Physical activity is not play: perceptions of children and parents from deprived areas

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Abstract

Aims To explore the perceptions of primary school aged children (n=9) and parents (n=21) from areas of socioeconomic deprivation in New Zealand in order to determine the factors which influence healthy and overweight children’s after school activities.

Method We held focus groups with children, utilising photo-voice prompts for discussion. Focus groups and semi-structured interviews were also conducted with parents. Content analysis of data was undertaken.

Results Both children and parents described physical activity and play as different constructs; physical activity was considered as an organised activity and play was identified as fun. Parents perceived that time, money and transport were all barriers to children participating in physical activities after school. Parents explained that children’s enjoyment of a particular activity as well as self-esteem influenced whether or not children participated in physical activity. Community support and communication were also identified as important in creating safer communities and places to play for children.

Conclusion When developing after school community activity programmes, the emphasis should be on active play rather than physical activity.

Overweight and obesity in children is a global concern. Consequences of childhood obesity include developing hypertension, dyslipidaemia, chronic inflammation, increased blood clotting, hyperinsulinaemia, Type II diabetes and glucose intolerance. Obesity can result from low physical activity and/or high levels of sedentary behaviour.

Current recommendations suggest that children should participate in a minimum of 60 minutes moderate-vigorous physical activity and a maximum two hours of recreational screen time activities per day.

Children living in areas of socioeconomic deprivation have higher rates of obesity than children in more affluent communities.

While there is no evidence to suggest that children from areas of deprivation engage in less daily physical activity than children from higher socioeconomic backgrounds, there is evidence that these children participate in more sedentary behaviours than their more affluent peers.

Interventions generally aim to increase physical activity levels, although these have demonstrated variable success. In order to successfully implement after school activity programmes in areas of socioeconomic deprivation, it is important to
understand the perceptions of children and parents around the barriers to and facilitators of physical activity.

Current research that has focused on children’s engagement in physical activity from deprived areas suggests that social disorder and lower neighbourhood safety are strongly linked with decreased physical activity.¹⁰

Studies have shown that body awareness, which manifests as self-consciousness in overweight children,⁸ may be a prime reason for overweight children’s low participation levels in physical activity and higher engagement with sedentary activities. These factors have not been explored in detail, especially in deprived areas in New Zealand where little work has been carried out on children’s perceptions of their physical and sedentary behaviours.

The purpose of this study was to determine which factors influence children from areas of socioeconomic deprivation to engage in after school activities. Findings will provide a basis for developing future after school physical activity programmes in these areas.

**Method**

Nine children (age range ~8–12 years old) and 21 parents (age range ~ 31–43 years old) participated in the study. Participants were recruited from a government subsidized school-holiday programme (9 parents and 9 children) and intermediate schools (12 parents) in South Auckland (80% response rate). South Auckland encompasses the socioeconomically deprived areas of Manukau and has a relatively high proportion of Maori (17%) and Polynesian (25%) families, with just under half of the population identified as New Zealand European and Asian (15%).¹¹

Of the 23 eligible schools (intermediate years, state, coed[ucational], and low decile) in the Manukau region, 14 schools were randomly selected. Decile rating for each school was either 1 or 2. Decile rating (1–10) indicates the extent to which the school draws its students from low to high socioeconomic communities. Decile 1 includes the schools with the highest and Decile 10 the lowest proportion of students from low socioeconomic communities.¹²

Once schools and holiday-programme centre were randomly selected, the principal of the school and manager of the centre were emailed information regarding the study. Consent to access the schools and holiday programmes to recruit participants was provided by school principals and holiday-programme centre management.

An information pack and letters inviting children and parents to participate in the study were sent home with children. Informed consent was obtained from parents and assent from children to participate in focus groups. Parents also consented (and children assented) for their children’s height and weight to be measured. A purposeful sample of convenience was used; those who agreed to participate were selected. Ethics approval was obtained by AUT University’s Ethics Committee. Participant characteristics are presented in Table 1.
Table 1. Participants’ characteristics in means ± standard deviation (SD) and percentages

<table>
<thead>
<tr>
<th>Participant characteristics</th>
<th>Children (n=9)</th>
<th>Parents (n=21)</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td>9.3±1.2</td>
<td>37±5.6</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>140.9±9.7</td>
<td>–</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>36.8±11.9</td>
<td>–</td>
</tr>
<tr>
<td>BMI</td>
<td>17.8±3.9</td>
<td>–</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>67%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Female</td>
<td>33%</td>
<td>90.5%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZ European</td>
<td>52%</td>
<td></td>
</tr>
<tr>
<td>Pacific Island</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Maori</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>European Other</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>3%</td>
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</tr>
</tbody>
</table>

Children’s height and weight were measured using a portable stadiometer (Design No. 1013522, Surgical and Medical Products, Seven Hills, Australia) and digital scales (Model Seca 770, Seca, Hamburg, Germany) according to the ISAK protocols (International Society for the Advancement of Kinanthropometry). Body mass index (BMI) was calculated as weight (kg) divided by squared height (m^2) and, using international BMI cutoffs, children were categorised into overweight and healthy weight groups. Both children’s focus groups were held at the holiday-programme centre. Focus groups were mixed gender but children were separated into overweight (four children) and healthy weight groups (five children). Children remained unaware of the focus group segregation. During focus groups, children were asked to discuss their perceived barriers and facilitators to participation in physical and sedentary activities after school.

During focus groups a “photovoice” approach was utilised to ensure data trustworthiness. Prior to each focus group, children were given disposable cameras to photograph places where they were active or played. They were instructed not to photograph people or events that would jeopardise their safety and only the activity and/or the place the activity was held. All children’s photographs were printed prior to each focus group.

Children were asked to describe their photographs and explain to the researcher their meaning. We expected the children to be valid and reliable informants as they were over the age of 7.

One parent focus group (seven participants) was held at the schools and the remaining parents were interviewed over the phone. Nine of the parents were associated with the child participants. Parents were asked to comment on their perceived facilitators and barriers of their child’s participation in physical and sedentary activities after school and any solutions to the barriers encountered.

Interviews and focus groups were audio recorded and transcribed by the researcher (AC). Children’s data were grouped according to their body size. A content analysis of the transcripts was undertaken with common statements coded and categorised. The different views of overweight children, healthy weight children and parents were reported separately. Categories were cross checked for credibility by the other two authors.

Results

Data were analysed in relation to the factors which influence children’s after school physical activity behaviours and the solutions to increasing such activity. The categories identified are presented in Figure 1. Participants’ quotes are presented in Table 2.
Parents recognised the importance of making physical activity fun for children to ensure their continued engagement. If their child did not feel the activity was fun, or if their child’s self-esteem was affected because they were unable to keep up with their peers, that child would be less willing to engage in physical activity.

Many parent comments also illustrated the importance, as they perceived it, of encouraging “the right attitude” rather than “the right aptitude” to facilitate their child’s engagement in physical activities.

Most children identified that fun was the main reason for engaging in physical activities. Children emphasised the enjoyment of the adrenaline rush and speed (e.g. bouncing high on a trampoline or going fast on a bike) when moving their bodies. However, for healthy weight children, competing was important and was in fact linked to their self-esteem. These children perceived themselves to be “good at the activities” they participated in and able to succeed in a competitive environment.

In this study participants generally perceived physical activity and play differently. Although participants recognised that both physical activity and play involved being active, physical activity was seen as a structured activity that should be undertaken for a certain time period every day, whereas play was seen as an unstructured activity that involved having fun.
### Table 2 Perceptions on children’s physical and sedentary activities: parent and children quotes

<table>
<thead>
<tr>
<th>Categories</th>
<th>Parent</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fun</strong></td>
<td>“… (their child will participate in) whatever’s fun (for them) at the time…”</td>
<td>“… cos most of the time I win.”</td>
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<tr>
<td></td>
<td>“…having the right attitude and letting the kids enjoy what they are doing rather than the competitive side like winning”</td>
<td>(healthy weight child)</td>
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<td></td>
<td>“When I jump I go really high.”</td>
<td>“Cos it’s fun when you go fast”</td>
</tr>
<tr>
<td><strong>Physical Activity vs Play</strong></td>
<td>“(Physical activity means) …something that you do for a minimum of twenty minutes at a time…”</td>
<td>“(Physical activity means) um anything that gets your heart rate going.”</td>
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<td></td>
<td>“(Play means) probably when they go outside and have a water gun fight, play tag.”</td>
<td>“(Play means) …just have a little bit of, just have fun I guess…your friends are involved”</td>
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<tr>
<td><strong>Access to After School Activities</strong></td>
<td>“…money is a barrier…”</td>
<td>“My mum works most of the time…”</td>
</tr>
<tr>
<td></td>
<td>“…too much money…”</td>
<td>“…It’s just too far away…”</td>
</tr>
<tr>
<td></td>
<td>“…the major one (barrier) would be working with me…”</td>
<td>“Cos we are split and in that situation it’s really hard…”</td>
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<td></td>
<td>“…I don’t want them walking to school and they have to cross a really busy road…”</td>
<td>“…I don’t want them walking to school and they have to cross a really busy road…”</td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td>“…social interaction as well…always been outgoing and like talking to people…”</td>
<td>“Not really cos there’s no one to play with.” (overweight child)</td>
</tr>
<tr>
<td></td>
<td>“…enjoyable because we (the child’s parents) are there…”</td>
<td>“(I’d like to) play with my dad more…cos he doesn’t get home till like six thirty.” (overweight child)</td>
</tr>
<tr>
<td><strong>Community Communication</strong></td>
<td>“… communication between the school and parents can help…to raise awareness and encourage them to participate because maybe they just don’t know what’s going on”</td>
<td></td>
</tr>
<tr>
<td><strong>Improved Communication</strong></td>
<td>“…having good communication with your neighbours and knowing each other”</td>
<td></td>
</tr>
<tr>
<td><strong>Free/low Cost Programmes</strong></td>
<td>“there are a lot of parents… (who will) take credit for the school and achievements without putting in the time and effort”</td>
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</tbody>
</table>

For children play was not just about ‘fun activities’ but also involved others, particularly friends. The perception that physical activity is something structured (in order to be beneficial) seemed to distance participants from engagement. There was a strong perception that physical activity was “good for you”, rather than “being fun”, and this perception seemed to be a barrier to children becoming involved in physical activity.
All participants commented that cost was a barrier to physical activity. For parents on limited incomes, competing demands (such as food and shelter) were a priority over structured after school activities. The high cost of structured after school physical activities prevented most parents from enrolling their children into these activities. Money constraints, rather than any unwillingness to engage in structured after school activity, was the main barrier.

Free structured after school activities were usually held at times when parents were working. All parents commented on work commitments (whether both parents were working or they were a single parent) impacting on their ability to safely transport children to and from structured after school activities.

Children tended to agree with their parents that work commitments were a major barrier. Many parents felt it was unsafe for their child to walk or cycle to after school activities due to built environment risks, including busy roads and distance to destination. Children likewise recognised safety and distance as barriers to active transport. Parents preferred to drive their children to their structured after school activities, however this was conditional on work commitments. Further discussions revealed that, for these families, there was no way of overcoming this barrier.

Social support influenced children’s participation in after school physical activities. Children who reportedly engaged in less physical activity or sport were more likely to engage in sedentary activities, including TV watching, playing play station, “Lego” and “dolls”. These children also reported not having family members to play with (either sibling or parent) because they were a single child or their parent(s) worked and it was these children who were more likely to be overweight.

Increased parental or family involvement seemed to facilitate participation in physical activity and parents were aware their involvement was both important and added enjoyment. Parents discussed the physical and social benefits of engagement in physical activities not only for the child, but the whole family.

It was evident from the data that community connectedness was perceived by parents as the factor most likely to increase children’s participation in after school physical activity. Many parents commented that improving communication between the school and parents through newsletters, email, “one-on-one” meetings and having important messages translated in languages spoken throughout the community would all increase community connectedness.

Communication was perceived as crucial for creating safer communities and enabling parents to trust others to care for their children. Parents discussed having a “neighbourhood support coordinator” who would email important updates to all parents in the neighbourhood. Neighbours could also communicate important information to households without computers. Parents believed increased communication would help connect families and parents in the neighbourhood, and enable car pooling to structured after school activities and play dates.

Many parents also commented on the importance of communication between school and parents to ensure safer communities. Some parents discussed that receiving newsletters from schools informing them of “stranger danger” was a beneficial strategy to reinforce safety in the neighbourhood.
Parents discussed the importance of free or low-cost programmes to enable more families to participate. Most parents felt that community support and involvement were necessary to keep the cost of the programmes to a minimum. Parents believed that some members of the community would be willing to facilitate the programmes weekly, but they understood that not all parents would be in a position to volunteer.

**Discussion**

For children and parents physical activity was seen as a ‘structured’ activity, whilst play was considered as fun. A sense of enjoyment encouraged children’s engagement in activities, structured or otherwise, and was enhanced by the presence of friends.

Our results agree with others who found that games and unstructured activities are considered more exciting or “fun” compared to structured activities and a primary motivator to participate.16

Although children are more likely to participate in activities they perceive as “fun”, many interventions to date have tended to include structured exercises with variable success.9 While interventions focusing on active play have proved successful at increasing physical activity,17 practitioners do not view play as physically demanding or able to provide children with the same benefits of structured exercise.

Nonetheless, children have been found to engage with more moderate to vigorous physical activity from active play during recess than from structured exercise in physical education classes.17 Therefore, a focus on active play may be just as, if not more, beneficial in increasing children’s daily physical activity levels.

Consistent with previous studies, cost, timing of activities and safety were the main barriers preventing children’s participation in after-school structured activities.18,19 These barriers were compounded by parents’ busy work schedules, and therefore ability to transport their children to and from activities, and children not able to transport themselves due to concerns around safety of the neighbourhood. Safe access to spaces to play also impacts on where children play.

Children in socioeconomically deprived neighbourhoods report playing in friends’ backyards, whereas children from more affluent neighbourhoods report playing in parks / playgrounds.20 This can be explained by children in socio-economically deprived areas having to travel two and a half times the distance to parks / playgrounds than those children living in less deprived areas.20

Offering supervised school playgrounds for children to play in after school and during weekends may provide a possible solution to concerns around safe access.21 Providing a supervised playground has successfully increased children’s physical activity levels,21 however the sustainability and feasibility of paying supervisors needs to be considered.

The current study found that supportive neighbourhood environments are required to overcome the barriers of cost and safety.22 Parents believed that afterschool programmes should be community based and supported by community residents and schools to ensure programme sustainability and a positive community environment.

Good communication was seen as key to achieving this and the use of newsletters, email notifications and meetings with the community and school was seen as a way of
promoting an awareness of safety issues within the community. Consultation with communities has been shown to be effective in promoting safety and trust, essential when developing community programmes. Lack of engagement with the wider community could explain the lower success rate of some children’s activity programmes.

Family support was highlighted as a factor that influenced participation in physical activity in this study. Children whose families members who engaged in playing games with them were more physically active and tended to be in the healthy weight range compared to those children who were overweight. Factors such as the importance parents attach to outdoor play, role modelling and parental encouragement are positively correlated with children’s participation in outdoor physical activity.

Research around health promotion and intervention in the area of childhood obesity, where physical activity is a component, has shown that a family centred approach is more likely to be effective in the long term. Parents in this study viewed “participation” and “fun” as more important than “competition” and “winning” when encouraging children’s engagement in physical activity.

Earlier studies have found that feeling good and having fun were more important to parents and children than winning and medals and furthermore pursuits were more likely to be enjoyable when parents encouraged experimentation with many different activities rather than pressuring their child to compete in one activity.

There are many children’s physical activity interventions which focus on one pursuit, for example, soccer, aerobics, walking groups or swimming. These interventions are likely not to have provided participants with the opportunity to explore different activities and discover the physical activity they most enjoy or are at which they are most successful. Therefore, activity programmes that include a wide selection of games, activities and sports are more likely to encourage participation.

While overweight children identified the presence of friends as being a primary motivator to participating in physical activity, for healthy weight children winning is the motivation. Healthy weight children appeared to have higher self-esteem and perceived themselves as being good at their activities.

Conversely, overweight children did not discuss competition or winning. In previous studies, overweight children reported body-consciousness and sweating during exercise, with muscle soreness after physical activities and inability to perform movements as ably as their peers.

Overweight children have often reported feelings of being stigmatized; although they wanted to play, they believed their peers did not want to play with them. These feelings further contribute to low self-esteem levels. As self-esteem and self-efficacy have been positively associated with children’s physical activity, it would seem that exclusion, body image issues and functional inability impair overweight children in their desire to engage in physical activities.

Long term interventions need to focus on inclusion and participation, tailored to the child’s ability and be mindful of weight discrimination against overweight children.
There are limitations to this study. First, the sample size of each group was small and participants’ views may therefore not adequately represent the views of others in the Auckland area. This study does, however, provide a ‘snapshot’ of perceptions that may be transferred to other groups. Secondly, the majority of parents participating in this study were mothers and therefore results reflect the perceptions of mothers to a greater extent than the perceptions of fathers.

Competing interests: Nil.

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References: