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Obesity Prevention Opinions of School Stakeholders: A Qualitative Study

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ABSTRACT

BACKGROUND: In general, schools are an important setting to implement current recommendations for obesity prevention in children because the vast majority of children attend school. This study investigated the opinions of different school stakeholders on the feasibility and acceptability of current obesity prevention strategies that could be implemented in Swiss schools.

METHODS: Research methods were comprised of a qualitative study which included school directors, physical education teachers, catering staff, school nurses and health educators, parents of young adolescents, and young adolescents interviewed (N = 40) categorized into 6 focus groups. Open-ended questions were used to determine the participants' opinion regarding current obesity prevention recommendations, and healthy eating and physical activity promotion strategies.

RESULTS: All participants approved the implementation of nutritional standards for food and drinks sold in schools, but thought that increasing the attractiveness of healthy options was the best strategy to improve eating habits. Enjoying participation in physical activity classes or after-school activities was stressed. Participants suggested offering classes for all students with poor physical condition, independent of weight status. Stakeholders called for governmental support and global coordination of interventions balanced with providing schools with enough autonomy to adapt programs relevant to their individual circumstances. They recommended integrating all school stakeholders in obesity prevention initiatives, with special attention to students and local authorities.

CONCLUSIONS: Participants agreed that schools are a crucial setting to implement childhood obesity prevention strategies. They called on school stakeholders to join efforts aiming to encourage healthy behaviors and to support and reinforce parents' efforts by spreading consistent and coherent health messages.

Keywords: obesity; school-based prevention; qualitative research.

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Childhood obesity is a serious public health problem worldwide, including Switzerland. In 2002, among Swiss children 6 to 12 years of age, the prevalence of overweight reached 17% and 19%. The prevalence of childhood obesity in 2002 was 4%, which represented a 5-fold increase compared to 1980.[1] Important physical and psychological consequences,[2,3] enormous associated costs,[4] and difficulties encountered in the treatment of obesity clearly point toward the need for prevention as a public health focus.[5,6]

Multiple factors at the intra- and interpersonal, institutional, community, and societal levels contribute to the onset and maintenance of weight gain during childhood and adolescence.[7] To reverse obesity trends, preventive interventions need to be based on an ecological approach and take into account the multiple etiologies and ''system level'' contributions to childhood obesity. Particularly, educational and environmental strategies need to be developed in family and school contexts.[2,8,9]

To date, prevention programs have mostly focused on schools, as schools reach a majority of children and have long-term and in-depth contact with them. These school-based prevention programs have shown changes in behaviors, even if the impact on body weight or body fatness is less evident.[10,11] Published recommendations for prevention efforts aiming at promoting healthy eating habits and active lifestyle[12,13] are detailed in Table 1.

Schools encounter at least 2 barriers to implementing these recommendations: (1) the structure and schedule constraints and (2) the different views and perceptions of the different stakeholders (eg, teachers, students, school nurses, parents, or vendors). To increase success in the implementation of current guidelines, our study investigated the opinions of those different school stakeholders about the feasibility and acceptability of current obesity prevention strategies that could be implemented in Swiss schools.

METHODS

Study Population and Study Design

To obtain in-depth descriptions of the opinions, perceptions, motivations, and needs of the different stakeholders, a qualitative approach was chosen. Focus groups promote group interaction among participants as they query and explain themselves to each other, which offers valuable data through consensus and diversity and greater insight into why certain opinions are held.[14,15]

This study was conducted in the French-speaking part of Switzerland and was organized in 2 steps. In the first step, a total of 40 school representatives from 6 different stakeholders groups—(1) school directors, (2) physical education teachers, (3) catering staff, (4) school nurses and health educators, (5) parents of young adolescents (10-13 years old), and (6) young adolescents aged 10-11 years (2 focus groups for parents were conducted)—were called and specific issues were discussed. Directors, school nurses, and health educators were contacted using the list from the school administration of the canton. Interested directors helped recruit teachers, health educators, and adolescents. Associations of physical education teachers and parents were contacted to recruit participants. The number of participants in each focus group ranged from 4 to 10, and the characteristics of the participants are described in Table 2.

In the second step, 1 person of each of the previous focus groups (except for the young adolescent) took part in a final focus group aimed at discussing the results and deepening propositions.

Table 1. **Current Recommendations for Obesity Prevention in Schools (adapted from Refs 12,13)**

Schools should:

- Ensure that all school meals meet nutritional guidelines.
- Develop and implement nutritional standards for all competitive foods and beverages sold or served in schools.
- Change availability and access to both healthy and less healthy foods, pricing of foods and beverages, promotional programs to support healthful food choices.
- Ensure that all children and youth participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day.
- Expand opportunities for physical activity through physical education classes (moderate to vigorous activity for at least 50% of the class time), and extracurriculum activities.
- Promote after-school use of school facilities and walking- and biking-to-school programs.
- Enhance health curricula to devote adequate attention to nutrition, physical activity, reducing sedentary behaviors, and energy balance, and to include a behavioral skills focus.
- Develop, implement, and enforce school policies to create schools that are advertising-free to the greatest possible extent.
- Evaluate the impact of programs on competitive foods' nutritional value and availability, student dietary quality, revenues generated by food and beverage sales, academic performance, and classroom and social behavior.
- Involve school health services in obesity prevention efforts. Conduct annual assessments of each student's weight, height, and gender- and age-specific BMI percentile and make this information available to parents.

Table 2. **Characteristics of Focus Groups Participants (Part 1)**

No.	Focus Groups Participants	Number of Participants	Females	Males
1	School directors	6	1	5
2	Physical education teachers	5	1	4
3	Catering staff*	5	3	2
4	School nurses and health educators	5	4	1
5	Parents of young adolescents	4	4	0
6	Parents of young adolescents	5	4	1
7	Young adolescents 10-11 years old	10	5	5
Total		40	22	18

*Including persons linked to school cafeterias, namely a representative from a balanced eating label for cafeteria, an independent school cafeteria owner, a catering business owner, a marketing director, and a dietitian.

Description of the Focus Groups

The focus groups took place in a conference room of the university hospital or in schools, between November 2007 and January 2008. The principal investigator led the discussions in each of the focus groups and an observer took notes on the interactions. Discussions lasted an average of 90 minutes and were recorded. A small snack was served at the end of each focus group. Adolescents received a $15 gift certificate and a free lunch. All participants and adolescents' parents signed a consent form allowing the recording and assuring anonymity.

Focus Group Questions

A semistructured questionnaire guide was developed by the research team and used to ensure consistency between groups. Open-ended questions were primarily aimed at obtaining participants' opinions on the current recommendations for healthy eating and physical activity, on potential partners for obesity prevention, and possible negative effects of prevention programs. At the end of the discussion, they were asked about final advice or recommendations for the persons in charge to develop obesity prevention programs. The discussion sessions started with the following questions:

1. Strategies to promote healthy eating for students in schools are set at 2 levels: by either modifying the type of food and drinks offered in school or diffusing messages to modify students' behaviors. What do you think of these strategies?
2. Strategies to promote physical activity for students in schools are set at different levels: mandatory physical education classes, facultative after-school programs, transportation between school and home, or diffusion of messages to modify students' behaviors. What do you think of these strategies?
3. Which partners should be implicated in the implementation of those strategies? What is the role of each of them? More particularly, how do you envision the collaboration between the school and students and families?
4. Can you think of possible negative effects from an obesity prevention intervention? If yes, which ones?
5. What is your last advice or recommendations for the persons in charge of planning obesity prevention programs?

For the second part of the study, participants were invited to read a summary of the first part of the results that they received in advance. During the focus group, they were asked to react to those results.

Data Analysis

The recordings were anonymously transcribed verbatim. Narrative analysis was conducted based on grounded theory process, to create explanatory schemes based on the experiences of those who were involved with the subject of interest.[16] Transcripts were analyzed looking for conceptual similarities and differences and predominant and relevant themes. Themes were checked by the research team for reliability. Themes were then synthesized, classified, and analyzed to answer our predefined research questions. The analysis of the last focus group was based on notes and recorded discussion and aimed to discuss the results of the first part of the study. Citations used in this text were translated into English by the research team.

RESULTS

Participants' opinions regarding obesity prevention programs are detailed first, followed by perceived difficulties (Table 3), and successes regarding healthy eating, physical activity, and health promotion. Finally, participants offered suggestions for future prevention programs.

Prevention Programs

None of the participants reported a global approach for obesity prevention in their school, but in almost all of the schools, some initiative was in place (eg, healthy meal at the cafeteria, no vending machine, targeted events by health staff, etc). Participants felt the need for coordination and for a global governmental program with clear guidelines, supporting the development and implementation of prevention programs in every school.

> It's a shame, there are a lot of small things done here and there, finally, a lot of energy is lost …. It would be good to coordinate all that. (Physical education teacher)

Table 3. **Participants' Perceived Barriers**

Prevention programs	• Lack of support for prevention programs. • Lack of a clear priority for obesity prevention. • A lot of wasted energy by lack of coordination between initiatives. • Difficulty to define the school's role (compared to the parent's role) in obesity prevention.
Healthy eating	• Competitive offers inside and outside of the schools. • Higher price of healthy options. • Not enough time to eat. • Social pressures.
Physical activity	• Short duration of physical education classes. • Differences in physical condition between students in school or after-school activities. • Teasing by peers with poor physical condition discourages them. • Competition: very motivating or discouraging depending on ease and physical condition. • Overprotection from some parents: discouraging walking/biking to school or participation in physical activities. • Legal issues: liability in case of accident.
Health messages	• Adolescents' habits already well established. • Overbooked school curricula: difficult to implement more health classes.

For them, such a program should have the following characteristics: (1) take into account and give value to existing programs in schools, (2) be flexible enough to be adapted to local practices and social realities, (3) be planned in the long run and not be limited to one-time interventions, and (4) be simple.

> Give value to existing programs like cooking classes, sports, etc. Give necessary resources for their development instead of creating new things again that you will be set against. (Health educator)

All participants underlined parents' key role in children's lifestyle habits. School staff emphasized that prevention programs in schools should not be a substitute to the parental educational role, but should be supportive of and reinforce the parental role. In addition, school staff particularly questioned if the school was an efficient way to reach parents. Barriers encountered by school staff included difficulties to mobilize parents for information sessions, concern about giving health messages to students in school that conflicts with parents' habits, and culture or tradition.

> I am not sure that school is the right place for this prevention. However, we can support it, for sure. (School director)

Programs should be integrated as much as possible into current curricula and implementation should include all stakeholders' participation, with special attention to key stakeholders like students and local authorities. All the participants expressed interest in being involved, at some level, in a prevention program and that their opinions be heard.

> I think that if they do such a project and ask students their opinion afterwards, it won't be respected. (Student)

School staff and parents noted the lack of adequate support (financial and human resources, premises, etc) and made clear that prevention programs could not be implemented without additional resources.

> It seems that good ideas are here, but there is a lack of financial or time support to do it. (Parent)

Healthy Eating Promotion

Despite the increasing efforts of school cafeterias to improve the quality of meals that are served, participants deplored the wide availability of alternative foods that competed with offering both inside (other foods at the school cafeteria, pastry sales during recess) and outside of school (fast-food restaurants, bakeries, or supermarkets). Participants also mentioned that healthy options are often more expensive than other food options.

> For lunch, students prefer to buy a pizza instead of going to the school cafeteria, so they spare 1 Swiss franc from what their parents give them. (School director)

Issues of lack of time to eat and social pressure from peers were raised by parents as barriers to healthy eating in schools.

> The food is very good . . . but the problem is that in 15 minutes, they must have finished eating, cleared out the table and be out of the school cafeteria. So children have no time to eat. (Parent)

> My kid loves carrots, but the problem is that he's been called ''the rabbit''. . . so. . .. (Parent)

Physical Activity Promotion

Even if Swiss regulations require 3 periods of physical education per week, physical education

teachers and parents noticed that the duration of physical education classes is shortened by travel time and that differences in physical condition between students make it difficult for teachers to adapt classes to each student. These physical condition differences were also seen as a source of teasing for some students.

> What we observe is that there are students who have a very high level and can do everything, and those who can't. There is no in-between. (Physical education teacher)

> I think that we do sport in school, but it is not really sport, because we don't sweat. (Student)

Participants' views of competition were mixed. Some believed that competition was very motivating for students with skills in sports, but others thought that it was discouraging for less athletic students. A majority of the participants, including parents, felt that some parents were overprotective of their children, discouraging them from walking or biking to school or to participate in school physical activities or to play outdoors. Legal issues related to liability in case of an accident emerged also as a worry for a majority of participants.

Health Promotion Messages

School staff found it difficult to have an impact on adolescents' lifestyle, as they have the impression that habits are already well established. All participants agreed, however, on the need for health messages in school to support education efforts from parents.

> I can feel gratitude from quite a lot of parents. At a certain age, all that comes from parents is negative, so when it comes from elsewhere, it's a support. (Health educator)

Participants had different opinions on the best venue for health promotion messages. To include them in school programs was appealing, but school curricula already filled the time allotted for instruction and it seemed difficult to implement more health classes. Health staff members encouraged inclusion of health messages in other classes like math, language, history, or geography. Some parents appreciated one-time interventions, but other participants think that they have no impact.

> It's a one shot. It has a very short life. It makes them [the students] aware for one moment and then other things happen. . . (Catering staff member about one-time actions)

Adolescents did not agree on the impact of health classes focusing on, eg, healthy eating. Some of them were worried that such classes could be boring and that students would not listen. Changes in eating habits after a class were challenged by an adolescent girl.

> Even if somebody tells me to never eat candies, I wouldn't do it. (Student)

Participants' Suggestions

Political support, on the one hand, at all governmental levels (city council, canton, etc) was seen as an important issue for the implementation and acceptability of obesity prevention programs by the participants. Such support would help schools prioritize obesity prevention among school tasks and give credibility and resources to the teams in charge of the implementation of prevention strategies. On the other hand, school stakeholders wished to keep enough freedom for their school to adapt the strategies to local history, practices, and tradition.

Participants thought that healthy habits should be promoted mostly with nonrestrictive measures and with efforts to increase the attractiveness of healthy options and behaviors. Enjoying eating in the school cafeteria, to participate actively in physical education classes or in special after-school activities should facilitate and encourage targeted habits. Nevertheless, 1 restrictive measure was cited: the creation of nutritional standards for food and drinks sold in schools. All suggestions are summarized in Table 4.

DISCUSSION

The aim of our study was to investigate the opinions of different school stakeholders about the feasibility and acceptability of obesity prevention strategies that could be implemented in Swiss schools. When comparing the existing recommendations for prevention of childhood obesity listed in Table 1 with our results, we observe that recommended prevention strategies were in majority endorsed by the participants. The role of schools in providing healthy food options at attractive prices was strongly supported and the implementation of nutritional standards for food sold in schools was requested. No consensus emerged on the ways to enhance health curricula, even though it was considered to be a priority by the participants. Barriers for the promotion of physical activity lay more particularly in after-school activities and active commuting, whereas improving intensity of physical activity during school time was more feasible.

Some studies have used focus groups or questionnaires to gather students' opinions about their recommendations for school-based obesity prevention programs, or about strategies they were willing to see implemented. Neumark-Sztainer et al interviewed adolescents in focus groups and found that they also clearly called for educational and physical activities that are fun and interactive, within a supportive and

Table 4. **Suggestions from Participants**

Prevention programs	• Establish global programs with clear guidelines at the governmental level. • Include all stakeholders in the discussion for the implementation of prevention strategies. • Provide adequate resources for a credible prevention program.
Healthy eating	• Increase attractiveness of school restaurants (more space, colorful decoration, etc). • Improve the nutritional quality of food and drink sold in the school cafeteria, while assuring appealing choices. • Support financially healthy meals and options. • Develop paying systems that encourage eating at the school cafeteria. • Make a room available for students to eat their lunch brought from home.
Physical activity	• Motivate students to adopt healthy lifestyle habits, through physical activity classes based on the pleasure to move and social relationships. • Increase movement during classes. • Increase access to indoor sport facilities while taking care of liability issues. • Develop special classes for students with poorer physical condition, while paying special attention to avoid any stigmatization.
Health messages	• Integrate health education messages in all the curricula and start at an early age. • Be attentive to the format of the messages. Messages should be fun and captivating, but also realistic. • Avoid restrictive and blaming nutritional messages. • Be careful to avoid health messages saturation. • Use existing classes, like health or cooking classes, as a vehicle for health messages.

comfortable environment. Accessibility and convenience of the program also emerged as an important issue.[17] In another recent study, American adolescents indicated that they were willing to exercise more, to change eating habits to include more fruits and vegetables, drink more water, and eat less junk food, but were not willing to give up soda, video/computer games, or television watching.[18]

Stakeholders' consultation and inclusion in the development of an obesity prevention strategy has been encouraged,[13,19] and in our study, all focus group participants also underlined the importance of such a recommendation. People need to feel involved in a project to invest energy into it. Some school directors, teachers, or school nurses have not waited for a global program to develop projects to promote physical activity or healthy eating in their schools. All of these ground-level experiences provide rich information for a new global program. As some focus group participants said ''we don't need to reinvent the wheel.'' In the context of limited resources, working on existing projects may be more cost-effective than implementing a new project. Also, stakeholders at the action level are invaluable people to bring very practical ideas and discern their feasibility. For all of these reasons, including all stakeholders from the beginning of the discussion, increase the chances of the programs' acceptability, feasibility, and success. A partnership between politicians, school staff, students, parents, and eventually food salespersons would be desirable.

Recently, several agencies have published recommendations and guidelines for obesity prevention in children and adolescents.[12,13,20] In our study, participants directly implicated by an obesity prevention plan felt the need for guidelines, which should come from the canton level. However, they also stressed that international recommendations need to be flexible and adapted to the Swiss context. Obesity prevention is a complex task and comprehensive programs require sufficient resources to be developed and implemented. Interviewed school staff stated very clearly that currently schools do not have the resources to add this task to their activities.

Schools reach youth from all socioeconomic backgrounds, and students spend a large part of their day there. For these reasons and because they provide a natural learning environment, offer physical education classes, and sell food and beverages, many obesity prevention initiatives take place in schools. However, improvement of eating habits and physical activity for children is largely dependent on parents who determine the accessibility and availability of healthy food[21] and provide support for physical activity.[22] Participants in our study stressed the importance to have a global public health strategy for obesity prevention. They call for community-based obesity prevention initiatives as a complementary way to reach parents. The American Dietetic Association also states that community-wide interventions are a way ''to support and enhance the efficacy of family- and school-based weight interventions'' and recommend that this kind of intervention should be undertaken, as few have been conducted and even fewer evaluated.[8]

Limitations

Qualitative methods have the advantage to gain depth in data collection regarding perceptions, opinions, representations, or experiences from the participants. In this study, focus group discussions were very rich and allowed a relevant analysis of the different obesity prevention strategies, as viewed by school stakeholders. Although our study represents a picture of all these views, the following limitations need to be addressed: (1) City council representatives were

not included in the discussions, although they play a key role in strategies regarding healthy eating and physical activity promotion. They should be included in future considerations. (2) For logistic reasons, adolescents were not included in the second phase of the study. For the same reason, only 1 group of adolescents was interviewed. Interview of adolescents of different ages and origins would have probably brought more diversified perspectives. (3) Opinions collected in this study are linked to the interviewed participants. It is possible that results would have been sensibly different if other people had participated. However, having brought together participants of every stakeholders' group should minimize this risk.

CONCLUSIONS

Our findings demonstrate a strong concern and interest in obesity prevention by all school stakeholders. Successful implementation of current recommendations for obesity prevention in schools implies involving all of the stakeholders at an early stage of the project and adapting it to the local reality. Participants pointed out key issues: identification and implication of all stakeholders, coordination of initiatives, adequate support, global thinking, and collaboration within the school and with the community.

Human Subjects Approval Statement

The study was approved by the Ethics Commission of the Medical School of the University of Lausanne, Switzerland.

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