


## Article

# Proximity Sports as a Sustainable Strategy for the Promotion of Physical Activity at an Early Age: The KIA Project

Valentina Barrachina <sup>1</sup>, Celia Marcen <sup>2,\*</sup> , Elena Mainer-Pardos <sup>1</sup>  and Irela Arbones-Arque <sup>3</sup>

<sup>1</sup> Health Sciences Faculty, Universidad San Jorge, Autovia A23 km 299, Villanueva de Gállego, 50830 Zaragoza, Spain; vbarrachina@usj.es (V.B.); epardos@usj.es (E.M.-P.)

<sup>2</sup> Department of Psychology and Sociology, University of Zaragoza, 50009 Zaragoza, Spain

<sup>3</sup> National Institute of Physical Education of Catalonia (INEFC), University of Lleida (UdL), 25192 Lleida, Spain; marbones@gencat.cat

\* Correspondence: c.marcen@unizar.es

**Abstract:** This paper presents the main results of the Kids in Action (KIA) project, which aimed to promote physical activity and sport among children aged 3 to 11, by linking the education, sports, and family sectors. It applies the concepts of proximity consumption and the 15-min city to sustainable and healthy habits. This study aims to evaluate the application of the concept of proximity to the provision of physical sports activities from an early age to reduce the drop-out rate of PA through collaboration between schools, local government, and the sports sector. A mixed methodology was used, applying a survey and interviews with the stakeholders to identify good practices when promoting physical activity at an early age. A total of 147 children and 10 adults (3 family members, 4 school managers or teachers, and 3 sports managers) participated. The main results included the importance of introducing sport and providing adequate facilities, namely through guided workshops. It influences not only the actual participation in sport but also the intention to continue practicing it. It is observed that children with less affinity for conventional sports benefit particularly from initiatives such as the KIA program. On the other hand, the lack of available resources and the influence of sports culture in families are considered the main barriers. They are factors that harm the quality of participation.

**Keywords:** children; sport clubs; healthy habits; physical activity; mixed methods



**Citation:** Barrachina, V.; Marcen, C.; Mainer-Pardos, E.; Arbones-Arque, I. Proximity Sports as a Sustainable Strategy for the Promotion of Physical Activity at an Early Age: The KIA Project. *Sustainability* **2023**, *15*, 12043. <https://doi.org/10.3390/su151512043>

Academic Editors: Franklin G. Mixon and Gianpiero Greco

Received: 26 June 2023

Revised: 25 July 2023

Accepted: 4 August 2023

Published: 6 August 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Sedentary lifestyles and insufficient levels of physical activity (PA) are global problems [1]. In Spain, only 63% of the school-age population engages in organized physical activity at least one day a week, and 83% engage in unorganized PA. Nonetheless, only 43% can be considered active in terms of frequency and intensity [2]. Between 20 and 30% of the school population is sedentary [2–4], with school age being a key period in the development of physical activity habits. Hence, if these activities are consolidated in childhood, the likelihood that young people will become active adults, benefiting from the full effects of PA throughout each of the stages of life [5], is increased.

In general, the level of practice decreases significantly around the age of 11–12 years, coinciding with the transition from primary to secondary education, as has been observed in other countries [1,6,7]. There is also a gender gap, most noticeable in organized physical activities, with 73% of boys engaging in organized physical activity compared to 53% of girls. [2]. Most of the organized activities take place in facilities and spaces outside of school. In the case of non-organized activities, they mainly take place in urban areas. When analyzing the barriers to doing sport among Spanish schoolchildren, the reasons most often given are “because I don’t have time” (25%), and “because I don’t like it” (20%). Only 9% do not do it “because it costs money”, and 5% “because it is far away” [2].

Sport participation is a complex phenomenon in which intrapersonal, interpersonal, and social factors interact. In this sense, proximity to points of interest, such as parks and trails, has been studied as a key point to promote participation in PA [2,8]. In this cluster of factors, the main socialization agents, like the family, the school, and, later on, the peer group, seem to play a prominent role.

Regarding the family, parental sports culture and children's "physical literacy" [9], including parental encouragement of physical activity, parental support for physical activity, or modeling [10], time spent outdoors and proximity environment (social spaces for physical activity in the community and the number of physical activity facilities close to the child's home) were positively associated with children's physical activity in the transition from primary to secondary education [11].

Physical activity could be perceived as an opportunity to spend time with children to bond and develop shared interests. In addition, several studies have focused on shared practices between parents and children. The findings show that children who engaged in the most physical activity with their father had the highest moderate-to-vigorous physical activity [12].

Kippe et al. [13] highlighted the role of preschool staff as organizers of children's Activities and their involvement in children's spontaneously initiated PA [13]. PA decreases with age. Therefore, physical education should be included as early as possible so that children may benefit from positive role models from an early age and establish good PA habits, namely in a way perceived as fun and enjoyable. Educators can be a noteworthy social factor influencing children's physical activity and sedentary behavior [14,15] throughout their academic lives rather than just in preschool.

There is a considerable amount of research on PA in adolescents. Nonetheless, only a few studies concerning children from a socio-ecological perspective have focused on early childhood or this critical moment of transition from primary to secondary school [11], considered by some authors as a great challenge to be faced [16].

From the socio-ecological model [17], the physical environment would be relevant for the levels and type of physical activity taking place in a city, neighborhood, or community [18]. Different studies have found that proximity to an exercise facility is positively associated with leisure-time physical activity, whether considering proximity as a 10 min walking distance, 1 km from home, "the 15-min city", a 20-min walking distance, or even asking about perceived proximity [19–25]. In adults, PA among women, younger adults, people with higher education, and urban residents appeared to have a stronger association with distance to an exercise facility [19]. Adolescents' perception of living in environments or dwellings that facilitate physical activity is associated with a healthier BMI, more hours of physical activity and family time, and fewer hours of screen time [20], as well as greater intensity and duration of PA activities [24]. Regarding children, there is a significant correlation between the spatial characteristics of an urban neighborhood and general environmental cues regarding the duration and intensity of physical activity [21].

Proximity to sports facilities and venues is particularly important for the most vulnerable social groups, such as minorities [26], single-parent families [27], or economically disadvantaged individuals [28].

However, the concept of proximity is not merely physical (distance from home or work to certain facilities and services). It has become a philosophy of life, framed within sustainability and "making the city". In the last decades, a whole current that advocates local consumption, proximity trade, and friendlier relations in the inhospitable neighborhoods of modern cities has spread [29–31].

Millennials, the digital, hyper-connected generation with high ethical and moral values, are the ones who have led this change in resistance to market imbalances.

It has been exacerbated by the COVID-19 crisis [20,31], where the close and proximate have become a lifeline [29]. We speak of more conscious consumption (of products and services), proximity as a rising value and quality of life, saving travel time, and public space as a space for social relations and with elements of urban sustainability [32].

This policy offers citizens a wider range of possibilities to efficiently navigate the large spaces of the metropolis to carry out the numerous daily activities imposed by increasingly overloaded agendas. To respond to the needs imposed by new lifestyles [32] in this fast-paced world, the reconciliation of professional, personal, and family life has become a puzzle to be solved constantly. Therefore, the availability of services in the vicinity and the fact that children gain autonomy in a safe area, such as a friendly neighborhood, are key factors in the aforementioned quality of life [33].

From this perspective, travel time is not only a quantitative value measured in minutes and hours. It is also an indicator of the structure of the city that allows us to evaluate the levels of physical proximity that urban reality can offer its citizens [31]. When addressing the issue of sport and proximity in the urban environment, reference is made to the unequal distribution of resources and opportunities for sports facilities in the city's neighborhoods, the promotion of minority sports, and the feasibility of providing a wide range of quality sports services that are accessible to all segments of the population and guarantee citizens' access to these services. Moreover, in Zaragoza (Spain), where this study takes place, the main reason for choosing a sports facility in the 2015 sports participation survey was proximity to the facility (39.2%) [34].

The socio-ecological model that advocates the promotion of physical activity in children and adolescents is usually within the Health Education framework, which states that for interventions to be effective, different environmental levels and subsystems must be influenced [35,36].

Within this model, the following theories are of interest to this work:

- Bandura's social-cognitive theory and the interrelationship between significant others (not only the family), social influence, and the influence of social support [37];
- The Structural Model of Environmental Influences on Behavior structures the complex influences of the environment at micro, meso, exo, and macro levels [38];
- The Ecological Model of Physical Activity (EMPA) adds biological factors to the above models [39].
- The Determinants Model, which identifies five types of factors [40,41]:
  1. Biological and demographic variables such as gender, overweight, age, or socio-economic status of the family;
  2. Psychological, cognitive, and emotional variables such as self-efficacy and expected and expected benefits;
  3. Behavioral variables. For example, playing video games and surfing the Internet;
  4. Social and cultural variables, such as parental modeling and local traditions;
  5. Physical-environmental variables such as access to sports facilities, safe spaces, streets, and parks.

The European project Kids in Action strived to get families to develop a healthier lifestyle and become aware of the real influence that physical exercise has on health, mood, and self-esteem from an early age. In Spain, an area of Zaragoza City known as Margen Izquierda del Rio Ebro (Left Bank of the Ebro River) was chosen to implement the actions.

To carry out this European project, co-financed by the European Commission through the Erasmus+ Sport Program, a group of Zaragoza schools and different entities that organize sports activities in the neighborhoods, as well as Zaragoza Deporte Municipal, the municipal company managing municipal sport, have collaborated.

Each month a different sport has been practiced, most of them activities that are not usually offered by schools, for example, Bicycle Motocross (BMX), parkour, climbing, Ultimate Frisbee, or canoeing. Each of these events was organized by one of the sports organizations in the selected area of the city and promoted by the participating schools (aimed at children aged 3–11 years).

The first time the children participate in one of these events, they are given a KIA passport, which they fill out with the different workshops. When they complete a total of seven sports activities, they are given a gift kit for their commitment to the sport.

The families were able to have direct contact with the different sports associations that collaborated on the project. Hence, once this initiative was finished, they could continue practicing sports in the activities that they liked the most. Likewise, they were given the opportunity to get to know other local sports modalities, facilities, and spaces that allow them to broaden their non-organized PA options.

In this sense, one of the shortcomings detected in the diagnostic analysis of the Kids in Action project, from which this study draws, is the disconnection between schools, families, and the city's sporting fabric (associations and sports clubs). It is fundamental for the implementation of local sports policies and may be a factor in the failure of some of the strategies and programs developed, making it the main topic to be analyzed and discussed in this paper.

This study aims to evaluate the application of the concept of proximity to the provision of physical-sports activities from an early age to reduce the drop-out rate of PA through collaboration between schools, local government, and the sports sector (sport clubs and associations).

## 2. Materials and Methods

A mixed methodology based on observational participation, a survey, and semi-structured interviews was used to involve the different stakeholders participating in the European Project "Kids in Action" (622130-EPP-1-2020-1-PT-SPO-SSCP). The study involved girls and boys in Early Childhood and Primary Education from seven different schools, parents, school leaders, and sports managers.

The inclusion criteria were:

- (a) Children: 3–11 years old, attending one of the participating schools;
- (b) Parents: having a son/daughter who has participated in at least two of the ten KIA events;
- (c) Sports managers: coach or manager of a sports organization; having participated in one of the KIA events (as organizer and/or trainer).

The number of interviews was not rigidly predefined. However, a minimum of two per category was planned and continued in each of them until it was considered that there was enough information to cover all the dimensions (saturation). Previous literature establishes the saturation point at around 7 interviews; in this case, as different categories were considered, 10 interviews were carried out. Nonetheless, some of them certainly offered little additional information.

### 2.1. Sample Description

There were a total of 147 children participating in this project (average age  $7.77 \pm 2.22$  years): 32 boys (21.76%) and 29 girls (19.72%) belonged to school 1. Eight boys (5.44%) and five girls (3.40%) were from school 2. School 3 had 7 boys (4.76%) and 3 girls (2.04%). A total of 17 boys (11.56%) and 22 girls (14.96) belonged to school 4. Only 1 boy (0.68%) participated in school 5. 1 boy (0.68%) and 3 girls (2.04%) were from school 6. Finally, a total of 12 boys (8.16%) and 7 girls (5.44%) belonged to school 7 (Table 1).

**Table 1.** Participants' description (children).

	Boys	Girls	Age Boys (year) M $\pm$ SD	Age Girls (year) M $\pm$ SD
School 1	32	29	7.96 $\pm$ 2.29	6.5 $\pm$ 3.53
School 2	8	5	7 $\pm$ 2.44	7.33 $\pm$ 2.54
School 3	7	3	8.37 $\pm$ 1.68	9.33 $\pm$ 1.52
School 4	17	22	8.23 $\pm$ 1.92	6.68 $\pm$ 2.80
School 5	1	0	8	-
School 6	1	3	7	10
School 7	12	7	8 $\pm$ 1.70	8 $\pm$ 2.58

SD—standard deviation.

Ten semi-structured interviews were conducted with a sample of the main decision-makers and stakeholders in the context of school, education, and sports: school leaders, sports managers, and parents. The interviewees' profiles are described in Table 2.

**Table 2.** Participants' description (adults).

	Code	Category	Gender	Profiles
Participant 1	P1	Family	Woman	Mother
Participant 2	P2	Family	Man	Father
Participant 3	P3	Family	Woman	Mother
Participant 4	D1	Schools	Man	Director
Participant 5	D2	Schools	Woman	PE Teacher
Participant 6	D3	Schools	Man	PE Teacher
Participant 7	D4	Schools	Woman	Primary Teacher
Participant 8	G1	Sports	Woman	Coach
Participant 9	G2	Sports	Man	Manager
Participant 10	G3	Sports	Woman	Manager

The Ethics for Research Committee of the Aragon Government (Spain) approved this study (C.I. PI22/108). All participants gave their written informed consent before participating in the study, which was non-compulsory.

## 2.2. Instruments

Three data collection instruments were used for this study. The first one was a graphical rating survey composed of a single question about whether he liked the activity. It had three Likert-type scales simulating facial expressions of "I liked it", "Indifferent" and "I did not like it", to find out the level of satisfaction with the activities among the youngest participants in the project.

This satisfaction questionnaire was inserted in an individual "passport", where children stamped their participation in the sports events programmed in the project (10 in total), intending to enhance their motivation (Figure 1).



**Figure 1.** KIA passport.

The second, semi-structured interviews were articulated based on: (1) the results from the activities; (2) the project objectives; and (3) variables. The questions inquired about the link between the educational and sports systems, the benefits of practicing closeness, the

prevention of early sports abandonment, and strategies to promote the practice of healthy physical activity in childhood.

Finally, the project's researchers actively participated in each of the meetings, noting down in their field notebooks everything relevant to this research, as well as comments from parents, monitors, managers, or educators regarding the meetings, merits and proposals for improvement. At the end of each of the meetings, the two researchers shared their notes, made conceptual maps of the variables, and identified the aspects of interest when drawing up the interview scripts. This process of participant observation was carried out following the guidelines set out in the guide by Lofland and collaborators [42].

### 2.3. Data Collection Procedure

The above-mentioned qualitative data were collected between October 2021 and July 2022 in parallel with the implementation of the Kids in Action project. Before this, informed consent was requested from the participants. The data collection process was accomplished by the same group of researchers.

At the end of each of the sporting events within the framework of the project, participants (children) were asked to fill out the satisfaction survey on the activity executed (faces' satisfaction questionnaire; see Figure 2).



**Figure 2.** Face satisfaction questionnaire.

Regarding the interviews with adults, they were carried out once the sporting events were over after requesting informed consent. The interviews were carried out online, recorded, and transcribed to be analyzed. A thematic analysis was conducted [43,44] by three experts with different profiles: a sports science researcher, a sociologist, and an expert in qualitative methods, guaranteeing quality and reliability with complementary perspectives. Written informed consent was obtained from all parties.

### 2.4. Data Analysis

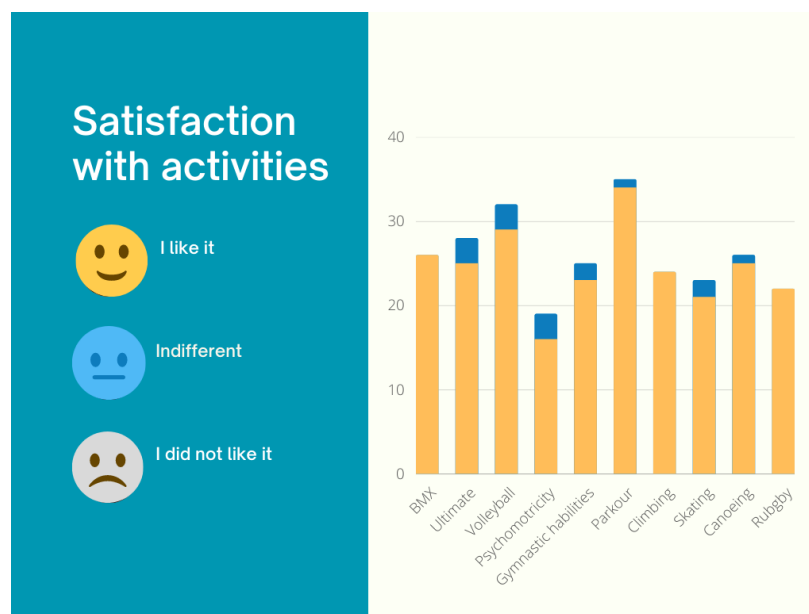
The collected data regarding children was analyzed with Microsoft Excel 2019. Interview data were analyzed using R software (version 4.3.0) and the packages RQDA (0.3–1), tm (variance 0.7–11), and ggplot2 (version 3.4.2). For each question, types of responses were determined (framing theme and response sentiment), and relative and absolute frequencies were counted for each category. In addition, the frequencies of occurrence of the most commonly used words throughout the 10 interviews were obtained. To do so, the transcribed text of all the interviews was cleaned by removing nexus words and joining words in the singular with words in the plural. The results were represented in a bar chart showing the 20 most frequently used words, as well as the distribution of the most mentioned by category, to extract conclusions about the different concepts highlighted by each one.

## 3. Results

This section displays the main results of the study. It is structured as follows: (1) Children's assessment of the program; (2) Interviews' results.

### 3.1. Children's Assessment of the Program

The 10 activities carried out during the project from September to June 2022 were rated by an average of 26 participants. The best-rated activities were BMX, climbing, and rugby (with 100% I like it), followed by parkour and canoeing (Figure 3).



**Figure 3.** Satisfaction with the activities.

The activity the participants were most indifferent to was psychomotricity with 16%, followed by Ultimate Frisbee and volleyball with 12% and 9%, respectively. None of the activities carried out were rated negatively by the participants.

Analyzing the evaluations of the activities considering the gender of the participants, an average of 12.8 boys and 13.2 girls completed the satisfaction survey. The activities best rated by the girls with 100% "I like it" were BMX, psychomotricity, gymnastic abilities, parkour, climbing, and rugby. However, one of the activities most highly rated by the boys was canoeing, coinciding with their satisfaction with rugby, climbing, and BMX.

The activities that were chiefly disliked by the boys were psychomotor skills (21.4%), gymnastic abilities (16.6%), volleyball, and skating (12.5%). For girls, on the other hand, the activities with the highest percentage of indifferent votes were ultimate (10.5%), canoeing (7.7%), and skating (6.6%).

### 3.2. Interviews' Results

#### 3.2.1. Thematic Analysis

Firstly, four dimensions of analysis were established concerning the objectives of the project. They were:

1. Links between the education system and the sports system.

During school hours, and due to the compulsory nature of the subject of Physical Education (PE), pupils' participation in physical and sporting activities is 100%. Participation outside the school is more variable. Nevertheless, educational leaders point out that it is precisely those schools interested in participating in this type of project that also have pupils who participate to a large extent in activities outside the school.

Thus, it is considered, both by the families and the teachers interviewed, that there is a relationship between the school's participation in this type of activity and project and the greater participation of pupils outside the school.

*...but the aim of introducing activities such as the KIA or other types of activities is for them to integrate them into their lives in later years, obviously as a state of physical and*

*mental well-being for any person. So, of course, through the physical education area in the centre and through activities that can be carried out such as PIBA plans and KIA activities or the activity bank of the Government of Aragon. It is very clear (D2).*

This is due to the following factors:

- They encourage greater interest in sports in general.
- They have a certain affinity for organized sports. For example, several of the participants showed an interest in joining associations and clubs in the sports they practice.
- Families also highlight their interest in continuing to practice in an unorganized way.
- However, some families *show a low appreciation of sport as a form of family leisure (D4)*, which leads to low participation in this type of activity.

Schools point out that, although most families are aware of the benefits of physical activity and are interested in their children doing it, when it comes to putting it into practice, in many cases, there is no collaboration with the schools to be able to implement this type of project or activity. However, when it comes to proposing improvements, they demand more programs. Moreover, teachers add that not only physical health benefits from it but also *coexistence (D4)*, through *the establishment of habits, values, and education (G2)*.

When defining the roles of each of the agents in the promotion of physical and sporting activity, the following have been considered, in addition to the shared role of motivating students:

- a. The educational center:
    - To promote physical and emotional well-being;
    - Inclusion;
    - Diversity of activities (get to know);
    - Four PE (Physical Education) sessions per week;
    - Achieving long-term effects;
    - Providing information on projects and activities;
    - Involvement of the FE department;
    - Dissemination of activities and projects;
    - Involvement *with neighborhood associations (D3)*;
    - Organizing, managing, and facilitating activities;
    - Ensuring compatibility *with schooling and different economic levels (D4)*.
  - b. Families:
    - Initiation into practice;
    - Accompany your children in activities;
    - Logistical support;
    - Facilitator;
    - Role model: *On the one hand, you have to be a role model for the children, on the other hand, you have to help them discover the range of possibilities and facilitate them on the path of physical activity (P3)*.
  - c. Sports associations:
    - Comfort: *Ease of scheduling, good technicians (D3)*;
    - Sports Culture: *The centers can show them the wide variety of sporting activities and their benefits. It is a field of experimentation that, in turn, can bring them closer to the nearest clubs or sports in the area where they are (P3)*;
    - To transmit the values associated with the sport.
  - d. Local government:
    - Financial support: *Grants to clubs and continuous training for technicians (D3)*;
    - Governance: *Intelligent resource management (D4)*;
    - Facilitators: *Opportunity enablers (G1)*;
    - Design and maintenance: *Decent sports areas (G2)*.
2. Local sports practice.



The fact that all the modalities practiced have been carried out in the neighborhoods implies an increase in the children's interest in continuing to practice them in an unorganized way, favoring informal practice and highlighting the possibility of this being a family practice. Moreover, the children and their families' state:

- The children's desire to continue practicing;
- The desire to show their friends and colleagues what they have learned in the workshop;
- The desire to repeat similar experiences.

*I have tried to find any time in the park or wherever to repeat what they have learnt. With friends, at school. . . they are looking to see how to develop a little bit more what they learnt in that hour, hour and a half of practice (P1)*

Families highlight the fact that they have discovered sports modalities, facilities, and places to practice in their neighborhoods that they did not know about, which has had a positive effect.

*. . .because even though we lived very close, we didn't know that you could, that you could do particular activities. We also discovered that we knew that it was there. . . (P2)*

In many cases, and speaking of the experience shared between the interviewees and other parents who attended the sporting events, they say that the project has been useful for them to get to know the sports on offer in the neighborhoods. In fact, they are much wider and more varied than they thought. Hence, it has a positive effect on their assessment of municipal management.

The fact that it is a neighborhood practice makes it possible to adapt the sport itself to the real context of each individual through:

- Self-practice (affordable and easily accessible materials, practice without materials, or adapted materials);
- Taking advantage of "time-outs" to continue practicing;
- The families also highlight the "recovery" of Saturdays that the project has meant for them to accompany their children to the workshops, something they consider very valuable, especially in the post-COVID-19 period, due to:
  - Less screen time for children when they leave the house for a morning of sport;
  - Discovering new playful and healthy ways to spend a Saturday morning.

*. . .because in my daughter's case, at least, she has discovered that on Saturday mornings you can do other activities than drinking vermouth and playing computer games at home (P2)*

Regarding the proximity of physical activities

- *Known environment (G1)*, as activities in areas that are familiar to children;
- Facilitates activity, as it is convenient to practice close to home or school;
- Family reconciliation, at a time when quality family convivial moments are becoming increasingly scarce: *Facilitates adherence, close social relations*;
- Improving children's autonomy: *independence of children (facilitates reconciliation between siblings if they can go alone to train for example) (D3)*;
- A way to occupy active and healthy weekends;
- Lower *investment of time and money (G1)*;
- Potential to take place during or outside school hours, reinforcing its impact;
- Prioritizing physical activity as a health and well-being factor;
- Promoting a change of habits:
  - Offering more alternatives;
  - Allowing children to practice at their own risk;
  - The novelty of new and less popular sports increases motivation.

3. Prevention of physical activity dropout in the transition from primary to secondary education.

One of the problems pointed out by the teachers is who benefits from this type of project, since according to them, the children and families are the ones more involved in

them (more active children, who like sport more, a group who usually practice sport outside school) who enroll in this type of non-compulsory activities, so that the mobilization of those who are more sedentary, or those whose families do not value physical and sporting activity highly, is much more limited.

In this sense, for many families, participating in this type of activity is an extra effort, which they may or may not be willing to make. One of the participants stresses that this closeness *is the key for middle-class families* (D4).

Family participation is considered extremely irregular, depending on the school and the following factors:

- Prioritization of activities. One of the teachers points out that, for the first time in decades, at her school, they have noticed a decrease in extracurricular sports activities and an increase in cultural and scientific activities.

*...And then obviously the increase in the use of screens, that is clear, but we have indeed started to notice that from the third year of primary school onwards there is a greater sedentary lifestyle, mainly for this reason. And perhaps also because of an excess of complementary activities that are not physical, such as English, music theory, Chinese... I mean, this overload sometimes leads to what is not there, in other words, there is much more cultural activity but less sporting activity* (D2).

- Time availability.

*...because you have to take them to places, you don't play mainly in the street like you used to* (D2).

- Possibility of accompaniment.

*...the promotion of family activities far from generating greater involvement I believe that it excludes pupils who cannot be accompanied* (D1).

- Possibility of collaboration with other families.

*It is clear that it is inherent, i.e., if a child cannot be accompanied by his or her family, it is difficult to carry out the activity* (D2).

A critical moment is the transition from primary to secondary education, which in many cases involves a change of school, timetables, and classmates. At this point, key factors in the transition have been considered:

- AFD facility in the same center. Also, families sometimes see sports as incompatible with studies (D4).
- Increased academic burdens/demands:

- This is not the only reason for the increase in sedentary lifestyles;
- Change in interests.

*The changes experienced in adolescence. Especially in girls who take on female cultural roles in which sport is left out* (D4).

- Need for advice or "guidance";
- Need for socio-educational support.

- Loss of healthy PA habits;
- Motivation on the part of families.

*For children with very sporty parents or who value sport a lot, perhaps not so much. ... or for those who excel early, then the family is normally willing to make the effort. ... especially if it is in sports such as tennis or football. ... but with those who are there, on average, it depends a lot on the culture and the value they give to the sport. Or to their comfort because of course, you have to take them, go and pick them up. ... wait there, matches...* (G4);

- Also, the predominance of competitive sports, as

*I believe that there is too much early specialisation, which leads to the abandonment of sports as early as the second stage of school (G1).*

*Children either do competitive sports or they don't do it at all. Playing in the street, in the park, etc., is being lost (G4);*

- Lack of financial resources;
  - Peer group.
4. Strategies to promote healthy physical activity in childhood.

Participation in sports promotion projects is considered one of the key elements in favoring the practice of sports in and outside the school. Thus, for instance, among the participants, the role played by having a sports club at the school and participating in regional government programs such as PIBA (Active Life Impulse Program), the Sports Activities Bank, or *Active School Citizens and Health Promoting Schools* (D4) is highlighted.

*A physical education teacher is not enough. I think there is a lack of personal and material support. If there were neighborhood coordinators, I mean, that is one thing that could benefit the link that we could have between families, students, teachers, children, and sports (D2).*

The main barriers to the practice of sports were identified among the different participants:

- Scarcity of resources: *Yes, but each family must adapt the resources to their characteristics. There is a lot of variety to choose from and every family can get adequate physical activity (D4);*
- Inequalities in the possibility of accompaniment and lack of family support;
- Peer group;
- Family overprotection;
- "Need" to take them to facilities instead of playing in the street;
- Lack of nearby sports facilities;
- Increased screen time;
- COVID standstill;
- Increasing sedentary behavior at younger ages (from 3rd grade onwards): *Children should play and move much more (P3);*
- Increase in non-physical cultural extracurricular activities;
- Activity overload;
- Lack of staff in the centers:

*...support of some kind, socio-educational, I don't know exactly how it could be, but what is important is what is achieved in primary school because obviously, children in primary school are a movement in themselves. But it is a pity that those habits, especially health habits, are lost in a significant percentage (D2);*

- Lack of material in the centers;
- "Loneliness" of the teacher with an interest in promotion;
- Possibility of neighborhood coordinators;
- Complex communication between families, pupils, and teachers;
- Children and sports;
- Established routines that make it difficult for families to change;
- Little offer of minority sports;
- Limited choice of opening hours and facilities, as well as *inequalities between neighborhoods (G1);*
- Time: *...the biggest barrier is often time, so some are very much in favor of and seek the time, but those who don't have the time don't bother to make time for it either (D1).*

### 3.2.2. Highlighted Concepts

The thematic analysis identified the following "typical responses", obtaining absolute and relative frequency counts to summarize the results of the questions to these questions. Concerning the results of the bar chart, the following words stand out for their high

frequency compared to the rest of the words: sport, activities, families, center, and children. They had significantly higher frequencies than the rest of the words. Figure 4 represents the most frequently cited words.

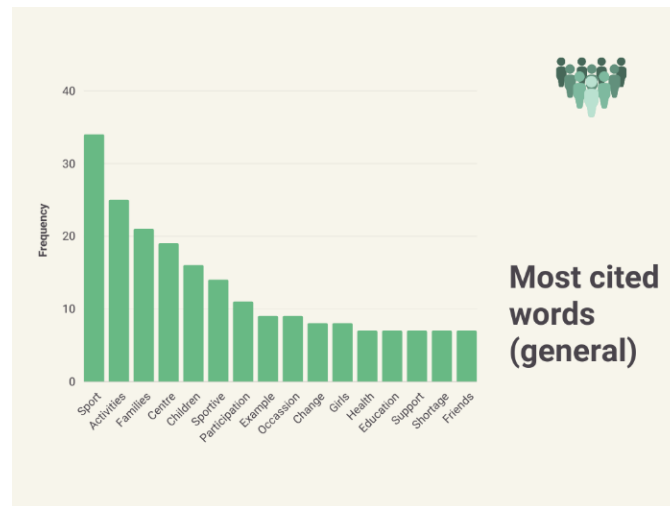


Figure 4. Top words cited by respondents (frequency).

When analyzing the most cited words by category, we found that for parents, the most important concepts are related to action (activities, participation, repetition, practice) and knowledge (information, search, discover), as reflected in the following Figure 5. School leaders identify families, activities, and sport as key elements, with the concepts of health and physical activity appearing, which do not appear in any other category (Figure 6).

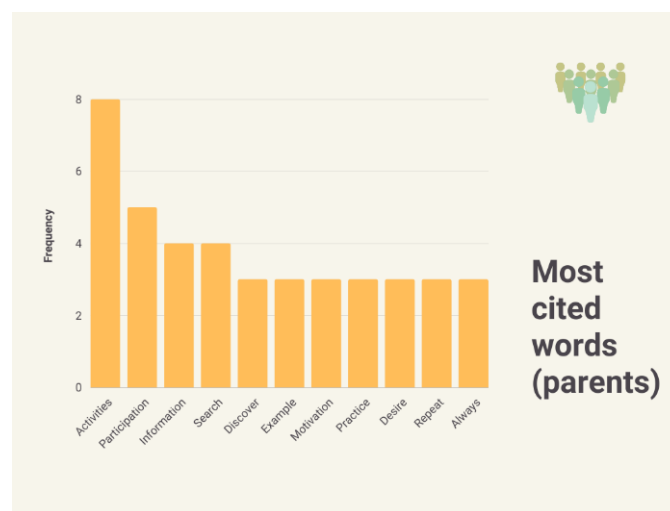
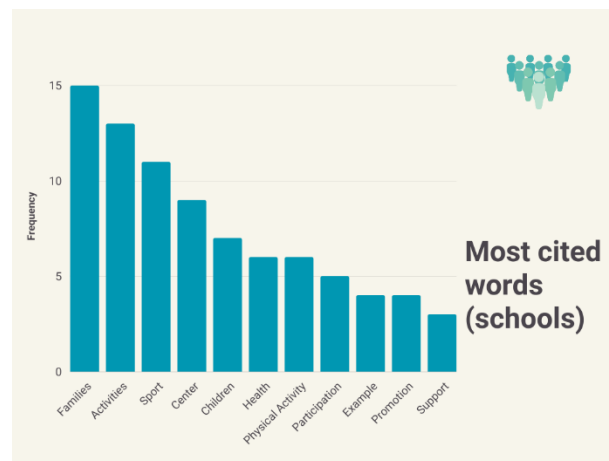
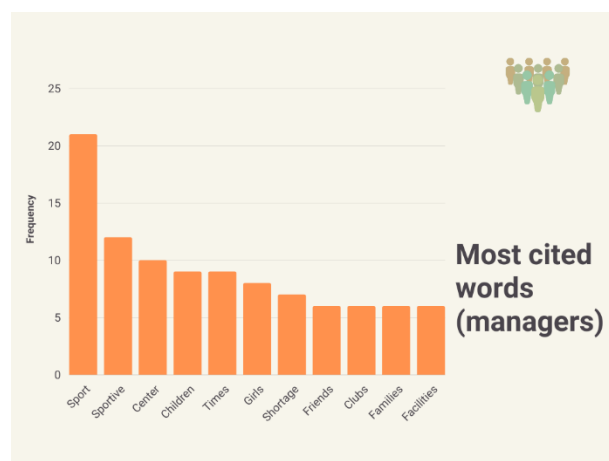


Figure 5. Word frequency per category (parents).



**Figure 6.** Word frequency per category (school leaders).

Finally, sports managers highlight sports, centers, and children, with the concept of shortage also having relevance, which only appears in this category (Figure 7).



**Figure 7.** Word frequency per category (sports managers).

#### 4. Discussion

This paper aimed to show how proximity could be a relevant factor in understanding sport participation in the early years. The results found show that schools can play a key role in showing pupils the wide variety of sporting activities and their benefits, which in turn can bring them closer to local sports clubs. Practicing sports at a local level has positive effects on children's continued interest, encouraging family participation, and discovering new sports and places to practice. Likewise, a change of habits towards a more active and healthy life can be promoted [45,46]. However, several factors were also identified as influencing physical activity dropout during the transition from primary to secondary education, such as the lack of participation of less involved families, academic burden, changes in adolescents' interests, and economic and social barriers. To encourage healthy physical activity in childhood, it is crucial to address these challenges and barriers by ensuring adequate resources, family support and accompaniment possibilities, and fostering effective communication between all actors and stakeholders.

This study shows that sports practice in close environments is shown to be a key element [18,19,25] to mitigate existing barriers, including socioeconomic ones [45].

Close sports practice encourages the adoption of healthy habits and allows children and young people to establish relationships with adults who transmit values, lifestyles, and positive attitudes, such as teachers, monitors, and sports managers [46]. Previous

literature showed that stress is a widespread problem for young people, and it is important to address it. However, adult engagement is needed to help address it [46]. Therefore, the active involvement of adults is essential to guiding children and young people towards a healthy and sustainable path. These positive aspects counterbalance the barriers identified by KIA project participants, who have highlighted lack of time on the part of families, limited diversity in sports provision, and safety concerns in facilities considered to be minority or “diverse”. In a similar vein, other studies have put forward the cost of activities, accessibility, and lack of local facilities as barriers [47]. Therefore, there is a need to address these barriers and promote the creation of inclusive and accessible sports environments for all through strategies that facilitate equitable access to sports opportunities.

It is essential to focus on children and young people by prioritizing their needs and motivations and placing them at the center of actions, strategies, and programs [47]. Rather than focusing exclusively on a specific sport modality, the well-being and holistic development of young people should be prioritized, tailoring sports initiatives to their interests and motivations [47]. Involving young people in the design and implementation of initiatives to increase physical activity seems to have a positive influence [46]. Furthermore, for these initiatives to be successful, effective linkages between schools, local sports associations, and sports authorities are essential [48].

Schools have untapped potential, as they could play a more active role beyond school physical education [15] and out-of-school activities by fostering the creation of active communities, promoting activities outside school hours, and cultivating an active culture within educational establishments. Some of the challenges in implementing projects like this are the lack of specific funding for such activities; the lack of a structured connection between the different stakeholders, which means that instead of joining forces, scarce resources and energies are often dispersed; and finally, the reliance on the volunteerism of teachers and parents instead of organizing professionally because of the medium- and long-term benefits they could have.

This study highlights the key role of families in promoting a healthy and sustainable quality of life for children and young people. To ensure the success of initiatives aimed at this population, it is necessary to establish strong links between educational establishments, the sports associations in the neighborhood, and the sports authorities.

Furthermore, the active participation and availability of families are indispensable elements for the success of these initiatives [47]. However, they can also represent a challenge for children who are vulnerable in other aspects of their lives. It is, therefore, necessary that public policies [46–49], such as the KIA project, are implemented in an institutionalized way and supported by neighborhood and local government bodies to ensure a holistic approach and provide the necessary support to these families and communities. In this sense, families play a crucial role not only as companions and motivators but also as role models [9] by transmitting the philosophy of “moving and interacting in the neighbourhood” and an active lifestyle that promotes interaction and participation in the community environment. In addition, it is recognized that there is a heavy reliance on the availability and willingness of families [47], which can be a barrier for children who are already in vulnerable situations in other aspects of their lives. In this sense, families play a crucial role as companions and motivators, but also as role models [9], transmitting an active lifestyle and a philosophy of “moving and socialising in the neighbourhood”.

It is, therefore, necessary to implement institutionalized public policies, backed by local government bodies that provide adequate support, as evidenced by the KIA program.

The findings from our study have a few practical applications. To address these challenges and barriers and promote healthy physical activity in childhood, it is essential to allocate adequate resources, provide family support and opportunities for companionship, and foster effective communication among all stakeholders.

In addition, the importance of close sports practice should be emphasized to mitigate barriers, including socioeconomic ones, and promote the adoption of healthy habits. The involvement of adults is also important to address stress-related problems in young people.

And, finally, to overcome barriers and create inclusive and accessible sports environments, strategies must be implemented to ensure equitable access to sports opportunities. Effective connections between schools, local sports associations, and sports authorities are crucial to the success of sports initiatives. Public policies must be implemented in an institutionalized manner through the KIA program and supported by local government agencies to provide comprehensive support to families and communities.

Several limitations are important to mention in the current study. The sample of participants in this study was limited, so it would be appropriate to extend the project to a larger number of schools to obtain evidence of greater reliability and validity. In addition, it is important to note that we worked with primary school children in compliance with the requirements of the project. However, the inclusion of participants from the first years of Secondary Education is relevant for a more complete understanding of the reality of the issue under study.

## 5. Conclusions

The current research revealed that proximity plays an important role in sports participation during early childhood. Practicing sports at the local level has positive effects on children's continued interest, encourages family participation, and helps them discover new sports and places to practice. It also promotes a change in habits toward a more active and healthy life. However, several factors were identified as influencing the abandonment of physical activity during the transition from primary to secondary education, such as the lack of participation of less involved families, academic burden, changes in adolescent interests, and economic and social barriers. To promote healthy physical activity in childhood, it is crucial to address these challenges and barriers by ensuring adequate resources, family support, mentoring opportunities, and fostering effective communication among all stakeholders. Finally, families play a crucial role as peers and motivators, but also as role models, transmitting an active and sustainable lifestyle and a philosophy of "moving and socializing in the neighbourhood." It is therefore necessary to implement institutionalized public policies, backed by local government agencies, that provide adequate support, as demonstrated by the KIA program.

**Author Contributions:** Conceptualization, C.M.; methodology, C.M. and V.B.; software, V.B. and I.A.-A.; validation, V.B. and E.M.-P.; formal analysis, I.A.-A., V.B. and E.M.-P.; writing—original draft preparation, V.B. and C.M.; writing—review and editing, V.B. and E.M.-P.; supervision, I.A.-A.; project administration, C.M.; funding acquisition, C.M. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by the European Commission, grant number 622130-EPP-1-2020-1-PT-SPO-SSCP.

**Institutional Review Board Statement:** The study was conducted under the Declaration of Helsinki and approved by the Ethics Committee in Research of the Aragon Government (CEICA), with reference C.P.-C.I. PI22/108, Acta N° 06/2022, dated 23 March 2022.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The datasets generated and analyzed for this study can be requested by correspondence from the authors at vbarrachina@usj.es.

**Acknowledgments:** This paper was elaborated by researchers from the ENFYRED Research Group (S53\_23R) and the ValorA Research Group (S08\_23R), supported by the Aragon Government.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- MacKenzie, J.; Brunet, J.; Boudreau, J.; Iancu, H.D.; Bélanger, M. Does proximity to physical activity infrastructures predict maintenance of organized and unorganized physical activities in youth? *Prev. Med. Rep.* **2015**, *2*, 777–782. [\[CrossRef\]](#) [\[PubMed\]](#)
- Consejo Superior de Deportes. Los Hábitos Deportivos de la Población Escolar en España. Available online: <https://redined.educacion.gob.es/xmlui/bitstream/handle/11162/66767/00820122017247.pdf?sequence=1&isAllowed=y> (accessed on 24 April 2023).
- Soler-Lanagrán, A.; Castañeda-Vázquez, C. Estilo de vida sedentario y consecuencias en la salud de los niños. Una revisión sobre el estado de la cuestión. *J. Sport Health Res.* **2017**, *9*, 187–198.
- Whiting, S.; Buoncristiano, M.; Gelius, P.; Abu-Omar, K.; Pattison, M.; Hyska, J.; Duleva, V.; Musić Milanović, S.; Zamrazilová, H.; Hejgaard, T.; et al. Physical Activity, Screen Time, and Sleep Duration of Children Aged 6–9 Years in 25 Countries: An Analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017. *Obes. Facts* **2021**, *14*, 32–44. [\[CrossRef\]](#)
- Calzada, J.L.; Cachón, J.; Lara, A.; Zagalaz, M.L. Influence of physical activity in the quality of life of children 10 and 11 years. *J. Sport Health Res.* **2016**, *8*, 231–244.
- Babey, S.H.; Wolstein, J.; Diamant, A.L. Few California Children and Adolescents Meet Physical Activity Guidelines. *Policy Brief* **2018**, *8*, 1–8.
- Hobbs, M.; Stewart, T.; Marek, L.; Duncan, S.; Campbell, M.; Kingham, S. Health-promoting and health-constraining environmental features and physical activity and sedentary behaviour in adolescence: A geospatial cross-sectional study. *Health Place* **2022**, *77*, 102887. [\[CrossRef\]](#)
- McCormack, G.R.; Giles-Corti, B.; Bulsara, M. The relationship between destination proximity, destination mix and physical activity behaviors. *Prev. Med.* **2008**, *46*, 33–40. [\[CrossRef\]](#) [\[PubMed\]](#)
- Casado-Robles, C.; Viciania, J.; Guijarro-Romero, S.; Mayorga-Vega, D. Conocimiento del entorno para la práctica de actividad física en escolares (CEPAF): Desarrollo y validación de una prueba escrita objetiva de elección múltiple. *J. Sport Health Res.* **2021**, *13*, 223–244.
- Neshteruk, C.D.; Jones, D.J.; Skinner, A.; Ammerman, A.; Tate, D.F.; Ward, D.S. Understanding the Role of Fathers in Children’s Physical Activity: A Qualitative Study. *J. Phys. Act. Health* **2020**, *17*, 540–547. [\[CrossRef\]](#)
- Pate, R.R.; Dowda, M.; Dishman, R.K.; Colabianchi, N.; Saunders, R.P.; McIver, K.L. Change in Children’s Physical Activity: Predictors in the Transition from Elementary to Middle School. *Am. J. Prev. Med.* **2019**, *56*, e65–e73. [\[CrossRef\]](#)
- Dlugonski, D.; DuBose, K.D.; Habeeb, C.M.; Rider, P. Physical Activity Coparticipation Among Parent–Young–Child Dyads. *Pediatr. Exerc. Sci.* **2020**, *32*, 132–139. [\[CrossRef\]](#) [\[PubMed\]](#)
- Kippe, K.O.; Fossdal, T.S.; Lagestad, P.A. An Exploration of Child–Staff Interactions That Promote Physical Activity in Pre-School. *Front. Public Health* **2021**, *9*, 607012. [\[CrossRef\]](#) [\[PubMed\]](#)
- Cooper, A.R.; Goodman, A.; Page, A.S.; Sherar, L.B.; Esliger, D.W.; van Sluijs, E.M.; Andersen, L.B.; Anderssen, S.; Cardon, G.; Davey, R.; et al. Objectively measured physical activity and sedentary time in youth: The international children’s accelerometry database (ICAD). *Int. J. Behav. Nutr. Phys. Act.* **2015**, *12*, 113. [\[CrossRef\]](#) [\[PubMed\]](#)
- Tonge, K.L.; Jones, R.A.; Okely, A.D. The relationship between educators’ and children’s physical activity and sedentary behaviour in early childhood education and care. *J. Sci. Med. Sport* **2021**, *24*, 580–584. [\[CrossRef\]](#) [\[PubMed\]](#)
- Moss, S.; Gu, X. Home- and Community-Based Interventions for Physical Activity and Early Child Development: A Systematic Review of Effective Strategies. *Int. J. Environ. Res. Public Health* **2022**, *19*, 11968. [\[CrossRef\]](#)
- Sallis, J.F.; Certero, R.B.; Ascher, W.; Henderson, K.A.; Kraft, M.K.; Kerr, J. An ecological approach to creating active living communities. *Annu. Rev. Public Health* **2006**, *27*, 297–322. [\[CrossRef\]](#)
- Pedersen, M.R.L.; Bredahl, T.V.G.; Elmose-Østerlund, K.; Hansen, A.F. Motives and Barriers Related to Physical Activity within Different Types of Built Environments: Implications for Health Promotion. *Int. J. Environ. Res. Public Health* **2022**, *19*, 9000. [\[CrossRef\]](#)
- An, R.P.; Zheng, J.K. Proximity to an exercise facility and physical activity in China. *Southeast Asian J. Trop. Med. Public Health* **2014**, *45*, 1483–1491.
- Bennasser, M.; Vidal-Conti, J. Relación entre actividad física y características de la vivienda y su entorno en jóvenes. *J. Sport Health Res.* **2021**, *13*, 281–294.
- Ramírez Saiz, A.; Alonso, A.; Jiménez Martín, D.; Lamíquiz, P. Can Proximal Environments Prevent Social Inequalities Amongst People of All Ages and Abilities? An Integrative Literature Review Approach. *Sustainability* **2022**, *14*, 12911. [\[CrossRef\]](#)
- Bao, Y.; Gao, M.; Luo, D.; Zhou, X. Effects of Children’s Outdoor Physical Activity in the Urban Neighborhood Activity Space Environment. *Front. Public Health* **2021**, *9*, 631492. [\[CrossRef\]](#)
- Gavand, K.A.; Cain, K.L.; Conway, T.L.; Saelens, B.E.; Frank, L.D.; Kerr, J.; Glanz, K.; Sallis, J.F. Associations between Neighborhood Recreation Environments and Adolescent Physical Activity. *J. Phys. Act. Health* **2019**, *16*, 880–885. [\[CrossRef\]](#) [\[PubMed\]](#)
- Reed, J.A.; Phillips, D.A. Relationships Between Physical Activity and the Proximity of Exercise Facilities and Home Exercise Equipment Used by Undergraduate University Students. *J. Am. Coll. Health* **2005**, *53*, 285–290. [\[CrossRef\]](#) [\[PubMed\]](#)
- Kaufman, T.K.; Rundle, A.; Neckerman, K.M.; Sheehan, D.M.; Lovasi, G.S.; Hirsch, J.A. Neighborhood Recreation Facilities and Facility Membership Are Jointly Associated with Objectively Measured Physical Activity. *J. Urban Health* **2019**, *96*, 570–582. [\[CrossRef\]](#)



26. Deka, D.; Connelly, M. Does Proximity to Activity-Inducing Facilities Explain Lower Rates of Physical Activity by Low-Income and Minority Populations? *Transp. Res. Rec.* **2011**, *2264*, 83–91. [CrossRef]
27. Zehl, R.; Thiel, A.; Nagel, S. Children's sport opportunities and parental support in single-parent families with a lower socio-economic status. An ecological perspective. *Eur. J. Sport Soc.* **2022**, *20*, 179–200. [CrossRef]
28. Sánchez-Valdivia, N.; Pérez-del-Pulgar, C.; de Bont, J.; Anguelovski, I.; López-Gay, A.; Pistillo, A.; Triguero-Mas, M.; Duarte-Salles, T. Residential Proximity to Urban Play Spaces and Childhood Overweight and Obesity in Barcelona, Spain: A Population-Based Longitudinal Study. *Int. J. Environ. Res. Public Health* **2022**, *19*, 13676. [CrossRef]
29. Delgadillo-Macias, J. Agro-food production and consumption in perimetropolitan areas. A typological approach from the proximity approach. *Estudios Sociales. Rev. Aliment. Contemp. Desarro. Reg.* **2019**, *29*, e19701. [CrossRef]
30. Gomà, R.; Ubasart, G. *Vidas en transición*. In *(Re)Construir la Ciudadanía Social*; Tecnos: Madrid, Spain, 2021.
31. Resa, S. La fuerza de lo local y el ciclo corto refuerzan la atracción hacia los productos de proximidad. *Distrib. Consumo* **2021**, *1*, 94–101.
32. Miralles-Guasch, C.; Marquet Sardà, O. Dinámicas de proximidad en ciudades multifuncionales. *CyTET* **2013**, *XLV*, 501–510.
33. Lavandinho, S. La proximidad, ¿un nuevo valor urbano? *Monográfico Ciudad.* **2014**, *17*, 21–49. [CrossRef]
34. Análisis de los Hábitos, Demandas y Tendencias Deportivas de la Población Zaragozana 2015. Zaragoza Deporte. 2016. Available online: <https://www.zaragozadeporte.com/Noticia.asp?id=3232> (accessed on 24 April 2023).
35. Bronfenbrenner, U. Ecological models of human development. In *Reading on the Development of Children*; Gauvain, M., Cole, M., Eds.; Freeman: New York, NY, USA, 1993; pp. 37–43.
36. Moral, L. Theories and models that explain and promote physical activity in children and adolescents. *Educ. Futuro* **2017**, *36*, 177–208.
37. Bandura, A. Health promotion from the perspective of social cognitive theory. *Psychol. Health* **1998**, *13*, 623–649. [CrossRef]
38. Wachs, T.D. *The Nature of Nurture*; Individual Differences and Development; SAGE Publications Inc.: Thousand Oaks, CA, USA, 1992; Volume 3. [CrossRef]
39. Spence, J.C.; Lee, R.E. Toward a comprehensive model of physical activity. *Psychol. Sport Exerc.* **2003**, *4*, 7–24. [CrossRef]
40. Sallis, J.F.; Prochaska, J.J.; Taylor, W.C. A review of correlates of physical activity of children and adolescents. *Med. Sci. Sports Exerc.* **2000**, *32*, 963–975. [CrossRef]
41. Sallis, J.F.; Owen, N. Ecological models of health behavior. *Health Behav. Theory Res. Pract.* **2015**, *5*, 43–64.
42. Lofland, J.; Snow, D.; Anderson, L.; Lofland, L.H. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*; Waveland Press: Long Grove, IL, USA, 2022.
43. Braun, V.; Clarke, V. Reflecting on reflexive thematic analysis. *Qual. Res. Sport, Exerc. Health* **2019**, *11*, 589–597. [CrossRef]
44. Terry, G.; Hayfield, N. *Essentials of Thematic Analysis*; American Psychological Association: Washington, DC, USA, 2021. [CrossRef]
45. Faulkner, G.E.J.; Buliung, R.N.; Flora, P.K.; Fusco, C. Active school transport, physical activity levels and body weight of children and youth: A systematic review. *Prev. Med.* **2009**, *48*, 3–8. [CrossRef]
46. Aranda-Balboa, M.J.; Huertas-Delgado, F.J.; Herrador-Colmenero, M.; Cardon, G.; Chillón, P. Parental barriers to active transport to school: A systematic review. *Int. J. Public Health* **2019**, *65*, 87–98. [CrossRef]
47. Vaquero-Solís, M.; Gallego, D.I.; Tapia-Serrano M, Á.; Pulido, J.J.; Sánchez-Miguel, P.A. School-based Physical Activity Interventions in Children and Adolescents: A Systematic Review. *Int. J. Environ. Res. Public Health* **2020**, *17*, 999. [CrossRef]
48. Strandbu, Å.; Bakken, A.; Stefansen, K. The continued importance of family sport culture for sport participation during the teenage years. *Sport Educ. Soc.* **2019**, *25*, 931–945. [CrossRef]
49. Masini, A.; Zanutto, G.; Longo, G.; Marini, S.; Soldà, G.; Salussolia, A.; Anastasia, A.; Sánchez-Oliva, D.; Ceciliani, A.; Dallolio, L. Erasmus+sport let's move Europa: Learning units for health promotion among children and adolescents. *Eur. J. Public Health* **2022**, *32* (Suppl. 3), ckac131–ckac463. [CrossRef]

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.