from all those that volunteered, individuals who had some similar backgrounds characteristics (age, ethnicity, socioeconomic status) and contrasting levels of PA participation. This was a way to remove the effect of these potentially additional influences, and thus explore in greater depth the explanations for the contrasting levels of PA. Therefore, four students were selected taking into account their demographic characteristics and their daily volume of formal and informal PA: 2 girls (1 active and 1 sedentary; ♀) and 2 boys (1 active and 1 sedentary; ♂). The active students reported participation in moderate-to-vigorous physical activity (MVPA) at least 60 minutes per day, thereby meeting the guideline recommendations made by Strong et al. (2005); the sedentary students revealed participation in MVPA for about one hour or less per week. Demographic and PA participation characteristics of the students selected for the interview phase are presented in table 1.

Table 1. Demographic and physical activity participation characteristics of interview participants

Variable	Active students		Sedentary students	
	♂	♀	♂	♀
Age, years	18	18	18	17
Ethnicity	White	White	White	White
Socioeconomic Status	Middle class	Middle class	Middle class	Middle class
Weekly PE lessons, 90 minutes	2	2	2	2
Practice of school sport	No	No	No	No
Practice of sport formally	4 to 6 times a week	Every day	No	No
Formal activity practiced	Handball	Tennis	-	-
Practice of informal PA	3 times a week	4 times a week	No	Once a week
Informal activity practiced	Skateboarding Football	Jogging	-	Volleyball
Weekly time of MVPA	7 hours or more	7 hours or more	Less than 1 hour	1 hour

Narrative research is characterized, essentially, by “collecting data in the form of stories, and ‘storying’ the lives, events, experiences, perspectives and actions of individuals or groups” (Armour & Chen, 2012, p. 238). Specifically, we have adopted a biographical approach, where a researcher constructs, or co-constructs, a story about a life, or part of a life. The purpose is “to better understand that life, to shed light on similar or contrasting lives, and/or to inform an analysis of a particular issue or event” (Armour, 2006, p. 472). In recent years, narrative research has drawn the attention of scholars within the social sciences. However, despite being an important means of developing our understanding of people’s lived experiences of their sporting and everyday lives (Smith and Sparkes, 2009), little attention has been given to this approach in the fields of sport (Smith and Sparkes, 2009) and PE (Grooves, 2003). Therefore, we adopted a biographical approach in an attempt to add contextual depth and meaning into the factors influencing PA participation by examining the views and the inner experiences of individuals and its connections with changing events and phases throughout the life course.

Each student was individually submitted to a narrative thematic interview centred on the following themes: my childhood, my friends, my family, the primary school, the secondary school, the PE I have experienced, the school sports, my PE teachers. The interview script was developed based on the constructs of the social-ecological model. Within this model, and in accordance with the investigation purposes, the interview highlighted the different factors that influence the levels of PA participation. In particular the personal (e.g., feelings, experiences, attitudes and motivations towards PA and PE), social (e.g., social support from family and friends) and environmental (e.g., access to facilities) factors. Interviews were conducted three to five days after the survey, lasted 90-120 minutes and were

recorded with the participants' permission. Furthermore, students were assured of the confidentiality of their statements.

The interviews were transcribed and the data analysis carried out introducing the transcripts into a database supported by the qualitative software package MAXQDA10. The interviews were submitted to an inductive content analysis, based on thematic analysis procedures (Flick, 2005). The data were then open coded and analysed using constant comparison identifying and extracting common themes and patterns. Each comment in all transcripts was coded according to its thematic emphasis, grouping together comments with similar content into major thematic categories. When data did not fit in any already existing category, a new category was created. Identified themes were then compared and contrasted and the data were re-examined. Overall, constructs from the social-ecological model of health behaviour drove the data analysis. In an effort to improve trustworthiness, data and interpretations were shared with the participants. Participants were given copies of their interview transcripts. The interview transcript accuracy was verified and participants noted no substantial changes. Finally, students' responses and the themes arising from responses were compared across the two pairs of students who have adopted different lifestyles.

RESULTS

Eleven main themes were identified: PA history; the value of sedentary behaviours; social support from family to PA; social support from friends to PA; safety and PA facilities in the local neighbourhood; PA participation in school besides PE; primary school and experiences in PE; secondary school and experiences in PE; PE teachers and PE peers; PA and health knowledge and perception of PE goals; and attitudes toward school and PE. The themes are described below.

Physical activity history

When asked about their PA during childhood, active students stated regular involvement in the practice of PA, in several contexts, from an early age. In turn, the sedentary adolescents revealed patterns of reduced PA participation and more often talked about their negative attitudes toward PA. The following quotations give some sense to these differences:

I was never quiet. I remember that I was always riding a bike, skating, and especially swimming and playing basketball with my dad. I had a lot fun. I swim since I was 3 years old, and when I was 10, I started to play tennis.
(Active girl)

I have never practised any PA. I did it only in my PE lessons. There are more important things with which I like to occupy my time. I don't like sport.
(Sedentary boy)

The value of sedentary behaviours

As for the value afforded to certain leisure-time sedentary behaviours, the active students considered that PA has always had a significant share in the occupation of their leisure-time, while sedentary students described their preference for TV viewing, console playing and surfing on the internet. The following interview excerpts summarize the situation well enough:

I didn't like to go out home. As I had more liberty, I stayed on the Internet, playing video games or listening to music. (Sedentary girl)

Whenever I could, but especially at the weekend, I was skating. It was the usual... I was with my neighbourhood friends playing football, riding a bike or running. (Active boy)

Social support from family to physical activity

Their narratives suggest that active students have been differentially more exposed to modelling (e.g., being active with children) and logistic support (e.g., enrolling children in activities) when compared with sedentary students. If attention is focused on the girls' discourses, this relation is even clearer. The active girl has stated that the strong parental support received across all ages was probably one of the main reasons for being active. In contrast, the comments of the sedentary girl suggest that parental support had decreased with age.

I was lucky because I've always practiced PA because my parents practice PA since I was a little child, they have always shown a special interest in sport. At home, we always talked about the importance of PA, nutrition and everything... they always gave me the opportunity to choose what I prefer. I like sport because of them. (Active girl)

When I was younger my mother sent me to gymnastics lessons and later to basketball. I always gave up because I didn't like it. After that the incentives for the practice of something physical have decreased. (Sedentary girl)

Social support from friends to physical activity

Regarding the social support from friends, some differences between the active students were registered. While the active boy reported a regular presence of friends in PA from childhood to adolescence, the active girl discourse inferred that her friends had exerted a significant influence namely after the beginning of adolescence. In addition to positive peer support received, notably the active girl highlighted some difficulties posed by some school peers, because of the time she spent doing sport.

They [classmates] have never been interested in doing sport. Recently, I've been feeling a little bad because they blame me for doing so much sport and not being able to go out with them. (Active girl)

In their discourses, sedentary students revealed numerous difficulties in their social contacts. This fact may have some negative influence on perceived support for the practice of PA, and consequently, on PA habits. Good examples of this statement were the following observations:

At that time [during primary school] I was shy, that is true. I did not make many friends, and consequently did not practice any physical activity games. (Sedentary boy)

My adolescence is being hard. I think it is due to friends and school. I've lost my interest on both. The adaptation to the secondary school was very difficult and I don't see them as friends, they are colleagues... I don't have many friends. (Sedentary girl)

Safety and physical activity facilities in the local neighbourhood

Both active students and the sedentary boy spoke about the availability of good quality PA facilities in their neighbourhoods. However, the sedentary boy was unique in that he had not used them, for reasons that seem to be associated with lack of motivation. Moreover, the sedentary girl mentioned the poor aesthetic qualities of her local neighbourhood as a disincentive to being active. The following quotations give some sense of this pattern:

Living in a city is different from living in the countryside. There, children can play in the fields, go for a walk without any kind of problems. In the city we are always observing buildings and more buildings and I consider that a discouragement to sports practice. (Sedentary girl)

I have lived in the countryside since I was a child, so green spaces have always surrounded me. I think that's one of the main reasons why I play sports. I had enough time and space for running and playing while the other kids in the city were closed in an apartment. I think that it can do a lot of difference. (Active girl)

Physical activity participation in school besides Physical Education

When reflecting about school sport participation, the four adolescents did not report participation in any activities throughout their school career. The active students mentioned reasons such as lack of time and involvement in formal PA outside of

school, while sedentary students commented on reasons due to negative attitudes toward PA and psychological determinants. Regarding inside school extra-curricular PA participation, the scenario is different because only the active students intimated participation. However, lacking an exercise friend and peer support were mentioned as barriers to participation in these activities by the active girl:

I always participate in organized school activities and tournaments, but it has to be only individual ones, such as tennis. I frequently say to my friends: *Don't you want to play volleyball?* I know that our class is well prepared because we have had good teachers, so we are definitely good at it...but no one ever accepted. There's no other way, it has to be individual practices.
(Active girl)

Primary school and experiences in Physical Education

In primary school, only the two active students attended formal PA classes and both revealed a positive attitude towards this experience. In contrast, the sedentary students revealed a negative attitude toward PA in general. In Portugal, children attending primary school have approximately between 6 and 10 years old and PE classes are required by law since this school stage. However, primary teachers do not always obey the law. As for the experienced curriculum in PE classes during the middle school (between 11 and 15 years), both pairs of students seemed to associate the experience with an undiversified curriculum, based on traditional team sports.

We played more football. Sometimes we had basketball and volleyball, but I think it was very repetitive. Dance and gymnastic? No, we didn't practice those activities. (Sedentary boy)

We did not practice many activities. It was always football, football and more football. We had essentially collective sports. I think that PE teachers didn't have much imagination. (Active girl)

The availability of facilities for PA in the school, such as infrastructural conditions, emerged in students' responses and seems to play an important role on their personal experiences in PE, as we can observe in these excerpts:

When it rained there were always theoretical lessons, because we didn't have a sports pavilion. Those lessons were boring. (Active girl)

The middle school was different. There were two football fields and we were always playing football or basketball because we had a field. (Active boy)

Secondary school and experience in Physical Education

As for secondary school, all students revealed in their narratives that they had experienced an eclectic curriculum through the PE classes. Nonetheless, their attitude differences towards the subject seemed to increase even more over time. The sedentary students increased their aversion towards the PE and PA, whilst the active students declared enhancement of their favourable attitude.

The current year is the one that I am enjoying PE discipline the most. (Active girl)

It was very difficult for me. I didn't like my PE teacher. We didn't have any kind of autonomy and he was always shouting at me. To tell the truth I didn't want to learn and do that kind of activities. Although we had several activities, PE was really boring. (Sedentary boy)

Physical Education teachers and Physical Education peers

Active adolescents most frequently mentioned the maintenance of good relations with both PE teachers and peers. Indeed sedentary students were more likely to mention difficulties in the establishment of a positive relation with both of them. Within this theme, it is noteworthy that active students highlighted the negative peers' attitude toward the PE activities, especially the girls' attitudes, as the main cause for sometimes not being motivated in PE classes.

The relation has always been very good, with both teachers and colleagues. Our teachers are very sympathetic, helping all students, so we can overcome our difficulties. They really want to promote PA. (Active boy)

I didn't like PE due to my teacher. The classifications were unfair and she had preferences for some students... So I was scared for trying and failing, with the others always staring at me. I'm ashamed because I feel that the others can do better than me, so I cannot make it. I don't even want to try. (Sedentary girl)

This last quote also illustrates that the sedentary girl had a performance-avoidance orientation, or in other words, the adolescent judged their skill level or competence in a normative way by comparing herself with other students, and tended to avoid performing the tasks proposed in the PE classes.

Physical activity and health knowledge and Perception of Physical Education goals

Concerning the acquired knowledge related to PA and health key concepts, all students exhibited general rather than specific knowledge, which seems to limit their ability to organize their own sessions or programmes of PA. As for the perceived PE main goals, there were no relevant differences between the two groups. All students made references to goals like health and PA promotion, and the development of social connections.

I think that the promotion of PA is the principal PE goal. For example, like in my case, if this discipline doesn't exist some students wouldn't practice any kind of sport and the obesity problem would be worse. (Sedentary boy)

Attitudes toward Physical Education and school

In terms of attitudes toward the PE subject matter, the two pairs of students exhibited substantial differences. Active students showed a very favourable attitude and revealed a like for PE. Moreover, they attributed curricular importance to the subject when comparing with other matters. In contrast, sedentary students revealed a negative attitude towards PE.

PE is my favourite discipline and it is as important as mathematics or language. We really learn important things, such as how to do exercise, that can't be learnt anywhere else. (Active boy)

I don't have any doubt that PE grades should not be included in the general average of academic results. I shouldn't be hampered because of not knowing how to score a goal. It is ridiculous because I want to study economics, which has nothing to do with it. (Sedentary boy)

Finally, despite recognizing the importance of school, students' discourses showed very little enthusiasm about school, with the sedentary adolescents presenting the worst ones.

About school and PE, I think that I could have done more. I'm aware of that. I should have done an early effort and changed my attitudes and behaviours. I am always so lazy. Let's see what is going to happen with the university application. (Sedentary girl)

DISCUSSION

The purposes of this study were to analyse the life stories of adolescents who have adopted different lifestyles and to identify psychological, behavioural, social and environmental variables related to an active and sedentary lifestyle. Before

discussing the results, it should be emphasised that the experiences of the participants from this study are by no means representative of all sedentary or active students. Instead, their narratives are highlighted here to illustrate the importance of the students' individual identities and experiences.

In the present study, students' attitude toward PE and PA emerged as a key indicator of the adopted lifestyle. Sedentary students commonly expressed negative views toward PE and PA, and their attitude deteriorated with age; active students reported a positive PA attitude from childhood through adolescence. Our study shows that the development of students' positive attitude toward PA and PE was associated with higher levels of PA participation and with a healthy lifestyle. These results are consistent with previous research (Carreiro da Costa & Marques, 2011; Telama et al., 2005). For instance, Telama et al. (2005) showed that boys and girls who practise more PA were characterized by having a high perceived competence, a high task orientation and a positive attitude toward school and PE. In contrast, those who were called *passive youth* had the lowest perceived competence and task orientation, and their attitude toward school and PE was neutral or slightly negative. Therefore, particular attention should be paid to the development of positive feelings toward PA from childhood.

The analysis of the past experiences of PA could shed further light into understanding the relationship between PA and the developed attitude toward PE and PA. Active students were seen to have responded to participation in unorganized and organized sports from childhood to adolescence, which may have contributed to internalize PA as a positive habit. Additionally, it is noticeable that they were the only students that attended PE classes during primary school. In turn, the sedentary students revealed patterns of reduced PA participation. While for the sedentary boy, the most critical obstacles to participation were "lack of desire and interest", the sedentary girl's comments were focused on "non-enjoyable experiences". Effectively, PE enjoyment has been found to be consistently and positively correlated with participation in organized and unorganized PA in and outside of school, among children ages 5 to 17 years (Findlay et al., 2010) and female secondary students (Wang et al., 2007). Therefore, our study provides evidence that past experiences in physical activities from an early age, seemed to be important not only for the development of habits, beliefs and attitudes, but also in what concerns the development of the motor skills necessary to obtain enjoyment in the practice of physical activities. Thus, the presence of a quality PE in primary school years is crucial.

Research investigating the motivation of children and youth in PA has shown that personal self-perceptions, such as perceived competence or dispositional goal orientations, could be major influencing factors for PA participation (e.g., Standage et al., 2003; Wang et al., 2009). The resulting data from the interviews have evidenced that active students show both a higher perceived physical competence and a mastery goal orientation. The following quote from the active boy gives an idea of this statement: "I always felt comfortable at sports. I think I'm good at it.

Therefore, I always liked those challenging exercises... When I cannot do the exercise at the first attempt? There is no problem, I am persistent and I keep on trying until I get it right. I think the mistake is part of the learning process and after that, when I succeed, it is so much better...". In turn, sedentary students exhibit low levels of perceived competence and a performance-avoidance orientation (e.g., sedentary girl's quote presented in theme *PE teachers and PE peers*). In line with previous research, we can observe that feelings of competence and a mastery goal orientation were related with an intrinsic motivation (Ferrer-Caja & Weiss, 2000) and with an active lifestyle (Telama et al., 2005). Hence, PE teachers should focus their pedagogical interventions on increasing students' perceived competence and establishing a motivational mastery climate.

Students' motivation and attitudes toward PE are also influenced by the type of learning atmosphere in PE classes (Papaioannou et al., 2007). In this matter, the promotion of a mastery motivational climate and the PE teacher characteristics were mentioned by all adolescents as important factors in the PE class. Students referred to appreciation of those PE teachers who encourage practice and provide feedback emphasizing perseverance, effort, task and the achievement of personal goals, instead of those who make normative comparison with other pupils. Concerning PE teacher characteristics, all students mentioned they like those teachers who support their autonomy, or in other words, teachers who allow them the opportunity for making organizational and PE activities choices, that show empathy and are competent. These findings are consistent with results of previous studies. For example, in recent research with the purpose of understanding and transforming adolescent girls' self-identified barriers to PE engagement and PA participation, Enright & O'Sullivan (2010) found that the negotiated curricula facilitated the girls in connecting PE to the social cultural contexts of their lives. Bruening et al. (2009) carried out research focused on a programme combining sport and PA, life skills, and mentoring while promoting healthy life choices for preadolescent girls. The results showed that children become more engaged and benefit more from being incorporated as decision makers. In this study, negative attributes of PE teachers were readily exposed by sedentary students: controlling teachers, who communicate with directives, commands and shouts; who differentiate boys from girls and the skilled students from the less skilled; and who confer poor classification standards. In line with the investigations outlined above, it seems that to bring the students and their learning to the fore in curriculum decision-making is crucial for promoting active lifestyles, especially among adolescent girls.

When reflecting on autonomy in PE, students tended to talk about the curriculum experienced. Students' narratives suggest that school placed significant emphasis on team games often at expense of lifetime activities, mostly during middle school (between 10 and 14 years). Previous investigations have shown that boys and girls, usually, favoured different PE activities. Explicitly, girls tend to prefer individual and non-competitive activities, which the girls could imagine themselves choosing to participate in outside of school (Bruening et al., 2009; Enright &

O'Sullivan, 2010). In this study, we found that students prefer those activities where they are shown to have a higher perceived competence. Likewise, active students favour those activities practised formally outside school. Thus, while the sedentary girl mentioned volleyball, the active girl and the active boy respectively reported tennis and handball. Another interesting finding was that the sedentary boy had no preference for any activity. In summary and according to Fairclough et al. (2002), physical educators must recognize which activities have the greatest carry-over value into adult-life, and aim to provide more opportunities for all students to experience these activities.

Roth & Stamatakis (2010) examined whether knowledge of public health guidelines was linked to PA levels for 1954 children aged 11-15. They showed that for girls knowing the guidelines was associated with meeting them. In the present study, we found that all students presented general rather than specific knowledge. Special attention to this finding should be given to those who reported the lower levels of activity. Despite identifying health and PA promotion as one of the main goals for PE, sedentary students presented a narrow knowledge regarding the recommended amount of PA and how to self-manage their own PA. According to their narratives it seems that throughout their scholar career, their PE teachers did not act in a direct way to improve mastery health related fitness knowledge. In Spain, Hernández, Velázquez, Martínez & Díaz (2010), with the purpose to find out what relevance certain curriculum aims are given by teachers and their beliefs about the importance that several factors have on students taking after school physical activities, concluded that teachers show lack of confidence in their specific possibilities to motivate the adherence of students to PA. These data appear to be even more alarming when, in another investigation, Hernández, del-Campo, Martínez & Moya (2010) demonstrated that the duration of PE class is not respectful of the curriculum guidelines with respect to the time that would be allocated to this subject at school. Moreover, they concluded that actual-time PA does not reach at least the thirty minutes of physical exercise necessary to expect health benefits. Despite recognizing that knowledge *per se* is probably not enough to change behaviours, and that further investigation is warranted to explore how knowledge and perceptions are related with PA, the promotion of key health messages linked to healthy and active behaviours should not be overlooked by PE teachers, as well as providing intense PE classes.

Using an ecological approach and recognizing that to obtain support and adherence of all educational agents is crucial to achieve success in school interventions aiming to promote the practice of PA, Carreiro da Costa & Marques (2011) developed an investigation to obtain an overview of students', teachers' and parents' sport and PA participation and to characterize their views toward PE and PA. The findings from this investigation suggest that many fathers and mothers do not have an adequate idea and perception about the real needs of their children's PA. The same perspective is shared by the majority of the teachers (non-PE teachers). Additionally, they found that most parents regard PE as a compulsory subject, but few think of it as an examinable subject. In this study, sedentary

students attributed less curricular importance to PE when comparing with other subjects, such as mathematics or literacy. Hence, they argued that PE grades should not be included in the general average of academic results. It is possible to suggest that their decreased interest for PE stems also from a loss of academic prestige. Conversely, the active students attributed curricular importance to PE. These findings suggest that, for the interviewed students, perceived PE status could have influenced their attitude toward the PE and PA. For that reason, it is important to recognize and work on the ways how other community school intermediaries view the PE subject, such as teachers, school directors and parents, which has been associated with a perceived lower subject status in all regions of the world (Hardman, 2009). It is worth noting that the investigation of Martínez et al. (2010) is a good example of the importance of having conscious parents about the benefits of healthy practices and about the role that school and PE can take to promote these practices.

This idea seems to gain even more relevance when another result from the present study points to the importance of the social support from family as a decisive influence to the adoption of an active or a sedentary lifestyle. In general, students' narratives suggest that active adolescents have been differentially more exposed to modelling and logistic support from their parents from childhood until adolescence, especially in the girl's case. In turn, the sedentary girl commented on decreased social support from family with age, and the sedentary student has registered no incentives. These findings corroborate previous research. For instance, longitudinal studies centred on the change of parental support and adolescent girls' PA, have shown that parental modelling before adolescence and logistic support during adolescence could help girls to establish early patterns of PA and social networks that facilitate maintained PA during adolescence (Davidson et al., 2009; Dowda et al., 2007). Thus, it seems that strong family support is likely to be related to the acquisition and maintenance of regular PA participation during childhood and adolescence.

Another key theme that emerged from this study was peer social support for PA. Along with the active boy reporting a regular presence of friends in PA since childhood, it was possible to identify an increase in peers' influence from early years to adolescence. This was also referred to by the active girl. However an important difference should be taken into account. While the active boy only mentioned positive peers' influence, the active girl encountered more barriers to the practice of PA. Although, in line with Voorhees et al. (2005) and Davidson et al. (2009) findings, it seems that the frequency of activity with friends was an important correlate of PA among those adolescents with an active lifestyle. The opposite might be observed for the sedentary students who mentioned many difficulties in their social contacts. Therefore, our results show that different lifestyles may also reflect different patterns in activity support provided by peers.

The availability of good PA facilities seems to have some influence on students' PA participation. On the one hand, the sedentary girl mentioned the poor aesthetic

qualities of her local neighbourhood as a disincentive to being active: she stated that if her neighbourhood was more walkable, she eventually would go out for a walk. On the other hand, active students and the sedentary boy spoke about the existence of good accessibility and facilities in their home environments. Even so, the sedentary boy was somewhat unique in that he had not benefited from these circumstances. Aiming to examine perceived environmental associations with type of adolescents' PA choices, Mota et al. (2009) showed that there were no significant associations between environments and organized PA but there were several significant associations with unorganized PA. The active girl narrative revealed to accordance with these findings, because in her home environment she always engaged in numerous informal activities. The active boy explored (run, skate...) his neighbourhood with friends since he was child and also talked about the proximity of several sports clubs to his home as an influential factor in experimenting with different PA formally. Interestingly, the active student indicated that the accessibility inside school was also an important factor for being active, mainly during the basic education stage, when the breaks (recesses) and lunchtimes were spent playing on the fields. *"It was amazing. Now, it's very different. We just sit and talk at the back school gate"*.

CONCLUSIONS

According to the findings of this study, some remarks have relevant importance for the adoption and maintenance of an active and healthy lifestyle by the young people. First, we found that positive PA experiences during childhood were associated with regular PA participation among adolescents. Therefore, PA and PE professionals should provide significant and positive PA experiences to children from an early age. The PE teacher characteristics and the promotion of a mastery-oriented motivational climate were mentioned by all adolescents as important features of PE classes. Within this theme, it is worth noting the references to the PE curriculum and to the involvement of students in curricular decision-making. Regarding personal perceptions, considering the survey and interview data, active students revealed a higher perceived physical competence and showed a mastery-goal orientation, while the sedentary adolescents exhibited a performance-avoidance orientation. Moreover, it seems that the development of students' positive attitudes toward PA and PE were associated with higher levels of PA participation and with a healthy lifestyle. Nevertheless, it seems that the active girl encountered more barriers for the practice of PA than her male counterpart. Therefore, she had to stand firm to overcome those barriers, and to adopt an active lifestyle. Further, the findings provide evidence that the adoption of different lifestyles may also reflect different patterns in activity support provided by parents and peers. It seems that social support is likely to be a key determinant of youth PA. Finally, the availability of good PA facilities seems to have some influence in PA participation.

The limitations of this study can be divided into those relating to qualitative research in general, on the one hand, and, on the other hand, those that concern

the narrative research method. In broad terms, the findings may not be widely generalized and are limited to the participants, context, and settings in which the study took place. To counter such limitations, the comprehensive accounts typical of life stories study enabled the complexities and idiosyncrasies of such single cases to be revealed and add to the knowledge base of the current literature on the multivariate factors associated with adolescents' PA behaviour. The results in this paper provide relevant information with the goal of enhancing PE teacher knowledge with respect to the promotion of active lifestyles in schools and ultimately prepare them to prevent the decline of PA among adolescents, namely among girls.

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