

Italy's Giocampus – an effective public-private alliance against childhood obesity

Maurizio Vanelli and Viviana Finistrella on behalf of the Giocampus scientific committee

Childhood obesity is a worsening social emergency. It affects even the youngest children and has become a major issue in schools throughout the developed world and beyond. In Italy, recent data from the Ministry of Health show that more than 1 million children, a quarter of all young people between 6 and 11 years old, are overweight; 12% of the child population is obese. In southern regions, the situation has reached staggering proportions: half of all children are overweight or obese. In fact, Italy is now third in the world for childhood obesity – behind the USA and Portugal. Consequently, over the next few years there will be a dramatic rise in type 2 diabetes among young people in Italy, severely affecting the health and quality of life of future generations. In response, a range of lifestyle interventions has been promoted in many Italian schools in an attempt to teach children the basic principles of healthy nutrition and encourage them to be physically active. While these have enjoyed a degree of success, a new approach has been promoted in the northern city of Parma which takes a novel approach and, it is hoped, may resolve the shortcomings of previous initiatives. The Giocampus programme treats overweight and obesity as a public health problem that requires a global intervention as part of a multi-sectoral commitment to community welfare.

Prior to the inception of Giocampus, a large-scale cross-sectional study into the health-related behaviour of school children in Parma^{1,2} collected data that provided the programme with a robust scientific context. Overweight and obesity were associated with some common dietary mistakes – skipping breakfast or eating inappropriate breakfast (21%); making unhealthy snacks available at schools via vending machines (62%); inadequate daily consumption of fruit and vegetables (74%); excessive intake of soft drinks (41%). Sedentary behaviour was found to play a key role in the development of overweight: only one in 10 children took part in physical activity every day; half of the children watched television or played computer/videogames for more than three hours a day; half had a television set in their bedroom; 55% were taken to school by car.

Multi-sectoral and based in the community

Growing concern over the prevalence of unhealthy lifestyles, as revealed in those findings, gave rise to the Giocampus project, a multi-sectoral, multi-partner initiative in Parma involving local government, education authorities, the University of Parma, sports clubs, the food industry and the media. The programme's steering committee is made up of scientists, nutritionists, paediatricians, teachers and educational specialists, psychologists, public administrators, food factory managers and experts on communication, and closely monitors all aspects of the intervention.

The prefix 'gio' in Giocampus stands for 'gioco' – 'play' in Italian.

The committee also supervises the inclusion within the school curriculum of a programme of nutritional education (20 hours per year) and physical education (60 hours per year) that was specially adapted to meet the developmental needs and abilities of children of different ages. The nutritional education materials are presented in seven didactic units; the programme for physical activity involves training in mobility, co-ordination and rhythm – all of which help the children to develop their fine motor skills as well as a sense of fair play. (The prefix 'gio' stands for 'gioco' – 'play' in Italian.)

Giocampus teachers are supported in the classrooms by specially trained undergraduates studying Nutritional Sciences and Movement Sciences at the University of Parma. Known as the 'taste teachers', they lead specific classroom games and activities that are designed to facilitate learning through



'Taste teachers' run specific classroom activities and games that enable children to successfully learn by playing thus improving their knowledge about healthy foods.

play – thus improving the children's knowledge about healthy foods and a healthful lifestyle and encouraging them to take up healthy-but-fun behaviours, such as being more physically active together with their peers.

Education for health – for all

At the start of the school year, training courses in nutritional education are organized for the teachers involved in Giocampus. A range of related themes are discussed in these sessions, including strategies to promote physical activity and encourage healthy behaviours, child eating disorders and the psychological aspects affecting the development of dietary behaviour. Practical classes in the preparation of meals with reduced fat content are offered by pasta producer Barilla. These sessions include meetings with paediatricians, nutritionists and psychologists, who offer information and advice on a range of subjects, including improving children's diet, ideas for healthy snacks, encouraging children

to become more physically active, tackling overweight in children, and family communication.

Paediatricians, nutritionists and psychologists offer information on improving children's diet, encouraging physical activity and family communication.

Families participating in the programme also receive education on the consequences of childhood obesity and strategies to prevent overweight through a booklet, Obesity Alarm, edited by the Postgraduate School of Paediatrics of the University of Parma. Already distributed to more than 10,000 parents, Obesity Alarm is available in English and Arabic as well as Italian.



Alongside the school programme, there is also an annual summer sports school for children aged from six to 14 years, which is held at the University of Parma and organized by the Postgraduate School of Paediatrics and the Graduate School of Sport and Exercise Sciences of the University, with the support of Barilla. Some 3,000 children a year are admitted to the two-week course, where they spend eight hours each day engaged in various sports and physical activities under the supervision of professional instructors. The young campers eat snacks and lunch together also under supervision and following a menu suggested by paediatricians and dieticians.

Initial data show positive results

The intervention has benefited in terms of community awareness and subsequent acceptance and uptake of activities from a high-profile media campaign via radio, television and newspapers; posters are displayed throughout Parma, in the streets, buses, schools, supermarkets, pharmacies, paediatricians' and dentists' offices.

Giocampus is a formidable tool to promote effective strategies that can improve knowledge of nutrition and engender positive lifestyle changes.

Since the collection of data began in 2005, the number of children who skip breakfast has fallen from 22% to 8% and the initial correlation between those who skip breakfast behaviours and rates of obesity has disappeared. Moreover, the consumption of fruit has increased by 20%; the percentage

of children who eat breakfast while watching television has fallen from 18% to 9%; and the number of children enrolled in organized sports has risen three-fold. Twice as many parents are eating breakfast with their children than did so prior to Giocampus and soft drinks have disappeared from vending machines in our schools. A 'walking school bus' initiative, promoted by local government, has been central to the 102% rise in the number of children who travel to school on foot.

Giocampus is a well-structured, scientifically sound programme. It is proving a formidable tool to monitor lifestyle habits in a large population of healthy children and promote effective evidence-based strategies that can improve knowledge of nutrition and engender positive changes in family lifestyle. The results achieved to date in Parma via the partnership between the public bodies and the private sector underline the effectiveness of a preventive, protective initiative as part of a strong commitment to community welfare.



Posters throughout Parma and a high-profile media campaign kept Giocampus in the public eye.



Practical family cookery classes were offered by pasta producer Barilla.

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References

- 1 Vanelli M, Iovane B, Bernardini A, et al. Breakfast habits of 1,202 northern Italian children admitted to a summer sport school. Breakfast skipping is associated with overweight and obesity. *Acta Biomed* 2005; 76: 79-85.
- 2 Fainardi V, Scarabello C, Brunella I, et al. Sedentary lifestyle in active children admitted to a summer sport school. *Acta Biomed* 2009; 80: 107-16.