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Original article

Primary school healthy lifestyle promotion: Preventing childhood obesity and overweight through a participatory action research project

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Abstract. *Background*. In the last 30 years, childhood obesity has become a global issue. In Europe, Italy is particularly affected, especially among primary school-aged children. Post-COVID-19 reflections revealed the need for more research and collaboration to address this concerning issue for children health. *Aims*. To understand parents, teachers, and healthcare professionals' childhood obesity and overweight perceptions and to co-create an educational intervention. *Methods*. A participatory research approach, combined with qualitative methods, was based on a high child obesity rate area of Southern Italy. *Results*. Focus groups conducted in three primary schools involved teachers, parents, and healthcare professionals. The emerging themes, "Healthy lifestyle: a complex issue?", "Fat Stigma and Prejudice" and "Possible Interventions", paint a dramatic scenario and highlight that obesity prevention is effective only through the integrated involvement of all parties and the community playing a central role. Sharing results with stakeholders helped to draft prospective education interventions. *Conclusion*. Collaboration between public and private parties and avoiding a blame culture by listening to the needs of families and children is crucial in preventing childhood obesity and overweight. (www.actabiomedica.it)

Key words: Childhood Obesity, Childhood Overweight, prevention and control, Community-Based Participatory Research, Primary Schools, Focus Groups

Introduction

Overweight childhood and obesity have reached epidemic proportions throughout the world over the last thirty years (1). Once considered a problem only in high-income countries, overweight and obesity are now dramatically on the rise in low- and middle-income countries, particularly in urban settings (2). According to the European Childhood Obesity Surveillance Initiative conducted by the WHO, almost one in three school-age children is overweight or obese (3). Italy is one of the most affected states in Europe (4). The results of a survey conducted by the Italian Institute of Higher Health Research reported that among children (6-10 years), 20.4% are overweight and 9.4% obese (5).

Background

Obesity is an excess of body fat and considered a multifactorial disease deriving from a genetic predisposition and environmental and behavioural factors

(2). Overweight and obesity status are defined using age and sex-specific charts for body mass index (BMI). Children with a BMI equal to or over the 95th percentile is obese, and those with a BMI between the 85th and 95th percentiles are overweight (2). Children aged 6 and 7 years were most susceptible to developing overweight/obesity and obesity (6,7) highlighted that the chances of becoming obese as adults double for children under the age of 10 who have at least one obese parent, and it is estimated that the probability that childhood obesity persists into adulthood tends to increase from about 20% at age 4 to approximately 80% by adolescence. The main contributors to childhood obesity are poor eating habits and lack of physical activity (2).

The promotion of physical activity and the reduction of a sedentary lifestyle contribute to improving the health and psychological well-being of children as well as being healthy actions for all ages (8). Physical activity habits developed in childhood are often maintained into adulthood (9). Over time, children and adolescents who spend many hours in sedentary activities may have poorer health outcomes (3). These findings include increased adipose tissue, lower cardio-metabolic well-being, reduced pro-social behaviour and sleep quality. Therefore, it is essential to limit physical inactivity time, mainly if it is associated with time dedicated to recreational devices, and to enrich the various motor activities to activate preventive health interventions (10). Parents' lifestyles and the home environment influence children's physical activity and dietary preferences (11). Parents' sedentary lifestyle is often inherited by their children (12).

Since what children eat depends on the family, the purchase of junk food, the way food is prepared, and the attitudes and behaviours regarding food on the part of parents significantly influence, from early childhood, the child's approach to healthy eating (13). Access to healthy foods at home and parents' eating habits significantly shape children's approach to healthy eating (14,15). In many modern families, the popularity of ready-made and pre-packaged foods is increasing due to parents' limited time to prepare meals. However, regular consumption of these foods can lead to weight gain due to their high sugar, fat, and salt content and reduced nutrient intake (16). Additionally, spending several hours in front of screens while eating is linked to increased consumption of snacks and sugary drinks (17). This behaviour, known as "mindless eating," is associated with television viewing (18). Obesity or being overweight does not have sole physiological consequences. Children who are overweight or obese are more likely to experience psychological distress, mainly due to judgments and bullying (19). Obese children and adolescents are often excluded from peer groups and can experience psychological trauma, poor body image and low self-esteem (20).

Several country's governments and organisations have developed national clinical guidelines and standards to prevent childhood obesity (21,22). Public and school health services represent an excellent opportunity for healthcare practitioners to discuss healthy growth, nutrition, and ways to prevent childhood obesity (23). Health professionals in school settings and communities can help create a healthy and safe school environment for children and guide teachers and families to better lifestyles (24). In several European countries and the UK, the role of nurses has been implemented to support children's overweight and obesity prevention programs (25, 26). Nurses play a vital role in promoting children health through education, counselling, behaviour change, advocacy, and policy implementation. For example, they help prevent and identify childhood obesity risks in various community and healthcare settings (27,28).

During the COVID-19 pandemic lockdown and preventive measures, childhood obesity increased (5). This, in turn, led to delays in developing national programs to improve children's lifestyles. Although the complex nature of child obesity has been acknowledged, only a few studies take a systemic approach to prevention (29). Therefore, there is a need for studies that investigate this issue from the perspectives of different participants and generate solutions through group effort and the exchange of insights in a participatory manner.

Aims

The study aims to investigate child obesity and overweight perceptions of a group of parents, primary school teachers and health professionals. The study has

two objectives: 1. Explore multiple participants lived experiences from primary schools in southern Italy; 2. Co-creation of educational interventions by active discussion of multiple participants.

Methodology

Study design

The study adopted participatory research as the most suitable approach to emphasising the collaborative construction of research through partnerships among researchers, stakeholders, and community members with knowledge and lived experience (30,31). The first step implied a qualitative descriptive study to understand participants' experiences and perceptions of child obesity or overweight, as well as public health interventions and policy implementation (32, 33). Focus group approach was chosen to facilitate interaction and stimulate productive discussions (34); thus, reflecting the thoughtful nature of the research design. This study adheres to the consolidated criteria for reporting qualitative research (35).

Participants and setting

Puglia has the highest rate of obesity among the population in Italy (4). Primary schools in the Puglia region were targeted to seek participation, and school directors were contacted via email to gauge their interest in the research. AC facilitated communication and organized meetings with communities and potential participants while working as a community nurse in the region. Three primary schools from the districts of Fasano (BR) agreed to participate. Multiple meetings were held to present the project and seek collaboration from the school directors in selecting participants (teachers, parents and health professionals). The selected participants were then contacted via email and telephone to explain study purposes. The nature of the study and purposive sampling did not allow for specific selection criteria. However, the research team established that teachers willing to participate should have worked at the institution for at least one year.

Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki (36) and complied with Italian and university ethics regulations. It did not require ethical approval as it did not involve clinical treatments or biomedical equipment with clinical implications. Formal permission was obtained from the directors of the three schools where the focus group was held. All participants provided written informed consent, agreed to be audio-recorded, and were informed that they could withdraw from the study at any time without consequences. The study did not collect personally identifiable information, and all textual material was kept anonymous to respect participants' privacy and confidentiality.

Data collection

AG, MP, and MB conducted focus groups, rotating between roles (moderator, interviewer, and observer) for each session and alternated in taking field notes. They attended focus group training by experienced researchers in qualitative methods (GA and EDL). The focus groups, conducted between January and February 2023, addressed various aspects of child obesity using semi-structured questions (Table 1). The sessions took place in the schools after regular hours, providing a private space for participants to discuss relevant topics comfortably.

Data analysis

The qualitative data were analysed using thematic analysis to identify recurring patterns of meaning (37). Before coding, each member of the research team familiarized themselves with the data by reading through all the transcripts independently. Then, transcripts were inductively analysed to identify the descriptions of the participants' perspectives and experiences across all data. To guarantee research rigour, the research team organized regular inter-analysis meetings to share findings and to exclude non-fitting themes (38). Research validity was supported by research team independently analysed the interview transcripts before meetings to compare analysis findings and reach

Table 1. Focus groups questions.

Questions	Dimension Explored
Is childhood obesity or overweight a pressing concern today? Do you think there are factors contributing to this issue and how it affects children's physical and mental well-being?	Awareness and knowledge regarding the impact of obesity or overweight in primary schill children s life.
In your view, how do teachers and parents impact a child's lifestyle in terms of proper nutrition and physical activity? Specifically, how can teachers create a healthy and supportive environment within the school setting, and how can parents encourage good habits at home?	Opinions and point of view on factors influencing obesity and overweight in children.
In your opinion, what effective interventions can be implemented to prevent this phenomenon? Are there specific programs or policies that have been successful in addressing childhood obesity, and what role can healthcare professionals play in supporting children and families in making healthier choices?	Collecting possible solutions from participants and activate their interest and involvement.

consensus (39). The preliminary results were shared during a formal online meeting attended by study participants and school directors, representing a crucial platform for important feedback. The research team actively engaged with the stakeholders and adopted a critical reflective approach to enrich their understanding of the topic and review the analysis's results (37).

Results

Three focus groups were conducted in three primary schools in Fasano (Puglia). The participants were twenty-three teachers (22 women and one man), ten parents (8 women and two men), three healthcare professionals (a nutritionist, a social worker and a psychologist) and a primary school governance representative (Table 2).

The research team carefully composed each focus group including a balanced participation of teachers, parents and health professionals. The focus groups

Table 2. Study Participants N=37.

Participants		Gender	
Teachers	23	Female 89%	Male 11%
Parents	10		
Nutritionist	1		
Psychologist	1		
Social Worker	1		
Primary School expert	1		
Total	37		

lasted an average of 90 minutes each. Before each session, researchers recapped focus groups' ground rules for a fruitful discussion and how to guarantee creating and maintaining a safe, non-judgmental and inclusive environment. The sessions were video recorded, verbatim transcribed and checked by the researchers for accuracy and ensuring participant anonymity. The data analysis led to the identification of three themes: "Healthy lifestyle: a complex issue?", "Fat Stigma and Prejudice" and "Possible interventions". Each theme includes several sub-themes (Table 3).

Theme 1: Healthy lifestyle: a complex issue?

Participants expressed their opinions on obesity in primary school children. Most of the teachers argued that the phenomenon is real and urgent.

> *"Does childhood obesity exist? I think yes. In the last ten years, there has been an increase in weight in children and an increase in obesity cases" (T2)*
>
> *"We have had children who also had difficulty tying their shoes, bending over, climbing stairs, they were out of breath, they had difficulty breathing" (T1).*

Some participants also highlighted that the perception of the problem varies among parents.

> *"(…) for some parents, it is not considered a problem." (HP1)*
>
> *"The main problem starts with the parents, who don't understand what the problem is." (P2)*

Table 3. Themes and subthemes.

Theme	Sub theme	Excerpt
Healthy Lifestyle: A Complex Issue?	a. The bored child.	*"...up to ten years ago, children played, at least in small towns, played in the streets. They played in the courtyards. Now, the courtyards are the places where there is a parking space (...) The houses with courtyards are not even equipped for children to play (...)."* (P8)
	a. Home or school: Who is responsible for the food and nutrition education?	*"We tried to tell the parents... among other things, the parents were also quite overweight, but the mother responded: The child is fine. So, we had denial attitude from the mother".* (T11)
	b. Eating habits	*"They(children) usually have a sandwich with cured meats or Nutella. Some children don't eat bread or biscuits, so they only eat cured meats or cheese; for example, (…) pretzels, snacks" (T22)*
Fat Stigma And Prejudice	a. The physical activity dilemma	*"For example, I have two fifths and there are children who have these difficulties in coordination and in reality, their classmates tend, during physical activities, to smirk, to have an attitude, I'm not saying derisive but still not entirely correct or indifferent" (T10)*
	b. Memories of an overweight child	*"As a child, I really experienced a very sad childhood because I was overweight, too. Moreover, I suffered a lot (…) so this doesn't make easy with parenting my children". (P5)*
Intervention Proposals	a. Education on food b. Inclusion of schools and health professional bodies c. Support children mental wellbeing	*"There must certainly be more information and awareness on the topic, starting from attending physician and the paediatrician talks, mainly with parents and teachers." (P4)* *"I see the issue of emotions as very linked to nutrition and above all we need to listen to the children (...) because they need to be listened to by us, teachers, but I also think at home, they need more attention." (T22)*

There are three sub-themes that characterize the main theme

The Bored Child

Among the causes of childhood obesity, the study participants highlighted primarily the consequences of COVID-19 (increased online activities and lack of social interaction) and, essentially, boredom.

> "*After the pandemic, after this long period at home of distance learning, however, the children have changed; perhaps the sedentary lifestyle, the fact that they could not move, or go out, had a significant impact on this" (T4)*

Participants often attribute children's boredom to recent architectural changes in houses, which have reduced access to outdoor spaces like playgrounds and parks. The lack of space drives children to seek entertainment elsewhere, resulting in increased time spent playing video games and watching TV.

> "*Families increasingly live in tiny houses and flats full of furnishings, including sofas. Therefore, children's spaces are reduced to strips in their rooms. (....)"* (T1).

Another aspect discussed multiple times by participants is the reduced time parents spend with their children. In families where both parents work, children may be left at home alone or placed in the care of grandparents, who may indulge them with excessive food.

> *"When the child goes to his grandparents, practically everything is dismantled [re. Food education] (…). They tend to give a more significant portion; the child knows it and leverages it.* (HP2)

Furthermore, the fast pace of parents' lifestyle leads families to adopt behaviours that are not entirely exemplary and to prefer ready-made foods.

"Then there are sometimes children who do not have breakfast at home. Parents tend to put a sandwich or something more substantial because they don't have breakfast" (T22)

"However, as a parent, this conviviality of having breakfast together is missing. That's what B said, of setting an example, of eating together, and then we run away back to work, lunch is fleeting, quick, and then maybe they [children] remain alone" (T11)

Nevertheless, families also face economic difficulties and to buy fresh and healthy food is not always affordable. While the option of cheaper but not so healthy snacks is always available.

"(...) eating organic and healthy has a higher cost. And some families maybe nowadays can't afford it because they have three or more children." (P4)

Home or School: Who is responsible for the food and nutrition education?

The theme of responsibility is apparent in conversations between teachers and parents, emphasizing the importance of taking responsibility in guiding the child toward a healthy lifestyle.

"While I agree on the influence of family context. I also consider the responsibility which is not only of the family but also of the school" (P9)

Nevertheless, parents appeal to the school and teachers to the families in a bounce of responsibility that does not help define the role each party should assume

"I also believe it is right to give proper nutritional education starting from home and continue it back to the school context with what we teachers can do" (T2)

"As was said before, parents please them [re. children] *with everything to see them eat. Moreover, it is here that I think that the teachers- not that I want to put any more burden on the teachers - this is where they must intervene" (P10)*

Eating habits

The study participants highlighted that the most concerning eating behaviours are the consuming of junk food (e.g. pre-packaged foods, snacks, sausages, fast food) and the habit of skipping breakfast.

"In second grade, we established one day a week for fruit, corresponding to the day on which the children do physical education. This is because otherwise, many constantly eat a salami sandwich every day for the whole week" (T19)

""The vending machines are a new phenomenon. They serve as a meeting place with the expression 'See you at the vending machines.' (…) Because now that has become a meeting place where they can do what they want because then it is enough to have few euros (…)". (HP3)

Parents exchange models of education of eating habits, and some negotiate the junk food consumption with their children. The transcript below illustrates how this subtheme is articulated across several parents' turns:

P2. *I try to give my children rules* (re. eating habits).
P3. *Since my son was little, I have trained him to eat certain things and avoid others. That is, he does not eat, I say, junk, and he knows very well what junk is and that he should not eat it.*
P2. *I only allow junk food once a week because I cannot really remove it.*
P1. *Everything in the right quantity, in my opinion (...) right in quotes.*

Theme 2: Fat stigma and prejudice

Focus group participants' obesity and overweight concerns are not only related to the physical health of the child but also to their psychosocial aspects. In this regard, another theme that emerged is linked to stigma and prejudice towards overweight children. There are two sub-themes that describe this theme.

The physical activity dilemma

> *"During the physical education lessons every week there is a conflict with their classmates, so when I welcome them back from the physical education class, they either cry or think that their classmates are laughing at them because maybe they are clumsier, they are unable to experience this moment and in class they always express this feeling of being different" (T11)*

Many children, due to their weight and difficulties in performing exercises during physical education classes, are sometimes victims of prejudice from their classmates.

> *"(…) the first-grade child. (…) feels like he is chubbier than others. He feels it as an inconvenience or because he is being made fun of, and then because when faced with a physical demonstration, he also finds it difficult to run; he is embarrassed". (T7)*

However, some teachers consider weight to be a health risk for the child or a cause of humiliation and may influence the child to stop playing sports.

> *"Last year in my class there was a child who was obese, and it happened that during the physical education class, he finally sat down because we (teachers) were afraid because, you could see it, he became red in the face, even in breathing..." (T23)*

memories of an overweight child

During the focus groups, several parents and teachers shared accounts of suffering from obesity during their childhood.

> *"I, too, had a personal experience of being an overweight child. and when to eat a product was forbidden; on my part there was a fixation on wanting to eat it more, of going beyond that prohibition" (T11)*

Some participants' narratives and contributions to discussions revealed that there is still a lot of suffering from these memories, and they fear that their children will follow the same difficult path.

> *"As a child, I really experienced a very sad childhood because I was overweight, too. Moreover, I suffered a lot (…) so this doesn't make easy with parenting my children". (P5)*

Theme 3: Intervention proposals

The focus group was also a space for the participants to share ideas for intervention proposals. There are three sub-themes that describe the proposal emerged.

Education on food

Some proposals were related to education and training initiatives on the quality of food. Thus, to better explain the effects that diet have on health (e.g. current health, physical appearance, obesity, feelings of well-being and ability to perform physical activity).

Parents and teachers agreed on the importance of paying attention to a correct and healthy diet and raising awareness of the use of healthy foods through visits to local companies to learn about the production cycle. This initiative can help to learn the principles of the Mediterranean diet and the food pyramid and help to carry out an accurate reflection on the characteristics of foods. Another possible action would be the application of a single menu in the school canteen and possible obligation to follow a "snack calendar" during breaks:

> *"Our field of action is the classroom, so we can work from there, not elsewhere. Therefore, we must work on children breaks' food habits. If parents disagree, we should consider making it mandatory" (T19).*

Inclusion of schools and health professional bodies

Other suggested initiatives lead to an inclusion and integration of schools and health professional bodies for the prevention of obesity. The participants acknowledged the importance of the involvement of

health professionals, schools, and institutions to work together strategically.

> *"There must certainly be more information and awareness on the topic, starting from attending physician and the paediatrician talks, mainly with parents and teachers" (P9).*

These initiatives also involve stakeholders like the city or local councils to promote sports and physical activities. For example, the civic bodies can help to increase school sports activities by helping families in economic difficulty and the activation of afternoon sports activity courses.

> *"Even the city council and communities, even the school with all the bodies, should involve the children more in afternoon activities" (HP4).*

Support children mental wellbeing

The focus groups highlighted also how important is to support children mental wellbeing. In fact, greater attention is needed regarding the expressions of discomfort expressed by young people, on personal relationships and communication between adults and young people and between peers:

> *I see the issue of emotions as significantly linked to nutrition, and above all, we need to listen to the children (...) because they need to be listened to by us, teachers, but at home, they need more attention" (T22).*

Discussion

This study aimed at exploring the phenomenon of primary school overweight and obese children (6-10 years old) collecting teachers, parents and health professionals' perceptions during focus groups. The participants highlighted several aspects of obesity prevention and how to tackle the facilitating factors. However, the focus groups also represented a chance for parents, teachers, and health professionals to meet in a new and proactive scenario, aiming for consensus and collaboration. The organisation of the focus groups and the focus groups themselves was, for the participants and the researchers, a first step into a participatory research project focused on co-creating educational interventions for promoting healthy lifestyles and disease prevention (40). The results highlighted themes concerning the responsibility of the child's health and eating habits, stigma and prejudice, and lastly, collecting possible interventions for health promotion.

The child health lifestyle was a complex issue, balloting responsibilities from school to families in a continuous rebound in which one perceives the individual's impotence (parent or teacher) and the loneliness to deal with the problem adequately. This interplay between families and schools outlined a punctual discourse regarding contemporary topics like modern family management, family habits and children's space to play (41). Although the children's diet issue seemed felt more by teachers, even with heavy indirect 'judgments' on families, parents' awareness increased throughout focus groups, and consensus was reached on potential interventions.

Parents who recognise excess weight in their children as a health risk may be more motivated to encourage healthy behaviour change than parents who do not. According to a cross-country European study, parents need more awareness regarding their children's weight to avoid the problem being ignored, as it does not exist for them (42). Even parents who realise they have an obese child and recognise this condition as a health risk may view it as a temporary problem and not realise that obese children are more likely to become obese adults (43). Considering this, it is essential to increase parents' knowledge and awareness of the risks associated with the development of overweight/obesity and its adverse conditions, involving them in health promotion interventions and encouraging them to adopt healthy lifestyles. Parents can help prevent their children's obesity only if they feel motivated (because they appreciate the health risks), know what to do (because they are informed about healthy eating and exercise habits) and understand that their child is at risk (because they know obesity when they see it).

Our study revealed the complexity of the topic and uncovered new elements, such as the subtheme about the environment in which children live (architectural

and societal changes) and how this affects their attitudes and opportunities for physical activities and movement. This aspect was fundamental during the pandemic, increasing European child obesity (43). Health promotion interventions for the prevention of obesity must, however, modify the characteristics of the obesogenic environment of industrialised societies and must necessarily be supported by national and regional nutritional prevention policies that act on different environments like schools, workplaces and communities (19). In addition, the subtheme related to eating habits, in line with what emerged in the literature, highlighted habits and behaviours such as the consumption of high-calorie food during the school break and the habit of skipping breakfast. This is a starting point for more profound reflections regarding how children are educated about food.

Participants agreed on how obesity affects the child's physical and psychosocial health. Teachers stated that the psychological aspect of obesity is underestimated, and they highlighted the need to listen more to children. Therefore, they invited them to pay more attention to the children, their feelings, and their discomfort. Obese or overweight children are more likely to experience psychological discomfort (45), mainly due to negative reviews and bullying that they may suffer from peers (46). Because of their difficulty performing exercises during physical education hours, overweight or obese children are often subjected to the prejudice of companions, creating intense discomfort (47). The fear of facing others and their judgement can lead to more isolation and sedentary behaviour, increasing obesity and the generation of negative loops for the healthy psychological development of the child. In addition, it emerges that even teachers can consider the weight of the child an added concern when seeing evident fatigue after motor activity. For these reasons, the student may want to stop playing sports. On the other hand, from the statements of some parents relating to their personal experience of obesity and overweight, there is a memory of psychological solid condition, which in some instances inevitably leads to wrong attitudes of refusal of food. However, overweight children might find pleasure in physical activities if these are offered as motor games rather than traditional sports practices like soccer (48).

In this study, teachers expressed a high level of frustration with the school system and with their relationships. While schools are great places for nutrition education, they need more support from the organization and society to implement effective initiatives (49). Teachers found it challenging to connect with parents, especially those with overweight or obese children, hindering their efforts to improve health education. Despite this initial tension, both teachers and parents made efforts to collaborate during focus groups. This emphasizes the importance of a shared approach involving teachers, parents, and health workers in designing, implementing, and monitoring educational interventions in schools. To promote targeted behaviours, parents should be engaged through educational materials, family homework assignments, and school meetings or events aimed at changing the home environment (50).

Multicomponent interventions, as our study has shown, are highly effective in preventing obesity, especially when they are sustainable over time and implemented in a multidisciplinary context (51). Schools, being essential channels for health promotion, are key in preventing obesity when the educational context is oriented towards promoting physical education and healthy food choices through permanent curricular activities. Our study demonstrates that schools can effectively identify health behaviours and carry out interventions to prevent obesity with a multiparticipant approach. The active participation and contributions of teachers, parents, and health professionals, as evidenced in our focus groups, led to a consensus on different possible strategies and interventions. This collaborative effort was further advanced with additional meetings and a presentation of a planned training on healthy eating habits for parents and teachers, supervised by health professionals from the same area where the study was conducted.

Furthermore, school nutrition education programs must not be limited to classroom teaching activities alone, but they should engage both schools and families in culturally appropriate ways. In addition, health professionals like school or community nurses and nutrition and sports experts should be actively engaged (and empowered) to support parents (and children) with the knowledge and skills necessary to

make adequate decisions regarding their health (52). Therefore, programs should offer the environment, services, and support necessary to develop and maintain positive and healthy behaviours. They include nutrition education, health services, counselling, social services, psychological support, integration with other community activities, tailored physical education, nutrition services and staff training (53, 28).

Study limitations

The aim of this study was to develop a participatory research project. The first step involved collecting the experiences of groups of participants in X. Therefore, the findings cannot be generalized to other individuals, although efforts were made to maximize the diversity of participants. However, this study is one of the few to involve parents, teachers, and health professionals in focus groups on child obesity prevention. The second step of the study intended to engage participants in planning and designing educational interventions. Unfortunately, this was not implemented due to time constraints and conflicting schedules. It's important to note that the study did not include the children's voices as crucial participants.

Conclusion

The issue of child obesity is a significant and urgent health concern worldwide. This research finding highlights the importance of active involvement and collaboration among all parties involved in preventing overweight or obesity in children. To implement a comprehensive intervention in primary schools, it is essential to reach an agreement among parents, teachers, and health professionals. Collaborative approaches are crucial, involving active listening to parents' and children's needs, taking into consideration teachers' and experts' concerns, and so leading to practical tailoring and refinement of interventions.

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