



Article

Barriers and Facilitators to Toddlers' Physical Activity during the COVID-19 Pandemic, as Perceived by Teachers, Principals and Parents: A Challenge for the Early Childhood Educational Environments

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Abstract: The aim of our study was to explore the barriers and facilitators that teachers, principals, and parents face when adapting to COVID-19 pandemic scenario in terms of promoting toddlers' physical activity (PA). Thirty-four (20 teachers and principals, and 14 parents) semi-structured qualitative interviews were conducted from October 2020 to March 2021. The socioecological model has enabled the identification of barriers and facilitators, some of which are related to the pandemic and others which are not. The main results suggest that upon reopening the ECEC institutions, regarding environmental barriers, educators mentioned the impact on the use of space, and parents, the modification of daily activities generated by COVID-19. However, educators also considered that the presence of suitable spaces in the school for practicing PA was a facilitator. At the intraand interpersonal level, facilitators of PA that were unrelated to the pandemic included, for parents, the predisposition of children to be physically active and their own function as role models, and for educators, the curricular practices themselves. At an environmental level, the risk of danger in the traditional classroom plus bad weather were considered barriers by educators, while parents mentioned difficulties accessing outdoor space and the poor suitability of indoor spaces. Our results suggest the simultaneous analysis of the perceptions of different actors in the educational environments offers a broad vision of the ecological alternatives for offering children opportunities for PA in these difficult times.

Keywords: physical activity; educational environment; toddlers; early childhood education and care; COVID-19; socioecological model



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1. Introduction

The COVID-19 pandemic has drastically changed people's daily lives, particularly by restricting movement and interpersonal contacts. These changes have been imposed in different ways, forcing the population to reconfigure their way of life, especially their way of interacting with their surroundings [1]. The pandemic has also entailed major challenges to the early childhood education and care (ECEC) sector [2–4].

Physical activity (PA) is a health behavior influenced by the interaction between different individual, social, and environmental factors [5]. Early childhood education and care (ECEC) is an ideal time to promote PA, since interventions at an early age can more effectively establish healthy behaviors [6]. Likewise, schools are important environments

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contributing to the provision of opportunities to perform daily PA and the consequent participation of preschool-age children [7–9]. However, the COVID-19 pandemic has had an impact on the quantity and nature of PA and sedentary behavior among young children [10–14]. Several factors are at play in determining the effect of the COVID-19 pandemic on young children's PA, including children's and parents' individual characteristics, the home and school environment, and the interactions between different parties and contexts, distinguishing between pre- and post-lockdown periods.

Before the pandemic, parents perceived several barriers and facilitators affecting PA in young children, at all levels (intrapersonal, interpersonal and environmental) [15–17]. At the interpersonal level, the lack of strategies and motivation [16,18,19], parental cognitions and behaviors [20], and lack of time [19] are considered barriers, while facilitators include intrinsic motivation, parental support, and the child's enjoyment of PA [21]. Some environmental barriers that parents report are inadequate equipment, lack of facilities, insufficient space [17], weather [22,23], and an unsafe outdoor environment [19].

The COVID-19 lockdowns changed parents' perceptions of children's PA [24], and research has highlighted new barriers and facilitators for PA during those periods. According to families, determinants of PA have included anxiety about catching the infection [25,26], respect for recommendations on social distancing [26], park closures [26], access to neighborhood play spaces [24], the cancellation of extracurricular activities [27,28], and poor work-family balance [27,29,30]. Different authors have concluded that COVID-19 poses important challenges and opportunities for families, students, and educators. Indeed, the experience of lockdown activated different adaptation strategies, attributable both to individual characteristics and to their family and living contexts [26,29].

As for educators, they also perceived different barriers and facilitators to PA during pre-pandemic times. At the interpersonal level, they consider that toddlers in childcare may benefit from teachers' intentional prompting, modeling, and embedding moderate-to-vigorous PA within free play activities [22]. PA-specific training, personal attitudes toward PA, presence of supportive behaviors and policies specific to the promotion of PA have also been shown to positively affect higher-intensity PA [31].

At the environmental level, the demands of work, the need to prioritize academic outcomes, the desire to prevent noise, and teachers' own reluctance to go outside could hinder children's activity. Specific barriers include limited provision of active opportunities [16], lower priority for the health and physical education curriculum or appropriate curricular ideas [22], lack of performance measures for PA or sufficient infrastructure [32], limited physical space [16,22], minimal parental support [22], and difficulty in offering age-appropriate experiences [22]. On the other hand, Lyn et al. (2014) identified PA policy changes to be facilitators within the childcare environment [33].

It is important to clarify early childhood educators' perception of their role in children's PA [34,35]. Since the new pandemic scenario could challenge the assumptions about both the correlates of young children's movement behavior and the role of ECEC teachers in promoting and offering quality curricular PA [36], our research is a first attempt to identify the everyday barriers and facilitators that ECEC institutions and families face in promoting PA in young children during the pandemic time. There is some evidence on barriers to and facilitators of PA in young children from lockdown periods during the pandemic [17,25,30,37,38], but to our knowledge, only one study has analyzed these factors in the post-lockdown pandemic period, specifically focusing on educator-perceived barriers in preschoolers aged 2 to 5 years [39]. However, we were unable to find evidence about the influence of these factors in the toddler population upon the re-opening of ECEC institutions (in our country, in autumn 2020), analyzing teachers, principals and parents' perspectives at the same time. Therefore, the main aim of our study was to explore the barriers and facilitators that teachers, principals, and families face when adapting to this new scenario in terms of promoting young children's PA. Furthermore, we have included teachers, principals and parents because we consider that the simultaneous analysis of the Educ, Sci. 2022, 12, 349 3 of 16

perceptions of different actors in the educational community offers a broad vision of the ecological alternatives for offering children opportunities for PA in these difficult times.

2. Materials and Methods

2.1. Participants

The research was carried out in public ECEC centers in the province of Valencia (Spain). This qualitative study included 14 ECEC teachers (13 women and 1 man); all had a degree in ECE and were responsible for classes of children aged 2–3 years old. In addition, six ECEC principals (all women) with at least 15 years' experience leading six different public ECEC institutions took part. We also included 10 mothers and 4 fathers whose children were enrolled in the participating ECEC institutions. The mean age of the parents was 38 years.

2.2. Interviews and Qualitative Analysis

This was an exploratory research study employing open-ended, semi-structured qualitative interviews, conducted from October 2020 to March 2021. A total of 20 interviews among teachers and principals were performed in school classrooms, while 14 interviews among parents were conducted on a bench outside the ECEC institution (four interviews were performed with both parents). Interviews lasted an average of 12 min (range 10 to 14).

For teachers and principals, the interviews were held to gain insight about the barriers and facilitators of PA in young children. Prior to the interviews, the principal investigator (PI) took several photographs of the main indoor and outdoor spaces that young children used for curricular activities, selecting eight photographs per ECEC institution to discuss with the teachers and principals. The purpose of the interview was to elicit their perspectives on the role of the indoor and outdoor spaces in promoting PA. Before starting, the PI explained the purpose of the study and obtained verbal informed consent from the informants. The PI performed all interviews, which were audio recorded, according to a standard guide, asking participants for clarification when necessary.

The purpose of the interviews was to elicit the perspectives of participants (teachers, principals and parents) on the role of indoor and outdoor spaces in promoting PA under the new pandemic scenario. The questions for the interview were based on the official ECEC curriculum and structured around three points: (1) first, ECEC objectives regarding the process of knowing of one's own body as well as its possibilities and motor limitations; (2) second, the role that the ECEC environment plays in promoting PA in young children; as explained in the Introduction, the literature confirms that given the importance of the school environment in providing preschoolers with opportunities for daily PA, it is necessary to clarify early childhood educators' perception of their role in children's PA; and (3) third, what the perceived barriers and facilitators of PA were with regard to the impact of COVID-19 on their daily lives.

Before answering the questions, teachers and principals were read the following legal statements from the Official ECEC curriculum [40]: Article 3. Objectives of the ECE cycle. Early childhood education in the first cycle will contribute to developing children's capacities to: understand their own and others' bodies along with their movement possibilities, with respect for differences: Knowledge area of oneself and personal autonomy. The school institution should establish itself as an important agent in terms of generating healthy habits and customs that facilitate the acquisition of healthy lifestyles and behaviors that promote health and well-being. Objectives of the area: -Know one's body by parts and overall, its possibilities and motor limitations. -Discover one's own body as a means of communication with the world. -Know the external characteristics of one's own body and discover the possibilities of movement.

The following questions guided the interviews with teachers and principals:

- What opportunities are there during the school day for children to be physically active?
- What COVID-19-related barriers do you face that have affected children's physical activity?
- What makes it easier for children to be physically active?

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- What have you stopped doing now because of COVID-19?
 The photographs of the indoor and outdoor spaces were used as prompts to discuss the following two questions:
- In terms of PA, what does this space mean for the young children?
- Regarding the organization of the school space, how has COVID-19 affected the opportunities for PA among children?
 - Finally, parents were asked:
- What COVID-19-related barriers have you encountered that have affected your child's physical activity?
- What have you stopped doing now because of COVID-19?
- What makes it easier for your child to be physically active?

Data collection and analysis followed a qualitative approach. Data from the audiotapes were transcribed in a Word document immediately after conducting the interviews. Then the PI and another researcher reviewed all the transcripts to search for and identify meaningful quotations and reactions. A qualitative analysis of the transcript was performed by selecting units of analysis, coding them, and then classifying them. Each participant was classified with their corresponding interview. Pseudonyms were used in order to protect participants' privacy. First, we developed an initial coding scheme and then analyzed the data to construct the final categories and the most significant themes.

3. Results

The socioecological model has enabled the identification of barriers and facilitators, some of which are related to the pandemic and others which are not (Table 1). Furthermore, using a deductive coding scheme based on the relationship between the themes and the theoretical dimensions of the socioecological model (intrapersonal, interpersonal, and environmental), authors agreed on two dimensions, 15 categories and 16 sub-categories.

Table 1. Dimensions, levels, categories, and subcategories identified in teacher, principal, and parent interviews about barriers to and facilitators of PA in toddlers during the COVID-19 pandemic.

Level	Barriers or Facilitators	Participants		Categories and Sub-Categories
Dimension 1: not specific to pandemic				
Intrapersonal	Barriers	Parents	(1)	Lack of willingness among children
	Facilitators	Teachers, principals, parents	(2) (3)	Intrinsic need to move Child's inclination to be active
Interpersonal -	Barriers	Parents	(4) (5)	Difficulty finding age-appropriate activities that motivate the child Limited time
	Facilitators	Parents	(6) (7)	Parents as a role model for PA Presence of siblings and peers
		Teachers, principals	(8)	Teacher's curricular practices
Environmental	Barriers	Teachers, principals	(9)	Indoor and outdoor (a) Risk or danger in traditional classroom (b) Bad weather
		Parents	(10)	Difficulty accessing and using indoor and outdoor spaces for PA (c) Poor availability of parks (d) Neighborhood parks are difficult to access or dangerous (e) Indoor spaces are inadequate for PA

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Table 1. Cont.

Level	Barriers or Facilitators	Participants	Categories and Sub-Categories
		Dimension 2: specific to pand	етіс
Interpersonal	Barriers	Parents	(11) Fear of infection
		Teachers, principals	(12) Impact on socialization
			(f) Decrease in opportunities for socialization
			(g) Restricted socialization between school and families
			(h) Decreased socialization among faculty
Environmental	Barriers -	Teachers and principals	(13) Impact on the use of space
			(i) Reduction of courtyard space(j) Establishment of shifts for using outdoor space
			(k) Elimination of spaces for practicing structured PA
		Parents	(14) Daily activities modified by COVID-19 restrictions
			(l) Closed parks and playgrounds(m) Cancellation of after-school activities
	Facilitators	Teachers and principals	(15) Presence of suitable spaces for PA
			(n) Use of outdoor spaces
			(o) Use of indoor spaces(p) Use of spaces dedicated exclusively
			(p) Use of spaces dedicated exclusively to PA

4. Discussion

4.1. Barriers for PA Perceived by Teachers and Principals

Regarding the first dimension (factors not specific to COVID-19), educators mentioned environmental barriers affecting indoor and outdoor settings, divided into two sub-categories: (a) the danger generated by the furniture in traditional classrooms and (b) bad weather. For educators, the relationship between the use of indoor spaces, restrictions on movement possibilities, and the need to preserve health is important:

The only thing is the tables and chairs, and it's true that I don't let them run around because they can fall, hit something, and hurt themselves. And the fact is that this, for example, the pillar is there in the middle, and that's already a barrier to begin with. And then there are the tables, too. (Teacher A)

Risky play is common in the indoor ECEC context [41], but there is a growing debate about the balance between ensuring that children have stimulating and challenging play spaces and that they are safe when they play [42]. However, we agree with Sandseter, Kepple and Sando (2021) that ECEC institutions should explore ways of supporting risky play indoors but without neglecting safety [41].

Despite the perspective shared above, faculty also perceive that the children negotiate the use of different spaces, adapting them to their movement needs.

In the classroom they are much more limited than in a space like the square or the courtyard, but, even so, they look for [PA], even if it is to raise and lower the chair, they go up, they go down. (Teacher B)

Another barrier perceived by educators was related to (b) bad weather:

When it rains you can't go out, so you can't move ... especially racing. (Teacher C)

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Teacher 1: Yes, when it is very windy because, of course, there are trees here too ... We don't usually go out when it is very, very windy and when it rains, of course. (Teacher D)

In the same line, Lavafe et al. (2021) recently reported that teachers saw bad weather as a barrier for practicing PA [39]. Our data collection took place in the winter months, and some of our educators also considered bad weather a barrier. Similar to Tucker and Guilliand (2007), we believe that innovative solutions are necessary to promote involvement in PA during this season [43].

Regarding the second dimension (COVID-19-related factors), the impact of the pandemic on socialization was detected at the interpersonal level. Regarding socialization with other children (f):

Getting together with other classes, in pods the children have fewer social relations with other children, then there are the activities, before you could do the activities together, but not anymore. (Principal A)

Schools are places for socialization, and they are with other children, and they can move around and at least in this, well, yes, we are all more limited, but this is circumstantial, right? (Principal B)

Regarding socialization with other children, a common practice before the pandemic was to share the playground space with children from other classes, for example groups of the same age but in different classes, or among groups of different ages. In the first academic year of the pandemic, this was not possible.

Before we went out, for example, because of the schedule there were two or three classes that we had the same playground schedule, and all the children went out at the same time. But not anymore, now we each have, if one group leaves at 11 A.M. another leaves at 11:10, okay? So that there can be no crossing between them and we have the patio divided into zones . . . (Teacher A)

The relationship, also, between kids of different ages, that that was very sweet too, that the older ones helped the little ones and things like that ... that's impossible now. (Teacher B)

The elimination of opportunities to socialize not only materialized through the circumscription of the playground area, but also in other spaces and curricular practices:

In all the activities that are organized in the afternoon, the ages are mixed, even the babies; [the activities] are for the whole school: theater, puppets, concerts, every afternoon there is something and it's . . . for everyone. (Principal D)

But ... we keep doing it ... we keep coming here in order, taking turns ... that cohesion that exists when all the students are together is not the same. (Teacher E)

Similarly, O'Keeffe and McNall (2021) found that early primary school teachers (children aged 4–7 years old) felt uncertain about their capacity to incorporate play into their classroom upon school reopening [37]. Taken together, all of these restrictions have led teachers to stop certain practices, although they have also prompted adaptations.

Pandemic restrictions also included the elimination of any type of face-to-face contact between school facilities and families (g):

Before they would come into the classroom and we would put up a form and [the parents] would see it. Now we practically only communicate through the mobile application. And the little time that we can open the door and: "everything okay?"—"yes, all good" is just enough so it doesn't get crowded. (Teacher B)

COVID-19 has exposed issues that have been present in teaching for long time: the need to care, the emotions that surround the identity of the teachers, and the frustration in the face of small or important interruptions in their daily work [38,44]. For instance, regarding the decrease in opportunities to socialize, teachers and principals recognize that, just as it was necessary to eliminate children's opportunities to interact, their own interactions with other faculty members were also affected (h):

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Personal relationships have been limited, including among ourselves, among educators and the educational team, it has been limited. All these personal relationships practically don't exist. (Teacher F)

Future studies are therefore necessary to elucidate how, in the post-lockdown time when certain social distancing restrictions are still maintained, educators, parents, and children negotiate the construction of their identity and try to overcome the barriers posed by the ongoing pandemic.

In addition, the physical environment is widely considered to have a strong impact on children's PA in ECEC institutions [45–47]. In this framework, for some teaching staff, the pandemic led to a reduction in play space (i):

They are more limited by the ... before they were out every afternoon or in the square, which they love because ... yes, we have lost many possibilities with the spaces, we have had to divide the outdoor spaces. (Principal B)

The courtyards have had to be parceled out, it is not the same to go out into a space where everything is free to you, now we are limited . . . (Teacher E)

Lavafe et al. (2021) have also argued that shrinking indoor space and limited access to play equipment impacted educators' ability to engage children in moderate to vigorous indoor PA [39]. Government regulations stipulate that the use of the playground by different classroom pods will be organized in such a way as to guarantee a safe distance and avoid contact between different groups [48]. Wijtzes et al. (2013) have suggested that for children to reach the recommended daily amount of PA during outdoor play, they need to be around other children to stimulate them to become more active [49]. Further research is necessary in order to examine whether this restriction could have an impact on the objective levels of moderate to vigorous PA. However, for some directors, restricting children's interactions with other classrooms and ages was an opportunity, not a barrier:

Not much, because on the contrary, it's almost as if we have promoted more movement, because since we have done more outdoor activities, no, we do not believe that it has affected us. (Principal C)

In addition, in order to comply with the rules of social distancing, the outdoor space also started being used in shifts (j).

We take turns. This year we take turns in the courtyards: Monday, Wednesday and Friday we go out to that one in my class; Tuesday and Thursday we go out to this one. (Teacher G)

But ... we keep doing it, otherwise, we keep coming here in order, taking turns, like in the courtyard, but, of course, I don't know how to explain it, that cohesion that exists when all the students are together is not the same. (Teacher E)

Another pandemic-related barrier, which educators perceived as affecting the movement opportunities for girls, was the elimination of certain spaces for practicing structured PA (k) for organizational or logistical reasons:

Yes, the classroom was open specifically for psychomotor skills, not now, now it is the outdoor patio because they do more outdoor activities. (Principal A)

Teachers also perceived a decrease in the use of curricular materials related to PA:

They used to love the ball pit, but, of course, now it is unfeasible because there is a lot of ball material to disinfect, so it's not worth it . . . (Teacher G)

Some authors have reported that teachers perceived that the availability of material resources also limited implementation of infection prevention measures, and that in particular insufficient space was a major concern that hindered implementation of small pods and social distancing [50].

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4.2. Facilitators for PA Perceived by Teachers and Principals

At the intrapersonal level, the educators cite children's intrinsic need to move around as a facilitator of PA (2):

Movement is something natural, it is spontaneous at this age, so we have to have spaces sufficiently prepared for them to achieve it. (Principal C)

Tucker et al. (2011) also found that daycare providers perceived activity levels to depend on the individual child [51], while Gubbels et al. (2018) argued that "children are not naturally inactive"; they just have different needs when it comes to PA [52].

In addition to working with movement in all senses, we work movement with music, movement with theater, movement of all kinds. (Principal B)

In this sense, Van Zandvoort et al. (2010) have found educators perceive resources such as music to be a facilitator in engaging preschoolers in PA while at daycare [23]. Similarly, Tucker et al. (2011) found that daycare providers understood the value of PA among preschoolers and did their best to facilitate these behaviors wherever and whenever possible [51].

At the environmental level, educators consider that suitable space for PA is an important facilitator of children's movement opportunities, including with respect to (n) the use of outdoor spaces, (o) the use of indoor space; (p) the use of spaces dedicated exclusively to PA.

Regarding the use of outdoor spaces (n), previous research has found that ECEC teachers consider insufficient space to be a barrier for PA [23]. Our participating teachers and principals perceived that a larger space inside the school environment was considered a facilitator for PA in young children:

Outdoor space, there is a lot too, in addition to dirt, stones, everything to touch, outdoor games are also conceived to do any type of movement . . . (Principal B)

What we encourage the most is that, the outdoors, nature, outdoor excursions ... (Principal D)

In this line, different authors have posited that outdoor conditions shape young children's possibilities for play, learning and development [46,53,54]. As Aguilar-Farias et al. (2021) recently observed, toddlers and preschoolers living in rural areas experienced less marked impacts on their PA [10], suggesting that outdoor environments could counteract the negative impacts of the COVID-19 pandemic on young children's PA.

In fact, the recommendations for avoiding the spread of the virus in schools highlighted the importance of prioritizing, whenever possible, the use of outdoor school spaces. In this sense, principals pointed out that one of the ways to challenge the restrictions imposed by COVID was to increase the use of outdoor spaces:

Not much, because on the contrary, it's almost as if we have promoted more movement, because since we have done more outdoor activities, no, we do not believe that it has affected us. (Principal C)

Regarding the use of indoor spaces (o), having classrooms equipped with suitable material for exploring movement possibilities in this age group became a facilitator of PA:

Well, I think that the space itself is designed to favor [PA]. That is, how the classes are distributed . . . (Teacher I)

Well, as I mentioned before, they love the courtyard. The glass pyramid drives them crazy. They also ride their bikes there ... They love the waves and the mats. Doing somersaults ... (Teacher H)

One of the restrictions imposed to prevent the spread of COVID was the creation of pods, that is, stable classroom groups that do not socialize with children outside their group [50]. In fact, these pods allowed teachers to maintain their curricular practices within their classrooms:

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Well, let's see, what happens is that, in terms of movement, in the courtyards, the children keep on doing the same, although without getting together with the others. (Teacher H)

I have not had barriers because mine are 2-3 years old ... I set up ... my classroom was for psychomotor skills ... then there was the wooden slide, I had the ramp ... As it was inside the class, they could use it all day, and they did all the time if they wanted to move around. (Teacher C)

Regarding the use of spaces intended for structured movement opportunities (p), while some centers were forced to reduce or eliminate spaces dedicated to structured physical activity, others maintained the use of the special psychomotor classroom, which educators identified as a facilitator and an element that challenged the restrictions imposed by COVID-19:

DA: They have a weekly psychomotor session, because you have to organize spaces and times, when they do the three parts, the group is divided, because quality is prioritized over quantity.

The ECEC institutions demonstrated a rapid response capacity, establishing a balance between protecting children's health and continuing curricular practices. Previous studies have indicated that despite the barriers arising from the COVID-19 pandemic, faculty collectively organized and worked hard to implement preventive measures to re-open schools safely [2,50]. In fact, as suggested by the European Commission [4], ECEC institutions have largely overcome the challenges posed by the pandemic, Creating new scenarios that were an eye-opener for ECEC staff at certain levels, staff "discovered" new and valuable ways of working.

4.3. Barriers and Facilitators of PA Perceived by Parents

One of the barriers perceived by parents, which was not related to the pandemic, was children's unwillingness to practice PA:

Well, I have to tell him to play, because if I didn't, maybe she would spend a lot more time watching cartoons. (Parent A)

Sometimes he walks and gets tired and wants to get on the stroller or wants us to carry him. (Parent B)

Regarding interpersonal barriers, two categories were identified: those related to (4) the difficulty finding age-appropriate activities that motivate the child and (5) the impossibility of spending more time with the child due to work obligations. Regarding the first:

Finding activities that motivate them quickly is a barrier. (Parent C)

Along these lines, Fees et al. (2009) found parents struggle with offering age-appropriate experiences, and this was identified as a barrier for PA practice. Parents generally believe children are naturally active, which may preclude their engagement in strategies designed to increase PA [55].

Another barrier perceived by families is related to the time they have to be with their children:

The time that we have after work to be able to go places further away from our home and do a freer and calmer physical activity. (Parent D)

Most of the day is not spent with us, we also have to manage with the grandmothers. (Parent A)

Recently, Hesketh et al. (2017) and Alcántara-Porcuna et al. (2021) found in not specific to pandemic that among the barriers to young children's PA that parents perceived was the lack of time and the lack of family conciliation [17,55]. Along these lines, it has been found that for parents, lack of time and family duties were also important barriers to PA during the pandemic, suggesting that COVID-19 exacerbated the time demands on parents [26,56].

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At an environmental level, parents mentioned difficulties accessing and using outdoor and indoor spaces for practicing PA. Regarding the limited availability of parks:

Above all, we do not have a park very close to home; you have to go somewhere else. (Parent E)

Maybe there aren't many spaces adapted for children aged 0 to 3 years old, right. In other words, the parks are meant for older children. (Parent D)

In addition, parents mentioned barriers related to the neighborhood environment (route) to reach the park (d), which they sometimes perceived as dangerous:

There's not even a road to cross from home to the other street, there is not even a zebra crossing. (Parent F)

What there is, is a little dangerous, let's say, because I would like, for example, to ride a bicycle . . . When he goes down the street, it is very difficult for me to take him by the hand because he wants to run, so I have to argue because of course! He might be hit by a car! (Parent A)

Hesketh et al. (2012) noted that safety was the most commonly discussed issue among parent groups [55], while Bentley et al. (2012) also reported that parents cite lack of safe outdoor play space as a barrier to their child's PA [21]. As Bentley et al. (2012) explained, we consider that strategies to increase perceived safety are needed to overcome this barrier [21].

Recently, Aguilar-Frias et al. (2021) also found that toddlers and preschoolers with space to play at home had less marked impacts on PA due to COVID lockdowns [10]. The limited availability of space in homes was also recognized as a barrier:

Because it's not very big either, our apartment. We also have many things, a lot of stuff that can prevent you from moving. (Parent H)

Parents also identified some barriers specifically related to COVID-19 affecting young children's PA. These barriers were specifically related to the interpersonal and environmental level. At the interpersonal level, our results revealed that parents perceived the fear of infection as a barrier to PA:

We hesitate more and more to go and expose ourselves to eventual interactions, which at my daughter's age is more difficult to avoid, so one always thinks about it a lot, to have the option of going out and being outdoors with her. (Parent D)

-I, I still have fear in my body, you don't take them down so much to the street because of this, you don't have the attitude of leaving them to their own devices. (Parent E)

Other authors have also reported being nervous about becoming infected with COVID-19 as a barrier to PA in a primary school population [25,26,28]. We concur with Yomoda and Kurita (2021) that parents' support can help children maintain their PA during the pandemic [57].

At the environmental level, our results show that daily activities and PA were modified by COVID-19 restrictions, which led to (l) closed parks and playgrounds. Between October 2020 and March 2021 (the study period), the government decided to close playgrounds in order to reduce social contact and avoid the propagation of the virus [48]:

We are not going to take them to the parks, but hey, we will try to compensate for it, walking more along the river or trying to take more walks. (Parent I)

Well, right now, because of the special situation, the parks, you can't use them, or go climbing up them, which he likes a lot \dots (Parent E)

Before we did go out to the park, now we don't because of the coronavirus. (Parent A)

Children's play in public spaces and parks decreased during COVID-19, as parents wanted to follow public health distancing measures in order to avoid the spread of the disease [25,26]. Furthermore, some parent also recognized that the park closures had a negative impact on PA as well as on socialization with other children:

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For example, we aren't going to take them to the parks, which is already a place where they did physical activity; maybe it reduces the group physical activity, which is also very important: the social component of physical exercise. (Parent A)

Pelletier et al. (2021) likewise found that parents perceived a loss of social opportunities due to physical distancing guidelines arising from the COVID-19 pandemic [28]. Other authors have suggested that the after-school setting is an opportune time for young people to accumulate significant amounts of PA [58]. However, in order to avoid spreading the virus, schools cancelled extracurricular activities, and parents considered this a barrier (m):

We are still waiting to see if extracurricular activities, such as swimming, are finally organized, we do not know if we will be able to do them, and last year, for example, because she went twice a week. (Parent A)

Fredrick and Marttinen (2021) suggested that especially in the context of the global COVID-19 pandemic, after-school programs should serve as a safe, healthy, and affordable refuge for young people to develop social capital and benefit from positive relationships with adults [59].

At the same time, parents recognize that park closures did affect their day-to-day routine, but they have found ways to overcome this barrier by adapting, finding new alternatives for their children to be physically active:

In none, because we have replaced it with ... riding a bike or a scooter. (Parent B)

So we have changed it for ... we take a very big ride ... we go the entire belt on a bike, scooter, or whatever he chooses at that moment and we go around ... in order to not be with other children. (Parent H)

Recently, Pelletier et al. (2021) found that some families' resilience and adaptation during the pandemic increased opportunities for PA. For instance, families found they could still be active without as many structured activities [28]; establish new routines incorporating PA, especially outdoors [26]; and create new forms of parental involvement [30]. Thus, social restrictions do not necessarily obstruct PA but may just change its location and form.

4.4. Facilitators of PA Perceived by Parents

According to parents, there are facilitators of physical activity that are not related to the pandemic at all three levels studied. On an intrapersonal level, parents perceive that their children's predisposition to be physically active facilitates an active life:

The back of the sofa is suddenly fabulous, as you have an armchair ready and a sofa is suddenly a gymkhana to climb on . . . he doesn't see the limits, you have to put them there yourself. (Parent F)

I think, I see that it's in his nature, that is, he cannot be still. (Parent B)

It's easy, because what we have to do is stop it, that is, in our case, it is not necessary to stimulate him to move. (Parent G)

Similarly, a recent systematic review of perceived barriers and facilitators to PA and sedentary behavior in young children showed that at the individual level, parents described activity as being innate [16].

At the interpersonal level, parents felt that both they themselves (6) and the child's siblings (7) facilitated PA:

We try to do everything we can to make it easy for her to have movement and activity. We walk to school, we walk back, we do everything we can walking . . . (Parent A)

Our way of thinking and our lifestyle. (Parent C)

Well, I think that having a sister almost the same age, because they are very active and look to each other to play . . . I think that encourages them to move. (Parent I)

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A large body of research has consistently shown that parental support, encouragement, and engagement in PA are important facilitators of children's PA [16,21,56]. Children's wider social networks, such as siblings and peers. have also been identified as important for promoting young children's PA [60], and parents have recognized that this element could be an important facilitator for PA [16].

At an environmental level, teachers, principals, and parents recognize that strengthening communication between school and family is another potential facilitator of children's physical activity:

However, families can always be given guidelines, the thing is they don't pay much attention . . . so, we have to raise awareness that they need to do PA. (Parent B)

The little time that they are with children, well, they should use it to do things, not watching TV, not being at home, that is, giving more quality to the moments they spend together. (Parent G)

In their qualitative study, Conelly et al. (2018) found that ECEC teachers of young children aged 3–5 years old considered that improving communication between ECEC institutions, principals, and parents is important for promoting PA at school and at home, and it may contribute to maximizing children's health benefits and allowing ECEC institutions to better support children's PA habits [34]. In this context, some parents point out that just as schools report on nutrition, artistic activities, etc., these communication channels could also be used to provide information on and promote PA:

A lot of information related to their day-to-day life itself is given, but little in relation to what they play or stop playing; very little, really, very little. (Parent E)

In school and at home, we wonder what better opportunities can be offered for girls to be physically active. (Parent D)

Along these lines, Wilke et al. (2013) found that childcare workers perceived the lack of communication with parents as a barrier for young children's PA [42]. We agree with Alcántara-Porcuna et al. (2021) that contextual factors and not only focus on individual factors related to the child should be taken into account for programs aimed at promoting PA in early childhood [17]. Therefore, we suggest that now more than ever, continuous communication and interaction (by any means), also in terms of educators and parents communicating about the curricular practices surrounding PA, is necessary to overcome the challenges and negative impacts that COVID-19 could have on young children's development.

4.5. Practical Implications

Our results provide teachers and principals in early childhood centers with more information, not only on how the pandemic is affecting children's physical activity but how these institutions can strategize together to support families in need of healthy environments in these challenging times. While it is certain that COVID-19 will become endemic, our society is not exempt from facing a similar situation in the future. We thus believe that continuous communication and interaction (including educator-parent communication about curricular practices around PA) is more important now than ever in order to overcome the challenges and negative impacts that COVID-19 could have on young children's development. Likewise, we encourage families to continue taking an active interest in promoting physical activity and developing strategies to challenge the barriers to PA in the post-pandemic period, as in pandemic times.

4.6. Strengths and Limitations

This study presents some noteworthy strengths. First of all, to our knowledge this is the first study that analyzes the perceptions of teachers, principals, and parents about how the pandemic (post-lockdown) has affected PA in children aged 2–3 years. Second, the participation of six ECEC institutions helps reflect the great diversity of approaches and

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adaptations to the pandemic among the educational community. Third, the simultaneous analysis of the perceptions of different actors in the educational community offers a broad vision of the ecological alternatives for offering children opportunities for PA in these difficult times.

However, the study also has certain limitations. The sample of schools are from an urban environment, so its findings are not apt for understanding the perceptions of the educational community in rural areas. Second, it is not possible to objectively relate the impact of the pandemic on PA levels with the perceptions of the school community. Third, we do not know the impact of the pandemic on children's perceptions of opportunities for PA. For this reason, future lines of research in the field of ECEC should examine these dynamics in rural areas, assess objective measurements of PA, and involve young children to understand how the pandemic has affected them.

5. Conclusions

The socioecological model has enabled the identification of barriers and facilitators of PA in toddlers, some of which are related to the pandemic and others which are not. In the pandemic time, interpersonal barriers perceived by educators and parents included the impact on socialization and fear of infection, respectively. Regarding environmental barriers, educators mentioned the impact on the use of space, and parents, the modification of daily activities generated by COVID-19. However, educators also considered that the presence of suitable spaces in the school for practicing PA was a facilitator.

At the intra- and interpersonal level, facilitators of PA that were unrelated to the pandemic included, for parents, the predisposition of children to be physically active and their own function as role models, and for educators, the curricular practices themselves. Parents also mentioned barriers such as the difficulty of finding age-appropriate and motivational activities and the impossibility of spending more time with their children due to work. At an environmental level, the risk of danger in the traditional classroom plus bad weather were considered barriers by educators, while parents mentioned difficulties accessing outdoor space and the poor suitability of indoor spaces.

Our results suggest that upon reopening the schools, the enforcement of social distancing norms, classroom pods, hygiene requirements, and other measures to limit COVID-19 infections have led parents to revise their relationship with their children to promote PA and have led educators to establish organizational practices that challenge both interpersonal and environmental barriers of PA.

Finally, the new Royal Decree 95/2022 [61] that revises the ECE curriculum recognizes that the acquisition of healthy and sustainable habits, as well as their progressive integration into daily life, contributes to self-care and favors increased autonomy. As the new regulations point out, in this process, PA is expected to be promoted as a healthy behavior. Therefore, further research is needed not only on how this healthy behavior manifests in light of the objective measurement of PA levels and patterns under this new scenario, but also on the barriers and facilitators that teachers, principals and families will face and that will impact PA under the new ECE curriculum that will take effect in the coming months.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of University of Valencia (Ethical approval code-UV-INV_ETICA-1441131, approved on 3 December 2020).

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

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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