COMMUNITY BASED AWARENESS INTERVENTION FOR CHILDREN TO PREVENT OBESITY AND TYPE 2 DIABETES

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ABSTRACT
Health interventions in children were aimed at increasing the physical activity, along with healthier eating habits and health education. A carefully followed diet-exercise combination seems to work wonderfully in preventing or delaying the development of diabetes. Community involvement in the promotion and support of healthful lifestyles reinforces recommendations made in the health care setting. Schools are integral in the successful prevention and management of obesity and type 2 diabetes mellitus and potentially are important resources for promoting children’s self-care. Improvement in health and well-being for all children was a real challenge, which was achieved during awareness program. Prevention messages need to be thoughtfully developed to resonate with community and beliefs. The engagement and empowerment of communities is critical for overall success in decreasing the disease burden of obesity and type 2 diabetes.

KEYWORDS: Community, Type 2 diabetes, Obesity, lifestyles.

INTRODUCTION
Community based interventions were aimed for children to follow a healthy lifestyle, promote healthy food alternatives, bring awareness, and need about an increase in physical activity. The disease, if left unmanaged, poses various challenges to the patient and health care providers, including development of diabetic complications and thus decreasing the life expectancy of the affected child (International Diabetes Federation; 2013). The general population is unaware of the existence of diabetes in children of 2–5 years of age and believe that it affects only the middle-aged group. Awareness among the public health care professionals is also very poor (Kumar et al 2015). Community involvement in the promotion and support of healthy reinforces recommendations made in the health care setting. The engagement and empowerment of communities was critical for overall success in decreasing the disease burden of type 2 diabetes mellitus and obesity. Schools were integral in the successful prevention and management of obesity and type 2 diabetes mellitus and potentially were important resources for promoting children’s self-care. Improvement in health and well-being for all children, both immediate and long term, was the desired outcome of addressing childhood over weight and obesity. The World Health Organization defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease. A nurturing environment promotes all aspects of growth and development for children, physically, mentally, and socially. This environment fosters self-esteem, body satisfaction and a positive body image, qualities that facilitate health-promoting behaviors. This project was the first large scale community intervention project in Chandigarh which focuses 100% on primary prevention of not only obesity but also Type 2 diabetes.

MATERIALS AND METHODS
Booklets, posters and pamphlets had also been printed to start the awareness program at mass level. Children/Parents/Teachers etc. were provided health education by booklets/posters/pamphlets.

Schools were also visited. Health professionals were involved in developing and implementing school- and community-based programs to promote improved dietary and physical activity behaviors for all children and their families. They were educated about improving physical exercise and healthy eating habits which can delay and prevent Type 2 diabetes. Parents were advised to send their children for a particular sport so that they can develop physically and mentally.

A coordinated, accurate, public information campaign was carried. Campaign was launched to prevent childhood obesity and diabetes with the release of pamphlets/posters/booklets on prevention of childhood obesity. Campaign was planned to raise awareness among
general public, health care providers and health policy makers so that no child dies of diabetes. Parental involvement remained the most important key to children's healthy diets. Childhood obesity awareness project was a critical step towards long-term goal of combating obesity. Small changes can make a big difference. Nutrition education in class, combined with a school environment offering healthy foods and drinks and special attention for students who were already overweight or obese, resulted in a significant decline in the number of obese students. People were encouraged to consume a healthier diet (lower calories, lower saturated fat and increased fruits and vegetables) and to increase daily physical activity. Effective strategies and programs for controlling risk factors were generated at community level.

Children were given nutritional and physical activity education through lectures and Posters/Pamphlets/Booklets. Parents were also being invited to attend lectures and who will fail to participate, the information was sent through

<table>
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<th>Group/Sub Group</th>
<th>Yes</th>
<th>No</th>
<th>Undecided</th>
</tr>
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<tr>
<td>All Data</td>
<td>934</td>
<td>761</td>
<td>353</td>
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It is clear from the discussion with children that they were ready for change (45.61%) and to take action. There is a general misconception in parents in India and other developing countries that an obese child is a healthy child. In an effort to keep child “healthy”, he/she is fed in excess. Many of these children remain obese for life. High burden of school work and academic competitiveness have led to decreased participation in sports and any other form of physical activity. This is particularly true for girls who are sedentary from school years. Many of the studies from India show that females have more obesity and the metabolic syndrome as compared to males. The lack of appropriate play area and limited open space around home makes it difficult for children to stay physically active. According to Valde, 2011 community awareness program was used to develop a diabetes prevention education program led by a group of volunteers from a community. Professionals in the field of nursing, education, nutrition, physical education, and fitness combined their expertise to develop content on diabetes and healthy life styles for third and fourth graders. The focus is an overview on diabetes education, nutrition and physical activity using a highly interactive environment for the program.

Thus health interventions in children were aimed at increasing the physical activity, along with healthier eating habits and health education. A carefully followed diet-exercise combination seems to work wonderfully in preventing or delaying the development of diabetes. Ready-to-eat food is widely available for purchase, and the average number of calories available for consumption per person has increased.

This comprehensive, successful program was focused on promoting and supporting healthful lifestyles for all children at home, in school and in the community as integral to the well-being of children of all sizes. This project had supported the activities that (a) create a nurturing environment, (b) provide education on healthful eating (c) promote and support opportunities for enjoyable physical activity.

Health care professionals played an important role in this study by raising community awareness about the importance of physical activity and resources for healthy nutrition. The powerful influence of physicians extends outside the clinic when they thoughtfully advocate for healthy lifestyles and good nutrition practices within the community. Health care professionals used their expertise to provide prevention messages to the community on healthful lifestyles and good nutrition via lectures. Prevention messages were thoughtfully developed to resonate with community, culture and beliefs. Youth involvement in prevention efforts was highly effective.

The emphasis was on living actively, eating in normal and healthful ways and creating a nurturing environment that helps children recognize their own worth and respects cultural food ways and family traditions.
Schools are first and foremost sites for learning. Children are more receptive to ideas presented at school and be more willing to participate in planned activities with their peers. Changes to the surrounding environment involving food service, family and community also have the ability to influence outcomes by improving accessibility to healthy foods and physical activity opportunities. Communities and parents are important participants in intervention activities as they have a role in influencing children’s daily conditions and activities.

The school setting is an example of a community-based site with enormous potential to address the risk factors for obesity and type 2 diabetes among children and youth. A public health focus on community programs and policies that address various determinants of health is useful, since obesity and diabetes prevention require multiple modes of intervention and collaboration across professions and sectors. Several mixed results concluded that interventions aimed at younger children were more successful than those targeting adolescents.

Delivery of an educational program for children in grades 4 to 12 and their parents can play important role in preventing obesity and type 2 diabetes. School food owners were encouraged to sell healthier food items. Meetings with parents were directed at healthy eating, obesity prevention and reinforcement of national dietary guidelines.

Children were provided knowledge about the benefits and importance of active living and encourage children to incorporate physical activity into everyday life. Addition of an extra 90 minutes of sport-oriented activity for grades 3 to 8; 15-30 minutes of daily recess encouraged children to dance or play various sports. The medical challenge in treating type 1 diabetes is the confusion between type 1 diabetes and type 2 diabetes and its management which is very common and is observed with both general practitioners and parents of children with diabetes (Maryam et al,2016). Diabetes management requires support and collaboration from family, school, and society, which is sometimes difficult, as they are more discouraging than positive (Kumar et al. 2012).

Schools were encouraged to increase activity in physical education classes and recess, with an emphasis on traditional games. Interactive sessions with children/parents/caregivers were focused on knowledge and behaviour change skills to promote healthy eating and increased physical activity. It was focused on increased after-school physical activity; reduced TV, videotape and video game use; modify the school food environment by encouraging food service personnel to replace calorie-dense food choices such as chips and soft drinks with items of high nutritional value such as fruits and vegetables. Common strategies were suggested to increase physical activity to include the physical education to lead activity classes and music as a motivator for activity. Opportunities for physical activity during recess were maximized. Parental participation was actively encouraged. Family-oriented activities and inviting parents to planning meetings were encouraged. Proper education of self-care must be given to the child so that the child can cope with his/her existing disease, maintain self-confidence, ensure self-management and adapt with life at large (Kalra et al,2013 and Chiang et al,2014)

Prevention must take highest priority and should focus on decreasing the risk, incidence and consequences of type 2 diabetes mellitus among children. Primary prevention efforts were recommended. Early diagnosis and optimal medical care are the keys to effective secondary prevention. The following recommendations are based on healthy food and activity that were frequently discussed:

- Institute healthy food and beverage standards for all items available in pre-school, school and after-school programs. Standards should address levels of fat, sugar, and calories.
- Ensure that all children receive physical education that meets minimum standards for quality, duration, and frequency. Students should be active, classes should be of appropriate size, and teachers should be well-trained.
- Establish grocery stores that will provide fresh and healthy items.
- Eliminate the advertising of unhealthy foods and beverages to children and youth.
- Provide health plan benefits that cover age-appropriate nutrition counseling and education as well as physical activity programs.
- Make school recreational facilities available for after-hours use by children and families.
- Provide safe and convenient roadway access for people who want to walk or bicycle.

Prevention messages need to be thoughtfully developed to resonate with community and beliefs. The engagement and empowerment of communities is critical for overall success in decreasing the disease burden of obesity and type 2 diabetes. Schools are the integral part in the successful management of obesity and type 2 diabetes mellitus and potentially are important resources for promoting children’s diabetes self-care. Counseling of children and adolescents was a real challenge which was achieved during awareness program.

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REFERENCES


