

QUALITATIVE EVALUATION OF A SCHOOL INTERVENTION FOR THE PROMOTION OF PHYSICAL ACTIVITY: LEARNING FROM THE PERSPECTIVE OF THE TARGET POPULATION

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ABSTRACT

Qualitative evaluations of school-based interventions for physical activity promotion are seldom undertaken, but can provide important insights into unforeseen limitations and consequences of interventions. These understandings can help the refinement of those aspects of school intervention implementation that are not easily identified a priori via quantitative evaluations. We illustrate this argument with the example of evaluative qualitative data collected during a physical activity promotion intervention that we carried out in two Spanish primary schools. The findings of this study uncovered a number of unexpected and difficult to quantify problem areas including; communication problems with parents, classroom-based interventions as off-putting, the legitimization of stereotypical health and body shape associations and even instances of marginalization of some of the very children the interventions were targeting. In conclusion we call for researchers to consider drawing on qualitative evaluations in order to aid the refinement of future school-based interventions.

Key words: health education, sedentary lifestyle, discourse, body shape

EVALUACIÓN CUALITATIVA DE UNA INTERVENCIÓN ESCOLAR PARA LA PROMOCIÓN DE LA ACTIVIDAD FÍSICA: APRENDIENDO DE LA PERSPECTIVA DE LA POBLACIÓN DIANA

RESUMEN

La evaluación cualitativa de intervenciones escolares para la promoción de la actividad física es poco común, pero puede ser muy útil para detectar las limitaciones y consecuencias imprevistas de estas intervenciones. Este conocimiento puede servir para mejorar aquellos aspectos problemáticos de las intervenciones escolares que difícilmente pueden ser identificados a priori a través de evaluaciones cuantitativas. En este artículo defendemos estos argumentos con datos cualitativos recopilados durante una intervención para la promoción de la actividad física que llevamos a cabo en dos centros españoles de educación primaria. Los resultados de este estudio sacan a la luz una serie de problemáticas inesperadas y difíciles de cuantificar como son; los problemas de comunicación con los padres, el rechazo que generaron las intervenciones en aula, la legitimación de asociaciones estereotipadas entre salud y forma corporal, e incluso la marginación de algunos niños que representaban la población diana de la intervención. Como conclusión, sugerimos a los investigadores el desarrollo de evaluaciones cualitativas como recurso complementario para la mejora de futuras intervenciones escolares.

Palabras clave: educación para la salud, estilo de vida sedentario, discurso, forma corporal

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INTRODUCTION

By the late 1990's researchers of physical activity and health were suggesting that increasing patterns of physical inactivity in industrialized societies were painting a worrying epidemiological picture (Sallis & Owen, 1999). More recently, strong correlations between sedentary lifestyles and health problems such as cardiovascular diseases, obesity, type II diabetes and osteoporosis, amongst a range of other health disorders, have been demonstrated (American College of Sports Medicine, 2013). What was perhaps most concerning about these developments is that significant proportions of at risk populations comprise children and adolescents. Subsequently, this population has become the focus of special concern due to the critical role of both childhood and youth stages of life for acquiring and consolidating an active lifestyle (Telama et al., 2014). Therefore, the promotion of physical activity among young people is considered an important public health goal (Welk, Eisenmann, & Dollman, 2006).

Within this youth physical activity promotion agenda, school-based interventions are increasingly acknowledged as the most common and efficient strategies for the promotion of physical activity among youth (Fairclough & Stratton, 2006; Institute of Medicine, 2013; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007; Story, Nannery, & Schwartz, 2009). The logic for this rationale is simply that school is one of the most influential institutions for children and adolescents during the first decade and a half of their lives, and the single environment in which they spend most time during this phase of their lifespan. Moreover, some researchers consider school-based interventions have an inherent advantage over initiatives in other settings because they can be embedded into the official school curriculum and therefore take advantage of existing staffing and infrastructure resources (Cale & Harris, 2006).

While the goal of health and physical activity promotion for the younger population via school-based interventions might be considered beyond question, how this is best done is more debatable (Kulinna, Brusseau, Cothran, & Tudor-Locke, 2012). As Doak, Visscher, Renders, and Seidell (2006) suggest, school-based interventions must not be deployed uncritically and should be subjected to ongoing evaluative research that feeds back into the development of this genre of intervention. Quantitative studies evaluating interventions for the promotion of physical activity, such as the type discussed by Cale and Harris (2006) and exemplified by Kahn et al. (2002), have generated a useful and necessary knowledge base for the improvement of future initiatives. These types of evaluations are mainly focused on testing the effectiveness or final results of an intervention, by assessing the changes on concrete variables measured in pre- and post-tests (e.g., body mass index, waist circumference or time in moderate-vigorous physical activity). However, the main drawback of

quantitative evaluation approaches is the difficulty in learning from the target population (the pupils and parents), particularly when trying to identify mistakes, limitations and unintended consequences arising from the process of implementing an intervention. The incorporation of evaluation techniques based on qualitative approaches to attend to this gap in evaluative knowledge is important and complementary since these approaches can attend to those aspects of implementation which are not easily identified, analyzed, and expressed from a quantitative perspective.

The aim of this article was to report on a qualitative evaluation of the process of implementing a school classroom-based intervention for the promotion of physical activity in primary schools. The specific purpose was to identify, from the students' and their parents' perspectives, any mistakes, limitations or unintended consequences arising in our implementation process. This kind of evaluative knowledge can be an essential compliment to quantitative evaluations of program effectiveness if future interventions are to be refined, improved and therefore, optimized.

Social ecological models and school-based interventions for the promotion of physical activity

Social ecological models constitute a commonly used theoretical framework to study the factors that influence individuals' behavior change, and have been used in many academic fields including psychology, sociology, health, and education (Cale & Harris, 2009; Devís-Devís, Beltrán-Carrillo, & Peiró-Velert, 2015). In the field of health and physical activity promotion, social ecological models make reference to a range of factors influencing physical activity behavior (Zhang, Solmon, Gao, & Kosma, 2012), including: personal factors (e.g., self-efficacy), social environmental factors (e.g., parent's support at home, friends' support in school, teachers' support in the physical education classroom), and physical environmental factors (e.g., availability of physical activity facilities, convenience of facilities, and safety of physical activity settings).

Social ecological models applied to school-based health and physical activity research typically propose five levels of factors, in line with the work of McLeroy, Bibeau, Steckler, and Glanz (1988): intrapersonal, interpersonal, organizational, community, and public policy. Intrapersonal factors include characteristics of the child, such as knowledge and self-confidence related to physical activity. Interpersonal factors include primary social relationships, such as with parents, teachers, and peers. Organizational factors include school policies and procedures related to physical activity, as well as facilities and resources available for physical activity. Community factors include the local social and physical environments surrounding the school, such as

neighborhood socioeconomic characteristics and partnerships with local agencies supporting children's physical activity. Finally, public policy factors include those established at the government level (e.g., to increase or reduce the curriculum time for physical education).

A review by Murillo-Pardo et al. (2013) showed that school-based interventions to increase physical activity based on social ecological models are consistent, promising, and effective. Their evidence suggested that social ecological models constitute a robust theoretical framework to design, implement and evaluate interventions. Nevertheless, much of this social ecological research knowledge is generated by quantitative methods, while qualitative approaches could increase the theoretical and practical contributions of the social ecological framework still further. Devís-Devís et al. (2015) argue that a qualitative perspective can be useful to develop in-depth understandings of how personal, social environmental, and physical environmental factors interrelate and effect physical activity in children's daily lives. Furthermore, qualitative approaches could be useful to provide different ways of accessing the influences of certain social environmental factors that are difficult to study from a quantitative perspective. As it is illustrated in the results and discussion, the role played by social discourses of "ideal" body shape provides an example of one subtle yet powerful social environmental factor that is difficult to detect without a close attention to contextualized qualitative data generated from the target population. For these reasons, the opinions and experiences of parents and children receiving an intervention were collected, collated and analyzed in the manner set out below.

METHOD

As part of a broader multi-method study on the promotion of active lifestyles, the data for this article came from a qualitative assessment of a classroom-based school intervention for the promotion of physical activity. In what follows we articulate the intervention procedure and the qualitative research methods utilized.

Intervention procedure

The intervention was implemented with 6th grade pupils (11-12 year-old) belonging to two different primary schools. The two schools were public and were located in the urban area of Elche (Spain). The pupils of both schools belonged to families occupying a middle (class) socioeconomic status. The study was designed around three groups, as seen in Table 1.

TABLE 1
The different groups and interventions of the study.

	Intervention group 1	Intervention group 2	Intervention group 3
Sample	Class of 15 students	Class of 22 students	Class of 21 students
Intervention with children	Presentations + debates (Lessons corresponding to knowledge of the natural, social and cultural environment)	Presentations + debates + group activities (Lessons corresponding to physical education)	Presentations + debates + group activities (Lessons corresponding to physical education)
Intervention with parents			Three meetings

The children from the different intervention groups attended a classroom-based program for the promotion of physical activity, conducted by a teacher (a member of the research team). This program consisted of one formative session per week over five consecutive weeks. Each session lasted from 30 minutes to one hour depending on the intervention group. All the intervention groups watched different presentations of 5-10 minutes. These presentations were created by the research team after various meetings and discussions. First, the researchers decided the information they wanted to present to the students from the relevant scientific knowledge concerning physical activity promotion. Next, the best way to present this information to children was deliberated, taking into account the research team's previous experience of conducting studies focused on active lifestyle promotion with children and adolescents. Then, the teacher prepared five presentations, with the support of the software Windows Movie Maker, which were focused on the topics displayed in Table 2. These contained written information, pictures, images, and oral information recorded by the teacher and incorporated as voiceover narration. The first version of the presentations was reviewed by the whole research group, who proposed some modifications which informed the final versions. This process of supervision and review by an expert group was deliberately established to create appropriate presentations for the age group and the purpose of the study.

After the presentations, the teacher posed questions, clarified any doubts about the factual details presented and facilitated group debates (see example of questions in Table 2). This phase lasted 20-25 minutes. After the debate, children from intervention group 2 and 3 also participated in a final phase, lasting 20-25 minutes, in which students worked on several group activities designed to foster both reflection and active involvement with the session topic (see examples of activities in Table 2). After working in groups, students put their ideas together with the rest of the class.

Participating parents of intervention-group 3 children attended three meetings (lasting approximately one hour), focused on the promotion of their children's physical activity participation. The meetings took place in a classroom of one of the participating schools at the beginning, midway point and end of the phase of interventions with the children of group 3. Contact with these parents requesting their participation was initially established by notifications delivered via their children, and subsequently by telephone. Relatively, few parents attended the meetings (this issue is addressed in the results and discussion). More specifically, five parents attended the first meeting, nine the second, and seven the third. Five mothers attended the first and the rest of the meetings. Two more mothers attended the second and the third meeting. Another mother and just one father attended the second meeting.

These meetings delivered the same content covered with the students, with a PowerPoint presentation lasting 15-20 minutes and followed by debate. As with the students, the teacher posed questions and offered guiding comments on factual matters of the presentation content (see example of questions in Table 2). After the meetings, researchers provided parents with a pre-prepared guide including the general contents of the sessions and different strategies for the promotion of their children's physical activity participation (see example of strategies in Table 2).

TABLE 2
Example of activities and questions of the different interventions.

Intervention	Example
Presentation topic	<p>1) Negative effects of physical inactivity, described the risks of a sedentary lifestyle (cardiovascular diseases, obesity, type II diabetes, osteoporosis, etc.) and tried to persuade pupils about the importance of physical activity participation.</p> <p>2) Physical activity guidelines for children, offered students physical activity recommendations related to the kind of exercise they could do at their age, the number of days per week, the intensity, and the realistic options available in their context.</p> <p>3) Strategies to foster an active lifestyle, offered advice on integrating physical activity into their lifestyles and included combining physical activity with lessons, homework and other daily duties.</p> <p>4) Barriers and factors influencing physical activity participation identified everyday aspects that foster or make physical activity difficult. Special attention was paid on the role of parents, physical education teachers, coaches and peers.</p> <p>5) The influence of sociocultural factors and mass media on our lifestyle, promoted understanding of how lifestyles are influenced, positively and negatively by socioeconomic status, gender discourses and mass media messages.</p>
Group debates with children (example of questions)	<p>What would you recommend to an inactive person so that he/she changes his/her lifestyle?</p> <p>Do you think it is important to keep an active and healthy lifestyle?</p> <p>How would you organize your time to combine physical activity with your studies and other duties?</p> <p>Why do you engage in (or not engage in) physical activity?</p> <p>Do you think mass media influence your daily physical activity habits?</p>
Group activities with children (example of activities)	<p>Writing a group report that described benefits of physical activity.</p> <p>Organizing a school day to combine homework and other duties with physical activity participation.</p> <p>Identifying the main factors influencing their physical activity participation, giving them a percentage of importance, and justifying to the rest of the class those percentages. The list of factors identified had to add up 100 %.</p>
Meetings with parents	<p>Example of questions after the presentations:</p> <p>Do you think it is important that your children engage in physical activity?</p> <p>How can you help your children to be active?</p> <p>Do you engage in any physical activity with your children?</p> <p>Example of strategies included in the guide for parents:</p> <p>Physically active play with their children.</p> <p>Fostering youngsters' participation in extracurricular sports.</p> <p>Offering their children opportunities for active family leisure.</p>

Qualitative evaluation procedure

The research project was funded by the Spanish Sport Council and approved by the research ethics committee of Miguel Hernández University (Elche, Spain). An official permit for school research was also granted by the Education Department of the Valencian Community Government. In compliance with established ethical procedures (Silverman, 2000), we sought informed consent for our study proposal from the head-teachers of the two primary schools approached (consent was granted). We also gained signed informed consent forms from all parents whose children participated in the study.

Different data collection techniques were used to gather the qualitative data for this study. All the sessions conducted by the teacher with the three intervention groups and the parents whose children belonged to intervention group 3 were attended by an observer, who paid special attention to the observation questions described in Table 3, and took field notes about notable conversations and events. All observational information was written in a field diary during sessions and typed up immediately afterwards.

In addition, immediately after the phase of intervention, four semi-structured focus group interviews were conducted and recorded by an interviewer with the children of each of the three intervention groups (15, 22, and 21 pupils respectively) and with the group of parents ($n = 7$) who attended the third meeting. The focus groups lasted between 40-60 minutes and took place in the same classrooms used for the intervention sessions. An example of questions guiding the focus groups is presented in Table 3. The four recorded focus group interviews were transcribed in preparation for data analysis.

TABLE 3
Example of questions guiding qualitative data collection.

	Example of questions
Observation	<p>Intervention delivery: Is the intervention researcher presenting the information in an effective way? Is he/she controlling the group and favoring a positive social atmosphere?</p> <p>Subjective affect: Do they understand the information? Do they like the information or think it is important? Do they listen and are they involved in the activities? Is there any comment or event indicating that the intervention is influencing them in a positive/negative way? Do they feel well integrated and respected by the group?</p> <p>Positive and negative aspects of intervention: What has been successful and what might be improved?</p>
Focus group interviews with children	<p>What do you think about the sessions we are doing with you? What do you think about doing this kind of things at school?</p> <p>Do you think these sessions are useful for you? What are they useful for?</p> <p>Do you think these sessions are useful for you to do more physical activity?</p> <p>What do you like /not like about the session we have done? What could we improve?</p>
Focus group interviews with parents	<p>What do you think about the meetings we have done with you? Do you think these meetings should be done at school?</p> <p>Have your children made any mention about this study at home?</p> <p>Do you think this intervention can help your children to do more physical activity?</p> <p>Have we convinced you of the importance of an active lifestyle?</p> <p>Do you think these meetings will make you more involved in promoting your children's physical activity participation?</p> <p>What do you like/ not like about the sessions we have done with you and or your children?</p> <p>Can you suggest any ideas to improve future interventions like this at school?</p>

Transcriptions and observational field notes were stored and analyzed with the support of the software Nvivo (Bazeley & Jackson, 2013). The qualitative data gathered were analyzed following what Hsieh and Shannon (2005) refer to as a “conventional content analysis”. This type of analysis involves the following generic steps. First, all transcriptions were read several times to become more deeply familiar with the data. Second, all meaningful pieces of text were identified and allocated to a topic or theme. Thirdly, these emerging themes were classified using inductive reasoning, into a “map” of interrelated categories and subcategories relating to the overall aims of the study. Fourth, steps one to three were repeated in a cyclic process of categorical refinement (classification and reclassification of categories and their contents). This process finally gave way to a categorical structure of data and interpretation that was coherent for the researchers carrying out the analysis. Key findings are presented in the result sections below.

In addition to following the analytical process in a systematic manner, the trustworthiness of our findings and interpretations was enhanced by the co-authors of this paper adopting the role of “critical friend” throughout the analysis (Martos, Devís, & Sparkes 2009; Sparkes & Partington, 2003). This involved the critical friends monitoring the analysis and sharing viewpoints and interpretations as it progressed. Furthermore, the existence of several sources of data and numerous researchers involved in the process led to what Biddle, Markland, Gilbourne, Chatzisarantis, and Sparkes (2001) refer to as a form of (non-positivistic) triangulation thereby helping to reduce the influence of individual bias on the data by cross referencing and scrutinizing relevant contents, categories and emerging interpretations. In representing these data, all participant identities are anonymized.

RESULTS AND DISCUSSION

Communication and participation difficulties with parents

The first category emerging from the qualitative evaluation concerned issues of the effectiveness of communication strategies with parents that were used in the intervention. Although all parents were informed about the ongoing study in general terms, contact with individual parents to request their participation in the three meetings with the research group was initially established by notifications delivered via their children. This strategy proved inefficient, because a number of students forgot to hand this documentation to their parents. Initially, only two mothers attended the first meeting. It is worth noting that on the day in question, these parents went to the main gate of the school and came back with three more mothers, who did not know anything about the meeting, indicating there was not a lack of willingness to participate. A number of parents made reference to this problem, related to a lack of information received (although it had been produced and sent out), in the focus group interview we conducted after the intervention:

Mother: There were parents who did not know anything. The information arrived through the children, and some of them didn't explain anything, they just said “we are doing talks and we have a new teacher”. The information arrived a bit late and was confused (Parents' focus group).

In order to increase the attendance of parents to the following meetings, the research team decided to make contact directly with a parent/guardian of each participating child, by telephone. This effort increased parental participation a little (nine parents attended the second meeting and seven the third). For this reason, other parent participants indicated in the focus group that they had received enough information and the problem lay with the difficulty of involving parents at all:

Mother 1: I don't agree, they have sent notifications and they phoned us at home, they can't give more information.

Mother 2: All right, they didn't give so much information for the first meeting...but the situation changed for the following ones.

Mother 3: I think parents who want to know...they know. Maybe, no more people would have come if you had informed before, because, at the end of the day, we are always the same mothers who come to this sort of thing [the rest nodded] (Parents' focus group).

The parents' limited participation, even after the personal phone calls, was surprising for the research team. However, other authors have reported on the difficulty of addressing and involving parents in school-based interventions focused on the promotion of healthy behaviors such as physical activity (Van Lippevelde et al., 2012). Indeed, Martínez-Baena, Romero-Cerezo, and Delgado-Fernández (2011) found that while parents usually valued school teachers taking part in the promotion of their children's physical activity, they tended to be unwilling to get involved in the school interventions themselves. This situation is complex and problematic, since from the social ecological perspective parents' involvement is considered an important interpersonal component for the effectiveness of interventions trying to foster healthy lifestyles among children (Golley, Hendrie, Slater, & Corsini, 2010; Van Lippevelde et al., 2012; Zhang et al., 2012). Our intervention also illustrated that this dilemma is further compounded by the hierarchy of perceived importance held by participants and where physical activity fitted into their lives. Significantly, children of the few mothers who did attend the meetings already practiced regular physical activity and sport:

Interviewer: Do you think this intervention can help your children to do more physical activity?

Mother: The issue is that... the children of almost all the mothers who are here do sport [the rest nodded] (Parents' focus group).

Therefore, we were not providing the intervention to families whose children were inactive, which was our main purpose and so in a sense we were, to coin a phrase, "preaching to the converted". This finding is consistent with other studies reporting that the majority of participating parents in this kind of school interventions are physically active mothers (Van Lippevelde et al., 2012). The involvement of those parents whose children are inactive remain, therefore, a fundamental issue to address (Cordon & Bourdeaudhuij, 2002). This topic demands further open ended qualitative research to explore the myriad possible reasons influencing that parents of physically inactive children do not take part in these interventions.

Beltrán-Carrillo, Sierra, González-Cutre, Cervelló, and Montero-Carretero (2013) suggested that new technologies (e.g., internet social networks) could

enhance the direct contact with parents and their involvement in this kind of interventions. They also proposed more socially interactive activities with parents to increase their attendance to the meetings and help to create collaborative social networks for a real promotion of healthy lifestyles at school (e.g., a trekking day trip with parents and children).

However, these authors declared that such social networks comprising parents, pupils, researchers and teachers, require strong social links between the different agents, need time to be developed, and only long-term interventions lasting possibly years are likely to successfully achieve this end. Future interventions led by the physical education teacher might offer this long-term component, and internet social networks could facilitate contact with parents and the emergence of educative communities committed to the school strategies for the promotion of physical activity.

Classroom-based interventions as off-putting

As described in our methods, the sessions with the intervention group 1 were developed during a timetabled period normally filled by a classroom based subject. However, due to logistical constraints, the sessions with the intervention groups 2 and 3 took the timetabled place of an active physical education class. While it is difficult to quantify, the varied emotive reactions of pupil participants to the physical activity promotion intervention program was very different between these two groups and clearly related to the loss of the scheduled class activity the intervention temporarily replaced. Students receiving the intervention in place of a classroom-based subject were satisfied with their participation in the study, as indicated in the following comments:

Interviewer: Do you like we do these meetings with you to inform about these issues?

Girl: Yes, they are interesting and with them, moreover... we lose theory lessons [subject: knowledge of the natural, social and cultural environment], which are very boring... [laughs] (Group 1 focus group).

However, the reaction of pupils attending intervention during physical education lessons was very different:

Interviewer: What do you think about these sessions?

Several pupils: They are boring... I don't like watching videos, I prefer doing physical education.

Others: Yes, I think the same.

Interviewer: Then, if we did it in another subject instead of physical education, would you like it more?

Pupils: Yes! In math or science. Yes, yes...or in language (Group 2 focus group).

Boy: If you want us to do more sport, why do we watch these videos in the hour we have to go to the court and do physical education?

Girl: We stay in class instead of doing physical education. (Group 3 focus group).

This response was also echoed by the participating parents;

Mother 1: They didn't like you keeping them in class, this is the general comment. I have not only heard this from my child, but also from other children, they are always saying us: "we have to do sport, and we don't do it".

Mother 2: They like physical education and they get upset when you take it away from them (Parents' focus group).

The sessions with the intervention group 2 and 3 were developed in physical education because our only contact with the school was the teacher of this subject and we could not/did not wish to disturb other teachers' lessons. However, as our data indicate this structural logistic represented a contradiction for both pupils and mothers as they did not understand why we opted for physically inactive promotion of physical activity especially in place of active physical education sessions. This finding concurs with Cale and Harris (2006) who indicate that classroom-based programs for the promotion of physical activity are less efficient and less attractive to youngsters compared to physically active promotional sessions. According to these authors, inactive interventions are limited because they tend to focus on information transmission rather than a combination of understanding, experiencing physical activity and decision-making. Clearly, the subjectivities of both pupils and parents are necessary to be listened to, as they provide important feedback about the consistency of the intervention message regarding aspects such as timetabling and effective intervention pedagogies. In connection with the social ecological factors described by Webster and Suzuki (2014), our findings highlight the importance, not just of organizational factors in the school physical activity promotion interventions, but crucially the evidence here suggests a close connection between organizational and intrapersonal factors, something that the qualitative evaluation approach adopted here is well suited to uncovering.

These findings suggest that future school interventions should include physical activity programs during physical education, school break times, or extracurricular schedules. Wherever possible theoretical concepts to promote physical activity and health might be better communicated during lessons involving exercise, with short presentations or through active games/tasks (e.g., dancing with light, moderate or vigorous intensity according to teacher's indications; four children have to carry one member of their team along 15 meters in different healthy ways for their backs). In addition, online social networks preferred by children and adolescents could also be a promising resource to disseminate useful theoretical knowledge for the promotion of

physical activity (e.g., links informing about sport facilities and sport options in their city, figures representing heart rate training zones for aerobic fitness, short videos about problematic and recommended strength and stretching exercises).

The desirability of a cross-school intervention

As one mother suggested, doing the intervention sessions in other subjects would be one solution to the problem of losing opportunities to participate actively in physical education described above:

Mother: ...it would be better if you don't take the practical lessons away from them, and you put the videos in other subjects... (Parents' focus group).

The establishment of a school-wide intervention would avoid using many curriculum hours allocated to any given subject. At the same time, these objectives might be tackled through different subjects and the influence of the intervention might be stronger as a result. One mother expressed this idea in the following way:

Mother: I think the involvement of all teachers in the school is very important. For instance, the children's tutor must be aware of what they do and take part in the work you do with them (Parents' focus group).

In line with this cross-school intervention perspective, a number of pupil participants proposed offering extracurricular sport activities, organized around their physical activity preferences, as a school initiative for the promotion of physical activity:

Interviewer: Concerning all the things we are doing, give us ideas to improve, so as to know what we can do to make you do more physical activity.

Boy 1: Going to the playground.

Boy 2: Organizing activities, providing more excursions.

Girl 1: Offering sports we like.

Girl 2: Yoga, riding a bike... (Group 2 focus group).

Taking into account the limited number of hours of physical education (Kahn et al., 2002), it might be desirable if future interventions were developed from a cross-school perspective involving teachers of different subjects, and offered via a range of extracurricular physical activity programs. In this way, no subject would suffer an excessive load of classroom based sessions related to the intervention, physical education would keep its hours, and students would have new alternatives for physical activity participation. This cross-school perspective is in line with the strategies proposed by social ecological models involving diverse social agents and organizational decisions to promote physical activity in school-based interventions (Zhang et al., 2012). This global perspective has given rise to promising and effective school-based interventions to promote physical activity (Murillo-Pardo et al., 2013).

Nevertheless, a special focus here should remain on maximizing the targeting of school resources on the interpersonal and organizational level. The physical education teacher could be the lead coordinator of the strategies for the promotion of physical activity at school (Kelder, Karp, Scruggs, & Brown, 2014), and could lead meetings with other teachers to decide what theoretical knowledge could be taught from other subjects of the school curriculum to promote physical activity. In line with the findings reported by McMullen, Kulinna, and Cothran (2014), the teachers could also design different active tasks and games including academic contents that children could practice during different moments of the school schedule (e.g., a dance involving music and math concepts). This interconnection of theoretical and practical contents among the different subjects might optimize the influence on children and the promotion of active lifestyles at school. Moreover, this purpose could be reinforced with general school rules such as providing sports equipment to play with during school breaks and putting posters promoting active lifestyles in visible places.

Other cross-school interventions could also involve community integration. For instance, the children of a school might be invited to take part in popular races or other “active events” organized by local institutions, to support patients with cancer, the use of bicycles in the city, or environmental awareness. Moreover, the teachers of different subjects could engage students in tasks which promote critical and reflective thinking about these topics (e.g., debates, reports, murals).

Stereotypical health and body-shape associations emerging during the intervention

The oral information transmitted in the intervention was based deliberately on delivering empowering and respectful messages that fostered healthy and active lifestyles. However, there were moments when the presence of certain images in the presentations combined to legitimize interpretations of stereotypical health and body-shape associations. For example, images of obese people appeared on the screen while the researcher informed about the health problems linked to physical inactivity. Conversely, the images of “sporty” toned and muscular people appeared in the video about the influence of media on our lifestyles. These linkages between the visual representations and the commentary, while carefully crafted and presented by the intervention team, nonetheless provoked a number of superficial and frivolous evaluations of people appearing on the screen:

During the video about the consequences of physical inactivity, some children started to laugh when the image of an obese person appeared in the screen... (Group 2 observation, field notes).

Pupils were paying attention closely during the video about sport and media. When some pictures about sport people appeared they made comments like "what a picture", "they are gorgeous", "uhh!", they laughed and whistled... (Group 1 observation, field notes).

Our observations and focus groups also confirmed that children typically "interpreted" slim or muscled bodies as positive, healthy and desirable, while overweight bodies were always negative, linked to health problems and undesirable. While stereotypical conceptions such as these have been scientifically demonstrated as erroneous (Campos, Saguy, Emsberger, Oliver, & Gaesser, 2006), it became clear that the aim of the intervention was being interpreted by some children as having a desirable body (shape) rather than keeping a healthy lifestyle:

Interviewer: Do you understand, then, that we can have health problems if we don't do physical activity?

Girl: ...but my brother is always eating and playing video-games and he is like a stick [very thin].

Interviewer: But being thin doesn't directly mean being healthy and having some overweight being ill...it isn't so simple (Group 3 focus group).

Interviewer: [Speaking about the intervention] What do you think about what we are doing at school? Do you think this is useful?

Boy 1: Yes, so as not to be fat.

Boy 2: Yes, to be thinner.

Interviewer: But...just for that? Are not there more important things?

Boy 3: Yes, to be muscly... (Group 2 focus group).

These findings concur with studies illustrating that the presence of hegemonic social discourses around what Garrett (2004) terms "ideal" bodies are serving to negatively influence young people and their understanding of health and the body (Beltrán-Carrillo, Devís-Devís, & Peiró-Velert, 2016; Burrows, 2010; Cliff & Wright, 2010; Lee & Macdonald, 2010). Such discourses promote a social rejection of fat, a desirability of slimness for women and muscularity for men, and give rise to uncritical and simplistic associations between health and ideal models of beauty. In this sense, other studies have clearly pointed to how a number of health promotion initiatives and public health messages defused in popular media offer simplistic conceptions of health, and are overly focused on body shape and weight loss (Evans, Rich, & Davies, 2007; Humberstone & Stan, 2011).

This evidence suggests that there is a need to review not only the messages disseminated on interventions for the promotion of healthy lifestyles, but also the way these messages are transmitted and communicated, and the way these

messages are interpreted by the target population, in order not to unintentionally legitimize erroneous understandings of health and the body. Future interventions should be carefully scrutinized to check they communicate information from a health education perspective instead of a weight-based approach (Evans, Rich, & Davies, 2007). The focus should be placed on the promotion of physical activity and other healthy habits, not on obesity prevention, losing weight, or getting thin or muscled bodies. For this purpose, the messages and visual material used on interventions need to avoid simplistic and confusing associations between health and body shape. Concretely, it would be especially important to emphasize that people with thin or muscled bodies may have health problems (e.g., cardiovascular diseases, type II diabetes, cancer, or osteoporosis, not only obesity), if they are inactive and maintain other unhealthy habits like smoking, taking drugs, or following an unhealthy diet. In the same way, it is necessary to highlight that people who appear overweight, in terms of body shape, can be healthy if they keep an active and healthy lifestyle. Importantly, this idea challenges the values and interests of a “consumer culture” (Featherstone, 2010), in which dissatisfaction with body shape is manipulated to increase the consumption of goods and services (e.g., creams to reduce wrinkles, pills to reduce fat, equipment to do exercise, or aesthetic surgery).

Therefore, it is necessary that teachers, parents and children challenge instead of promote ideal body discourses at school. The simplistic stereotypes and wrong perceptions reported in this study are not only a barrier for health promotion, but also a breeding ground for the marginalization of some children, as we identify in the following section.

Marginalization of inactive and overweight children during the intervention

The research group paid special attention to generate a climate of respect during the intervention, so that participants felt integrated into the group and able to contribute their views without fear of negative judgment. However, in spite of these efforts, several undesirable interactions unfolded during the sessions in which certain students showed their lack of respect for inactive people. This took the form of a “symbolic violence” (Beltrán-Carrillo, Devís-Devís, Peiró-Velert, & Brown, 2012) that drew on a meritocratic individualism expressed as “victim blaming” (Rich & Evans, 2005) with views expressed that inactive children were to blame for their health because they were not responsible enough to maintain a “correct” lifestyle:

During the video, when a girl who routinely spent a long time on the computer and playing video games appeared on the screen, some pupils pointed out other classmates laughing at them (Group 3 observation, field notes).

[After the video]...the interviewer asked if some pupils didn't practice physical activity so as to inquire why he/she didn't practice and think about the possible options to help him/her to become more active. Children who did sport pointed out their inactive classmates laughing at them, while they sat in silence, showing signs of embarrassment (Group 2 observation, field notes).

These situations of rejection and marginalization also occurred against overweight children (regardless of activity patterns) who had an undesirable body according to some of their classmates:

[During the video] The picture of an obese child playing video games has appeared on the screen. Then, one boy said to another: "you are him...he, he" (Group 1 observation, field notes).

Boy 1 [slightly overweight]: [Speaking about the ideal body in current society] You aren't muscly, you are thin, you need more muscle.

Boy 2: But you are fat and all your body's covered in fat which moves when you move [he makes mocking sounds simulating fat in movement].

Boy 1: He, he [a forced laugh]

Girl: Don't laugh, you know it's true.

Boy 1: I know.

Observer: [The observer was present during the group activity] Come on, what are you saying? ... He isn't fat.

Girl: Of course he is fat, don't you see him?

Observer: Listen...having a little bit of fat is not bad...

Girl: But he doesn't have a bit, he has plenty of fat around his belly and all over his body.

Boy 2: Moreover, he has cow tits, lady tits which dance when he moves [the other children of the group laugh while boy 1 stays silent with a forced smile] (Group 3 observation, field notes).

These children participants appear to have absorbed the meritocratic individualistic canon that health can be achieved "unproblematically" through individual effort and discipline, directed mainly at controlling the size and shape of their bodies (Beltrán-Carrillo et al., 2016; Burrows, 2010; Evans & Davies, 2004; Rich & Evans, 2005). While we do not seek to underplay the importance of promoting individual agency for keeping an active and healthy lifestyle, the promotion of health is socio-culturally and biologically more complex than this. The most negative consequence of these discourses is that they encourage pupils to idealize slim and muscular bodies; while overweight or obese people are characterized as lazy, self-indulgent, or greedy (Rich & Evans, 2005), and fat is considered "unnatural," "avoidable" and thereby a

direct sign of neglect, lack of self-control and will power, irresponsibility, moral laxity and failure as a healthy citizen (Campos et al., 2006; Golley et al., 2010). The insights we have gained give cause for concern not only because they are based on worrying discourses that have proved difficult to dispel through our interventions, but also because there is a suggestion that interventions such as this one may implicitly act as a catalyst for legitimizing another's moral worth (as well as one's own) based on the shape, weight and relative fatness of a given body.

The findings reported in these last two themes constitute a powerful example of how discourses around "ideal" bodies (Garrett, 2004) *affect* school-based physical activity promotion interventions because of the way they inadvertently position and thereby *affect* the subjectivities of participating pupils.

From a socio-ecological perspective, it is vital that school interventions not only avoid restricted associations between health and the body, but also actively challenge the societal assumption that physical activity and health are only a matter of personal responsibility and will. If children can be educated to understand that public policy, community, organizational and interpersonal factors all play an important role on the promotion of physical activity and health (Webster & Suzuki, 2014), some "victim blaming" attitudes could be challenged and prevented. In this sense, a social climate of total respect towards children, their habits, and their body shape, is necessary in all school interventions. A supportive (instead of a judgmental) attitude toward others should be promoted among parents, teachers, and children in all tasks, meetings, and activities. Moreover, teachers carrying out interventions need to avoid tasks that might inadvertently identify some children as negligent (e.g., looking for an inactive child to think in group different options to increase his/her daily physical activity levels).

CONCLUSIONS

A social ecological, relational and qualitative approach was used in this article to evaluate the process of implementing a school classroom-based intervention for the promotion of physical activity in primary schools. Our qualitative findings indicated that small, unforeseen and in some instances unforeseeable issues arose from the implementation of the intervention that were nevertheless very significant to the target population (children and parents). These types of findings are important because they are often difficult to collate into feedback questionnaires a priori, meaning that this kind of data is best collected qualitatively. More specifically qualitative evaluation of physical activity promotion can:

- 1) Be used to identify limitations and mistakes of our own interventions, many of which could be palliated during their development.
- 2) Inform on the unintended consequences of the contents of the program and delivery.
- 3) Have applications for other researchers, who may use these insights to consider their own programs prior to them taking place or use these key themes in order to focus an evaluation strategy of their own studies.

In conclusion, as Lee and Macdonald (2010) point out, we have to promote physical activity for the health, well-being, quality of life and enjoyment of young people rather than bodily appearance, weight loss or physical performance, and any vicarious conflation of these outcomes should be strenuously countered. The qualitative evaluation of this study has highlighted that special attention should be paid to the way we transmit information during interventions so as to avoid legitimizing the marginalization of some inactive and overweight children, who are precisely the young people who we most need to empower. This qualitative approach has also been useful to show the significant interconnections between different social ecological factors and uncover the concrete ways this combination of factors influenced the process of implementing the intervention and the opinions and experiences of the target population. Therefore, while qualitative evaluations will not provide all the data required to refine interventions successfully, the insights they generate nevertheless provide an important complimentary contribution.

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