



CANTEEN REFORM FROM THE PERSPECTIVE OF THE PARENTS OF NURSERY CHILDREN IN BÉKÉSCSABA

¹E. Lendvai, ²K. Varga, ³Gy. Hampel

¹University of Szeged Faculty of Engineering, Mars tér 7, 6724, Szeged, Hungary,
e-mail: lendvai@mk.u-szeged.hu

²University of Szeged Faculty of Engineering, Mars tér 7, 6724, Szeged, Hungary,
e-mail: varga.kitti29@gmail.com

³University of Szeged Faculty of Engineering, Mars tér 7, 6724, Szeged, Hungary,
e-mail: hampel@mk.u-szeged.hu

ABSTRACT

It is important to provide sufficient quantity of good quality food for young children. The bases of healthy diet should be learned as a child and nurseries have an important role in shaping the children's eating habits and forming their taste. This paper summarizes research results about the canteen reform introduced in nurseries on 1st January, 2015. A total of 140 questionnaires were collected from parents or grandparents of the young children attending nurseries in Békéscsaba. We asked them about their pre-reform and post-reform opinions on the children's food and what they think of the implemented reform. The answers indicated that the parents were satisfied with the nursery caretakers who always gave detailed information about the child's meal and provided the possibility to discuss problems, most of the parents were well informed about the the nursery canteen reform and the majority agreed with it. Our proposals based on the research are: The parents should have more influence and their opinion should be asked about the catering of their children. Opinions of the nursery caretakers and the catering managers should also be considered, since they spend a lot of time with the young children at the nursery. The changes in the nursery catering should have been implemented more gradually.

Keywords: nursery, canteen reform, questionnaire, Békéscsaba

1. INTRODUCTION

It is well known to everybody in Hungary that unhealthy nutrition, obesity and lack of active lifestyle is an increasing threat to a significant part of the population. Those who try to do something about it try to do sports and to try eat healthy. Some people believe that the bases of healthy diet should be learned as a child but since the child does not see this at home, this matter should be solved in public institutions. Based on this concept the so-called canteen reform was introduced and has come into force from 1st January, 2015. Every parent knows that the development of good habits should start in infancy. The taste of the infant develops as the parents and the caretakers shape it. If the infant does not get used to sweet taste, he or she will not like it and will accept the natural taste of the food. If, instead of sugary soft drinks and syrup, we give hundred per cent freshly-squeezed juices and clean water to drink, we do a lot for the infant's health and ensure his or her balanced development [1].

Due to the above mentioned, our research was done in nurseries. We have examined the effects of the introduced reform on young children, their parents and their caretakers. For this purpose, we have chosen the preparation of structured interviews (with nursery caretakers and catering managers). This study presents the results of the qualitative methods.

The fact that the child eats enough can be judged by whether he or she is satisfied or not and his or her development seems continuous or not. A healthy infant and young child never loses appetite. The child who eats only a small amount of food, but eats heartily and with joy does not have a bad appetite. The psychological conditions have effect on tolerance, metabolism and the processing of nutrients too [2].

Therefore, the above mentioned mean a careful, deliberate and thoughtful task [3]:

- Planning a menu which is diverse, coordinated in taste and form, appropriate for age and season.
- The knowledge about the infant or toddler: their individual needs, level of development, eating frequency, the quantity and quality of food and their way of eating (on lap, by the table, with help or alone, drinks while eating or only after eating).



- The impact of the environment (precise preparation, nicely set table, balanced and relaxed atmosphere).
- The behaviour of the people nurturing the young children.

It is especially important to provide sufficient quantity of food for the children with the qualitatively correct composition. Children get breakfast, snack, lunch and afternoon snack in the nurseries. Using the appropriate kitchen technology, the enjoyment value is also being taken care of. It is a requirement that the meals of the adults and the children are prepared based on a different menu and the same raw material is avoided in the kitchen. These rules must be observed in all circumstances [4]. In addition, there are numerous recommendations on what kind of and how much nutrients should be provided for the toddlers, for example: One of the small meals in the nurseries should also contain animal protein [5]. Excessive salt intake should be avoided and the usage of sugar should be as minimal as possible [6].

In the case of recommendations, we must mention the well-known nutrition experts, who highlight the following (table 1): The recommended daily calories for the 1-3-year-old group is 1,537 kcal. From the daily calories 800-950 kcal should be provided in the nursery with four meals (2 small and 2 main meals), where the percentages are: 54% carbohydrate, 32% fat and 14% protein. The daily recommended amount of the carbohydrate is 206 grams, of which the added sugar can be maximum 10%, and the smaller the amount, the healthier the menu. The amount of fat is 55 grams, of which the essential fatty acid must be 28 grams. The total amount of protein should also be 55 grams, including 33 grams of proteins of animal origin which is 60% of the total amount. Proteins of animal origin are indispensable for young children because these proteins are the building blocks of the body. That is why the vegetarian diet is strictly forbidden and unacceptable for the developing, young children.

Table 1. Table of food nutrients for nursery-age children (Source: [7])

Nutrients	Age 1-3
Energy	1,537 kcal
Total protein	55g
Protein energy	14%
Animal protein	33g
Proportion of animal protein	60%
Total fat	55g
Energy proportion of total fat	32%
Essential fatty acid	28g
Total carbohydrates	206g
Energy proportion of total carbohydrates	54%
Added sugar	10%

We have formulated three hypotheses prior to the commencement of our research:

1. At least 80 per cent of the parents are satisfied with the fact that nursery caretakers give detailed information about the toddler's meal and provide the possibility to discuss the occurring problems.
2. At most 50 per cent of the parents are well informed about the implementation of the nursery canteen reform.
3. At least 70 per cent of the parents disagree with the implementation of the reform.

2. MATERIALS AND METHODS

During the survey, fifty questionnaires were distributed in Békéscsaba in each nursery. A total of 150 questionnaires were given to the parents or grandparents of the young children attending nursery. The data collection was carried out from March till May, 2016. A total of 140 assessable questionnaires were collected.

The questionnaire was divided into two main parts based on the date when the child started to attend the nursery. Those, whose children or grandchildren attended the nursery before 1st January, 2015 (that is,



before the introduction of the reform), had to fill in the first and the second part as well. In cases, when the child started to attend the nursery after implementing the reform, the parent or grandparent filled in only the second part of the questionnaire.

We have evaluated the completed forms with the help of Statistica 13.0 and Microsoft Excel 2010 software.

The three hypotheses mentioned in the introduction were also tested at 5% significance level with z-test. The empirical value of z can be calculated as in (1) by taking the portion of the sample meeting the criterion (k), the sample size (n) and the hypothetical value to compare with (P):

$$Z = \frac{k - nP}{\sqrt{nP(1 - P)}} \quad (1)$$

The value of z -test then has to be compared to the critical value of z at 5% significance level to decide whether the hypothesis can be accepted or has to be rejected.

3. RESULTS AND EVALUATION

The respondents of our research had the following demographic characteristics: they were typically female (95.72%); their age was between 26 and 45 years (87.90%); most of them were living in Békéscsaba (95.00%); and almost fifty-fifty per cent graduated from high school or had an academic degree.

Seventy-five per cent of the interviewed (105 persons) had a child attending the nursery before 1st January, 2015 (i.e. before the introduction of the reform), while twenty-five per cent (35 persons) enrolled their child into nursery after 1st January, 2015.

The pre-reform opinions (the first part of the questionnaire) can be summarized as follows: the respondents of the survey were typically satisfied with the taste, the size and the appearance of the food. Parents had the opportunity to get to know the food on so-called “health days” and during the transition period. Fig. 1-3 shows their opinions which were measured on a scale of 1 to 5 (1: not at all suitable/not satisfied, 5: fully suitable/satisfied).

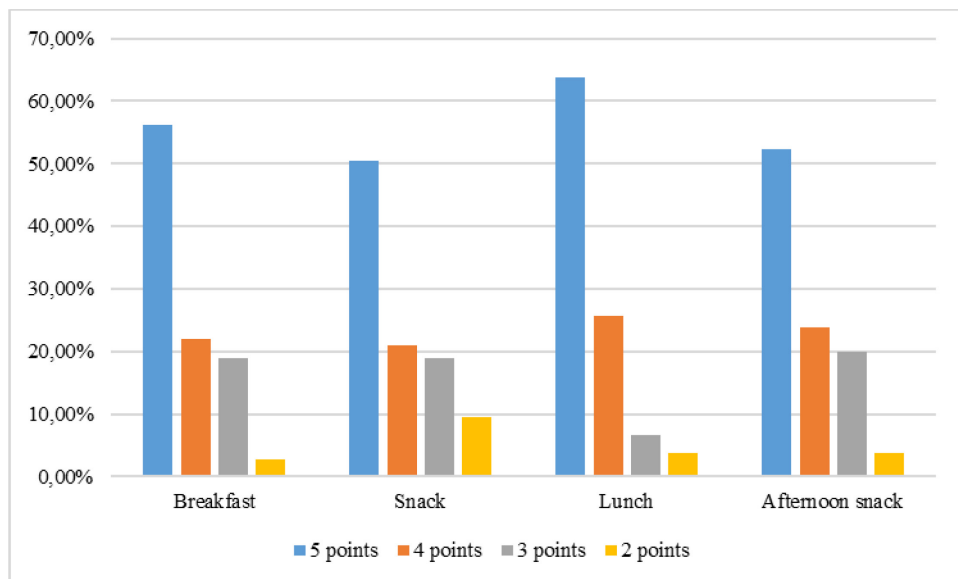


Figure 1. The evaluation of the size of portions in public catering before the reform (n=105) (Source: authors' edit)



Hereinafter all parents responded to the questions, making the sample size 140. First, we asked about the knowledge related to the catering reform in the second part of the questionnaire. Based on the results we can say that approximately half of the parents tried to check on things, while the same percentage read about it one or two things. The percent of indifferent parents were insignificant. Then we tried to evaluate the opinions on the reform. From the eight possible answers, more than one could be marked by the participant (fig. 4). This time the results were not as unified as in the previous case.

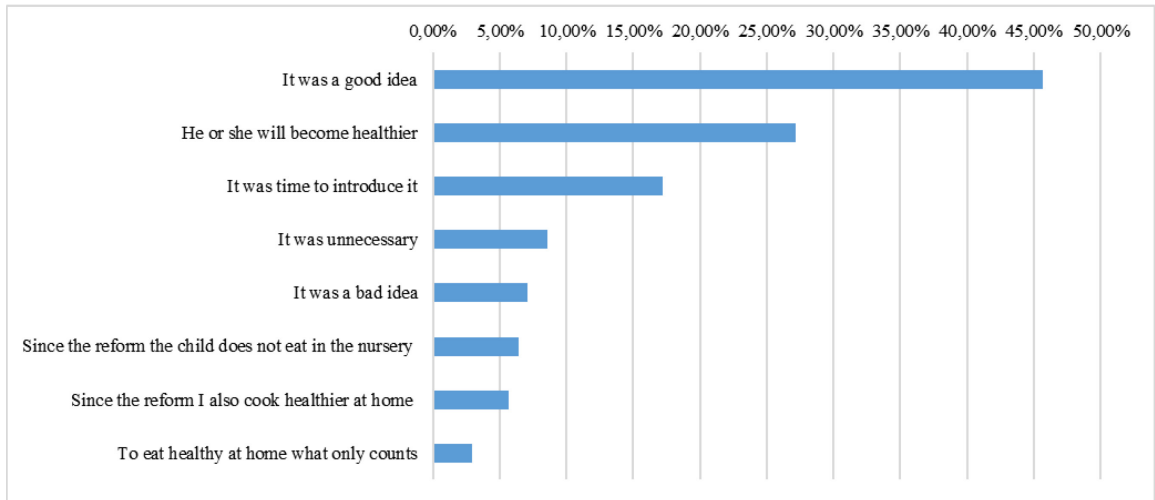


Figure 4. The distribution of the respondents based on their opinion on the reform (n=140) (Source: authors' edit)

The questions about the reform were followed by the same questions found in the first part of the questionnaire.

The taste, quantity and appearance of the food was evaluated on a scale of one to five, just as in the first part. We have found that the biggest difference was in the taste of the food. Parents gave five points to the taste of the food in far fewer cases than before the reform. The obtained results can be seen in table 2.

Table 2. Percentage of the fully satisfied respondents in the case of post-reform food evaluation (% , n=140) (Source: authors' edit)

Size of portions	
Breakfast:	48.6%
Snack:	45.7%
Lunch:	57.9%
Afternoon snack:	50.0%
Taste of food	
Breakfast:	43.6%
Snack:	37.1%
Lunch:	24.2%
Afternoon snack:	46.4%
Appearance of food	
Breakfast:	58.5%
Snack:	57.1%
Lunch:	45.7%
Afternoon snack:	57.1%

We have found significant difference considering the children's hunger. A higher percentage of the parents marked "always" (36.4%) or "usually" (30.0%) than before the reform, when this was only 17.2%. The

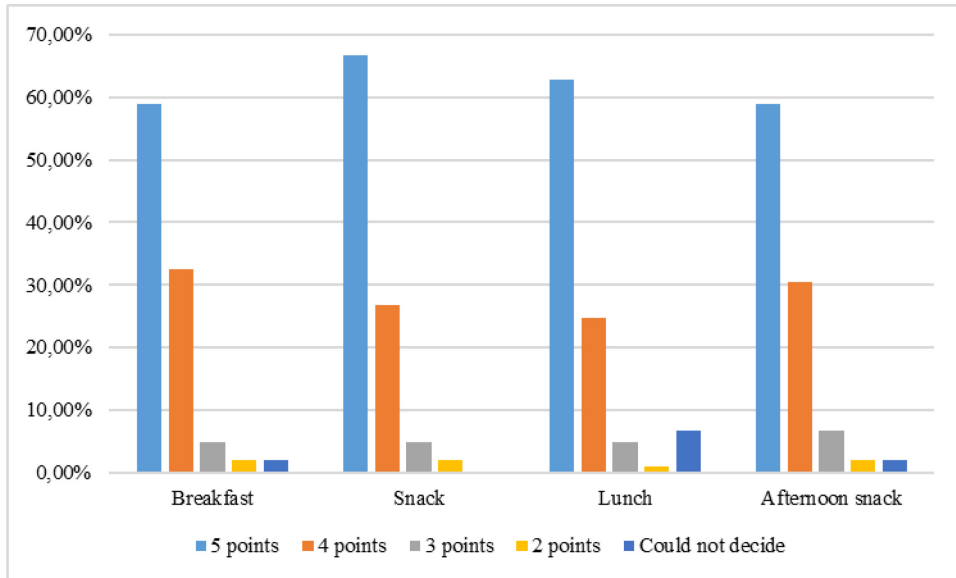


Figure 2. The evaluation of the taste in public catering before the reform (n=105) (Source: authors' edit)

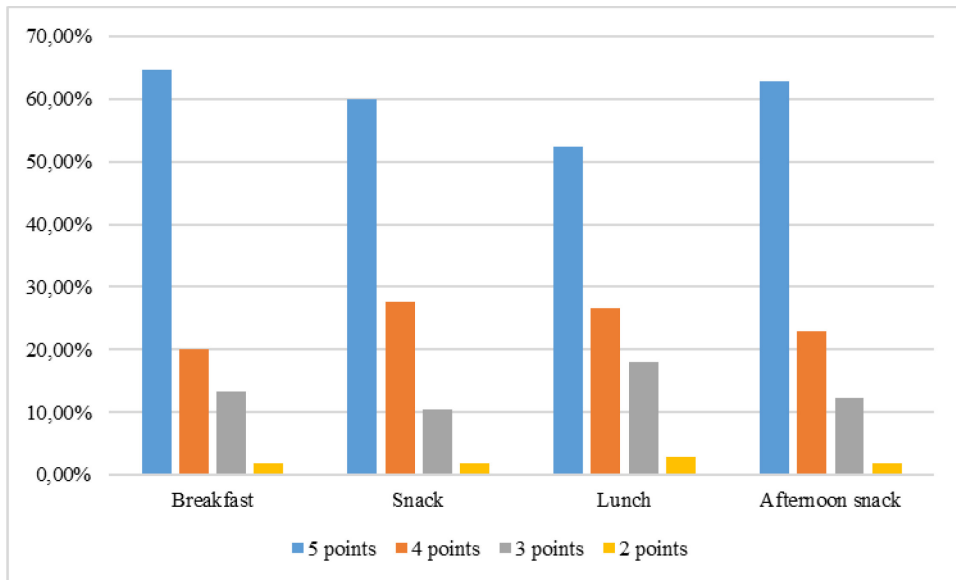


Figure 3. The evaluation of the appearance of the food in public catering before the reform (n=105) (Source: authors' edit)

Due to the child's age, the parent cannot expect a detailed report regarding the daily meal. Instead, he or she can decide if the toddler has eaten enough based on the child's hunger. The answers given to the question about this fact showed that 57.1% of the children never remained and 25.7% rarely remained hungry before the reform. Only 17.2% indicated that his or her child was always or almost always hungry when met at the end of the day. In addition, we also learned that most of the children willingly ate what he or she was given at the nursery (64.8%) and only 8.5% turned out to be picky. The parents could get this information from the nursery caretakers with whom they discussed the experiences in all details every day.



feedback of the caretakers also support that the group of kids picky earlier, before the introduction of the reform, has grown from 8% to 20%.

In the last question of the survey, we asked the parents and grandparents on their views on the reforms. Here are a few opinions of which some support and some oppose the reform:

- “The taste of the previous foods was better; I would bring back those.”
- “As long as the children heartily eat the offered food, there is no need for a reform.”
- “Sometimes less healthy food may be allowed.”
- “This is perfect as it is.”

Many people had noted that the reform should have been introduced more gradually and several of them had mentioned that the dishes could have homelier taste instead. Some thought that the reform was completely unnecessary. According to them, the food was tastier in the past and the children’s health does not depend on this.

In order to examine the three hypotheses, we have performed left and right tailed tests; table 3 contains the results.

Table 3. The results of the hypothesis tests (Source: authors’ edit)

	1st hypothesis	2nd hypothesis	3rd hypothesis
H₀	$p \geq 0.8$	$p \leq 0.5$	$p \geq 0.7$
H₁	$p < 0.8$	$p > 0.5$	$p < 0.7$
k	136	67	73
n	140	140	140
P	0.8	0.5	0.7
Z_{crit}	-1.645	1.645	-1.645
Z_{emp}	5.071	-0.507	-4.611

4. DISCUSSION AND CONCLUSIONS

Our first hypothesis was that at least 80% of the parents are satisfied with the fact that nursery caretakers give detailed information about the toddler’s meal and provide the possibility to discuss the occurring problems. It was clear from the parents’ answers that it was always possible to discuss problems. The parents were always given information about their children’s meal. Following the introduction of the reform 77.1% (108 persons) said that they had discussed everything in details with the nursery caretakers and another 20% (28 persons) did not find any problems to discuss. Nobody marked the answer that the caretakers refused the discussion or did not provide information. The interviews with the caretakers of the young children support this, since they all reported that they had given the parents information daily, but if there was a need for a longer conversation about an emerging problem, this could be arranged after making an appointment. The opinion of nutrition manager in the nursery was the same.

The calculated empirical value of the left tail z-test (Z_{emp}) is higher than the critical value (Z_{crit}), so we can accept the first hypothesis at 5% significance level.

Our second hypothesis was that at most 50% of the parents are well informed about the implementation of the nursery canteen reform. The questionnaires revealed that 47.9% of the parents were aware of the implementation of the reform and they had detailed information about it. Approximately the same percentage of the parents read about the reform but not in detail. Only a minor percentage (1.4%) did not hear about it and 2.8% replied that they were not interested in the topic.

The calculated empirical value of the right tail z-test (Z_{emp}) is lower than the critical value (Z_{crit}), so we can accept the second hypothesis at 5% significance level.

Finally, our third hypothesis was that at least 70 per cent of the parents disagree with the implementation of the reform. In the case of the relevant question, the respondents were allowed to mark more than one of the eight possible answers. The “I find it a good idea” answer was marked by 64 persons and 24 chose “It was timely”. Eight respondents have been cooking healthier since the introduction of the reform. Altogether this is 96 people of the 140 (68.5%). The reform was a bad idea according to 10 individuals and 12 people



thought it was unnecessary. The child of 9 parents have not been eager to eat in the nursery since the implementation of reform and 4 parents thought that it was the home meal what only counts. These numbers add up to a total of 73 people (52.1%). The majority therefore agrees with the implementation of the canteen reform.

The calculated empirical value of the left tail z-test (z_{emp}) is lower than the critical value (z_{crit}), so we have to reject the third hypothesis at 5% significance level.

Our proposals are summarized as follows:

- Parents should have more room and more influence. Their opinion should also be asked about the catering of their children in the institution. For example, there could be an online forum for comments and opinions and these could be monitored and used by professionals to modify the reform.
- The realization of the reform should be the outcome of a multi-month, or even a one-year process. The consumption of sugar and salt should have been gradually reduced, and the introduction of new spices should have been carried out similarly to the introduction of new flavours recommended in infancy.
- In the case of the reform, the opinions of nursery caretakers and catering managers should also be considered, since they are the ones who spend the most time with the young children after the family.

REFERENCES

- [1] J. Bajusz, O. Fiedler, O. Tobak, Az egészséges csecsemő és kisgyermek gondozása (Care for healthy infant and toddler), Szegedi Egyetemi Kiadó, Szeged, 2009
- [2] I. Henter, É. Mramurácz, Zs. Szabó, Táplálkozási és ételmeztani ismeretek (Nutrition and dietetics knowledge), Líceum Kiadó, Eger, 2013
- [3] J. Rigó, Étellemezésvetők kézikönyve (Handbook of catering managers), Anonymus Kiadó, Budapest, 1999
- [4] L.-né Balogh, B. K. Barbainé, B. I. Kovácsné, Á. Nyitrai, J. Rózsa, F. M. Tolnayné, É. Vokony, A bölcsődei nevelés-gondozás szakmai szabályai (The professional rules of nursery care), Ministry of Human Capacities, Budapest, 2012 http://www.feherkereszt.hu/2012/data/userfiles/file/szocialis_fuzetbolcsodei_.pdf (Download: 6th March, 2017)
- [5] J. Paller, A rendszeres étkezést biztosító, szervezett ételmeztési ellátásra vonatkozó táplálkozás-egészségügyi ajánlás közétkeztetők számára (Nutrition recommendation for public caterers providing regular and organized meals), Office of the Chief Medical Officer, Budapest, 2011 https://www.antsz.hu/data/cms30236/szervezett_etelmeztési_ellatasra_vonatkozó_taplalkozas_egeszse_gugyi_ajanas_kozetkeztetoknek_20110805.pdf (Download: 6th March, 2017)
- [6] National Institute for Family, Youth and Population Policy, Napközbeni ellátás – bölcsőde (Day care – nursery). Social Renewal Operational Programme (TÁMOP) project 5.4.1.-08/1-2009-0002 Modernization of social services, strengthening central and regional strategic planning capacities, foundation of social policy decisions – Regulatory pillar (I.), Budapest, 2011 http://www.ncsszi.hu/download.php?file_id=1738 (Download: 6th March, 2017)
- [7] Gy. Bíró, K. Linder, Tápanyagtáblázat (Table of nutrients), Medicina Könyvkiadó, Budapest, 1999