

THE STRATEGY OF SUSTAINABLE NUTRITION OF PRESCHOOL AGE CHILDREN

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Abstract: Nutrition is a major environmental influence in physical and mental growth and development in early life. The Pre-school time is the only age, when children are not deciding themselves what to eat. Hence, in the proper diet of preschool children is concerned the whole society.

The aim of this paper is to identify the stakeholders and analyze their importance and engagement in provision of sustainable catering service and nutrition education in preschool educational institutions.

The research is based on the public health nutrition (PHN) practice bi-cycle, which is including community analysis and engagement, problem analysis and stakeholder analyses. The main focus of this paper is on stakeholder analysis, which is centered on results of two interviews conducted in May of 2011 – quantitative questionnaire of parents of kindergarten and qualitative face-to-face interview with the head of the kindergarten.

In Latvia in provision of healthy nutrition are involved all levels of management - both arranged legislation and developed the recommended dietary norms and provided three times catering in kindergartens under the supervision of medical staff.

Keywords: preschool children, stakeholders, sustainable nutrition.

Introduction

Nutrition – what people eat – is known to be one of the key factors influencing health. If people eat healthily, they can avoid many preventable diseases and can live longer lives more free of illness. Many European countries have attempted to introduce campaigns for healthier eating, and concern is widespread about the move towards a fast-food culture in which traditional styles of eating and cooking are declining. (Dixey et.al., 1999).

Many authors are emphasizing the importance of preschool age for healthy future development of a personality.

Children's food preferences and practices are initiated early in life (e.g., 2–5 years of age), early dietary intervention programs may have immediate nutritional benefit, as well as reduce chronic disease risk when learned healthful habits and preferences are carried into adulthood. Families and child-care settings are important social environments within which food-related behaviors among young children are developed. (Niclas et. al., 2001)

Research evidence suggests that children are not born with the innate ability to choose a nutritious diet; instead, their food habits are learned through experience and education. (Swadener, 1994)

The years between a child's 2nd and 5th birthdays represent a period of rapid social, intellectual and emotional growth. At the same time, overall physical growth is decelerating while motor skills are being fine-tuned. Preschoolers are busy exploring the environment. They have tested their independence and are now ready to learn. Food preferences can now be influenced; parents and friends as well as television advertising will affect food consumed. (Sigman-Grant, 1992)

Nutrition education is essential for preschool children because the quality of their nutrition has a direct impact on their growth and development as well as their nutritional status throughout life. The early years in a child's life are critical ones to the formation of health promoting nutritional concepts and behavior. (Swadener, 1994)

With the future in mind, the alarming trends in obesity create a need for immediate action – especially with regard to children: more than 30% of all European children are overweight or obese (European Commission, 2007)

The study of Public Health Agency shows that in Latvia 21.5% of seven-year-old children (24.5% boys and 18.4% girls) are overweight, including obesity. In general, obesity is the problem of 8.2% of the first class students. The highest proportion of obese children is in Riga and other big cities. (SVA, 2008)

What has become clear is that the prevention of obesity needs the concerted action of all actors involved, including children and parents, the food industry, retailers, the media and marketers. As far as children are concerned, the major responsibility for obesity lies with their parents and families as well as with secondary socialization agents such as caretakers and teachers. All mentioned agents act as gatekeepers. This means that they have, to a larger or lesser degree, the power to control the impact the media, retailers, the food industry, restaurants and food marketers exercise on children's food preferences and physical activities. (Reisch; Gwozdz, 2010)

Within the framework of international mobility project (<http://www.nutgecs.eu/>) in five countries (Turkey, Latvia, Germany, Romania and Austria) is explored the catering for preschool children.

In all countries the analysis of the national nutrition policy, participation analysis of local municipality (community) and problem analysis are done, as well as identified the stakeholders and their obligations and carried out the qualitative interviews.

This article describes findings from interviews with key stakeholders in Latvia conducted in May 2011.

The **aim** of this paper is to identify the stakeholders and analyze their importance and engagement in provision of sustainable catering service and nutrition education in preschool educational institutions.

The following **hypothesis** is stated: the government with effective use of policy instruments is able to come to strategy of sustainable nutrition of preschool children.

To attain the aim the following **objectives** are identified as relevant:

1. to describe the problematic of nutritional concerns of preschool age children;
2. to identify the stakeholders relevant to nutrition issues and problems of preschool age children;
3. to apply stakeholder analysis techniques to understand the needs, agendas and engagement of stakeholders;

To analyze the situation in Latvia a special focus is given to kindergartens in Jelgava city.

Materials and methods

The research is based on the public health nutrition (PHN) practice bi-cycle, which is including community analysis and engagement, problem analysis and stakeholder analyses. The main focus of this paper is on stakeholder analysis, which is centered on results of two interviews – quantitative questionnaire of parents of kindergarten and qualitative face-to-face interview using checklist with the head of the kindergarten “Pasaciņa”. Quantitative questionnaire was conducted in 20 kindergartens of Latvia, mainly in Jelgava city with participation of 131 parents. The data has been processed with SPSS program. Descriptive statistics was used to describe the basic features of the data in a study.

Monographic descriptive method, as well as the methods of analysis, synthesis and logical construction are used to study the problem elements.

Results and discussion

One of the important questions that needs to be asked when considering how to and who will assist to develop solutions to address the identified public health nutrition (PHN) issue is ‘who are the main stakeholders involved in this issue?’ There is increasing recognition of the central role of stakeholders – individuals, groups and organisations – who have an interest (or stake) and the potential to influence the actions and aims of a project or policy direction (Brugha, 2000).

By collecting and analysing data about the stakeholders, an insight can be gained, who will be affected or who are concerned about the nutrition issue of preschool age children, as well as their level of *interest* and *influence* on developing solutions for the issue.

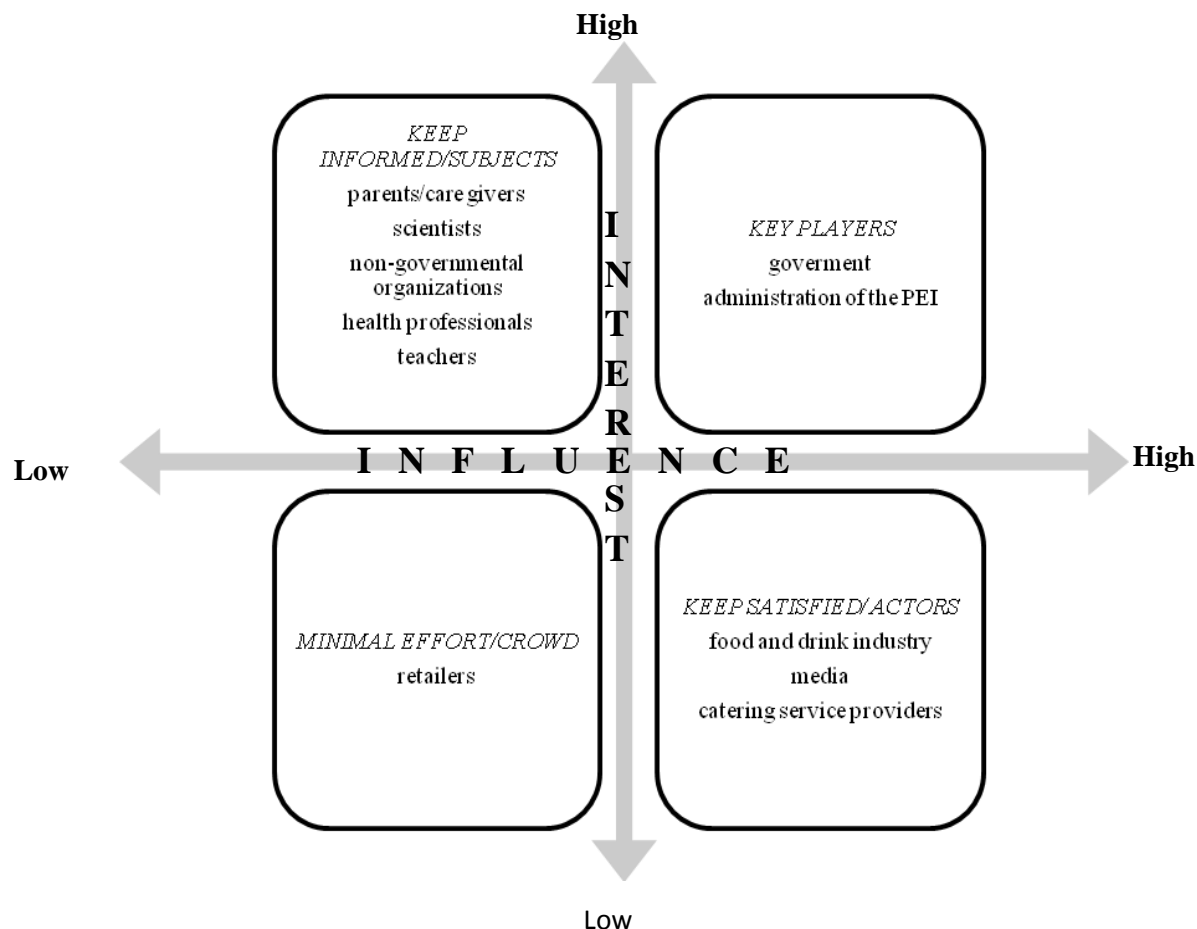


Figure1. Stakeholder analyses grid – preschool children nutrition in Latvia

This stakeholder analysis is based also on Tim Lobstein's article about childhood obesity and previous study about "Soft drinks and obesity in Latvia" by Knai et al.

Interested stakeholders with high influence

According to our analysis the most influential and interested stakeholders are among administration of PEI and government/ local municipality, however the latter could show stronger position in restriction of using food with low nutritional value in catering of preschool age children. It could be correct to say, the interest is more visible in different kind of advisory documents and public relations, but less in strict legislation and regulations. If parents would be united in some association, they could become also more powerful.

Interested stakeholders with medium/low influence

Interested stakeholders with medium to low influence included non-governmental organizations (NGO) or civil society groups; nutrition specialists involved in raising the issue of obesity and healthy diet in the media; public health researchers in university settings and parents of preschool children. All of them could become more influential if the interest about healthy nutrition would go beyond the local and micro environment. In Latvia it is expected to have stronger voice from NGOs, unfortunately they supposed to be interested, but there is least done from the side of NGOs.

Conversely, those with the greatest interest in improving children's diets appear to have the least influence on policy.

Low interest stakeholders with high influence

Food and drink industry, media and catering service providers are the ones, whose main interest is profit, therefore with different motivation at the end they are not very interested in provision of healthier choices, which can sometimes lead to higher price and additional costs (for instance sausage is cheaper than fresh meat). Since they are very close to the direct consumers, their influence is considered as high.

Low interest with low influence

This is the group, which is putting minimal effort in making the change for healthier nutrition of children, but in the same time has very important place in the food supply chain. In this study the retail sector is appointed. As the business sector they are mainly interested to sell well known, widely consumed and advertised products, which are not always the healthy ones.

All of the stakeholders may change their location in the graph, if there is a proper and positive stimulation. The results of this analysis agrees with Tim Lobstein that in order to influence policy, and to restructure the graph in favour of healthier children, it might be valuable to look at trying to move the various components on the graph—for example by strengthening the influence of those who are currently in the top left corner of the graph and encouraging them to be noticed and their views considered. Equally it could be valuable to reduce the influence or alter the relatively negative influence of those who are currently in the lower right hand part of the graph, by finding incentives for them to change their interests so that they support healthier diets. Finally, those with the most influence on policy (suggested in this graph as being government, administration of PEI) need to become more interested in the promotion of healthier diets—through showing the economic damage that obesity and other health problems because of wrong nutrition in early childhood may cause and by increasing the political pressure for action. (Lobstein, 2005)

The nutrition specialist of preschool age children from Latvia University of Agriculture Valda Kozule is recognizing today's problems of catering in preschool educational institutions:

Municipalities are concluding the contracts with catering companies not for food quality, but only for the lowest price, which the firms are usually setting unreasonably low just to win the contest and it has consequences:

- In order to earn (PEI and the schools do not provide a good profit) are purchased the products with lowest price, which often are also less valuable and unsuitable for children's nutrition;
- Menus do not provide adequate nutrition value and the amount of food (for sense of fullness), children frequently feel hungry, the health problems start;
- Meals are subordinated according to the needs of workers (eg, afternoon snack - 15.00, or even faster, for canteen staff to finish the work faster, but the children just have eaten lunch from 12:00 to 13:00).

The results of quantitative interview "Parents' opinion about quality and organization of the catering in the kindergarten" are showing, that:

1. 95% of parents are thinking that food in kindergartens is healthy
2. 68% of parents on a regular basis are following up the menu of kindergarten
3. Only 8% of parents have ever approached with advices about food service improvements
4. The proposals given about improvement of children's nutrition are as follows (see Fig.2)

The proposals given by parents are related with the problems mentioned above. And the low activity of parents could be explained with their different levels of knowledge about healthy food as well as low confidence about their ability to influence the established system. From first two answers we can estimate that almost 30% of parents are not interested, what is the content of daily nutrition of their children.

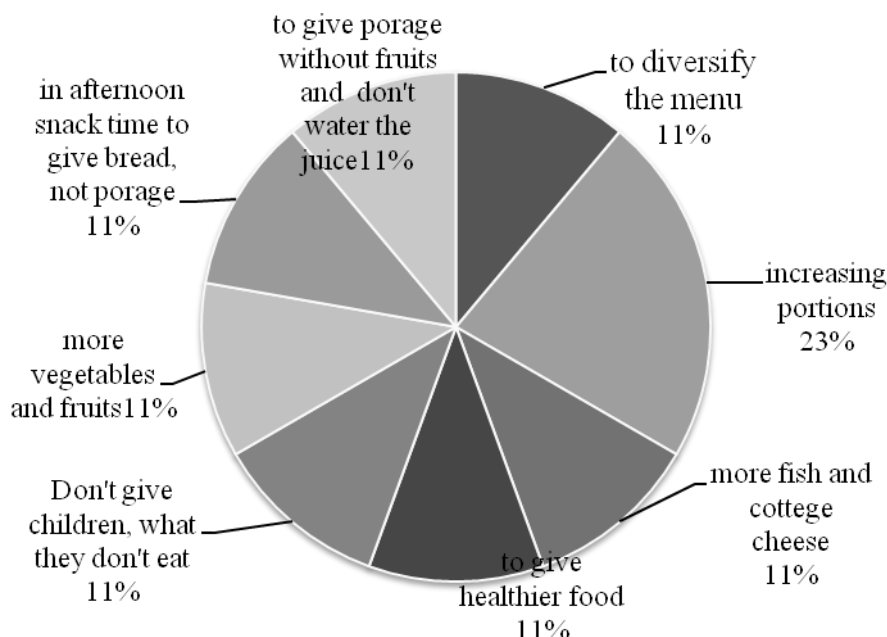


Figure 2. What kind of proposals has been given?

5. According to parents' opinion the following food could be included in daily menu (See Fig.3) The results are showing that in daily menus of kindergartens there is really lack of so important nutrients as vegetables and fruits, which are the main components of healthy diet. 9% of respondents would like to see in the menus such traditional fast food (with low nutritional value) as dumplings, what is clearly showing wrong perception of healthy food and the consumption patterns of the family.

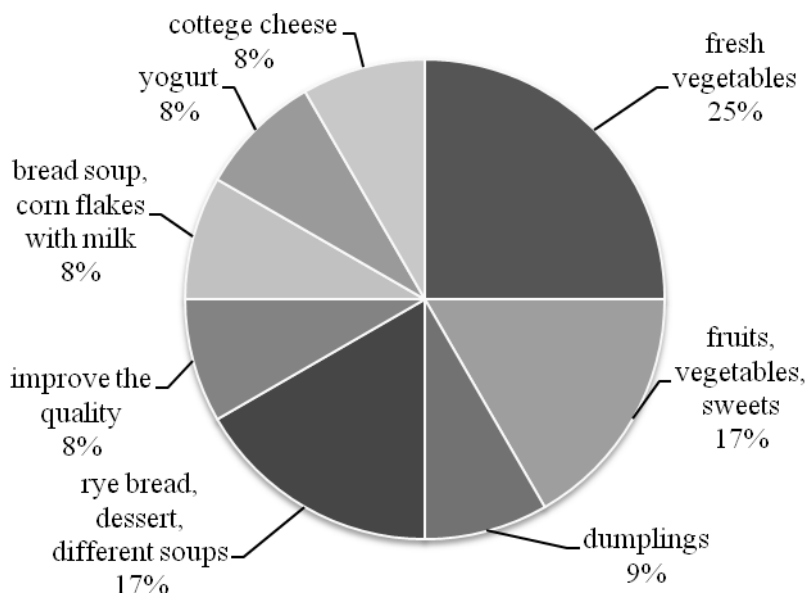


Figure 3. What kind of food should be included in daily menu?

6. According to the parents' opinion the most frequent healthy meals in menus of kindergarten are as following in Figure 4.

In average in kindergartens the food is considered as healthy – freshly cooked and warm, controlled by different kind of institutions. Many international studies did come to conclusions, that the main nutrition problems of preschool children are coming from their families, where because of both working parents and the lack of time are developed unhealthy consumption patterns.

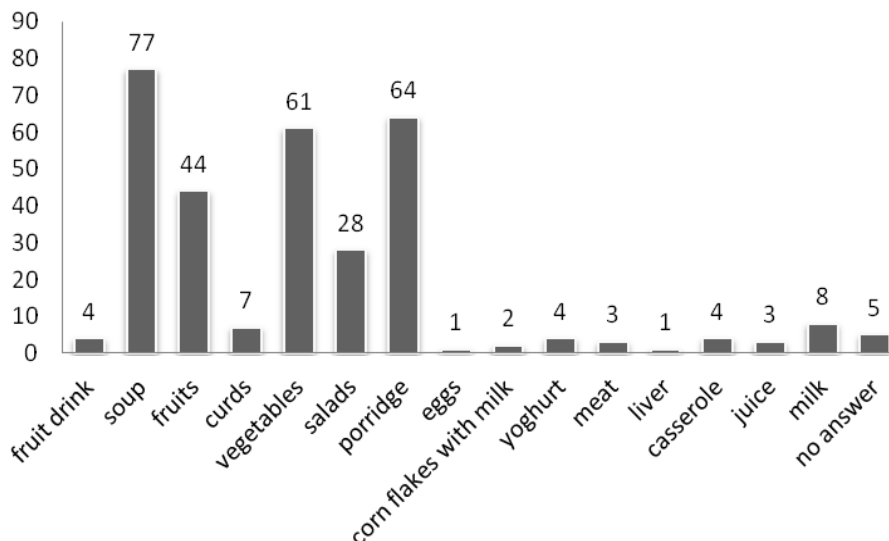


Figure 4. Most frequent healthy meals in menus of kindergarten

The face to face interview results with the head of PEI “Pasaciņa” regarding catering service and nutrition education of children are very positive and seeming not to have any of the mentioned problems of nutrition specialist. The interview shows that the head of PEI is interested in quality of supplied meals, but at the end the final decision is up to the enterprise. If there are no complaints regarding food quality, the administration is not evaluating and following the menu. The work is based on mutual trust even there is no nutrition specialist involved in catering process of children.

Table 1

Analysis of interview results – catering service

Positive aspect	Negative aspect
Quality meal => => Comments of parents => Comments of staff It is daily evaluated by medical staff	It is hard to discuss on a complete menu, as calculations related to it is done by the enterprise. The institution’s head believes there is no need to increase the staff by establishing a position of nutrition specialist
Three meals are provided	Seasonal food products do not dominate
No payment problems caused by parents	Constant supply of meals

Analysis of the interview result – nutrition education of children aged 3-4 years

- The kindergarten is not involved in projects regarding nutrition
- The COUNCIL of PARENTS in which 3-4 parents from each group of children actively participate. Various meetings with specialists concerning food additives, energy value of food products and healthy food are held.
- Nutrition education of children is performed:
 - according the preschool educational program’s practical classes – table culture, preparation of simple dishes related to annual celebrations
 - in daily discussions on healthy food between pedagogues and children.

Consumption of a healthy diet by young children is essential to provide for normal growth and development and to prevent a variety of nutrition-related health problems, such as anemia, growth retardation, malnutrition, compromised cognitive achievement, obesity, dental caries, and chronic diseases in later life. Children are the nation's most important resource and thus deserve the best possible education for their present and future health.' (Swadener, 1994)

Conclusions

The system of kindergarten catering service in Latvia is a well-developed and is governed by legislation and supervised by the control authorities.

Children's education is regulated by preschool educational program, but the main work on nutrition education depends on the teachers how to organize lessons on healthy eating.

Teachers are considered as interested stakeholders in healthy nutrition of their children, but in the same time resistant to change or difficult to engage because of too much other duties and low payment, therefore the significance of nutrition in kindergarten must be implemented in curricula for teachers.

Health professionals, scientists and NGO's are not enough raising the awareness of society about present emerging health problems of children and the importance of healthy and sustainable nutrition in early childhood. Therefore there is also less pressure on policy makers for necessity to draw up and implement an action plan for healthy nutrition based on current scientifically recognized health promoting principles and approved nutritional norms.

The result of survey is showing that among parents there are different opinions about healthy food. The caregivers should be a part of nutrition education provided by government.

All who are educating, organizing and financing the nutrition of preschool age children are jointly responsible for its sustainability.

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