

Social Marketing used at school to fight children obesity prevalence: A French school case study

Abstract: In this research we examine the role of social marketing in addressing childhood obesity through the French PPNS program case. After describing its main content, we analyze if and how children integrate (or not) such actions in their everyday life. Results indicate that first, that there is a gap between what is transmitted and what is practiced about balanced diet. Second, children kept their food habits as it is part of their own identity (aversions and preferences are strongly anchored). Implications for social marketing used at schools are discussed. It includes changing the type of learning through more rational courses by integrating food and nutritious issues in the curriculum.

Keywords: children - obesity - school – ethnography – French PNNS program – social marketing.

Introduction

Obesity can be defined as an abnormal or excessive physical fat accumulation that can harm health (WHO). Childhood overweight and obesity is rising rapidly around the world in rich countries and poorer ones. However, according to the International Obesity Task Force (IOTF) report, overweight is high among the poor in rich countries, and among the rich in poor countries. In 2010 more than 43 billion children under 5 years old (WHO) are overweight or obese. Currently in France 4% of 5-17 children are obese and 12% are overweight.

Obesity is a complex phenomenon to study because of the numerous factors that can explain it and the interaction between them. However, we can classify obesity causes in three groups, mainly genetic predispositions, individual patterns, and, socio-cultural factors (Ayadi and Young, 2006). It is quite difficult to intervene with the two first factors. In this study we focus on socio-cultural factors and more precisely on school in socializing children to improve their nutrition. Socio-cultural factors refer to changes that occur in our daily life. These changes in our lifestyles can explain the evolution of our food practices that can sometimes result on obesity (Corbeau, 2005; Poulain, 2009).

Children obesity has been of interest to public marketing policy research. Here studies have investigated food socialization related to socialization agents such as communication agents (Young, 2003), peers (Birch, 1979; Kelly and al., 2010), and the family (Cook, 2009; Marshall, 2005). However little is known about the role of government agencies in food socialization. The aim of this study is to look at the role of social marketing through government policies in addressing childhood obesity and its application in children's daily life. In our study we are interested in elementary school as a socialization agent. We chose one particular school belonging to the French Nutrition-Health Program (PNNS) to look at the relationship between nutritious guidelines provided by the PNNS, school practices and children's daily life evolution.

1. Social marketing and obesity prevention

Social marketing can be defined as *“marketing designed to influence the behavior of a target audience in which the benefits of the behavior are intended by the marketer to accrue*

primarily to the audience or to the society in general and not to the marketer” (American Marketing Association). The main objective of this branch of marketing is to enhance social ends (e.g: well being of the community).

Desirable social changes can be achieved through three major strategies related to (Donovan and Hanley, 2010; Henley and Raffin, 2010):

- Education (information and skills): ensure that people have access to information about nutritional value of food like food labels;
- Motivation (persuasion): encouraging healthy food consumption
- Regulation (socio-political actions): taxes on unhealthy foods, regulating advertising to children.

Effective social marketing requires “community partnerships” between all the agencies both private (e.g: food industry) and public (e.g: health department). This collaboration should also include education departments (e.g: school, teachers), socialization actors (e.g: family), and so on.

As IOTF report highlighted, obesity prevention is one of the most realistic solution and “*The most logical settings for preventive interventions are school settings and home-based settings*” (IASO¹, 2004, p. 7). Obesity as a real public health concern can then be addressed through the use of social marketing by changes in the social trends. These actions should involve work at all levels of the environment: ecological approach can be a helpful approach as it consider individual in an open system (Egger and Swinburn, 1997).

2. French PNNS Programs to prevent obesity

In France, childhood obesity has been taken into account by government at a late stage. The first real action was made by the PNNS program (2001-2005). This program has two major objectives to prevent obesity: promoting healthy food intake and enhancing physical activity. Social marketing is used through communication (ex: advertising poster campaign about the importance of sport practice), the product (ex: fish fun food), the place (ex: point of sale creating events about milk process) and price (ex: reduction of some “healthy food” prices like fruits). So within this program all the actors (private, public, and association) are more or

¹ The International Association for the Study of Obesity

less involved. As Ayadi and Young (2006) suggested, to be effective actors have to work together in a real collaborative way to fight obesity pandemic.

PNNS actions to increase fruits and vegetables consumption through advertising and suggestions were given to schools in order to promote varied food and more sport activity. Vending machines were banned from schools. The main result of such actions was to diminish 20% obesity among the population. First PNNS program results were mitigated: obesity prevalence did not decrease. From more than thirty years, it did not stop increasing. However, the goal in terms of education was achieved: people became aware of this epidemic.

PNNS 2 (2006-2010) is a continuity of the first one but the actions are improved through clearer measures. For example since February 2007, TV advertising for food products should display health claims like *“for your health, practice a regular physical activity”*, *“For your health, avoid eating too salty, sugared and fatty”*. Within PNNS 2, a new program called *EPODE (Ensemble, Prévenons l’Obésité des Enfants)* which can be translated as “together, let’s prevent children’s obesity” was launched in 2004 to help prevent childhood obesity. In 2010, about 200 towns were involved in EPODE and this program is now applied in other countries such as Belgium, Spain and South Australia (Henley and Raffin, 2010). EPODE is implemented through local mayors whose role is to implement well-being actions to kindergartens and primary schools. These actions involve promoting healthy diet and regular physical activity in primary schools in order to prevent and/ or reduce obesity of 3-12 years old children. Once again, PNNS (2) results did not meet the main objective: obesity is still increasing. Nevertheless, EPODE’s results are more adapted to children and the majority of town renewed their partnership with EPODE community (commitment is for five years). Since 2011 began the PNNS 3 (2011-2015) whose actions are still the promotion of physical activities and settlement fighting, the intensification of obese people coverage, and actions in favor of the most deprived.

In summary, within the last ten years obesity did not decrease in France. Yet, people’s state of mind changed as the majority of the population is aware about this pandemic. Politicians used quantitative results of PNNS survey to advance that obesity decreased and that people changed their food practices by integrating more fruits and vegetables and less “unhealthy food”. Precautions should be taken towards these results. As Poulain (2009) highlighted, declarative answers provided by closed questions can not measure the effective behavior. The author concluded that in order to understand real practices, qualitative studies are a better

methodology to highlight the real behavior. Such methods include ethnography studies where the research is taken place directly on the field being studied. Results from different researches are contradictory: quantitative research only gives a result when qualitative one help to better understand real food practices. We think that the two methods are complementary but qualitative study has to be done before the quantitative one. EPODE can be more effective as it involves public and private actors of a town.

3. Actions within schools

Even if ecological approach necessitates taking into account all the actors to better understand a phenomenon, its application seems hard to do. School as a socialization factor can be a successful place where to learn the meaning of balanced diet and to increase physical activity. PNNS guide for elected representatives and municipal technicians aims at improving population nutrition and health.

This report² suggests intervention within schools and their environment, mainly the classroom, the canteen and the recreation ground. Three main strategies for the school and its environment are encouraged (PNNS):

- Physical activities: the day without car, creation and discovery of walking path, arrangement of playgrounds and schoolyards;
- School restaurant: creation of specifications taking into account balanced diet menus at the canteen menus, messages on paper napkins distributed in the school restaurant;
- Pedagogical actions: morning snack content, fruit supply at school, encouragement of physical activities in the recreation ground, discovery outings to better understand food and their transformation process (ex: in a farm), meal conception and realization by children, school garden activities, daily implementation of menu suggestions at home for parents.

The town will have the logo of “active PNNS town”. Even if the actions described bellow seem effective, childhood obesity still increases. The objective of the empirical part of this paper is to see how children perceive these measures and to look at how they integrate them in their daily life.

² PNNS guide à l’usage des élus et techniciens municipaux, ministère de la santé et de la protection sociale, www.reseauvillesacivespnnns.fr

4. Methodology:

The dynamic between school as a socialization agent and social marketing is not well understood. Obviously, researches focused on quantitative data are not really adapted for the study of food practices evolution as declarative answers can sometimes lead to socially accepted response (“social desirability”). In case of discovering a phenomenon, ethnography study can be a reasonable approach (Emerson et al., 1995, Fetterman, 1998, Spradley, 1979). Our study occurred with children schooled in a French primary school involved in EPODE program. Thirty children aged 7-11 were first asked about the school and its environment (the canteen, recreation ground activities). Interviews probed as they go on and new ideas were then integrated (communication and information within the school about obesity, their feeling about such preventive actions and their practices at school and at home. We also interviewed their parents (the mother or the father) to complete children’s responses and to see whether and how they implemented PNNS actions.

Conversations were tape-recorded and then transcribed. A thematic content analysis was done. School practices (e.g: menu given to parents), information given by a city hall staff in charge of PNNS project implementation were used in that process to interpret findings.

5. Results

Two main results are highlighted in this research. The first one is a gap between what is transmitted and what is practiced about balanced diet. Second, children kept their food habits as it is part of their own identity (aversions and preferences are strongly anchored).

5.1 Social marketing and the gap between what is transmitted and the real behavior

Children are taught about how to have a healthy diet at school through different activities including courses about healthy versus non healthy food. Outings were done in farms to explain where the products were coming from (e.g: milk process).

However, results indicate that socialization process is not operating well because there is a gap between what is transmitted and what is learned. Children do not link very well these

activities and their own health. The reason why public policy implementation does not work is related to the way of learning. Hedonic learning about healthy food (e.g: sport activities, participation to the taste week, drawings, etc.) is well perceived by children, but it led to contradictory behaviors: *“they told us that we have to bring only fruits in our lunch boxes, no cake, no sweets. But I don’t like fruits, so I often bring some biscuits with me and eat them at break time: my teacher can’t see me (laugh)”* (M. 10 years old).

Older children better understand the importance of such actions, but this doesn’t lead to changing food habits:

Interviewer: *Did your teacher speak about obesity in the classroom?*

J. 10 years: *Euh, yes we spoke about obesity at school. That it was good to eat well, but that we have to eat balanced food, not things too fat, too sugared like Coca and so on. We can have some from time to time, but not too much. We talk just a little about it, not that much.*

Interviewer: And what do you think about it?

J. 10 years: *Well, this is true that we have to eat balanced, varied food and if we abuse, it can have consequences for us.*

Interviewer: *Ok, and did you change something in your food intake?*

J. 10 years: *I know that it is important but even fruits; I only like some, but I don’t like very much with regards to what would be necessary to eat.*

These actions are well perceived by parents but they also do not change their behavior because of “healthy” food cost and the time to spend for cooking. For example, this mother told us: *“But, well if we want to eat balanced food, I think it is expensive. Because, take only one piece of fresh fish, it is almost five euro a piece. Thus, euh that rises fast when we are a large family. Fruits also, it’s not cheap . Me, I often eat fish, but if the six of us had to eat it, we could not, that would be very very expensive”* (C. 44 years old).

Home food cooking is encouraged by PNNS program, but for families where parents work, this cannot be implemented in the week as they work. In one family, the mother told us that she goes to fast-food with her three children for financial reasons. She knows that this is not a “reasonable idea” as the food is not “healthy”, but giving pleasure to children is more important for them. In many families, parents use food to stop feeling guilty for their absence during the day due to their work. We can see here a gap between the PNNS’ objective and parent’s motivation towards food.

Unlike fast-foods, traditional restaurants are not often visited by families: *“We also go to Chinese restaurants, but less often than McDo or Quick, but the kids love eating Chinese food. We also sometimes go to the brasserie close to my home, but now with the prices, euh it*

is less simple. They told us to avoid going to fast-foods, but it's euh, it's good to breath from time to time. It is quicker, less expensive and kids can have fun. This is the place where they enjoy themselves!" (D. 35 years old)

Parents are given a monthly canteen menu (Cf. appendix 1). This menu details for each day the quantity of “*fruit and fresh or cooked vegetables /juice*” (green color), “*milk product*” (blue color), “*meat, fish, egg*” (red color) and “*starchy food and dried vegetables*” (yellow color). While asking parents about the importance of this menu for them, none of them seemed interested by the composition of the meal in terms of variety and food balance. For the majority of them, the menu is used to avoid giving children the same meal as the one they had at the canteen.

At the back of this menu (Cf. appendix 2), we find a presentation of the monthly vegetable (in this menu: Swiss chard), how to cook it, and a recipe based on this vegetable. There is also an idea of a dinner menu composition with the monthly vegetable. Here again, parents do not pay attention to this page and rarely read it as they refer to their own knowledge or recipe book for cooking preparation.

5.2 Social marketing and children food habits

The PNNS measures and information implemented in the canteen were badly welcomed by children. For them campaigns about health food are made to forbid eating products they like and force them to eat those they dislike (e.g: vegetables). Hence most of them deeply reject PNNS actions at school which are considered as contradictory to their preferences.

Here is a conversation extract we had with a 9 years old boy:

Interviewer: *Ok, and what do you like?*

C. 9 years: *Well, what I like? Pasta, rice, mash potatoes, chips, steak, euh...*

Interviewer: *And they propose you this food at the canteen?*

C. 9 years: *We very rarely have the things I like at the canteen*

Interviewer: *Really?*

C. 9 years: *however sometimes they make us beefsteaks with pasta. It is excellent! (ironic tone) beefsteaks tough as tarmac (laughter), uncooked pasta!*

Interviewer: *Ah all right, and thus you do not eat it?*

C. 9 years: *I eat, I eat, but I take time. I find that it's a pity.*

Interviewer: *And at the school, do they speak about obesity?*

C. 9 years: *Yes, they spoke about obesity at school. Yes because they make us everything in water and I don't like it that much.*

Interviewer: *and what do they cook you in water?*

C. 9 years: *Ah, everything, everything, everything, everything! All the food, they cook everything in water! It is because of obesity. I know it because of the taste: you can see everything is cooked in water. Also salt: they don't put salt on meat. It is always like that (sad face). One day I asked the canteen lady if I could have some sauce. She said: "No, due to obesity, we give nothing now".*

So in this case, the child noticed changes in food content at the canteen and this is not well perceived as before he could have products he likes, like chips and food with sauce and now according to him, food quality is bad. Some parents, due to the fact that their children do not eat at the canteen give them snack food. While asking, they told us they know it is forbidden, but they prefer to give them something to eat better than the child does not eat anything. Children and parents transgress sometimes school rules to avoid being hungry.

AT home while having dinner, children often bring some new information given by schools about healthy food. Sometimes parents change their behavior, but this modification is fleeting because children have their own preferences and aversions. So, if parents cook more vegetables because they know it is good for health, and their children do not like them, they won't eat them. Parents prefer to avoid conflicts, so in the end, the child obtains what he/she likes.

However children are very positive to the school physical activities: *"now, the recreation last for thirty minutes, this is very good because I have to spend less time in the classroom (laugh)"* (P. 8 years old). When we asked children about the activities they liked at school, most of them refer to sport or drawings.

Discussion: Useless of social marketing designed to prevent obesity?

If we compare PNNS implementation at school to real food practices, it seems that there is a gap. Children do not respond positively to PNNS program because they believe health information doesn't apply to them: the way courses are done (hedonic activities) does not convince them. They like such activities (e.g: outings to farms) but these activities do not fundamentally change their food intake. They often dislike food they have at the canteen and like more their parents' meals. Moreover, food rites related to fast-food were identified in

almost all the families. And children continue to like snack food despite what is taught about its negative impact on health.

Social marketing designed for preventing childhood obesity is perceived as useless by children as they believe such actions do not apply to them: children are not interested in such policies and perceive them as a waste of time. However, this is the case for food content and not for physical activities which are liked by children.

As it is highlighted in the literature review, changing food habits is a hard thing to do as preferences and aversions are learned from infancy (Birch, 1982; Chiva, 1992; Fischler, 1990). For example, from the four flavors, the sweet one is the only one that is inner (Steiner, 1973). This is why children appreciate so much sweet products. Obviously, it seems hard to modify food preferences as this means changing one's identity. However, as children like sport activities, PNNS program can have a bigger focus in this physical activities implementation when targeting children.

Within the families, providing healthy food to children is seen as costly and as time consuming. This research shows that there is a need to consider all the parts to be effective: this is what is suggested by the ecological approach where people are considered in a system opened to the influences of the environment (Egger and Swinburn, 1997).

Conclusion and implication

Our objective was to see if social marketing could be used at school to prevent childhood obesity. Results indicate that school, as a socialization agent can be a major interface to reveal information contributing to children wellbeing. However, children believe they are not concerned by these measures as the way of learning is not considered credible.

Children have their own preferences and aversions towards food that are built since their infancy and depending on many factors: it seems very difficult to change food preferences as it is part of their identity. There is a need to better involve parents in this program as children acquire food preferences in their family environment. These measures have to be done very early as until the age of two, children preferences and aversions are quite similar to their parent's ones (Birch, 1979). If parents are soon socialized to the importance of healthy food intake, then this will help to better prevent obesity risk as they will be more opened to

integrate this finality in their children socialization process. Social marketing aiming at preventing childhood obesity has to be more present in families.

However, as the price is a real hindrance, there is a need to reduce “healthy” food prices and continue in the same time to communicate about their importance.

School can be an interesting socialization factor to change behavior, but it can be effective only if within the family, parents do have the same discourse and actions. This research shows that families are more than a major socialization factor in terms of food modification.

We believe that even if obesity is still increasing, social marketing implemented in schools is very important to prevent childhood obesity. Changing food habits requires time, so we have to continue to inform and communicate towards families and children.

Communication content has to highlight the fact that “unhealthy” food should be consumed with moderation as children believe that these products are banned by educators and school in general.

Implication of this research at the societal level to prevent childhood obesity can be summarized in four main points:

- Encourage schools to enact policies related to healthy food intake, nutrition and physical activities
- Put health education in school curriculum
- Provide economic incentives for supplying “healthy” foods in schools
- Improve nutritious quality of food provided in canteens

The first limit of the study is that we studied the role of social marketing in a particular context: school. However, we did not study the role of other socialization factors like TV. Second, as our study is qualitative, results were subjectively interpreted and cannot be generalized. To mitigate these results, future research will integrate the role of other socialization factors such as TV advertising or peers. This study highlighted that changing food habits require more time than changing physical activities. Future research can investigate the effectiveness of social marketing actions in encouraging children to be less sedentary.

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Appendix 1: a week menu in a town implementing PNNS guide

VILLE DE CAM		Semaine	
lundi	1/2 avocat tomate	Clou - blanc	
	Filet de volaille	Joue de boeuf au paprika	
	Fricassée de petits pois Echampiignons	Crêpin de pomme de terre & courgettes	
	Froumage pâtisserie	Yaourt	
Lundi de Pâques			
lundi	Filet de sardine		
lundi	Paupiette de veau		
	Carottes râpées pommes de terre		
	Froumage fruit		

Les codes couleurs :

NB. : pour les enfants ne mange

