

3. TRABAJOS PUBLICADOS

3.1. ESTUDIO 1: Recognition of Barriers to Physical Activity Promotion in Immigrant Children in Spain: A Qualitative Case Study



Article

Recognition of Barriers to Physical Activity Promotion in Immigrant Children in Spain: A Qualitative Case Study

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Abstract: Physical activity facilitates the acquisition of healthy habits from childhood to adulthood. Differences exist regarding the performance of physical activity among immigrant children compared to native Spanish children. The purpose of the study was to describe the barriers that exist for the promotion of physical activity. A qualitative case-study approach was implemented. Parents of immigrant children, teachers, a school principal, and priests were included, using purposeful sampling. Data were collected from 25 participants, via unstructured and semi-structured interviews, focus groups, and researchers' field notes. A thematic analysis was performed and ecological levels were identified. Our findings revealed the following barriers to performing physical activity: (a) the meaning of physical activity, (b) gender inequalities, (c) academic burden, (d) lack of social contact, (e) expenses and family economy, (f) lack of infrastructure and natural surroundings, (g) time constraints, (h) fear and insecurity, and (i) the reason for immigrating. These results may be used to revise the school curriculum, promoting equal opportunities for physical activity and encouraging family participation. Additionally, urban design policies should be encouraged to facilitate access to open spaces for recreation within cities.

Keywords: emigrants and immigrants; exercise; child; parents; qualitative research

1. Introduction

Physical inactivity is considered the fourth leading risk factor for global mortality [1]. On a global level [2], more than 80% of school age youth are physically inactive. More specifically, in Spain, gender differences have been documented, with girls being overall less active than boys (16.3% vs. 8.2%) [3,4]. To counteract this problem, regular physical activity is recommended as it provides numerous health benefits, such as reductions in hypertension, coronary heart disease, type 2 diabetes, breast cancer, and stroke [5]. Additionally, physical activity improves body weight control and promotes muscle and joint functioning [5], improves concentration, and enhances children's school performance [6,7].

A number of factors have been shown to influence physical activity levels in children and adolescents. These include the school environment, immigration, culture, and the social and community context where the child lives [8–13]. The school environment plays an important role in the promotion of physical activity, thanks to physical education and the organization of after school activities that promote the practice of sports, games, and other physical activities [7,11,14]. In Spain,

the 2012 national health survey [4] documents differences between people who were born in Spain and those who were born abroad but subsequently immigrated to Spain. For people over the age of 15, 43.8% of those born in Spain (i.e. the native population) were sedentary, compared to 48.3% of people born abroad (i.e. the immigrant population) [4]. This finding is supported by previous studies [9,10] that show that children of foreign parents are less physically active.

Ethnicity and culture are important determinants with regard to the performance of physical activity in immigrant children. In a study of multi-ethnic parents' views of children's physical activity in North West England, Trigwell et al. [10] reported that on an environmental level, barriers to physical activity included safety concerns, and both a lack of resources and lack of access. Additional barriers were noted for ethnic groups with a Muslim faith (Asian Bangladeshi, black Somali, Yemeni), who reported a lack of culturally appropriate physical activity opportunities for girls. In addition, the perspective of immigrant parents regarding physical activity may condition the performance of the same in their children. For example, parents can positively influence their offspring and act as role models, by providing emotional support, economic resources (covering expenses), and by providing transportation with their car [7,12]. In contrast, parents may also limit their child's physical activity when they perceive that insufficient safety conditions are available for the performance of physical activity [7,10,13], or when they feel that the curricular content of the child should be oriented towards mental-cognitive training as opposed to physical education [15].

Where an immigrant child lives also impacts their level of physical activity. Aspects such as the presence of a means of transport, sports centers, the level of safety and crime in the neighborhood and the presence of parks are all relevant when performing physical activity, via games and sports, and/or allowing children to walk to school on their own [7,12,15]. Lin et al [16], in their study about neighborhood social environments and children's independent mobility, described how children with parents who perceived their neighborhood as being safe and more cohesive, and who lived closer to their child's school, were more likely to allow them to travel to school unaccompanied. For New Zealanders, European, Māori, Samoan, and other Pacific parents in Australia [16], and also for Asian minority parents in London, and Turkish minority parents in Germany [17], security, danger, and crime were common concerns that impacted allowing their children to go out alone.

However, these aforementioned factors do not act independently of each other. Indeed, certain environments (social and physical environments) and policies, can make a community and its environment either more favorable or more adverse toward the promotion of physical activity [18]. To better understand this relationship between individual and environmental factors, ecological models [18] focus on the relationship between people and their physical and sociocultural environments and show that environmental contexts are predictors of health behaviors, such as physical activity [18]. Ecological models incorporate a wide range of influences at multiple levels. Levels of variables or dimensional studies included in ecological models of physical activity include intrapersonal (biological, psychological), interpersonal/cultural, organizational variables, or those related to the physical environment (built, natural), and policy (laws, rules, regulations, codes) [18]. Ecological models are particularly useful in assisting research and practice when applied to a specific behavior since unique environmental and policy factors may influence each behavior [2]. Ecological models identify factors and design interventions to influence multiple levels, including individuals, social environments, organizations, built environments, and policies, in order to achieve population improvements in public health [18].

Despite accumulating evidence of factors that promote physical activity among immigrant children, there is little research on the parents' perspective and that of other physical activity stakeholders (teachers, community leaders). In Spain, a gap exists in the identification of barriers and/or difficulties for the promotion of physical activity, both from the parents' perspective and that of the members of the social and community environment, such as teachers, school principals, and social community leaders.

The purpose of our study was to describe barriers for the promotion of physical activity, perceived by parents, teachers, a school principal, and social community leaders. The question that guided our study was: What barriers do parents and teachers encounter when promoting physical activity among recently immigrated children who face a new cultural context?

2. Materials and Methods

The guidelines for conducting qualitative studies established by the consolidated criteria for reporting qualitative research [19] and the Standards for Reporting Qualitative Research (SRQR) [20] were followed. Qualitative methods are useful for understanding the beliefs, values, and motivations that underlie individual health behaviors [21]. Furthermore, qualitative studies have been used to study parents' perceptions of physical activity and to identify strategies to incorporate into the prevention of childhood diseases [22]; to explore the links between parents' and children's perspectives on culture and healthy lifestyle behaviors, such as physical activity [10,22]; and to examine social neighborhood environments and children's mobility [16], and the process for increasing physical activity among elementary-aged children [23]. The design and manuscript structure were inspired by qualitative studies reported by Palacios-Ceña et al. [24].

2.1. Study Design

A qualitative descriptive case study with embedded units was conducted [21,25]. A case study may be formed of different units, which help to describe a phenomenon. These units may be different participants from different contexts and places who are only connected by the phenomenon under study [21,25,26]. In this study, the phenomenon under study was the barriers for the promotion of physical activity in immigrant children, perceived by different participants, including parents, teachers, a school principal, and social community leaders.

2.2. Context

This study was conducted in the city of Alcorcón (Madrid, Spain), with a population of 175,000 inhabitants in the year 2017. The reported immigrant population rate of Alcorcón was 11.9% in 2017, compared to an average 13% in the community of Madrid [27]. The reported population of children between four and 15 years of age in 2014 was 17,765, of which 1,883 were foreigners, representing 10.5% of the child population. We reached a consensus to include participants from two contexts: (a) the school environment, by including two educational centers (EC) from Alcorcón; and (b) the social-community environment via the inclusion of two Catholic parishes (CP) of Alcorcón.

2.3. Participants

We included all those who met the inclusion criteria and who participated in the promotion of physical activity among immigrant children at the school and in the social context.

Inclusion Criteria

- Parents: (a) living in Alcorcón (Spain) during the study, (b) who were not born in European Union countries, (c) who had children between seven and 16 years of age in the Spanish education system, and (d) whose children had been born in their country of origin.
- Teachers: (a) who at the time of study were actively working at an educational center, and (b) with over four years' experience in teaching.
- The principal of a public, private, or charter school: (a) who, at the time of the study, was actively working at an educational center, and (b) with more than four years' experience in teaching.
- Leaders of a community: people with a relevant responsibility post in an organization, or institution with social impact in the community where the parents lived. In this case, these were religious leaders (i.e., Catholic priests).

2.4. Sampling Strategies

A purposeful sampling strategy was employed [21], which involved deliberately selecting participants. In this case: people who participated in physical activity promotion for immigrant children in the school context, and/or the social context [21,25]. We contacted two EC and 10 teachers who taught children between 10–14 years of age, along with the school principal. They put us in touch with parents who met the inclusion criteria, of whom five agreed to participate in the study. Additionally, contact was made with the principals of two CP, who put the researchers in touch with immigrant parents who met the inclusion criteria, of whom seven agreed to participate in the study. Also, two priests who directed activities for the promotion of sports and cultural activities with the immigrant families agreed to participate in the study. Cumulatively, 25 participants were included in the sample and none withdrew from the study (Table 1).

Table 1. Sociodemographic data of participants.

Participants	Sociodemographic Data
Parents	Participants: 12 (4 women) Mean age: 47.4 ± 7.4
Teachers	Participants: 10 (5 women) Mean age: 37.6 ± 7.0 Years of teaching experience: 15.3 ± 7.6
School Principals	Participants: 1 (man) Age: 51 Years of teaching experience: 30
Community Leaders (Priests)	Participants: 2 (men) Mean age: 44.5 ± 13.4

2.5. Data Collection

Data were collected from November 2017 until May 2018. The objective of this case study was to obtain an in-depth, multi-perspective holistic enquiry entailing the need for multiple data sources and multiple data collection tools (Table 2) [21,26]. The interviews and focus groups were conducted in Spanish and subsequently translated.

Table 2. Data collection process.

Data Collection Phase	Data Collection Tool	Participants
1	7 unstructured interviews + 7 researcher field notes	2 parents, 2 teachers, 2 priests, 1 principal
2	2 focus group + 2 researcher field notes	10 parents, 8 teachers
3	11 semi-structured interviews + 11 researcher field notes	5 parents, 4 teachers, 1 principal, 1 community leader ¹

¹ Parents and teachers were obtained from phase 2 and the school principal and community leader were obtained from phase 1.

2.5.1. Unstructured Interviews

Unstructured interviews were conducted first with participants 1–7. The interview started with an open question: “What is your experience with physical activity with children?” Thereafter, we listened carefully, noted the key words and topics identified in the participants’ responses and used their answers to ask for and clarify the content [21]. In this way, relevant information was collected from the perspective of the participants. A first analysis was performed on the unstructured interviews of participants 1–7. This analysis revealed relevant topics that required further study, thus making it necessary to include a second stage of data collection.

2.5.2. Focus Groups

The second stage (participants 8–25) consisted of two focus groups (see Table 2) which were based on a question guide designed to gather information regarding specific topics of interest (Table 3) [21].

Table 3. Focus group question guide.

Phase	Contents	Time (Min)
Moderator welcome	Welcome, explanation of study aims, process of the session and rules.	5–10
Opening questions	Participants were asked about their experience with physical activity in children: Could you tell me your experience with physical activity in children? The question was centered on aspects of physical activity promotion and management:	10–20
Introductory and transition questions	What promotion activities did you perform? What activities were performed for the management of physical activity? Questions were posed once more on the basis of prior participant responses in order to go into greater depth regarding areas such as: Teacher–children relationships: Do you think the relationships between teachers and children may influence the promotion and management of physical activity? Parent–children relationships: Do you think the relationships between parents and their children may influence the promotion and management of physical activity?	10–30
Key questions	Development of physical activity programs in the school: What is your experience with programs in the school? How are these developed? How do parents’ and/or teachers’ interventions contribute towards promoting and maintaining physical activity? The moderator performed a brief summary of the contents covered.	20–40
Closing remarks	The participants confirmed whether the summary was correct and were given the opportunity to add to/modify their statement.	10–15

Focus groups (FGs) were conducted to examine different perspectives within the same group, to acquire an understanding of the problems faced by the group, and to facilitate the identification of values and norms [21,28]. In total, two FGs (See Table 2) were conducted, and each FG comprised between 6–12 participants [21].

The FGs were conducted by a moderator following a uniform structure [21,28]. The moderator posed questions, based on the issues raised in the discussion, in order to further explore or clarify aspects, either on an individual level or with the group as a whole [28]. Focus groups were conducted in Spanish, and were audio recorded. Permission for these recordings was sought before the recordings began. A second analysis was performed on the two focus groups. This analysis uncovered relevant topics within the same group that required further study, thus making it necessary to include a third stage of data collection.

2.5.3. Semi-Structured Interviews

This third stage included 11 participants (parents and teachers obtained from phase 2 and the school principal and community leader obtained from phase 1) and consisted of semi-structured interviews (see Table 2) designed to gather information regarding specific topics of interest from FGs Table 4) [21].

Table 4. Semi-structured interview question guide.

Research Area	Questions
Physical activity, culture and ethnic group	Do you believe that culture and/or ethnicity can influence the performance of physical activity in children? How? How do you perceive physical activity from the point of view of your culture?
Strategies for the promotion of physical activity in immigrant children	How can physical activity be promoted and fostered in immigrant children? Which strategies or interventions are most necessary?
Barriers for the performance of physical activity in immigrant children	What elements can hamper the performance of physical activity in immigrant children? What elements can do so in educational centers? What elements can do so in the community?

2.5.4. Written Documents

Field notes were taken for each of the unstructured, semi-structured interviews, and FGs (see Table 2). The researcher field notes provided a rich source of information as participants described their personal experiences, their behavior during data collection, and enabled them to note their reflections concerning methodological aspects of the data collection [21] (see Table 2).

2.6. Data Analysis

A thematic, inductive analysis was performed [21,26,29]. Literal transcriptions were drafted for each of the FGs, unstructured and semi-structured interviews, and researcher field notes [21]. The thematic analysis [29] consisted of identifying the most descriptive content in order to obtain meaningful units, and subsequently reduce and identify the most common meaningful groups. In this manner, groups of meaningful units were formed (i.e., similar points or content that allowed the emergence of the topics that described the study participants' experience) [21,29]. This thematic analysis process was performed separately upon the unstructured interviews, FGs, and semi-structured interviews. Subsequently, joint meetings were held to combine the results of the analysis. Also, the data collection and analysis procedures were discussed during these meetings. In the case of differences in opinion, theme identification was performed based on consensus among the research team members. Subsequently, the research team held joint meetings to show, combine, integrate, and identify the final themes [21].

Once the final themes were identified, the multiple levels of the ecological model proposed by Sallis et al [18] were applied to contextualize the results of the different intervention levels towards the achievement and promotion of *active living*. Active living is a broader concept that incorporates exercise, recreational activities, household and occupational activities, and active transportation [18]. The multiple levels of influence include the following: intrapersonal factors, environmental policies (building infrastructure, land use, transportation regulations), location (access and characteristics of the places where physical activity may occur), information from the environment (including a great variety of forms of communication, providing and acquiring information), the socio-cultural environment (ethnicity, religion), and the natural environment (weather, topography, open space, air quality) [18]. At the center of the model, the person's behavior towards the four active living domains is located, together with the person's perception towards the different environments and the intrapersonal characteristics of each individual. No data analysis software was used.

2.7. Quality Criteria

The recommendations for the design of case study research in health care using the DESCARTE model [26] were followed. Also, the criteria for guaranteeing trustworthiness as cited by Guba and Lincoln were followed [30]. The techniques performed and the application procedures used to control trustworthiness are described in Table 5. These methods to increase rigor are compatible with case study designs [31].

Table 5. Trustworthiness criteria applied.

Criteria	Techniques Performed and Application Procedures
Credibility	Investigator triangulation: each data source was analyzed. Thereafter, team meetings were performed during which the analyses were compared and themes were identified. Triangulation of data collection methods: including unstructured interviews, focus groups, semi-structured interviews, and researcher field notes. Participant validation: this consisted of asking the participants to confirm the data obtained at the stages of data collection.
Transferability	In-depth descriptions of the study performed, providing details of the characteristics of researchers, participants, contexts, sampling strategies, and the data collection and analysis procedures.
Dependability	Audit by an external researcher: an external researcher assessed the study research protocol, focusing on aspects concerning the methods applied and the study design.
Confirmability	Investigator triangulation and data collection triangulation. Researcher reflexivity was encouraged via the previous positioning, performance of reflexive reports, and by describing the rationale behind the study.

2.8. Ethics

This study was approved by the Clinical Research Ethics Committee of the University Rey Juan Carlos (Project identification code: 3001201702417). The study was conducted in accordance with the principles articulated in the WMA Declaration of Helsinki (Ethical Principles for Medical Research Involving Human Subjects). Furthermore, we followed the Spanish Personal Data Protection Act and the Biomedical Research Act [32]. All participants provided written informed consent before they participated in the study.

3. Results

Twenty-five participants were included in the study with a mean age of 43.4 ± 8.7 years. See Table 1 for the sociodemographic profile of the participants. The teachers and the principal had 16.6 ± 8.4 years of teaching experience. The country of birth of the respective parents was Peru (4), Colombia (2), Ethiopia (1), Venezuela (1), Guatemala (2), and Senegal (2). The themes representing the participants' experiences were extracted from the unstructured interviews, FGs, and semi-structured interviews. Nine themes emerged from the material analyzed: (a) the meaning of physical activity, (b) gender inequalities, (c) academic burden, (d) lack of social contact, (e) expenses and family economy, (f) lack of infrastructure and natural surroundings, (g) time constraints, (h) fear and insecurity, and (i) the reason for immigrating. We included the narratives taken directly from the data collection regarding the themes identified in this study.

Within the findings, the multilevel ecological model by Sallis et al. was used [18] to identify the most relevant levels of the model within the themes that were obtained. A summary of the levels of the ecological model is featured in Tables 6–14.

3.1. The Meaning of Physical Activity

One of the barriers found was related to the different perspectives concerning physical activity. For teachers, physical activity was considered part of a child's education and linked to their relationship with their body, highlighting the need for children to acquire healthy habits through learning: "It is impossible to understand the education of these recently arrived children by separating the mental aspects from the physical ones. The body and the child's relationship with their body should be a priority for providing healthy habits." (teacher, focus group). Additionally, for parents, physical activity included movement, agility, physical space, the natural environment, and playing. Physical inactivity was associated with keeping the children locked up indoors: "The children live in cages, they are locked up, it is necessary to get them out of there" (mother, interview). Finally, the priests

described how the children must perform activities together with the family, promoting family union as a key pillar of the community.

The participants perceived a decrease of physical activity in terms of sports and/or games. The absence of games and/or informal extracurricular activities was identified as a barrier for physical activity. The parents described the importance of games that children perform outdoors (i.e., in the street, as being an informal way to perform physical activity). They compared this with their countries of origin, and described how, in Spain, children spend more time at home: “Here, it seems like they aren’t children. They are in their home, playing with the computer, the mobile phones, they are disconnected from playing, from activity, from movement, from their childhood” (father, interview). Many times, parents and teachers concurred that movement via playing should be assigned more importance than intellectual educational pursuits: “They need to peel away from the chair and not only work with their brain, although this is also important” (teacher, interview). The levels of the ecological model identified are described in Table 6.

Table 6. Levels of the ecological model identified in: The meaning of physical activity.

Meaning Units of Theme	Ecological Model Level
Educational policies orientated towards academic contents compared to physical education.	Policy environment
Insufficient programmed and planned activities available for the promotion of physical activity.	
Participation in community events via physical activity.	Social cultural environment
Physical activity in the natural environment (park, forest, countryside) is an essential aspect for children.	Natural environment
Household: children tend to spend their time mostly in the home. Even when at home, they do not perform physical activity. Much time is spent watching the television and playing video games.	Behavior active living domains (household, active recreation, active transport, occupational activities)
Active recreation: physical activity is part of the games children play. Playing and physical activity are linked together.	
Occupational activities: within their own activities, the family can try and perform physical activities together.	

3.2. Gender Inequalities

Gender differences can represent a barrier to the performance of physical activity. Most participants narrated that no difference should exist between boys and girls and that all children should be free to select and practice their preferred activity. However, according to many parents, in real life, there was a difference. These differences existed in their countries of origin and were maintained in Spain: “Soccer is practiced by boys. There are more and more girls, but it is a boy thing. Over there, girls practice volleyball and rhythmic gymnastics. It is very rare for girls to practice it” (father, interview). The levels of the ecological model identified are described in Table 7.

Table 7. Levels of the ecological model identified in: Gender inequalities.

Meaning Units of Theme	Ecological Model Level
The society identifies certain sports with a specific gender. Active recreation: certain physical activities may be limited by gender.	Social cultural environment Behavior active living domains (household, active recreation, active transport, occupational activities)
The environment presents difficulty for girls to access the same.	Perceived environment
The parents would like no gender barriers to exist; however, they still perceive these. Parents perceive gender barriers between boys and girls when performing physical activity in the schools of their countries of origin and this is maintained in Spain.	Intrapersonal

3.3. Academic Burden

The extensive activities children perform at school in addition to homework were perceived as a barrier by parents and teachers. The school day, together with homework to be done after classes, was perceived to lead to children who were continuously tired, stressed, and who lacked time for other activities. All the parents described how the school gave more importance to time dedicated to the educational content than time dedicated to leisure. Because of this, the time dedicated to homework was a hindrance for the practice of physical activity during after-school hours: “They have a large theoretical burden, they must study and they don’t want to do anything else. The excessive amount of homework prevents them from playing and doing sports and having fun” (father, focus group). “The educational system doesn’t let the child be a child. If the school timetables were better organized, then they could have more time to play” (mother, interview).

This point of view was shared by the teachers, who acknowledged that the homework burden should be decreased after school, and that the practice of other activities that allow children to “move” and “wake up their body” should be facilitated: “All day long they are confined to the classroom, and when they go home, they have to do their homework. When are they really children? When do they have time to jump, run, play among themselves, compete, or train any kind of sport? We are focusing on their brain and we forget that they are in a physical body which, if we do not teach them to care for it, when they become adults, they will have problems.” (teacher, interview).

This contrasted with the point of view of the director, who felt that children must face a social and educational environment, which demands them to acquire knowledge and performance, and the school is responsible for preparing them for this: “I understand that children should play more, but, the truth is that in a few years they have to face tests and social demands. It is also our role as educators to prepare them as best as possible” (principal, interview). The levels of the ecological model identified are described in Table 8.

Table 8. Levels of the ecological model identified in: Academic burden.

Meaning Units of Theme	Ecological Model Level
Educational policies and excessive school activities. Socially, the need for large amounts of homework is accepted, as it is considered to be beneficial for the child (being better prepared).	Policy environment Social cultural environment
Household: excessive homework, which limits other activities. Active recreation: this is affected by not having time for other activities.	Behavior active living domains (household, active recreation, active transport, occupational activities)
Inappropriate organization of school work.	Intrapersonal

3.4. Lack of Social Contact

Participants described how contact with other native children facilitates their ability to relate with others via play and physical activity: “It is very important that they practice physical activity, to relate with others (. . .) they share things with school friends and they teach new things to their adopted country” (mother, interview). The teachers described how immigrant children have more difficulty interacting with native children (because they do not know the language, because of rejection, or not understanding the instructions, etc.), and participating in physical activity, therefore choosing more sedentary activities: “The less contact they have with other children, the more closed they become and they participate less in other activities and games. It’s a vicious circle.” (teacher, focus group). On the other hand, most participants agreed that physical activity in a group can help children establish a better connection with the class, with the school and the new country: “I would take away many of the classes and reinforce physical activity for newly arrived immigrant children. Movement is a way for them to communicate among themselves, it’s innate, it’s natural.” (teacher, interview).

In the construction of relationships, relatives who are believers go to church, where they share experiences, and where immigrant children have contact with other children and with Spanish families. Church worship is an opportunity to establish contact and acquire local customs: “Our role is to try and make them feel like they have a place in our family [the church]. Besides, we help them to understand our customs, we organize activities so that they begin to meet new families, so that they can integrate faster.” (priest, interview). “When we got to Spain we were disoriented, the language was the same, but we did not understand many things, here [in Spain], people behave differently, there are other ways of doing things. The church helped us to feel that we belonged somewhere. For my children, it helped them a lot because the first thing they remember is going to the camp that the church organized. They are still friends with the children they met there.” (father, interview).

The levels of the ecological model identified are described in Table 9.

Table 9. Levels of the ecological model identified in: Lack of social contact.

Meaning Units of Theme	Ecological Model Level
The application of physical activity programs and events may help the integration of immigrant children in the new country.	Policy environment
Access to support groups and cultural and social groups facilitates the integration of immigrant children.	Setting: access and characteristics
For Catholic immigrants, the church facilitates the ability to integrate into the community.	
Acquiring information via other institutions, such as the church.	Information environment
Children must relate with other children in the community.	Social cultural environment
Physical activity could be a good means to do so.	
Active recreation: sharing games and sports among children.	Behavior active living domains (household, active recreation, active transport, occupational activities)
The teachers perceive an adverse environment for immigrant children due to language difficulties.	Perceived environment
The teachers perceive that immigrant children present greater difficulty relating with other and sharing games and physical activity with other children.	Intrapersonal

3.5. Expenses and Family Economy

One of the barriers is the economic costs families face when their children practice some kind of organized physical activity. The parents described how this is an expense that they cannot afford: “If you want [your child to practice sports] you have to pay and that is an expense that I cannot afford.” (father, interview). The parents described how, in their countries, there are many social subsidies for playing sports and performing physical activity: “There are associations that give you free sports

training. On behalf of the town hall there are also sports centers, and everything is free” (mother, interview). The parents and teachers described the economic sacrifice the family must make in order for them to practice an activity in Spain: “I know many friends who must go to great efforts so that their sons practice soccer.” (mother, interview). This sacrifice takes many forms, such as investing considerable time, facing economic expenses to cover trips, sports equipment, and enrollment fees in the sports center. The levels of the ecological model identified are described in Table 10.

Table 10. Levels of the ecological model identified in: Expenses and family economy.

Meaning Units of Theme	Ecological Model Level
The creation of support programs for children, in families with limited resources in order to practice sports and/or activities.	Policy environment
The costs of some sports centers limit the access to the performance of physical activity.	Setting: access and characteristics
Ease of access due to a reduction of activity registration costs or free access.	
Active transport: the families help by taking their child to the physical activity; however, this entails an effort to cover the cost of the trips.	Behavior active living domains (household, active recreation, active transport, occupational activities)
The environment is perceived as a barrier for the difficulty for children to access the space.	Perceived environment
To enable the children to perform physical activity, “sacrifices” are made (money, time, transport) on behalf of the family.	Intrapersonal

3.6. Lack of Infrastructure and Natural Surroundings

The teachers and parents related that the absence of sports and leisure infrastructure influences the practice of physical activity: “Our city seems like an abandoned town. There is no place to do sports. There’s not even a sports field, or a sports center to take them to.” (mother, focus group). Also, the parents associated the lack of physical activity with the excessive distance and/or poor accessibility of the space. Many of the parents lacked their own vehicle, having to use public transport as an alternative, or they lacked resources to reach the sports centers: “I would like to take my son to training every day, but we don’t have a car. And to think of using public transport, with the amount of buses that I would have to take to get there, makes it unfeasible. It’s better if he stays at home and studies other subjects.” (mother, focus group).

Many parents described that to share physical activity and games in nature with their children, they must cover long distances. Access to nature is also difficult, whereas in their countries it was part of their daily life: “In my country there were no parks, we had no need, nature was all around the house. Children were playing in the trees all day long. Getting to know ‘nature’ was not an extra activity necessary for their education. They lived with it.” (father, focus group). The levels of the ecological model identified are described in Table 11.

Table 11. Levels of the ecological model identified in: Lack of infrastructure and natural surroundings

Meaning Units of Theme	Ecological Model Level
Absence of infrastructures for the practice of physical activity and sports.	Setting: access and characteristics
Sports centers or open spaces in nature that are poorly accessible because of the distance from the home.	
There is a lack of good transport connections to reach the sports centers or the natural or open space. Either a car is needed, or several public transport connections are needed.	
The natural environment and open spaces to perform physical activity are very far from the home.	Natural environment
Active transport: sports centers that are very far mean that a private vehicle is needed to reach these spaces, or several public transport vehicles.	Behavior active living domains (household, active recreation, active transport, occupational activities)

3.7. Time Constraints

Parents lacked enough time to share activities with their children because of a work timetable that was incompatible with the children's leisure time. The workdays were long and prevented them from playing with their children outside of the home (park) or taking them to sports practices: "Work influences a lot, you aren't with them enough [the children]." (mother, interview). "First things first, and that means working to be able to give my children an opportunity to continue forward in a new country. Games and sports, although it pains me to say it, will have to wait." (father, focus group). From the point of view of the teachers, the organization of the child's day hampered the practice of physical activity, as it coincided with the parents' workday: "The extracurricular activities have timetables that are not compatible with the timetables of their parents, which are workdays of 10–14 hours each day (teacher, interview). My son had a scholarship for having come first in a sports meet at the town hall, but the timetable was from 18:30 to 19:30, and at that time I am still working." (father, interview).

The levels of the ecological model identified are described in Table 12.

Table 12. Ecological model levels identified in: Time constraints.

Meaning Units of Theme	Ecological Model Level
The programming of extracurricular activities does not adapt to the family's work constraints.	Policy environment
Access to sports centers or games is difficult because of the work timetable.	Setting: access and characteristics
Parents with a work timetable that is incompatible with playing or performing physical activity with the children in the community or sharing social and cultural events of the community	Social cultural environment
Active recreation: parents with great difficulty sharing recreational activities with their children, due to work timetables.	Behavior active living domains (household, active recreation, active transport, occupational activities)
Occupational activities: jobs with very long timetables.	
The parents wish they could share more time with their children and perform more activities.	Intrapersonal

3.8. Fear and Insecurity.

Perceived fear and insecurity were other hindrances for practicing physical activity. Some parents even used the term "terror" to describe their feeling of insecurity when taking their children to perform physical activity or play outdoors. They felt that it was unsafe to leave children alone playing on the street: "I am terrified about taking them to the park to play basketball. There is a big park, but it

has a bit of everything and you see people who are so strange, it's scary. And in the street the same thing happens, I don't let them go out on their own." (mother, interview). Some parents demanded the need for open spaces, such as parks; however, over time, many acknowledged that they stopped going to these places with their children due to feelings of insecurity: "I know that my children need to run, jump, play, practice sports and leave the home . . . but if the alternative is playing soccer in a neighborhood that I don't know, or in the park with no control, I prefer that they stay at home." (father, focus group).

In contrast, there were participants who felt that risks always exist, and therefore this must not condition children to limit their opportunities of doing sports, playing or interacting with other children and in other environments. They compared how, in their countries of origin, this risk was much more palpable, and that in Spain, children must not stop practicing sports because the risk is very different: "In my country [Columbia], there is a lot of crime. You can't do anything in the open air. You know, kidnappings, armed assault and those kinds of things. In Spain, you go out running and you aren't fearful of people robbing you, here you do not perceive any insecurity." (mother, interview). The levels of the ecological model identified are described in Table 13.

Table 13. Ecological model levels identified in: Fear and insecurity.

Meaning Units of Theme	Ecological Model Level
The development of policies for the control of public spaces is necessary, for games, sports, and other community activities.	Policy environment
Insecurity, risk of danger, and uncontrolled environments hamper the practice of physical activity on behalf of children.	Setting: access and characteristics
These spaces are avoided by the parents, who limit activity in children.	
There is parental control regarding the performance of physical activity, games and sports according to the perceived risk or insecurity for their children within a community.	Social cultural environment
Participation in activities in open spaces, such as parks, is avoided because of insecurity.	Natural environment
Household activity: avoiding the performance of outdoor activities is compensated with activities in the home.	Behavior active living domains (household, active recreation, active transport, occupational activities)
Active recreation: this is affected due to the limitation of activities outside the home.	
Parents display fear and insecurity when leaving their children alone playing in the street or alone in open spaces.	Intrapersonal
The perception of risk or insecurity in Spain is lower compared to their country of origin.	

3.9. The Reason for Immigrating.

The reasons that lead the families to immigrate can also be a hindrance for children to practice physical activity. For many parents, economic reasons were behind their choice to immigrate. Therefore, practicing physical activity was not seen as a priority: "What did we come here for (the immigrants): to work and make money, and we don't have time to do anything more, the rest is secondary, my children understand." (father, interview). On the other hand, when residence was more permanent (refugees, political asylum), the children's education, with all its intellectual and physical dimensions, acquired greater importance. Children were prioritized and therefore required parents' time: "When you realize that Spain is going to be your new home, everything changes. You try to give your children the same opportunities as any other child, for him to do what other children here [in Spain] do, to become one of them. His education is the most important thing." (mother, focus group). The levels of the ecological model identified are described in Table 14.

Table 14. Ecological model levels identified in: The reason for immigrating.

Meaning Units of Theme	Ecological Model Level
Work and making money is the family priority, limiting the access of children to sports activities and spaces.	
The choice to immigrate is determined by economic motives which are the family priority. In the case of temporary immigrants, physical activity is not a priority. However, for families that settle in Spain, physical activity is a necessary factor which their children must develop, like Spanish children.	Setting: access and characteristics
Occupational activities: the priority is the economy and making money.	Behavior active living domains (household, active recreation, active transport, occupational activities)
Parents who settle in Spain perceive that practicing physical activity is just another element within their education.	Intrapersonal

Finally, Table 15 displays the levels of the ecological model identified in each of the themes.

Table 15. Relationships among identified themes according to each level of the ecological model.

Ecological Model Level	The Meaning of Physical Activity	Gender Inequalities	Academic Burden	Lack of Social Contact	Expenses and Family Economy	Lack of Infrastructure and Natural Surroundings	Time Constraints	Fear and Insecurity	The Reason for Immigrating
Policy environment	X		X	X	X		X	X	
Social cultural environment	X	X	X	X			X	X	
Natural environment	X					X		X	
Information environment				X					
Setting: access and characteristics				X	X	X	X	X	X
Behavior active living domains ¹	Hh, Ar, Oa	Ar	Hh, Ar	Ar	At	At	Ar, Oa	Hh, Ar	Oa
Perceived environment		X		X	X				
Intrapersonal		X	X	X	X		X		X

¹ Relationship identified between theme and ecological model level (X); Household (Hh); Active recreation (Ar); Active transport (At); Occupational activities (Oa).

4. Discussion

Our results revealed a number of barriers for physical activity promotion in immigrant children from the perspective of parents, teachers, a principal, and community leaders. Our study continues a line of research on the factors that impact upon and influence the practice of physical activity and the implementation of a healthy lifestyle in immigrant children [10,17,22].

Previous studies regarding physical activity in children and teenagers [33,34] show how children and teenagers whose parents were immigrants practiced less physical activity compared to native children and teenagers. In the USA, Brewer et al [33] reported that this disparity is not attenuated by a child's socioeconomic, family, or neighborhood characteristics. Also, patterns of physical activity have been found to vary according to the immigrant generation status (being born in a new country vs. being born in the country of origin), and the process of acculturation [33,34].

Our participants did not agree with the existence of gender inequality in the practice of physical activity; however, many parents acknowledged that this type of bias exists in their country of origin. The existence of inequality in the practice of physical activity among men and women can be considered a global phenomenon [35]. In Spain, the 2016 survey on sports habits by the Ministry of Education and Culture [36] shows that boys mostly practice sports such as soccer, cycling, and swimming, and that girls mainly practice gymnastics, hiking, and swimming. Previous studies [10,37] show that this gender difference exists even in recess hours during school, where the amount of physical activity performed varies (greater in boys) as well as the type of activities performed ("boys games" versus "girls games"). Culture, ethnicity, and religion may, in part, explain this gender difference in immigrant children [10,37].

Our participants perceived a significant academic burden regarding academically-oriented school activities compared to activities promoting physical skills. This is in line with Trigwell et al. [10], who reported that ethnic groups from different cultures (Asian Bangladeshi, Chinese, Yemeni) prioritized educational attainment over physical activity. In contrast, many studies [14,38] agree with the need to increase physical activity in school curricula [38] and incorporating break periods between lessons [14]. Public health recommendations highlight the pivotal role that schools and teachers play in providing equitable opportunities for physical activity for all children. Also, opportunities to increase physical activity throughout the school day should span, not only in-school time (e.g., quality recess and physical education, classroom activity breaks), but also time before school (e.g., active commuting initiatives) and after school (e.g., intramural and interscholastic sports programs) [11,38].

Our results highlight how the neighborhoods where our participants lived do not present the necessary conditions, nor do they have sufficient infrastructure, for the practice of physical activity. Previous studies [17,39] show how the neighborhood, the area of the city where they are located, the presence of parks, accessible urban transport, and comprehensive urban planning to support physical activity (walkability) all influence the performance of physical activity. More specifically, in the case of children and youth, previous studies [17,40] have shown an association between neighborhood-built environments and an increased level of physical activity (and, consequently, a decrease in sedentary time). This also applies to young immigrant children/youth of other cultures or ethnicities in Western countries [17].

Nevertheless, fear and insecurity are also major barriers for the practice of physical activity. Previous studies show how crime, insecurity, the perceived presence of "dangerous" people, and the lack of safe spaces influence the possibility of taking children to leisure activities in safe spaces (with or without physical activity) [10,13,16,17].

Previous studies [12,41] have examined the influence of parents on children's physical activity, and the evidence for the context-specific influence of parental modelling on physical activity in childhood remains inconclusive. Along these lines, the SOPHYA Study Group [41] reported that parental modelling (physical activity practice) seems relevant for children's physical activity ($p < 0.001$), and were stronger for children aged 10–12 years, although not to the same extent in all children. This conflicts with previous studies [12] which have shown that parental modeling was not associated

with physical activity in children. We believe that an important barrier in the practice of physical activity in immigrant children is the socioeconomic-work situation of the parents, narrated in the themes “costs and economy,” “lack of time,” and the “motive for immigrating.” Parents choose to immigrate in order to earn a living and improve the family’s quality of life (via precarious employment or low-skilled employment with long working days), which is associated with insufficient economic resources and a lack of time for parents to invest in their children practicing physical activity, playing, and spending time together. Thus, a vicious circle is created, which can perpetuate certain activity routines in children in favor of sedentarism. In Spain, the National Immigrant Survey [42] describes how Latin American immigrants are labeled as economic immigrants (seeking economic improvements) who perform poorly qualified labor, and are mainly located in the lower levels of the socio-economic scale. Two out of every five immigrants are employed in manual labor and are poorly qualified (40%) and one in four (22%) performs manual labor for which a certain level of preparation is required. This means that low-skilled jobs with low salaries are perpetuated with long work days. Previous studies [22,40] show how parents’ lack of time, long work days, family burden, low salaries, and not having enough money to cover expenses (buying sports equipment, enrolling in sports activities) negatively impacts children’s physical activity. According to former studies conducted in Spain [40,43], children and adolescents who live in neighborhoods with a lower socio-economic status are less physically active.

In Spain, previous studies [44,45] that took place in the cities of Granada and Cuenca described how the volume of traffic, the poorly signposted intersections and pedestrian crossings en route to the school, and the insecurity were perceived as barriers for the performance of physical activity in children. Additionally, the organization of space, time, and physical activity performed in recess time at school was highlighted [44]. The lack of programming any physical activity during recess time led to situations where only certain physical activities were performed, monopolizing time and space, meaning that, at times, children did not participate in any physical activity and that gender differences between boys and girls was perpetuated. An example of this is soccer playing. Gutiérrez-Zornoza et al. [45] described the influence of the environment on the physical activity habits of school children. These authors reported that children perceived that residing in gated communities or in rural areas facilitated physical activity, as opposed to residing in neighborhoods and cities. They reported that their children’s feelings of insecurity regarding road traffic, car journeys, and an overall sense of not belonging or being accepted in the neighborhood were perceived as barriers to being active. Therefore, in Spain, the following barriers are highlighted: environmental barriers (accessing the schools and safe traffic), organizational barriers in the selection of physical activities within and outside the school, and social barriers (belonging to certain neighborhoods or areas). In previous Spanish studies [44,45], no distinction was made between immigrant and native children. On the other hand, within the context of Hispanic culture, in the USA, Ross and Francis [46] described physical activity perceptions, context, facilitators, and barriers from the perspective of Hispanic immigrant-origin children. These authors reported how Latino children had negative attitudes toward physical activity that were related to physical discomfort, low athletic competence, and safety concerns. Also, children had difficulties differentiating physical activity and play, and “fun” was identified as a primary driver of physical activity preferences. Also, Turner et al. [47] researched family lifestyle behaviors of Mexican-American and Mexican immigrant fathers and mothers and their repercussion on the performance of physical activities in children. This previous study found that parents were permissive regarding their child’s sedentary habits (which involved playing video games and watching television for lengthy periods), rather than actively encouraging them to be more physically active.

In our study, one might expect that immigrants who have a common language, and a common Hispanic culture (nine parents), would not encounter difficulties for promoting physical activity in their children. However, we have found similar difficulties in previous studies [10,16,17,22] that studied physical activity in children of different ethnicities, cultures, religions, and languages. This could be explained by the fact that the socioeconomic conditions for the immigrant parents of our study

are perceived as a determinant for their children regarding performing physical activity, despite not having linguistic barriers. Additionally, during the process of integration, non-native children may acquire habits and customs of the new country that could influence their health, including the adoption of sedentary habits [48].

It is worth noting that ecological model proposed by Sallis [18] was a secondary analysis applied just to contextualize the results by classifying them. However, this ecological model was not the aim of this study despite being used with an exploratory purpose. On the other hand, this ecological model could be useful as a theoretical model to guide data collection and as a primary analysis of future qualitative studies in the field of physical activity.

The implications of this study are based on the development of specific policies, programs, and actions for fostering and promoting physical activity, as well as eliminating the associated barriers and difficulties present in the community, the school, and the homes of immigrant children and their families. These interventions must be open and acting simultaneously upon different levels. Thus, for example, the development of security policies and crime control in the physical environment (i.e., parks) of a community acts upon the levels of the policy environment, setting: access and characteristics, and perceived environment. More concretely, educational policies should be included, oriented towards improving physical education in schools, policies promoting physical activity in the community, and the use of public spaces with the development of programs oriented toward the integration of immigrant children via physical activity, policies that help immigrant families with limited resources to access infrastructures and sports resources, and finally, work policies that facilitate work timetables compatible with the leisure time of both the child and the family (policy environment level, social cultural environment level, setting: access and characteristics level, perceived environment level, and intrapersonal level). Besides, there is a need to develop programs in schools to promote equality among sexes for participation in physical activities and sports while supporting physical activity in the natural environment and open spaces (i.e., parks and forest). Likewise, it is necessary to include community initiatives that facilitate the use of leisure time outside the home for performing physical activity with other children and/or with the family. Lastly, detailed information should be provided concerning physical activity proposals by integrating public and private initiatives within the community (social cultural environment level, natural environment, information environment level, setting: access and characteristics level, behavior active living domains level, perceived environment level, and intrapersonal level). Besides, it is also important to encourage urban design policies that facilitate access to open spaces within and/or close to the communities, and the development of sports resources with accessible timetables that are compatible with the workload of parents. Also, a network of appropriate means of transport should be created to ensure access to sports centers (setting: access and characteristics level, social cultural environment level, behavior active living domains level, and intrapersonal level).

Future lines of research should study the existence of barriers for the practice of physical activity in immigrant children of different nationalities, focusing also on different sports and including girls from different cultures and ethnicities. Additionally, further research should aim to develop public policies to promote physical activity in immigrant children in urban settings.

Limitations

This study has several limitations. First, a small number of participants was included. The qualitative nature of this study meant that the aim was to describe the experiences of the participants and, therefore, these findings cannot be generalized. We also only included participants from a single religious context (i.e., Catholicism). It would be necessary to develop future studies with immigrants from other religions.

5. Conclusions

Our findings help further our understanding of the factors related with physical activity in immigrant children living in Spain. One of the strengths of this study is that this is the first study to describe the barriers for performing physical activity in immigrant children from the parents' perspective and that of other participants living in their community and social environment.

Despite the fact that most parents in our study came from countries with cultural and linguistic ties with Spain, they perceived barriers for the performance of physical activity that were similar to the barriers identified in immigrants without cultural or linguistic ties to other European countries.

These results may be used for the development of physical activity programs in specific social contexts. These programs should: (a) reorganize the school study plans (decreasing the educational burden and the amount of homework given to children to increase the time dedicated to physical activity), (b) promote the participation of the whole family in children's physical activity, (c) provide economic support for families with fewer resources in order to cover enrollment costs and expenses related to children's sports practice, (d) improve the organization of sports activities and multicultural games in the community on behalf of the town halls and public institutions, and (e) encourage the development of safe natural public spaces within cities.

Future studies should incorporate the perspective of Spanish children and adolescents of immigrant origin to provide a greater depth to the development of physical activity programs and to further understand detected barriers and facilitators for the performance of physical activity.

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3.2. ESTUDIO 2: The Meaning of Physical Activity: A Qualitative Study on the Perspective of South American Immigrant Parents



Article

The Meaning of Physical Activity: A Qualitative Study on the Perspective of South American Immigrant Parents

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Abstract: Physical activity facilitates the acquisition of healthy habits from childhood to adulthood. There are differences in the practice of physical activity between immigrant children and native Spanish children. The aim was to describe physical activity in children, from the perspective of South American immigrant parents. A qualitative case study was conducted. Parents were recruited using purposeful sampling. Data were collected from 12 participants by means of unstructured interviews together with researcher notes. A thematic analysis was applied. The following topics were identified: (a) physical activity and health, (b) socialization, (c) the need for movement, (d) gender, (e) barriers, (f) educational burden, (g) community living, and (h) reason for immigrating. Parents described how physical activity is fundamental and has benefits for health, and for the relationship between children. They perceived that physical activity should not be limited by gender. The time dedicated to other school activities, the norms related to community living, and financial limitations were especially relevant as barriers for the performance of physical activity. These results can be used to revise the curriculum in schools, promote equal opportunities for physical activity and support family participation.

Keywords: immigrants; physical education and training; exercise; youth; parents; qualitative research

1. Introduction

The World Health Organization (WHO) [1] states that physical inactivity is the fourth leading risk factor for mortality worldwide (6% of deaths) after hypertension (13%), tobacco use (9%), excess glucose (6%), ahead of obesity (5%). The WHO [1] recommends 150 min per week of moderate aerobic physical activity or 75 min per week of vigorous aerobic physical activity or a combination of both. In Spain, the National Health Survey in Spain in 2017 [2] describes how 36.04% of the interviewees perceive themselves to be sedentary in their free time. This figure varies according to nationality, with 35.02% of individuals born in Spain admitting to being sedentary compared to 43.18% of individuals whose country of origin was not Spanish (immigrants). This difference increased in individuals aged between 15 and 24 years old by more than 10 points, and by 12 points in individuals

aged between 25 and 64 years old. Immigrant men and women are more sedentary compared to Spanish men and women in the same age groups. However, minors of foreign nationality are more active in their free time than natives (up to six points difference among sexes).

Previous studies [3–7] conducted in the USA and European countries show that children with foreign parents were less physically active than children with native parents. Griffiths et al. [6] described how, in children over the age of seven with immigrant parents, 40% had a level of physical activity considered “adequate” compared to 50% of children with native British parents. Recent European studies show that young immigrants have more difficulty accessing sports clubs and are less physically active than natives [8–10]. However, the study by Reimers et al. shows that foreigners participate much more in the extracurricular activities offered at educational centers [8]. The difference in the manner in which native people and foreigners practice physical activity can change when immigrants have been in the country longer or if they are second-generation immigrants [11,12]. This difference decreases if the children are second-generation immigrants [4].

Physical activity in children and adolescents becomes important in relation to obesity. Obesity is a non-transmittable disease considered by the WHO as the fifth mortality factor in the world [1]. Obesity in children and adolescents is a very important factor in early metabolic syndrome and the development of cardiorespiratory diseases [13]. It is a major health risk, although it can be overcome through physical activity [14]. In Spain, according to the National Health Survey [2], Spaniards show a higher percentage of overweight and/or obesity than the immigrant population. However, between 18 and 24 years of age, the immigrant population is more overweight and/or obese than the native population (32.95% versus 24.09% respectively). Foreign women, present greater overweight and obesity between 18 and 64 years of age, compared with Spanish women. In the case of children, there are higher rates of obesity among Spanish children than in immigrant children, in both sexes. These findings are in contrast with a report by Marín-Guerrero et al. [15] in the Community of Madrid who reported a high prevalence of obesity among the foreign population. A review published in 2014 [16] also demonstrated this prevalence of obesity among the immigrant population.

Other factors, such as environmental and/or socio-ecological factors influence the practice of physical activity or the prevalence of obesity [17–20]. Previous qualitative studies [7,11,21] reported that the factors that limit the practice of physical activity among immigrant children are both environmental barriers (insecurity, lack of sports or leisure resources, and lack of transportation), and socioeconomic barriers (lack of time or income), as well as cultural barriers (religion/beliefs, educational level, language, or gender inequality), which may prevent or limit the practice of physical activity among immigrant children, compared to native children. In addition, the parents’ sporting and eating behavior are also relevant factors in children’s behavior [14,22,23], as they act as role models. Martínez-Andrés et al. [24] describe how parents organize family life according to their own perspectives and priorities, putting educational activities first and leaving physical leisure activities for later.

In Spain, the immigrant population represents 10% of the total population in 2019 [25], and it is predicted that the immigrant population will represent up to 20% of the total population of Spain in 2033 [26]. This increase in population means that new families will be incorporated, with habits and customs, which could be subject to risk and/or protective factors such as physical activity or sedentary behavior. At this point, the authors believe that the parents’ perspective is fundamental in order to establish adherence to healthy habits such as physical activity.

The questions guiding this study are: How do immigrant parents perceive physical activity? What does it mean to them? Do they consider that exercise to be an educational asset or a healthy lifestyle habit that is passed on to their children? Answering these questions may help to understand the role of parents in the practice of physical activity among immigrant children and adolescents and in relation to the acquisition of healthy habits. The aim of this study was to describe the perspectives of immigrant parents on physical activity and how this applies to their children.

2. Materials and Methods

2.1. Design

A qualitative exploratory case study, using an interpretivist paradigm [27]. A case study is a research design that involves an examination of a contemporary phenomenon in a real-life setting [28]. It is used to explore and describe a single case bounded in time and place (i.e., the parents' perspective regarding their children's physical activity). Moreover, a qualitative case study can be used to describe participants' experiences regarding care, policy change, and understand why behaviors and complex interventions succeed or fail [28]. This research followed the international recommendations for conducting qualitative studies established by the Consolidated Criteria for Reporting Qualitative Research (COREQ) [29] and the Standards for Reporting Qualitative Research (SRQR) [30] (<http://www.equator-network.org/>).

2.2. Study Context

Alcorcón is a municipality of 33.73 km², located 13 km southwest from Madrid, in the Metropolitan Area of Madrid, within the province of Madrid (Community of Madrid, Spain). The greatest population growth took place in the 1970s, mainly due to the settlement of immigrants from other regions of Spain [31]. Currently, in the Community of Madrid, where the municipality of Alcorcón is located, the percentage of physical inactivity among adolescents is 30%. In relation to the situation of the immigrant population in terms of physical activity, the Community of Madrid reports a percentage of inactivity of approximately 39% among immigrant adolescents [2]. Alcorcón is one of the municipalities with the largest foreign population in the community of Madrid, and therefore there is a need for studies to deepen our knowledge of the physical activity dynamics among this group.

For this reason, the authors decided to visit institutions or centers where the population of South American immigrants gather for worship, or for cultural and civic activities, and where there were greater possibilities of recruiting participants for the study. The Caritas organization of the Parish Inmaculada Concepción de Nuestra Señora and the Parish Nuestra Señora de la Saleta, where large groups of South American immigrants met every Sunday and holiday, were particularly relevant.

The participants attended the Parish Inmaculada Concepción de Nuestra Señora (Alcorcón, Madrid) and the Parish Nuestra Señora de la Saleta (Alcorcón, Madrid). Both these parishes had programs for assisting and supporting the integration of immigrant families. These programs included the implementation of healthy habits in children and adolescents through physical activity.

2.3. Participants

The inclusion criteria were; (a) parents living in the Community of Madrid, (b) born in countries outside Spain and the European Union, (c) who at the time of the study had children over three years old in the Spanish education system, (d) who belonged to the Caritas organization of the Parish Inmaculada Concepción de Nuestra Señora or the Parish Nuestra Señora de la Saleta, and (e) who signed the informed consent. The exclusion criteria were: (a) parents under 18 years of age, (b) refusal to participate in the study, (c) native parents (born in Spain) and (d) not signing the informed consent.

2.4. Sampling Strategy

In qualitative research, sampling is the process of selecting or searching for situations, contexts and/or participants that provide rich data of the phenomenon of interest [32]. Non-probabilistic purposive sampling was performed [33], in which participants were selected based on their ability to provide relevant information to answer the study question. Sampling continued until the ongoing analysis revealed data redundancy [32]. Finally, 12 participants were included in the sample and none withdrew from the study.

2.5. Recruitment

The participants were contacted through the priest and coordinator of the family care program. Potential participants (parents) were then contacted by telephone and informed of the study. After a two-week period, they were contacted once again to confirm their participation.

2.6. Data Collection

Data were collected via unstructured interviews conducted in Spanish [33]. These interviews allow for inquiry and questioning in an open and flexible manner without imposing the researcher's perspective [34]. This enables participants to describe and narrate what is most relevant to them. The interview consisted of several open-ended questions: How is your experience with physical activity? Do you think it is relevant for your children? Based on these questions, the researcher wrote down the words, concepts and expressions that the participants used to cross-examine them. Repeating the cycle over and over again, deepening the participant's experience [33]. Overall, 20 interviews were conducted, and 20 researchers' field notes were collected. Eight participants were interviewed on two separate occasions, as it was necessary to collect more information. The remaining participants received a single interview.

2.7. Data Analysis

A thematic analysis was applied for the description and interpretation of parents' narratives [35]. The analysis was conducted on all interview transcripts [34]. In the coding process, the descriptive components that made up the participants' experience were identified, these descriptive components formed meaning units, which were then grouped into common groups of meaning, to finally identify the themes that described the participants' perspective [35].

2.8. Ethical Considerations

The study was approved by the Ethics and Clinical Research Committee of the Rey Juan Carlos University (code: 3001201702417). In addition, the Data Protection Law (Law 15/1999) was complied with, guaranteeing confidentiality and good practice standards. Participation in the study was voluntary and informed consent was signed prior to conducting the interviews.

2.9. Quality Criteria

In addition to following the COREQ [29] and SRQR [30] recommendations, the Guba and Lincoln criteria were applied to establish credibility, transferability, dependability, and confirmability [36]. The techniques to ensure credibility were; researcher triangulation, triangulation of data collection instruments, and participant validation. For transferability, the research protocol, and the context and participants of the study were described in detail. An external auditor/researcher was used to ensure confidence. This external auditor reviewed the research protocol, focusing on the development of materials and methods. External audits involve having a researcher who is not involved in the research process examine both the process and product of the research study. The purpose is to evaluate the accuracy and evaluate whether or not the findings, interpretations and conclusions are supported by the data. In the present study, four external audit trials were performed, prior to commencing the study (before February 2017), twice during the study (from February 2017 to June 2017; in March and May 2017), and once after completion of the study (after June 2017). Finally, for the purpose of confirmability, the researchers' reflexivity process was applied, holding meetings to establish the research team's prior position on the topic under study [33].

3. Results

The study began in February 2017 and was completed in June 2017. Twelve participants were included (seven women and five men), with a mean age of 41. The participants came from different regions of South America (Argentina, Colombia, Ecuador and Honduras). All were defined as having

a low or low/middle socio-economic level. The demographic characteristics and physical activity habits of participants are shown in Table 1.

Table 1. Sociodemographic characteristics and participant data.

Characteristics	Participants
Age (y)	
Mean $\pm$ SD ¹	41 $\pm$ 3.97
Range	36–46
Country of birth (n)	
Argentina	4
Colombia	4
Ecuador	2
Honduras	2
Years of residence in Spain (y)	
Mean $\pm$ SD	3.17 $\pm$ 1.47
Range	1–5
Children residing at home (n)	
Means $\pm$ SD	2.75 $\pm$ 0.97
Range	2–5
Age of Children (y)	
Mean $\pm$ SD	5.85 $\pm$ 2.98
Range	1–12
Net monthly household income levels (n) ²	
$\geq$ 3600 euros (level I)	0
2200 € to 3600 € (level II)	0
1550 € to 2200 € (level III)	2
1050 € to 1550 € (level IV)	4
Less than 1050 € (level V)	6
Leisure time physical activity (n)	
Mother	
Yes	0
No	7
Father	
Yes	4
No	1

¹SD = standard deviation; ² Ministry of Health, Consumer Affairs and Social Welfare. National Health Survey. Spain 2017 (ENSE 2017) [2].

The themes identified were: Physical Activity and Health, Socialization, The Need for Movement, Gender, Barriers, Educational Burden, Community Living and The Reason for Immigrating. The results are presented below with fragments of the participants' original narratives to justify the results obtained [33]. Additionally, Figure 1 shows our findings using a conceptual map [37].

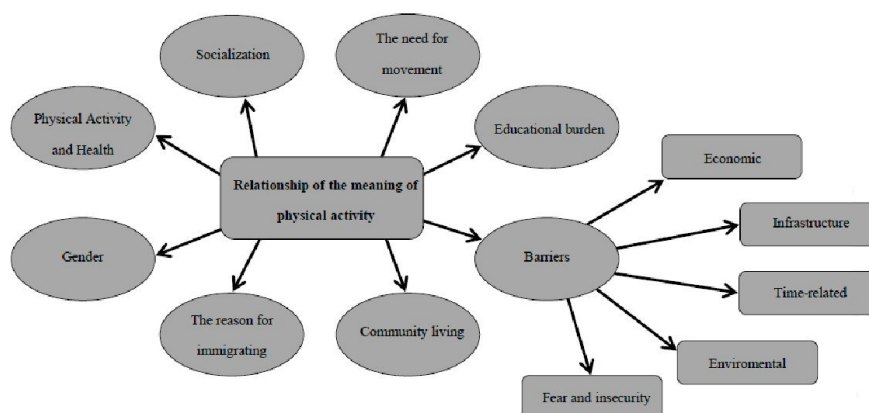


Figure 1. Conceptual map of results.

3.1. Physical Activity and Health

Participants ($n = 9$) described how physical activity leads to better fitness, better health, improved quality of life and physical well-being: “Being more active, more agile, and breathing better, feeling better in general” (P5, female, income level IV).

In addition, they also referred to how physical activity improves mental health: “You have to exercise to be well, to improve your self-esteem, in terms of mental health” (P1, female, income level V); “Changing your routine, obtaining relief, is a way of relieving everyday tension, even, calming the mind” (P4, male, income level IV).

3.2. Socialization

For parents ($n = 8$), physical activity supports socialization and helps instill certain values in their children. The narratives highlight the relevance of this for parents: “It is very important for them to practice physical activity, to socialize and get along in life” (P2, male, income level V); “They share with friends at school and learn to share with people outside school, in the parks” (P4, male, income level IV); “Doing something in a group is important. Belonging to a team is important” (P5, female, income level IV).

The narratives ($n = 5$) highlight the belief that practicing physical activity as a child can help their children be healthier when they reach adulthood: “You will always have better health conditions if you move, than if you are a sedentary person” (P6, male, income level III).

3.3. The Need for Movement

For the interviewees ($n = 5$), movement was a recurrent theme when qualifying and defining physical activity. Physical activity consists of movement, agility, physical space, the natural environment and play. In contrast to being sedentary, or confining a child to the house, which was compared to being cooped up in a cage: “Children live in cages, they are locked up” (P9, female, income level III).

Seven participants also compared the way children play and practice physical activity in Spain in relation to their countries of origin. Thus, in Spain, both children and people, in general, spend more time indoors, and consequently, they are more sedentary. In addition, they voiced their concerns with regard school environments, feeling that movement should be granted equal or greater importance as intellectual activity: “They need to get out of the chair and not just exercise the brain, which is also important” (P12, female, income level V).

3.4. Gender

The narratives also revealed differences in sports practice by gender. All participants unanimously stated that there should not be any difference in physical activity practice between boys and girls. Thus, no activity should be reserved for only one sex. Every child should be free to choose and practice the activities he or she desires: "I don't think that sport has anything to do with sexual personality. As long as they feel good" (P10, male, income level V).

However, all parents' acknowledged differences between boys and girls. Boys play more football and girls play more sports like volleyball or gymnastics: "Football is played by boys. There are more and more girls, but it's a boy thing. In my country, girls practice a lot of volleyball and rhythmic gymnastics. It is very rare for boys to play such sports" (P6, female, income level III).

3.5. Barriers

Barriers encountered by parents when encouraging and/or practicing physical activity with their children include: economic barriers, infrastructure barriers, time-related barriers, environmental barriers, or barriers due to fear and insecurity.

3.5.1. Economic Barriers

Eight participants reported that families must cover significant economic expenses when their children engage in any kind of organized or regulated physical activity: "If you want your child to practice, you have to pay and that seems overwhelming to me" (P1, female, income level V); "If you don't have help, I can't afford it. It's an expense I can't afford." (P2, male, income level V).

A difference was highlighted between the country of origin and Spain. Family benefits are more extensive in Latin American countries, allowing families to participate in physical activities with their children: "There are associations that provide free training. There are also sports centers belonging to the city council, and everything is free" (P8, male, income level V).

The concept of "sacrifice" appeared in the participants' narratives ($n = 5$). Families much make a great sacrifice in order to enable their children to practice some kind of activity: "I know many friends who have to make great efforts to get their children to play soccer, they sacrifice a lot for them" (P6, female, income level III).

Finally, having to register with a club, or a sports school, is considered another barrier for four participants. In addition to having to pay registration fees, specific material equipment is required: "Here you must pay for everything, you have to put them in a defined, organized team. If you don't have the right boots, you can't play" (P11, male, income level IV).

3.5.2. Infrastructure Barriers

Our participants ($n = 7$) reported that the availability of sports and/or leisure infrastructures near the family home, and their distance influences the child's physical activity. The narratives show that the absence of facilities conditions and prevents children's engagement in physical activity: "In the case of Parla, it is an abandoned village. There is no place to do sport. There is neither a field nor a sports center to take them to, there are no sports areas" (P1, female, income level V).

Parents ($n = 5$) reported that the greater the distance from the facilities, the less likely their children are to practice physical or sporting activities. Substantial time is involved in travelling to and from these centers: "There is a lake, it is a very big park, but mothers do not always have the availability to go there every day. It's far away and, without a car, it's impossible" (P9, female, income level III).

3.5.3. Time-Related Barriers

In order for their children to be physically active, parents ($n = 7$) must invest large amounts of their time. However, often, parents ($n = 4$) complained of a lack of time available, either because of an extended working day, and/or because their work hours are incompatible with the child's leisure time. Six parents described that their working hours are intense and this does not allow them to take

their children to organized physical activities or to the park: “Work has a great influence, you cannot spend enough time with them (the children) either. If you don’t have enough time, you can’t do it either” (P10, male, income level V).

This lack of time influences children’s physical activity, as well as having an impact on parents’ practice ($n = 5$). Thus, parents assigned priority to their children’s practice of physical activity and leisure above over their own: “We have a lot of work. And I prefer to spend more time with my children instead of going to do sport” (P4, male, income level IV); “But I can’t do sport with the children anymore. For me it is a big obstacle to do physical activities” (P12, female, income level V).

Other key points raised were: the lack of time, organizing the child’s schedule and the pace of the day. The participants ($n = 3$) described how the proposed timetable for practicing sports activities was unsuitable, both for their children and for the ability to balance work/family life: “The extra-curricular activities that we can take them to, which are often more compatible with my work, are more expensive” (P5, female, income level IV); “My son had a scholarship because he came first at a sports meet at the town hall, but the timetable was from 6.30 p.m. to 7.30 p.m., and I can’t take them at that time. What did I end up doing? We took him out, we couldn’t go” (P8, female, income level V).

3.5.4. Environmental Barrier

The parent’s narratives ($n = 5$) describe how the lack of nature or a natural environment near the homes is a constraint for engaging in physical activity: “In my country, there is more freedom to play sports outdoors than here, the children still go down to the street to play football” (P2, male, income level V); “We are much more limited here by the surrounding environment” (P7, male, income level IV).

3.5.5. Barriers due to Fear and Insecurity

This refers to the insecurity and fear that parents ($n = 7$) feel when they take their children to physical activities in an unsafe environment. Some ($n = 3$) felt “terrified” due to the feelings of insecurity when going to some of the parks. In addition, if there are areas that are not recommended for children because of insecurity, they feel that it is unsafe to leave children alone in the street to play ball: “The courts are full of people who hurt the children, and as a mother I feel afraid to let them go” (P2, male, income level V); “Here you feel terrified of taking them. There’s a big park, but since everyone goes, it scares you. And in the street you can’t leave them alone either” (P11, male, income level IV).

In contrast, participant 3 expressed opposite feelings, in Spain he did not fear taking his children to the park or letting them play in the street, compared to his native country, Colombia: “In Colombia, there is a lot of crime. You can’t do anything outdoors in my country. In Spain, you go for a run and you aren’t afraid of being robbed. In my country, the fear of going out is huge” (P3, female, income level V).

3.6. Educational Burden

It refers to the burden of homework and school-related activities that children must engage in after the school day. Parents ($n = 5$) narrate how their children have to study a lot, both during school hours and during “so-called” leisure time. The complaint shared by all parents is that the educational burden is greater and more important than enjoying leisure time. The time dedicated to homework is a deterrent for the practice of extra-curricular activities: “They have a great deal of theory. They come super tired (from school), they have to study and they don’t want to do anything else” (P11, male, income level IV).

Most of the interviewees ($n = 10$) felt that the school curriculum does not assign enough importance to physical activities, as the theoretical burden is very demanding: “The excess of homework compels them not to do sports or have fun” (P9, female, income level III); “The education

system has bad schedules that do not let the child be a child. If school schedules were better organized, they could have more time to play and be children" (P6, female, income level III).

3.7. Community Living

Sometimes, problems arise in the neighborhood communities, because of community norms that do not allow children to play certain activities in the courtyards. Specifically, it is often forbidden to play ball: "In the communities you can't play, the rules of the communities don't allow them to play ball, they are children, that's what they should do" (P9, female, income level III).

Parents (n = 4) described how in their countries of origin there is more freedom to play or practice physical activity in the street compared to Spain. They report that, regarding the community relations between neighbors, it is accepted that children should play and do physical activity (sport): "In my country, we don't live in buildings, we can all play in the street, people go out and everyone starts to play, they go on their bikes or dance. We don't get angry about these things" (P10, male, income level V).

3.8. The Reason for Immigrating

Most parents (n = 10) acknowledged that their reason for immigrating was financial. They need to earn money to be able to send it back to their native country, or save enough to return to their country in the future. Thus, physical activity is not a priority for them. This influences their children's physical activity and the time they spend with them, since the goal is to work more to earn more: "An immigrant wants to return to his or her country. Earn money and return. We come here to work, to earn money, and we don't have time to be active, sometimes we don't even have time for our own children" (P7, male, income level IV).

4. Discussion

The socio-demographic data shown in Table 1 contextualize the results obtained from the participants' narratives. Accordingly, in order to understand the results, it is necessary to contextualize which participants provided narrations regarding their experience [27,33]. In this study, the participants were mostly middle-aged women, most of whom did not engage in physical activity in their free time and earned less than 1550 to 2200 euros per month.

This paper aimed to describe the meaning of children's physical activity from the perspective of immigrant parents. Previous studies [3–5,11,24] show how young people and children whose parents are immigrants were less physically active than their native counterparts.

Our results coincide with previous studies [38] showing that physical activity is perceived by parents as a health benefit and should be practiced because of its physical and psychological effects. In addition, our participants perceived that physical activity also has a socializing effect. Similar results have been published by Carratalá and Carratalá [39] and Delgado [40], showing how physical activity is a socializing agent, in terms of integrating rules, as well as developing responsibility and a sense of companionship.

Physical activity is perceived as being very closely related to movement [41–44]. Our participants reported that in certain physical activities and sports there is a gender distribution. In Spain, the survey of sports habits published by the Ministry of Education, Culture and Sport [45], shows that boys mostly practice sports such as soccer, cycling and swimming, and girls mostly practice gymnastics, hiking and swimming.

In most interviews, participants compared their country of origin with Spain. They used the words "there and here" a lot. There is an important influence between what they knew before and what they know now, with important economic and cultural influences.

Parents find it difficult to be physically active. Previous studies describe how the lower the socio-economic level, the less possibility of physical practice there is [11,46]. Participants in our study acknowledged that the availability of financial resources significantly influences the decisions made regarding their child's physical activity. Our results highlight that participants prioritize the financial

well-being of the family over any health or leisure activity. Bhatnagar et al. [4] describe how this situation tends to change in the following generations, because having access to greater financial resources (a more stable livelihood) allows the family's priorities to be reorganized. Our results are in line with the qualitative study by Condon and McClean [12], describing that immigrants who are undergoing financial hardships must focus on improving the family economy, being unable to participate or promote the physical activity of their children. Foreigners do not have a socioeconomic level that allows them to justify an added economic expense, since the socioeconomic level of foreigners in Spain is low or medium [47]. According to the 2007 National Immigrant Survey, 40% of foreign nationals work in unskilled labor whereas 22% work in skilled labor [47]. These two categories have the lowest overall purchasing power [26].

There is also a barrier related to infrastructure. The neighborhoods (southern area of Madrid, Spain), where the interviews took place, are not adapted in terms of the number of parks, sports or leisure facilities. The physical environment, with large parks or natural spaces, is a key factor for good physical practice. If the physical (urban) environment often appears as a barrier to the practice of sports, physical and leisure activities, this is exacerbated in the case of immigrant parents, who are used to having a more open and natural physical environment in their countries of origin.

Lack of time is another limiting factor. The parents in this study described having long and overwhelming working hours that prevent them from doing any physical activity. Reimers et al. [8] reported that many parents cannot enroll their children in sports activities, let alone participate in them together. In addition, Reimers et al. [8] identified reduced physical activity related to the difficulty in accessing sports clubs and centers.

The proposed schedules for organized sports activities were considered by some of our participants as an added difficulty, as they described them as incompatible with their work schedules and family life rhythms. Previous studies [24,48,49] state that workloads and family burdens may prevent children and parents from practicing physical activity. In our study, five of the participants had three or more children. A large family could explain the difficulties in reconciling and organizing the family's daily routine when balancing the different activities, which could have an impact on enrolling their children in extracurricular or leisure activities.

Also, insecurity or fear of going out can influence the decision to take children to leisure areas. Owen et al. [50] and Motl et al. [51] describe insecurity as a barrier to sport. All these barriers coincide with previous studies [24,50–53] in research carried out in Spain, the United Kingdom and the USA.

The economic expense of certain physical activities (tuition, travel, etc.) could explain a decline in the practice of exercise among children of immigrant parents. In addition, the parent's financial situation, together with a precarious job situation and long working hours, and the need to earn money and save it, condition the ability to spend money on their child's physical activity practice. Condon and McClean [12] describe the difficulty of maintaining the physical health of family members, as opposed to the priority of financial health. Participants in the former study were aware of their children's lack of physical activity, and acknowledged that they did not get enough exercise because of financial hardship, time constraints or feelings of insecurity in some neighborhoods [24]. Our results show how participants prioritize work and economic status over their children's physical activity. This could be explained by the fact that our participants have been in Spain for less than five years. This means that the parents still have a precarious and/or vulnerable socioeconomic situation and need to find financial stability before they can incorporate the family and their children into other activities.

Finally, the importance of knowing the perspectives of parents regarding physical activity is underlined, as parents can play a crucial role in determining their children's sedentary behaviors. Two recent studies in Asia [54,55] showed the mutually interdependent relationship between parents' and children's physical activity and screen-viewing behaviors, highlighting the impact on children's health. The results show the potential mechanistic link between parents' perspectives on physical activities and children's health outcomes, showing that parents' screen-viewing behaviors and rules may be associated with their children's insufficient physical activity levels and overweight problems. In the opinion of the authors, future lines of intervention for pediatric overweight should

consider the inclusion of educational and behavioral programs designed for parents, instead of focusing only on children [54].

This study has several limitations. First, we were unable to carry out a homogeneous grouping of immigrant parents by geographically defined areas. Secondly, we did not identify whether the children of the parents were born in Spain or were transferred from their country of origin. The authors believe that this limitation is controlled, since the aim of the study was to describe the perspective of the parents and not that of the children. Additionally, the present study included 12 participants, and 20 interviews have been performed. Previous qualitative studies [27,33,56] have described how the total number of participants included does not depend on a previous calculation of the sample size, rather it is based on the saturation or redundancy of the information obtained in the interviews. Turner-Bowker et al. [57] reported that 92–97% of the saturation can be analyzed after interview numbers 15 and 20. In addition, our results cannot be extrapolated to all immigrant parents who have children, due to the design used. Nonetheless, these results may help professionals understand parents' experiences, and their difficulties in promoting physical activity and resources for their children. Finally, this study did not perform a cultural comparison between groups of native parents and immigrant parents.

5. Conclusions

This study describes the factors related to the physical activity of South American immigrant children from the parents' perspective. Our results revealed that the immigrant parents who were recruited in this study perceived that their children's physical activity was relevant and important to their future lives. However, certain barriers exist which limit and prevent the ability for foreign children to exercise, such as income, time availability or extended work shifts.

These results can be used to guide the programming and organization of physical activities in the school and community environment. It is also essential to provide policies to reconcile family and work, so that the lack of time is not a hindrance to the practice of physical activity. It is essential to create policies for financial aid targeted at the most disadvantaged families. In addition, it is necessary to invest in the creation of safe spaces and sports and leisure infrastructures to promote physical activity within the community.

A future line of research would be to carry out a cultural comparison between groups of immigrant and native parents, using a qualitative ethnographic design.

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3.3. ESTUDIO 3: The Perspective of Physical Education Teachers in Spain Regarding Barriers to the Practice of Physical Activity among Immigrant Children and Adolescents: A Qualitative Study



Article

The Perspective of Physical Education Teachers in Spain Regarding Barriers to the Practice of Physical Activity among Immigrant Children and Adolescents: A Qualitative Study

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Abstract: Physical activity (PA) contributes to the development of children and adolescents and to their mental and physical health. The practice of PA in the school context can contribute towards generating a more inclusive educational community for immigrant children and adolescents. The aim of this study was to describe the perspectives of Spanish physical education (PE) teachers on the practice of PA among immigrant children and adolescents. This research was a qualitative exploratory study. A purposeful sampling strategy was used. Data were collected through semi-structured interviews and field notes. Twenty teachers were recruited. An inductive thematic analysis and content analysis were applied. The following topics were identified: (a) Professional expectations; (b) Economic resources; (c) Integration; (d) Family; (e) Religious beliefs and practices; and (f) Gender difference. A predominance of positive emotions was identified in the narratives, and the most repeated words in word clouds were ‘Caribbean’, ‘Latin’, and ‘population’. These findings help to identify PA barriers for immigrant children and adolescents and may contribute to the creation of PA-based interventions in social and educational contexts.

Keywords: exercise; physical education and training; school teachers; child; adolescent; emigrants and immigrants; qualitative research

1. Introduction

Physical activity (PA) is defined as “... any bodily movement produced by skeletal muscle that requires energy expenditure” [1,2]. Physical activity is beneficial at all ages and is recommended as an active practice in early childhood, necessary for the healthy development of both children and adolescents. [3–5]. In addition, it prevents diseases such as heart disease, hypertension, or obesity in adulthood [3–5]. Furthermore, positive effects on mental health have also been demonstrated, such as a decreased presence of anxious-depressive symptoms in children and adolescents [6,7]. Physical inactivity and sedentary lifestyles have been identified as health-related behaviors that negatively impact

quality of life during childhood and youth [2–4], noting that worldwide, 80% of adolescents are not sufficiently physically active [8]. Thus, the current recommendation for ages 5 to 17 is an average of 60 min per day of moderate to vigorous PA, mainly aerobic, at least 3 days per week [1,8].

The General Assembly of the United Nations adopted the 2030 Agenda for Sustainable Development Goals, highlighting how PE and opportunities for PA in schools contribute to promoting health and well-being and ensuring quality education in educational communities with different social realities [2,9]. In Europe, the increased immigration of recent decades has led to a large increase in cultural diversity among school-age students in educational contexts [10]. Consequently, educational communities formed by teachers, parents and students are a key element for integration and social cohesion, where the role of PE classes and PE teachers in the generation of inclusive communities for immigrants is highlighted [10]. The practice of PA in the school environment can contribute to improving interpersonal relationships and respect among the different perspectives and cultures that are part of the educational community [11,12], thus fostering feelings of inclusion and belonging to the community [13]. The feelings of inclusion and belonging favors the emotional well-being of immigrant children and adolescents and promotes and facilitates their adaptation to societies they have emigrated to [13].

In Spain, the practice of PA in the school environment has been studied from the perspective of children [14], parents [15–17] and teachers [10,15,18,19], both in the general population [14,17] as well as specifically referring to the immigrant population [10,15,16,18,19]. In the study by Martínez-Andrés et al. [14] on the perception of the barriers encountered for the practice of PA in children between 8 and 11 years of age, the opportunities for the practice of PA are determined by the schedules established by their parents, in which the difficulty of reconciling work and family life and the prioritization of other types of academic activities over the practice of PA, together with the perceived danger of the community environment, favor more sedentary habits among the children. These results are consistent with studies carried out from the parents' perspective [15–17], in addition to identifying a greater difficulty for their children to participate in certain physical activities due to economic barriers [15–17], a greater difficulty of reconciling single-parent families, restriction of PA among children in informal contexts as a form of punishment, a lack of communication between the school and the family, the influence of the mass media [17], inadequacy of infrastructure and lack of natural environments for practice [15–17], excessive homework [15,16] and gender stereotypes and gender-related choices [10,15–17,20]. Moreover, Tamura et al. [21] identified that social environments of violence and insecurity in the neighborhoods where children and adolescents live are associated with a decrease in the practice of PA, representing the main structural barrier. These same authors recommend improving the spaces in which PA is carried out, such as parks and other open-air venues. Previous studies [22,23] point to the presence of crime in the neighborhood, the precariousness of the facilities where PA is performed [22,23], and high-traffic levels [23] as barriers to performing PA in children and adolescents in immigrant settings. Recently, Hu et al. [24], in their systematic review on factors influencing the performance of PA in children and adolescents, pointed to unsafe neighborhoods and inaccessibility of PA venues as barriers.

From the teachers' point of view, different perspectives have been identified, both among PE teachers and among teachers of subjects that take place in the regular classroom (subjects such as mathematics, science, etc.) [18]. For example, the imbalance between previous schooling and the level of the course in which they are enrolled, and the lack of knowledge of the language, are identified as elements that distort children's learning, according to teachers of classroom-taught subjects, while this issue is not perceived as a problem in the case of physical education (PE) classes [18]. Physical education teachers have been found to have an important role in promoting interculturality in Spanish schools [19]; therefore, the research on their perspective regarding PA practice in this population should be further expanded.

This study was based on the following research questions: How do PE teachers perceive PA in immigrant children and adolescents? What does it mean to them? Answering these questions may help to explain the role of PE teachers and their positioning regarding the promotion of PA practice among immigrant children and adolescents.

The aims were: (a) to describe the perspectives of PE teachers on PA and (b) barriers perceived and (c) to analyze the word frequency from interviews, to assess emotions and (d) to describe the polarity of their perspectives regarding PA.

2. Materials and Methods

2.1. Design

This study used a qualitative exploratory design [25,26]. Qualitative studies are used to describe people's experiences and perspectives on programs, complex phenomena involving social context, culture, and education. [25,26]. The design and manuscript structure were inspired by qualitative studies reported by Marconnot et al. [15,16].

The SRQR (Standards for Reporting Qualitative Research) guidelines [27] and the COREQ (Consolidated Criteria for Reporting Qualitative Research) international recommendations were followed [28]. Furthermore, the Guba and Lincoln [25,26] criteria for ensuring the trustworthiness were followed. The various techniques performed to monitor reliability are described in Table 1.

Table 1. Trustworthiness criteria.

Criteria	Techniques Performed and Application Procedures
Credibility	Investigator triangulation: Team meetings were organised during the thematic analysis, the results were compared, and the final results were identified.
Transferability	In-depth descriptions of the study, providing data and describing the study design and its different sections (context, research team, reflexivity process, sampling, inclusion criteria, data collection, and analysis).
Dependability	Audit by an external researcher, responsible for the assessment of the study protocol, with a special focus on the method and process of implementation during the study.
Confirmability	Investigator triangulation, data collection and analysis triangulation (thematic and content analysis). The process of reflexivity was conducted through the description of the researchers' positioning; reflective debriefing by the researchers during data collection and analysis.

2.2. Context

The community of Madrid recorded a foreign population of 15% (1,026,333 inhabitants) in 2020 [29]. Of these, 52.5% were women, 14.15% were under 16 years of age, and 3.48% were between 16 and 19 years of age. The most frequent nationalities among the total foreign population in Madrid were Romania (18.21%), Morocco (8.18%), China (6.41%), Colombia (6.2%), Venezuela (5.91%) and Peru (4.24%). Currently, in Spain, the total number of foreign students is 862,520 (in the community of Madrid 151,603) [30]. In this community, the number of foreign students enrolled in primary education is 59,944 and in secondary education 31,295 [30]. Regarding the number of teachers, in the community of Madrid there are 29,080 teachers in primary education and 21,902 in secondary education [31].

2.3. Sampling and Participants

In qualitative studies, sampling is aimed at selecting those participants who have the relevant information about the phenomenon under study (PA practice) [32]. In the present study a non-probabilistic and purposeful sampling strategy were used based on their relevance to the research question rather than representativeness [32]. The inclusion criteria were: (a) PE teachers working in the community of Madrid, (b) who were actively working at an educational center during the study period, and (c) who had over four years' teaching experience. The exclusion criteria were: (a) teachers who did not teach PE, and (b) not signing the informed consent.

Sampling continued until the ongoing analysis revealed data redundancy [32]. Finally, 20 participants were included and none withdrew from the study.

2.4. Data Collection

Semi-structured interviews were used, which followed a question guide oriented to specific areas of interest [25]. The question guide was constructed based on the literature review [15,16] and the experience of the researchers [25]. After obtaining personal and professional data from the participants, the interview began with an opening question: "Please, can you share with me your personal perspective regarding teaching PA to immigrant children and adolescents?" After this, open-ended follow-up questions were used to obtain detailed descriptions: 1. "Could culture or ethnicity influence the acquisition of habits, such as PA?"; 2. "What role do parents play in immigrant children and adolescents' adherence to PA?"; 3. "While teaching PA, have you experienced any critical event or relevant moment?"; 4. "What do you think are the keys to promoting PA in immigrant children and adolescents?"; 5. "What factors or elements can be considered facilitators or barriers in the acquisition of PA among immigrant children and adolescents?" During the interview, the prompt "Please tell me more about that" was used to encourage participants to explore specific aspects in greater depth.

The interviews were tape-recorded and transcribed verbatim. Overall, 1026 min of data collection were recorded, with a mean of 51.3 min (SD 9.72). All interviews were held at the schools. We used researcher field notes as a secondary source of information to provide more in-depth information [21]. All interviews were conducted in Spanish.

2.5. Data Analysis

The interviews were analyzed by means of an inductive thematic analysis [25,32] for the identification of the relevant themes obtained from the interviews, and a content analysis [33] of the participants' words and narratives. From the content analysis we obtained: (a) a cloud of the most used words, and (b) identification of the feelings of the participants and the polarity of their narratives. The use of content analysis in interviews and written texts through statistical techniques is used in discourse analysis and qualitative studies as a method of deepening and triangulating the analysis [33].

Full transcripts were made of each in-depth interview and of the researchers' field notes [25,32]. Thematic analysis [25] consisted of identifying text fragments with relevant information to answer the research question. From these narratives, the most descriptive contents (meaning units/codes) were identified. Subsequently, these units were grouped by their common meaning (common meaning groups) and/or similar content [25,32]. During coding, 1049 codes were identified. Thematic analysis was applied separately to interviews and field notes by D.P.-C., J.N.C.-Z. and R.M. Joint team meetings were held to combine the results of the analysis and discuss data collection and analysis procedures. In these team meetings the final themes were displayed, combined, integrated and identified. In case of divergence of opinions, the identification of the theme was based on consensus among the members of the research team. Finally, six themes were identified. See Supplementary file, Figure S1 Example of codification process.

For the statistical analysis of the qualitative content [33], the software R version 3.5.1 (R Foundation for Statistical Computing, Institute for Statistics and Mathematics, Welthandelsplatz 1, 1020 Vienna, Austria) was used. The text of the interviews was lemmatized for analysis. A word frequency analysis was carried out using the tf-idf algorithm (term frequency-inverse document frequency), and a wordcloud representing the most frequent use of words within the participants' interviews was obtained. Emotion analysis was performed using Bing [34], Afinn [35] and National Research Council Canada (NRC) dictionaries [36–38]. Text polarity was analysed, using the SODictionaries V1.11Spa dictionary as amplifiers and decrementators, the Bing dictionary [36–38], and as deniers, those proposed by Vilares et al. [39]. For the analysis of polarity (acceptance-rejection) 4 stages were used. In the first stage, a file was created with the text of the interviews, broken down by

sentences for textual analysis. In the second stage, polarity was calculated using the Bing Sentiment Dictionary, amplifiers and de-amplifiers of SODictionar-iesV1.11Spa [36–38] and the deniers proposed by Vilares et al. [39] (Figure S1). In the third stage, the scatter diagram of the sentences in the text in relation to neutrality was calculated to identify positive or negative tendencies. Finally, the evolution of emotional valence (positive-negative) was shown throughout the interviews. Fourier transformation was applied to confirm the polarity trend.

2.6. Ethics

This study was approved by the Research Ethics Committee of the University Rey Juan Carlos (code: 3001201702417). The study followed the principles of the Declaration of Helsinki. In addition, the present study complied with the Spanish Personal Data Protection Act [40]. All participants provided written informed consent before they participated in the study.

3. Results

The study began in September 2019 and ended in September 2020. Twenty participants were included, with a mean age of 40.9 years (SD 6.6) and with 15.55 years (SD 9.2) of PE teaching experience. Of the 20 participants, 13 were male and 7 were female. All participants were currently working in the southern area of the community of Madrid (Spain). Of the participants included, 8 did not believe in any religion, whereas 12 considered themselves to be Catholic Christians. Of the latter, six defined themselves as practising Catholics.

3.1. Results of the Thematic Analysis

The themes depict the teachers' perspective, obtained after analysis of the researchers' interviews and notes. Six barriers to PA practice were identified: Professional expectations, Economic resources, Integration, Family, Religious beliefs and practices, and Gender difference.

3.1.1. Future Professional Expectations

The participants reported that the parents of immigrant children and youth prioritize other subjects for their children over PE to avoid school failure, especially in the Asian community. Other extracurricular activities, such as English, have more weight than the practice of PA.

The participants spoke of how families with higher levels of education assign higher value to the practice of PA. In addition, from the teachers' perspective, many families believe that the practice of PA is not necessarily conducive to getting a good job or being successful in society. Moreover, some families reportedly fail to consider the health benefits of PA. In turn, the teachers perceived that certain young people consider PA as a form of leisure, rather than a way of acquiring healthy habits for their lives. In other cases, teachers perceived that some young people view PA as a strategy to avoid family and social conflicts. Thus, PA is seen as a tool that helps young people to overcome problems arising within the family.

3.1.2. Financial Resources

The study participants described that most immigrant families have low or limited financial resources. Furthermore, the teachers pointed out that having low financial resources influences the parent's ability to purchase clothing, footwear, and sports equipment. Sometimes, the practice of PA implies a substantial economic expense, comprising school or club enrollment fees and the payment of the monthly fee. Teachers reported that this is an expense that many families cannot afford. In addition, in the case of large families, the financial cost of sports equipment is multiplied and becomes a substantial burden for families.

“Even if the activities are cheap, for an immigrant population that is short of money, spending €10 a month is a lot. If, in addition, there are 5 children, it is €50 a month and that is a lot of money. So, they aren’t going to do it.” (Teacher#0005#).

Another example of this situation is the performance of optional educational-sports activities at the high school, such as skiing, which immigrant students rarely have access to due to a lack of economic resources. The participants described that, as an alternative, many immigrant students practiced unregulated PA such as playing in the street. Teachers reported that after-school PA programs at the Institutes for the Promotion of Physical Activity and Sport (Institutos Promotores de la Actividad Física y Deporte -IPAFD) promoted with public funds by the community of Madrid are mainly used by immigrant students. These programs cost €14 per year for 2 h of PA per week. This is an expense that families can afford.

3.1.3. Integration

Participants perceived how some communities tend to be quite “close-knitted” and this can lead to difficulties for the integration of children and youth and their ability to practice PA. Indeed, the more integrated the children/youth are within the group and in class, the more they are involved in PA. Moreover, participants narrated how immigrant students tend to form groups among members of the same community, thus an invisible barrier is formed between Spanish students and students from other communities. Some participants used the term “invisible barrier” and this separation was especially identified in young people belonging to the Asian and Maghrebi communities. Some participants mentioned the presence of a kind of “ghetto” phenomenon in PA.

Furthermore, the participants stressed that students who have been in Spain longer, those who are second generation citizens, or who arrived during their childhood display less rejection towards PA. In particular, children and young people from the South American community were highlighted as being able to integrate more easily, because they share a common culture with the Spanish children. In addition, the participants reported how extracurricular activities were identified as a way to promote social integration. Thus, many students enroll in the programs of the IPAFD to integrate better into the class and make friends.

3.1.4. The Family

All participants agreed that the influence of families is key to PA. Thus, the families represent a role model for young people. If the father or mother does not have the habit or possibility of practicing PA, it is difficult for the children to practice a sport.

“It’s like a vicious circle. Parents don’t do any PA and in the end the children don’t do any PA either. And since the children don’t do anything, the parents don’t practice either.” (Teacher#0013#).

Another important point stressed by participants was the excessive protection of the families towards girls in relation to boys, when carrying out any type of extracurricular activity. Boys are allowed to move with greater freedom than girls. This perception of the protectionism of families towards girls was observed specifically in the Maghrebi and Asian communities. The participants agreed that the family may perpetuate certain social and cultural stereotypes that place girls at a disadvantage when practicing PA. In addition, the participants pointed out that often the responsibility for the child’s education falls mainly on the mother, due to the physical absence of the father. This means that, in addition to the responsibility of supporting and caring for the rest of the family, the mother relies on the daughters’ help for the performance of household chores or to support in the family business.

3.1.5. Religious Beliefs and Practices

The teachers reported that in some communities, religious practices can hamper or limit the practice of PA for girls, particularly in the Maghrebi community. From the

participants' perspective, while there are some sports practices that Maghrebi girls can perform with greater or lesser comfort due to the use of other types of clothing, not strictly sportswear, certain sports may cause conflicts with families, such as swimming.

The participants felt that some families may prioritize certain religious practices or religious interpretations over their daughters' education and learning. This is accentuated during menstruation, as girls begin to wear certain clothes according to their religious beliefs, and in some there is a rejection of PA, sometimes motivated by stereotypes about PA.

"When they start wearing the veil everything changes. I have seen this change in them in the same class, from being a vital girl, the clothes change, the clothing changes, the temperament changes." (#Teacher0010#).

"... girls are afraid of losing their virginity while practicing gymnastics." (Teacher#0001#).

On other occasions, the participants narrated that there are certain practices, such as Ramadan in the Maghrebi community, which involves fasting, and may condition the ability to be physically active during PE classes.

3.1.6. Gender Differences

The teachers reported that there are marked gender roles for the practice of PA. Thus, certain sports are considered to be more suited to boys or girls, especially among the North African and South American communities.

"They have very much accepted that this is a girl's thing and that is a boy's thing." (Teacher#0005).

The participants explained that the physical condition of immigrant girls was poorer compared to their Spanish counterparts, in addition to difficulties in hand-eye coordination, rhythm and motor skills. This was especially related to girls from the Maghrebi and Asian communities. The teachers explained the subject of PE in the young girls' countries of origin was less intense, and that some girls had never developed a habit for practicing sports. In the interviews, the low level of physical fitness only referred to the female population; the participants did not make any comments regarding the boys.

The participants explained that some girls choose to exclude themselves from practicing PA, even during recess or free time, leaving the physical space of the school (playgrounds) to allow the boys to practice PA. The teachers felt that girls perceive themselves as clumsier, or with less skills or abilities than boys. Sometimes girls are even ignored during PE classes or recess when sharing games or sports activities with them.

Some participants believed that the family is not supportive of girls practicing PA, through overprotective attitudes, cultural reasons or religious beliefs.

"It is a problem of machismo. We can hide it, but it is full-blown machismo, the family can participate and perpetuate certain behaviors with girls." (Teacher#0004#).

As a result, many girls are more passive and do not show initiative when it comes to practicing PA; thus, they display signs of apathy or even rejection.

"Girls tend to be very passive. Physical activity represents a rejection, a refusal to move. For them it seems to be an obligation." (Teacher#0013#).

3.2. Results of Word Frequency (Wordcloud)

The word cloud revealed that 'Caribbean', 'Latin' and 'population' were the most repeated terms, followed by 'passive', 'Africa', 'street', 'movement' and 'overweight'. See Figure 1.



Figure 1. Word cloud from interview responses after applying the tf-idf algorithm.

3.3. Results of Emotions and the Polarity (Acceptance-Rejection) Analysis

The sentiment analysis regarding the research questions showed a prevalence of positive emotions (Figure 2A,B). In contrast, according to the Afinn dictionary there is a slight predominance of negative emotions, especially scores of -1 , against positive scores of 1 and 2 (Figure 2C). The associated emotions are those of trust and anticipation, followed by fear and joy (Figure 2A).

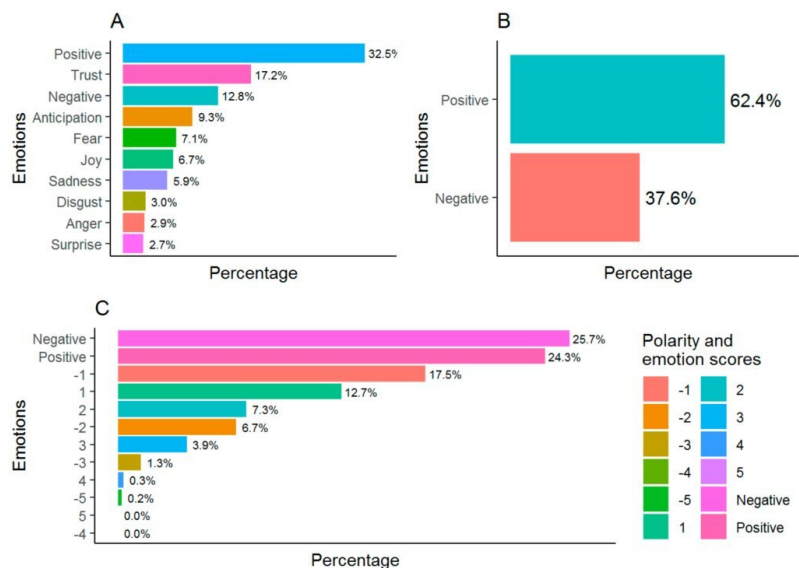


Figure 2. TNRC (A), Bing (B) and Afinn (C) dictionaries sentiment scores.

The interviews presented a polarity of 0.049 ± 0.339 , reporting a slight trend to more positive emotions, mainly on account of the presence of extreme positive values (Figure 3) regarding the research questions.

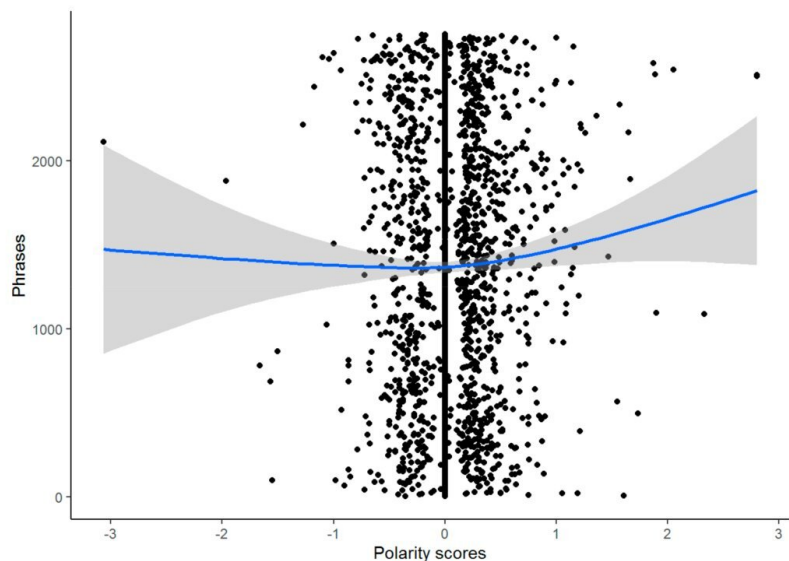


Figure 3. Polarity by phrases.

4. Discussion

Our findings highlight that, according to the perspective of PE teachers, the educational level of immigrant parents can influence their children's PA. The survey on the immigrant population in the community of Madrid in 2016 [41] shows that 30% of the immigrant population presented a basic level of education. In Spain, the 2017 national health survey [42] described that the practice of PA was inversely proportional to the families' level of education. The authors believe that a low level of education could explain a lack of awareness of the benefits of PA on the child's health and development. The participants in the present study perceived how immigrant families linked PA to leisure and entertainment, giving more importance to other subjects. Along this line, Trigwell et al. [43], show how families from different ethnic communities prioritize educational achievement (based on subjects such as mathematics, science) over PA.

Our results show how family finances can influence the ability to engage in certain physical-sports activities. There are no published data to date on the enrollment of immigrant children and youth in IPAFD programs. The national survey of immigrants in Spain [44] describes that 40% of the immigrant population perform manual or low-skilled jobs, and 22% perform manual jobs that require specific prior training. This emphasizes that many immigrants hold precarious jobs, with low incomes and long working hours. The authors believe that families enter a vicious circle, where the lower the level of education, the less qualified and less well paid the work is, resulting in a lack of sufficient economic resources to enroll their children in extracurricular sports activities, and a decreased practice of PA.

Physical education and sport are important tools in the process of integrating people into society. Lleixà [45] describes how PE is a space for meeting and communication that promotes the relationship between people from different cultures. According to the UNESCO, one of the objectives of PE and sport is to promote proximity between people and individuals [46]. In addition, the International Federation of Physical Education [47] establishes that PE must be a means of combating discrimination and social exclusion. Previous studies [48] show how certain communities may have a more isolated character and less interaction with other communities. Acculturation or assimilation of the host culture of immigrant families is related to the integration of children into society and can be

a factor in the acquisition of habits, such as the practice of PA [49,50]. Gerber et al. [49] point out that the higher the degree of acculturation of people in a new society, or the longer the stay in the country, the greater the possibilities of practicing PA. Moreover, the lower the level of acculturation in the population, the lower their participation in PA [51–53].

Additionally, there are differences between children and adolescents concerning their attitude towards PE lessons. Previous studies report that interest towards PA practice and PE decreases as students get older [54–56]. Gómez Rijo et al. [56] describe how the motivation of adolescents in secondary education towards PE practice is lower than that of primary school students. According to Fraile Aranda & Catalina Sancho [57], primary school students tend to feel more skillful at a sporting level than secondary school students. Overall, secondary students have a lower self-concept regarding their ability to perform PA compared to younger students [57].

Among teachers, there are also differences in their perception and orientation towards PA in primary and secondary education influenced by the school curriculum [58,59]. Primary PE teachers orientate learning towards attitudinal and self-realization goals, while secondary school teachers give more importance to procedural and conceptual learning, developing a greater social responsibility [58]. As a result, primary school teachers are more oriented towards games and global developmental work, while secondary school teachers are oriented towards more social skills development. However, Sicilia Camacho et al. [59] point out that in primary education, priority should be given to the development of social relations whereas in secondary education the focus should be on the acquisition of healthy habits.

Another key point is the role of parents as role models for PA practice. Previous studies [60,61] show how parents are an influence on adherence to PA. The more PA practiced by parents in their free time, the more likely their children are to develop similar habits. The authors believe that when parents practice PA, the family has a positive attitude towards PA and the subject of PE, and this can facilitate the practice of PA in their children. However, it should be emphasized that cultural components and/or beliefs can condition PA, particularly in the case of women. This may lead to the existence of a cultural conception of motor activity or motor development in children that is different from that of girls and boys [48,62]. Previous studies [18,63] describe how immigrant girls present a lower level of physical condition and less motor skills when it comes to collective activities, which may result in inhibition and self-exclusion from the sports space.

Most of the participants described religious beliefs as a possible barrier to the practice of PA, in relation to girls from the Maghrebi community. Capllonch et al. [64] describe how certain religious beliefs may limit the practice of PA among female members of the community, aspects such as exposing naked body parts (swimming, athletics), training or sharing PA with males, could prevent girls from participating in sports activities [61,65]. Moreover, previous studies [62] have stressed the need for teacher training on the reality of immigration and especially on the understanding of the cultural aspects of the Maghrebi and Muslim communities. Dagkas et al. [62] in England, describe how PA practice can be adapted for Maghrebi girls while respecting cultural and religious precepts and complying with school rules.

According to our findings, teachers report that girls show less initiative for practicing PA. In Spain, Martínez Baena et al. [66] describe how in students over 13 years of age, 23.1% of the girls practiced PA through obligation, whereas 15.7% acknowledged that they did not practice PA out of laziness. In addition, Flores [48], in a study on multicultural reality and PE teachers, described how immigrant girls claimed to have very little interest and passivity towards the subject of PE.

Regarding differences in teachers' and parents' perspectives on PE, Porcuna & Rodríguez-Martín [67] reported that both parents and teachers agree that they can act as role models for children and adolescents, which can positively and negatively influence them to practice PA. Similarly, they agree that there are environmental barriers to PA, such as high workloads, lack of parental time, or the lack of spaces where PA can be carried out [67]. However, in the same

study, Porcuna & Rodríguez-Martín [67] described that while teachers demanded greater collaboration between parents and teachers, parents demanded to receive more information from teachers on how to promote PA outside the school context [67]. Similarly, from the parents' perspective, sex and gender are identified as determining factors in the practice of PA [10,15–17,20], along with economic barriers and lack of infrastructure for PA [15–17].

It should be noted that of the three dictionaries used to identify the participants' feelings towards the research questions, two show a positive tendency in their discourse on PA and immigrant children and youth. Only one of the dictionaries used, Afinn, showed negative feelings, but with a percentage very close to positivity. Even though the teachers in the thematic analysis displayed a critical view of the practice of PA in immigrant children, identifying numerous barriers, their discourse tended to be positive, based on the text analysis carried out.

The results of this study reveal the perspective of PE teachers on aspects that may condition the practice of PA in immigrant children and adolescents. This perspective is the object of the study; however, it does not mean that it represents, coincides with or is contrary to the perspective or beliefs of other participants involved in the practice of PA, such as parents and students. This study has several limitations. First, a small number of participants were included. The present study has included 20 participants. Previous qualitative studies [25,30] describe how the total number of participants included does not depend on a previous calculation of the sample size; rather, it is based on the saturation or redundancy of the information obtained in the interviews. Turner-Bowker et al. [68] reported that 92–97% of the saturation can be analyzed after interview number 15 and 20. Secondly, the teachers included in the study were not part of the liaison classrooms, classrooms intended for the support and adaptation of immigrant children/adolescents joining the school. This could influence the results. In addition, teachers were not asked about the process of teaching PE to children and adolescents, which may reveal differences in the performance of PA. Finally, the qualitative nature of this study, gathering the perspective and experiences of a group of PE teachers concerning a certain phenomenon, cannot be generalized. However, it allows us to gain a deeper understanding of the phenomenon from their perspective.

5. Conclusions

Our findings help further our understanding of the barriers related to PA in immigrant children and youth in Spain such as giving more importance to certain subjects because of their job prospects, having low economic resources, the lack of role models in the family for the practice of PA, the formation of closed groups for PA practice among students, and the limitation of PA in girls due to gender differences. One of the strengths of this study is that it describes the barriers for performing PA among immigrant children from the perspective of the PE teachers.

Concerning the implications for teaching, these findings may help PE teachers to identify elements such as family issues, beliefs, and economical issues that can condition PA. Furthermore, these results can help young or inexperienced teachers to plan and program the teaching of PE towards the needs of immigrant pupils by promoting greater participation, considering their possible limitations and perspectives. Further, these findings may be considered for the design and implementation of PA programs in certain social contexts. It is important for PA programs to: (a) analyze the academic curriculum and devote increased time to PA, (b) provide financial support to families who have limited resources in order to cover any associated costs related to children's sports practice, and (c) promote the organization of sports activities and multicultural games in community settings.

Future lines of research should include the perspective of other participants, such as students and parents, regarding PA. In addition, it is important to examine the barriers for practicing PA in different contexts (school environment, neighborhood), and identify any obstacles for the practice of PA among immigrant students of different nationalities, also from a gender perspective.

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/ijerph18115598/s1>, Figure S1 Example of codification process.

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