

ORIGINAL ARTICLE

Physical activity and overweight: Experiences of children and youth in a Norwegian project

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Abstract

Physiotherapists have paid great attention to the problems associated with overweight among children and youth. Clinicians have started programs to support the target group in their efforts to become more physically active, thus preventing such problems from arising. The aim of the study has been to investigate the experiences of the participants in these programs. A phenomenological research design was chosen. Fourteen children and youth in one of these programs volunteered as informants. Interviews were conducted using a semi-structured interview guide. The interviews were interpreted using a multistep thematic analysis model. The participants considered the inclusion of a friend in the group as one of their requirements for participating in the program. Most of the participants enjoyed and coped with the physical activities, although a few disliked some of the ball games. The participants concluded that their endurance had improved and they had become physically stronger. Most of them were also engaged in a variety of activities outside the program. The children and youth asserted that they had benefited from participating in this physical activity program, which they experienced as enjoyable. The best long-term result is probably achieved when child, parents, school, voluntary organizations and community collaborate in order to strengthen the physical and social skills of children.

Key words: children, experiences, overweight, physical activity program, youth

Introduction

Today, many people are less physically active in their daily lives than was the case for earlier generations, and the problems associated with overweight are increasing both globally and nationally. According to the Worldwatch Institute, more than 1.9 billion people worldwide were overweight in 2010. A survey of statistics in 177 countries showed 38% of adults – those 15 years or older – were overweight. In India, 19% of adults were overweight, up from 14% in 2002. In Mexico, the figure has risen by 8 percentage points since 2002, while Brazil's is up by 7 points and the rate in the UK is up by 5 points. East Asia has seen a 4-point increase over the period. The USA leads all industrialized countries with 78.6% of the adult population overweight, although Micronesia and Polynesia top all countries. There, nearly 88% of the over-15 population is overweight (1).

In January 2010, Norwegian National Broadcasting announced that one out of eight children was

overweight (2). One of the underlying concerns is that growing children seem to be less physical active. If this tendency continues, one out of four children will be overweight by the age of 15. Because of the extent of these problems, many interventions are being prioritized by the public health authorities of Norway to help these children, and many physiotherapists and health personnel are engaged in this field both preventively and curatively. Their proposals focus on more physical activity and a healthier diet.

All children need to be physically active, playing with friends and grown-ups, in order to develop adequate physical skills and motor control. Most children are physically active; and a decrease in physical activity is first marked when the excess weight becomes a clinical problem. Accordingly, it seems to be of cardinal importance to stimulate children to play and to be physically active in order to prevent excessive overweight (3).

In order to avoid the need for intensive efforts and to establish healthy habits, many factors have to be considered when preventive and curative programs are developed. Several reports (4–8) have highlighted that children more easily engage in physical activities if they consider them meaningful, if they find the experience enjoyable and if they have a sense of coping. Engagement in physical activity also leads to a development of movement patterns in the children, and they learn more about the functioning of their body (9). In addition, during physical activity, most people become better acquainted with their personal levels of endurance and tolerance. Other factors related to project success have been identified by Säfvenbom & Sandahl (10), who assert that many children need to feel engagement in the activity, otherwise they will be easily bored and quit the program.

Children and grown-ups who are already overweight often feel that they deviate from the accepted bodily ideals, and that they are less valued by society. As a result, they find it difficult to join ordinary sports clubs where the ideals are the athletic body and a high level of competition. Nevertheless, it is possible to break the negative cycles of physical inactivity, overweight and depression, as described in several studies (11–14).

Physical activity programs for children with weight problems have been developed in many parts of the Norway. Their main goal is to prevent the children from becoming physically passive. However, little is known about how children and youth experience these programs. The objective of this study is to further investigate their experiences, particularly with regard to the following issues questions: Do they consider these programs meaningful? Do they enjoy the program and cope with the activities? Are they physically active in their everyday life?

Method

Background information

In the autumn of 2004, a national sports club started a physical activity program twice a week for youth and children who were overweight. No referral was needed. The program lasted 1 h and was either indoors or outdoors, and is still one of the on-going activities of the club. It is financed by the County Recreation Department so the membership fee is low. The instructors are physiotherapists and physiotherapy students. The aim is to motivate those at risk of overweight to be more physically active and to provide positive experiences of enjoyment and success among the program participants. Furthermore, it is hoped that meaningful physical activity will

strengthen the participant's self-confidence, and thus inspire them to be more physically active in everyday life, for example in gym class and in leisure activities.

Method. Interview was chosen as the preferred method in this project since we wanted to get the children's stories about their experiences in this program. There were a number of practical and ethical matters to arrange. The director of the sport club was approached and agreed to host the proposed program. A study application was sent to the Norwegian Social Science Data Services (NSD), which accepted the project, and to the Regional Committee for Ethics in Health and Medical Science, which replied that the study could be carried out without their special permission. In addition, information about the study and the interview guide was sent by e-mail to all the parents and a parental information meeting was held. At the meeting, we collected the written consent forms of the parents, as well as that of the director of the recreation centre. The parents were informed that they might be present during the interviews.

Sampling strategies

The program started each autumn and had been running for 4–5 months when the study began. Fourteen children and youth between 8 and 16 years of age volunteered to be informants and share their experiences related to the program. The interviewing activity was quite popular, and no one declined to participate in the study. Their reasons for joining the program were quite similar: many were encouraged to go by health personnel and their parents, and some came after talking to friends and acquaintances. The children lived all over the city, and some had to travel by bus to attend the program twice a week. Most of the participants had attended the program twice a week for either one or two semesters.

Data collection

The three physiotherapists who were involved in the study, the two who ran the program and the project leader who was an observer, carried out one-on-one interviews with the 14 volunteers in quiet rooms in the sports centre shortly after the training activities of the day had finished. The physiotherapists were already on first-name terms with the participants, and they were trusted by both the young people and their parents. This relationship of trust was considered important and was probably one of the reasons why the young participants agreed to be interviewed about their experiences.

The questions in the interview guide focused on the experiences of the participants: Did they think the program was enjoyable; and if not, was there anything the participants would like to change in the organization of the program? In addition, the participants were asked whether they were able to cope with the activities; and whether they could indicate something that was easier to do now than when they first joined the program. Other questions focused on whether they felt comfortable in the group and enjoyed playing games together. With regard to outside activities, they were asked whether they participated in gym at school, and what kind of activities they enjoyed in their spare time.

The participants were encouraged to describe situations or give examples of what had happened during the training. We asked them to tell us about the different games and activities, and what they were doing in these activities. This was important for us to get specific examples since children from 8 to 16 years of age are not used to speaking about their experiences in an abstract manner (15). The participants were spontaneous, and spoke quite openly, and the atmosphere was pleasant. A digital recorder was used during the interviews, and the sound files were later saved on the computer of the project leader.

Data analysis

The 14 interviews were transcribed from sound files to text. Giorgi (16) was used in the analyses. He recommends his method for “raw data consisting of concrete descriptions of specific experiences”. In the analyses of the transcriptions, the four steps elaborated by Giorgi were followed: getting an impression of the interviews as a whole, identifying the meaningful parts, abstracting the meaning of the content and compressing this material (16). In this study, the following factors proved to be meaningful for the program participants: the enjoyment or non-enjoyment of the physical activities, the ability to cope with the movements, and the presence of friends in the program and in activities outside the program. Parents and animals were also mentioned as important companions.

Examples from the analyses. The first sets of categories that emerge in the interviews were: the enjoyment or non-enjoyment of the physical activities, the ability to cope with the movements, and the presence of friends. By abstracting the content of the category “enjoyment and non-enjoyment of the activities”, the following subcategories emerged: *mastering*, *exploration* and *challenges*.

- (1) Example from the analyses of the category showing the enjoyment of mastering: “I have

discovered how strong I really am. In gym my reactions are quicker, and in volleyball I can nearly jumped to the ceiling without using much energy.”

- (2) Example showing the enjoyment of exploring something the young boy had not tried before: “I like the rowing machine. First you grab it, then you pull yourself away, and then you glide back again.”
- (3) Example showing that the level of challenge is of importance and may make the child dislike the activity: “I don’t want to join my friends who play football or skating in regular clubs; I cannot cope. It’s more fun for me in this activity program.”

The analyzed material is presented by using the developed categories as headlines. Some statements from the children illustrate the content. The last part of the analyses is the more theoretical understanding of the material (17), which is presented in the discussion chapter.

Discussing the method

The role of the interviewers is of importance in every study. Except for the researcher, the two other interviewers were responsible for running the activity program. Could that fact make the children less spontaneous so that they would not come forward with their true opinions? We experienced that being interviewed was a popular activity, and we had to promise to talk to the children as soon as possible. The parents had previously accepted the questions asked by the interviewers, and all children were allowed to quit the program if they disliked it.

The researchers’ role is of importance. They have developed the interview guide, made the analyses and chosen the theoretical foundation of the study; accordingly, they will always be present in the study. One of their main roles is to try to ensure the communicative validity of the study by explaining as thoroughly as possible the methodological considerations taken in every step of the study until the main conclusion is drawn. In many qualitative studies, the result and the discussion chapter is not separated since the discussion in many ways is the theoretical understanding of the material (17). Although they are separated as in this article, both chapters are parts of the analyses and the abstraction of the material.

Outcome

Friendship and the social set

Most of the informants enjoyed being in this program and liked many of the activities. They stressed that

this enjoyment was closely linked to their friendship with some of the other group members, as evident in the following statements:

I like it because it is very social.

I like it because my friend is here; without her, I would not have come.

I have made new friends and learned something new.

I like it here because it is fun, and I have something to do when other children are training in the sports clubs.

I have friends here, and the activities are fun.

Nevertheless, some social problems also occurred in this group, such as the exclusion of newcomers by some of the girls, the teasing of younger children by older ones, and the attention-seeking behavior of some children that disturbed the group. Some of the older children were also frustrated because they had to show consideration for the smaller children during ball games. These tensions are evident in some of their statements:

I like it most of the time, but sometimes some of the other boys tease us; my cousin, in particular, is in an exposed position.

Some of the others are not nice. One of the boys often yells loudly at me and I often get so frightened that my back starts aching.

A few of the other girls are very self-centered; they will not accept others and include them in their group. Luckily, I have my own friend.

There is one thing I would complain about. The older kids are not always able to train in the way I think they should be able to do, because there are so many young children here.

Enjoyment and exploration

Most of the participants enjoyed some of the ball-games. Cannonball was the most popular activity but some of the others were also mentioned.

I like cannonball.

Handball is fun, but not all the other ball games.

It is most fun when we are throwing balls at cones, like in bowling.

The majority of the informants enjoyed the treadmill and other strength training apparatuses. Since team play was not expected here, they were allowed to use as much strength as they wanted.

I like the rowing machine. First you grab it, then you pull yourself away, and then you glide back again.

I like the treadmill and all the strength training apparatuses.

I love to exercise with weights and strength training apparatuses especially, and I like some of the ball games.

In addition to these activities, some of the informants said that they loved to participate in the dance groups and to play outdoors. The informants also reported that the instructors were engaged and enthusiastic and this motivated them. In addition, they gave credit to the instructors for coming up with wide variety of activities.

Coping and challenges

Though ball activities were popular, some of the participants did not enjoy those games where the ball was kicked or thrown *roughly* at them. They were afraid of the ball.

I'm not interested in ball games. I'm afraid of the ball. Earlier, when I tried to be a football keeper, my brother always hit me with the ball in a really painful way.

I don't like ball games. It's no fun to play tag with a ball. I'm afraid to play football. Some of the boys play so roughly.

The majority of informants coped with some of the activities that were introduced to them, though some of the exercises were considered challenging. Some of participants claimed that they had improved their skills in the ball games and in skipping. In particular, they reported that their endurance had improved; they could run faster and farther than they could before. Some of them commented that they felt physically stronger, had achieved better body contact and had discovered how strong they really were.

I have discovered how strong I really am. In gym my reactions are quicker, and in volleyball I can nearly jumped to the ceiling without using much energy.

However, a few informants mentioned that they had no intention of participating in handball, football and skating outside the program, because the competition in open sports groups was intense; they were not able to keep up with more athletic children and youths.

I started playing handball in a sports club, but I had to quit because they were cleverer than me.

I don't want to join my friends who play football or skating in regular clubs; I cannot cope. It's more fun for me in this activity program.

The majority of informants spontaneously mentioned that they enjoyed gym at school, since their teachers chose a variety of activities. However, they did not like all the activities. Some of the informants also mentioned that what they did in gym was often more difficult than the activities they did in the program. One of them tried to sum up their feelings, saying that "Gym is always OK when you like the chosen activities."

The children's bodily experiences in daily life

All informants were engaged in some physical activities in their leisure time, and most of these activities had a social aspect. They were either walking or playing outdoors with friends, or they enjoyed swimming, horseback riding or training in dance groups. Some of them took care of animals such as dogs or horses.

To be with friends is fun. We spend time walking and talking and we go to the cinema often. We like the same activities.

I walk my two dogs every evening.

It's great to be with the horses at the stable.

Some of the informants played the piano, guitar or some cello, and some joined in role-plays. Only a small group mentioned that they used to spend many hours sitting at their computers.

Discussion

Friendship and the social set

Many of the informants stressed two reasons for participating in the program: the opportunity to become friends with others in the program and their personal satisfaction with the on-going activities. According to Feragen et al. (18), friendship is important for children and youth. Children who have friends view themselves more positively, and they are not as afraid of making mistakes or of taking the initiative. This is developmentally beneficial and may lead to further growth and development. These perspectives are supported by Säfvenbom & Sandahl (10), who have worked in the field of physical activities for young people. They also claim that, in order to experience interactions as meaningful, the interactions must be relevant to the person's life situation and in accordance with his expectations related to the situation. Our study confirmed that the participants enjoyed most of the activities in which they engaged, since

they all had at least one friend in the group, and they enjoyed many of the on-going activities. However, some of the group members described some social problems in the program. If we were to succeed in promoting growth and positive development all the participants, it was important to deal with these problems by actively creating good social relations in the group. According to Feragen et al. (18), negative relations to peers are often linked to a negative self-image, loneliness, social anxiety and rejection. A good friendship can lessen the impact of the negative, hurtful and upsetting remarks to which many children are subjected. Those who do not have such a friendship may have stronger emotional reactions to negative remarks from their peers. There are protective factors in friendship, which help rejected and shy children to develop resilience, and thus to be able to function satisfactorily in school and later in work life. According to Feragen et al. (18), the number of years that a child has lacked mutual friendship is a good predictor of loneliness and depression in early teens. In this program, some of the children spontaneously stressed that a good friendship lessened the impact of hurtful remarks, so underlining the role of friendship and an including social set is of greatest importance when starting such a program.

Enjoyment and exploration

Most of the participants enjoyed some of the activities, particularly some of the ball games, the dance group, the treadmill and the strength training apparatuses. All 14 informants coped with some of the activities that were introduced, though some of the exercises were considered challenging. Beneficial movement patterns are established when the child enjoys using his body in varied and challenging activities. Through repeated trial and error, the body control of the child is strengthened and the movements will gradually be automated (19). Increased movement control will also make the child feel more secure and able to take on new challenges, as well as increasing the level of enjoyment. In addition, the child will have more energy to use in other learning activities. In this way, the child will enter a positive reinforcement spiral. This was confirmed by many children in the program who reported that their skill in some of the ball games had improved, and that their endurance had increased and they could run farther and faster than when they first joined the group. However, some of them still had to continue the program, since three informants mentioned that they did not want to go to handball, football and skating outside the program, since the competition in these open sports groups was hard, and they were unable to compete with athletic children and youths.

Physiotherapists working with persons with eating disorders maintain that play is important since it promotes spontaneity and freedom of movement, as well as laughter and enjoyment (20). They consider an activity positive when the person looks forward to doing it, and when it gives the person energy, enjoyment and a sense of coping. In contrast, an activity may be negative when carried out compulsively and without enjoyment. Reynolds (21) maintained that exercise and movement may provide the person with important affective and cognitive experiences, and may stimulate his/her urge to explore the environment. Consequently, the person's attention and problem solving capability may improve. This link was evident in our informants who enjoyed the activities they already knew as well as explored new activities such as hip-hop dancing.

Coping and challenges

Though ball activities were popular, some of the participants did not enjoy these when the ball was kicked or thrown roughly at them; they were afraid of the ball. It is important that these children be given a learning program that suits them so that they may be able to participate in games with other children. Why is coping important? When a child is unable to cope and experiences constant failure, his enjoyment of movement will decrease. As a result, the child may avoid using his body in new physical activities unless he is sure he can cope, and consequently, he will often limit himself to situations in which he feels safe (18). Why is it socially important for children to cope with activities that others of their age are doing? Children who are competent in popular activities often have a high social status among their peers; often they are the ones who choose the activities and, it is accepted that they can make more blunders in play and physical activities than their peers. In contrast, the overweight children probably experienced a lower social status in physical activities in open sport groups.

The children's bodily experiences in daily life

Teachers play an important role as the leaders in school gym classes if these classes are to be beneficial for all children. Eleven of the informants spontaneously mentioned that they enjoyed gym at school; three did not mention it. Other children have had other experiences. Kiær Ørntoft & Madsen (12) interviewed 21 overweight children and youth who described the gym lessons as a weekly reminder of their inability to cope. Many of these children have tried to protect themselves from the humiliation associated with being less fit than the others by avoiding gym classes. However, it was found that when the

lessons were organized so as to avoid humiliating situations, gym was experienced more positively; the overweight children could find areas in which they felt capable, including throwing or receiving balls or goal keeping. The organization of lessons in a sensitive and thoughtful way may be far more effective than giving the overweight child excessive praise for his achievements, which may focus even more attention on the child's problem. Though we do not know the attitudes of the teachers of this group, most of them seemed to have organized the gym so that most of the children felt comfortable.

Engelsrud (22) stresses that the body is the main source of information available to people. If bodily experiences are neglected, a person loses an important basis for self-regulation. One consequence can be the inability to understand bodily reactions and thus a greater dependence on the assessments of others. Thus, the person's body may become an object not only for other people, but also for the person himself. In our study, this is evident in the youth who experienced that he was must stronger than he knew – when he discovered that he could nearly jump to the ceiling without using much energy. Ekerholt & Bergland (23) claim that people need to be empowered and to develop self-efficacy in order to cope with the challenges of life. In this process, increased bodily focus and awareness, as well as an understanding of the context in which reactions develop, may help them to understand more easily the signals of the body. This increased insight, in turn, gives rise to a feeling of control as well as relaxation, thereby promoting coping and empowerment. The present study confirmed that many of the children had changed in a positive way; they felt physically stronger and had achieved better body contact.

Conclusion and implications

The questions in his study are focusing on the experiences of the participants in a physical activity program.

The children and youth in this program enjoyed and coped with many of the activities and challenges they met. Many of them reported that they were able to run faster and further, and that they were physically stronger. Most of them also participated in physical and cultural activities in their leisure time. The participants underlined that it was important for them to have friends in the program and in their leisure time.

Such programs seemed to be experienced as positive when they contribute to the improvement of physical skills and self-confidence and help children believe that they are able to cope with challenges. Movements and activities are important for children

both at a physical, psychological and social level. Growing children need varied motor and social development in order to be able to engage in playing activities with other children at their age. To be overweight is viewed as problematic in our society. Problems associated with overweight have a ripple effect in people's lives (12–15). Since overweight people diverge considerably from the values and the ideals of beauty in today's society, and they often are blamed for having lost control of their body weight, there is a greater risk of meeting stigmatization. From this perspective, it is important to support children and youth who are at risk of developing overweight.

Valuable insight can be gained from the experiences of those with problems related to overweight who have tried to change their lives (23). If change is to be sustainable, inner motivation seems to be important. It is also necessary to focus on activities in which the users have the desire and strength to engage for some time. People at risk of becoming overweight need support. The best long-term results are achieved when child, parents, school, voluntary organizations and the community collaborate in order to achieve this common goal. A change in habits is a long-term process, and requires many years of follow-up (12).

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