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## What are little girls and boys made of?

The Results of the Lifelong Wellbeing Project and Good Practices in Nurseries in Kajaani and Kostomuksha

Edited by Kaisa Mikkonen







Kajaanin ammattikorkeakoulu

Kajaani University of Applied Sciences

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Edited by Kaisa Mikkonen

Kajaani University of Applied Sciences publication series B

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## FORWARD

The main target of research, development and innovation at Kajaani University of Applied sciences is the promotion of health and wellbeing in cooperation with regional, national and international networks. In order to promote health and wellbeing, knowledge of individual, social, structural and cultural factors affecting health and wellbeing is required. The assets and attitudes of people themselves affect the way health knowledge and services are used. Health promotion work involves instruction and providing advice and using different methods according to customer situation needs. Influencing the health and wellbeing of children and families has a significant impact on the health of adults.

The Karelia ENPI CBC programme funded the Lifelong wellbeing project (1.3.2013-31.12.2014), coordinated by Kajaani University of Applied Sciences with the cities of Kajaani and Kostomuksha and their nurseries (11 in total) as partners in the project. The objective of the project was to increase cooperation and to share good practices between the staff of nurseries in the cities of Kajaani and Kostomuksha in order to promote the wellbeing of families with under school-age children. The special focus of the project was the sharing of good practices concerning nutrition, exercise and early educational practices on both sides of the border. An insight into individual, social, structural and cultural factors was required to know how to share good practices. The nurseries' staff members visited nurseries, observed and asked about practices and familiarised themselves with the everyday work of the nurseries on both sides of the border. Equipment supporting wellbeing was also purchased for the nurseries. The everyday food and health activities of children and families were examined using questionnaires and the results were presented to the staff of the nurseries. Seminars that included lectures given by specialists on the themes above and the analysis and discussion of information gathered during the project, were also organized. Practices promoting the wellbeing of children and families were observed on both sides of the border. The results are presented in this publication.

We warmly thank our investors, project staff, and the members of staff who participated in the project from nurseries in Kajaani and Kostomuksha. It has been a pleasure to follow your enthusiastic and active work. My warmest thanks are also directed at the authors of this publication. It makes great reading!

Ketunpolulla 6.10.2014

Eija Heikkinen

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## 1 LIFELONG WELLBEING

### 1.1 Karelia ENPI CBC programme period 2007–2014

Henna-Mari Laurila

Karelia ENPI CBC is a cross-border cooperation programme between Kainuu, North Karelia, North Ostrobothnia in Finland and the Republic of Karelia which aims to increase economic wellbeing and to improve the quality of life within the geographic area covered by the programme, which is funded by the European Union, Finland and Russia.

Six targeted application rounds were organized during the years 2010 – 2012 with the themes of sustainable regional development, tourism, forest and energy, culture, wellbeing and the sustainable use of natural resources. 61 projects were funded via the application rounds. In addition, five infrastructure projects were funded by the programme.

All the projects include practitioners and actions in both Finland and Russia. The basic principle is that both parties will benefit from cooperation. The projects do not support and assist one-sidedly one or the other party but promote collaboration within issues where cooperation achieves more than would be possible if working alone.

More detailed information concerning the results and impact of the programme will be available once the projects are over but already at this stage it can be said that several projects have succeeded in achieving their objectives and have had a positive influence on the lives of the inhabitants of regions touched by the programme.

Although the Karelia ENPI CBC programme will finish at the end of 2014, cooperation will continue. The preparation of the Karelia ENI CBC programme is already underway and the first rounds of application are estimated to open at the beginning of 2016. Cross-border cooperation to promote wellbeing will then continue.

## 1.2 Lifelong Wellbeing Project 2013–2014

Matti Nissinen, Kaisa Mikkonen

The general aim of the Lifelong Wellbeing project was to promote the health and wellbeing of nursery children and their families in Kainuu and Russian Karelia. The target groups of the project were children aged 5-6 years and their parents from 5 nurseries managed by the City of Kajaani and six nurseries managed by the City of Kostomuksha. The participating nurseries from Kajaani were Huuhkajavaara, Lohtaja, Ratamo, Tapiola and Hoijakka and from Kostomuksha the nurseries were Berzka, Gnomik, Korablik, Skazka, Solnyshko and Zolotoi Kljuttsik. The project was implemented during 2013-2014 and it was funded by the Karelia ENPI CBC programme.

The secondary objectives of the Lifelong Wellbeing project (later the LLW project) were to describe the health related behaviour of the children's parents and possible risk factors threatening the parents' health as well as the exercise and health behaviour of pre-school age children. The objective of the LLW project was also to advance the social and cognitive skills of pre-school age children and the development of a positive self-image. Based on research and collaboration, the desired outcome of the project was to find good working practices to strengthen the education partnership between nursery staff and families and to promote the health and wellbeing of the children and their families on both sides of the border.

Cooperation between families and nursery staff plays a prominent role in the health education provision, learning and guidance of children. Health education is a part of everyday work in both Finnish and Russian nurseries. The nurseries' health education content is closely connected to the children's local environment, everyday life and concrete experiences.

The emphasized areas of health education are mental wellbeing, cleanliness and healthcare, sleep, rest, nutrition and eating habits, clothing and how to dress, and traffic and safety. However, several recently conducted studies show that a sedentary lifestyle, problems related to nutrition and many different risk factors threatening the lives of parents still affect the health and wellbeing of children as well as their parents. Thus, the health education research areas selected for the LLW project were the nutrition and exercise of pre-school children and the health behaviour of parents of pre-school age children.

At the start of the LLW project, meetings and seminars which extensively covered the operational principles and models of the nurseries from a pre-school education, teaching and guidance perspective were arranged in Kajaani and Kostomuksha. Nursery staff members were able to experience the everyday life of the other nurseries on both sides of the border in practice and to learn various methods of supporting the growth, development and learning of pre-school children during benchmarking visits. As stipulated in the objectives, LLW project practitioners specifically focused on the exercise and nutrition related behaviour of pre-school children and on cooperation between nursery staff and families to support parenting.

During the LLW project, risk factors threatening the health behaviour and wellbeing of parents of pre-school aged children attending the nurseries involved in the project in Kostomuksha and Kajaani were examined using a questionnaire. In addition, the parents in the families and the nursery staff kept diaries for one week (week 7/2014) recording information on the exercise and eating habits of 4-6 year-old children. 43 families and 43 children from Kostomuksha and 32 families and 35 children from Kajaani took part in the project.

The children's exercise and food diaries and the questionnaire completed by the parents were compiled in cooperation with the Kostomuksha partners and tested before use at Korablik Nursery in Kostomuksha and Hoijakka Nursery in Kajaani. Although the forms were tested and changed, their completion, the Russian-Finnish and Finnish-Russian translations and consequently the analysis and interpretation of information obtained using the forms, made describing and assessing the reliability of the research results challenging.

The aim of this publication is to provide information on the good practices used in education, teaching and guidance activities for pre-school aged children attending nurseries based in Kajaani and Kostomuksha that became evident during the Lifelong Wellbeing project. The publication describes the early education systems used in Kajaani and Kostomuksha, exercise and nutritional recommendations, as well as the exercise and eating behaviour of pre-school children and the health behaviour of their parents in both cities.

## 2 GOOD EARLY EDUCATION PRACTICES IN NURSERIES IN KAJAANI AND KOSTOMUKSHA

### 2.1 Early Education in Kajaani

Sirpa Kemppainen

Early education is educational interaction that occurs in the various areas of young children's lives which aims to promote the well-balanced growth, development and learning of children. Early education comes under the jurisdiction of the Ministry of Education and Culture in Finland as a part of the education and school system.

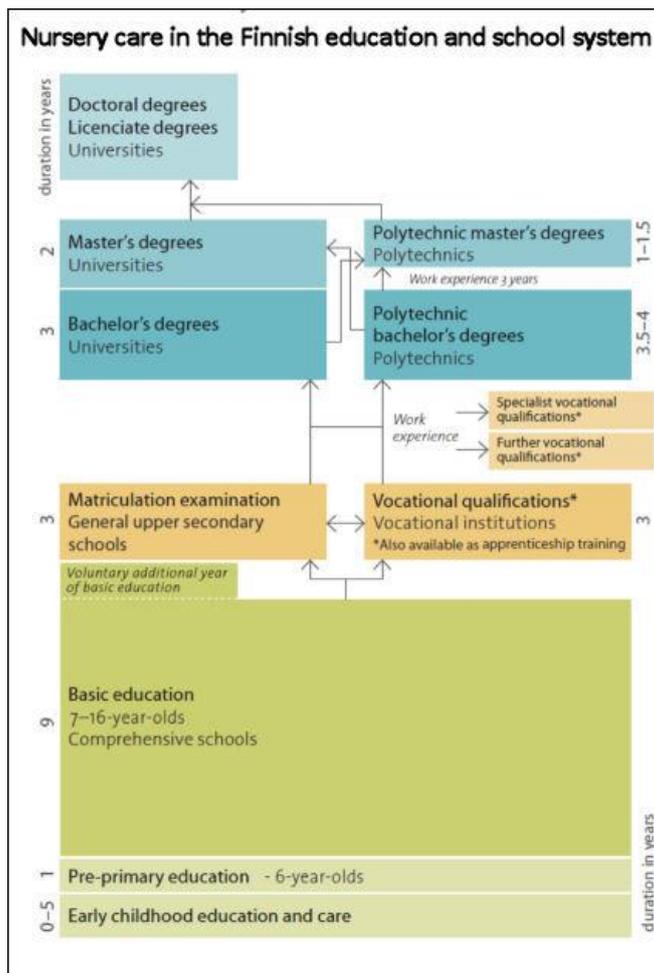


Figure 1. Early education in the education and school system of Finland

## Different forms of child day care in the City of Kajaani

Parents select a suitable nursery place for their children in Kajaani in either a municipal nursery or family day care (child minder) or a private nursery or child minder. They can also stay at home to look after any children under the age of three and can receive a home care allowance and an earnings related care supplement. If they so wish, parents can employ a nanny in the home with the aid of the private home care allowance and municipal supplement. Pre-primary education is organized either in full-time nursery groups or in school facilities in part-time groups for 4h/day. In Kajaani, the Early Education Department organizes pre-primary education as well as morning and afternoon activities for school pupils (figure 1).

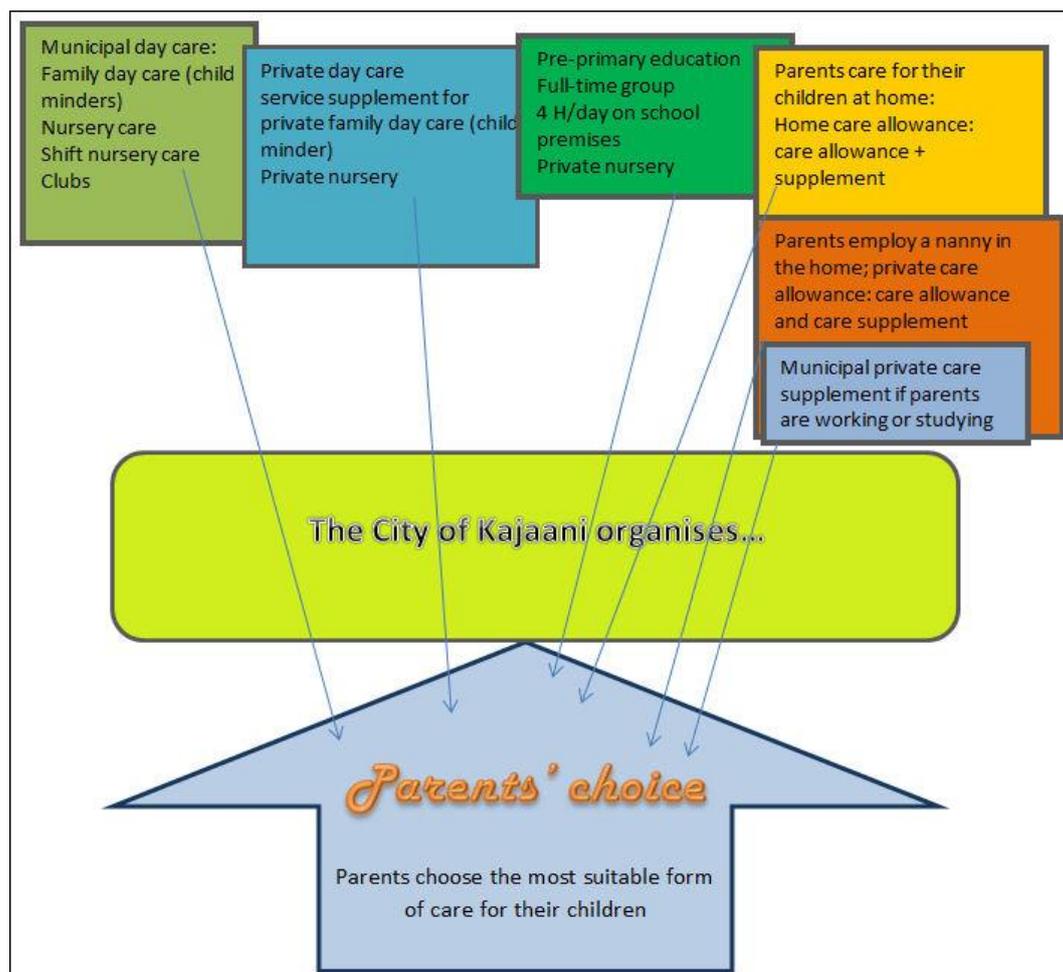


Figure 2. Forms of children's day care available in the City of Kajaani

In nurseries the children are divided into groups whose size depends on the children's age. The groups for children under the age of three have 12 children and there are 21 children in groups with children over the age of three. Usually 2 nursery teachers and 1 children's nurse work with the groups except for groups containing under three-year-old children which have two nursery teachers and two children's nurses. The group may also have a special helper.

Care in shifts is provided if childcare is required in the evenings or mornings or during the night due to the parents' working hours. Shift care is available in four nurseries in Kajaani.

Family day care (child minding) is organized in the home of the caregiver. A child minder can care for four children under school age and one half-day preparatory school child or school pupil.

If child day care is not required on a regular basis there are play-club activities available to children aged between 3-5 years twice a week for three hours at a time.

### Kajaani's Early Education Plan

The content of Kajaani's Early Education Curriculum (Kajaani's *vasu*) follows the main guidelines provided by the equivalent national document (National Curriculum Guidelines on Early Childhood Education and Care). The main focuses within the content of Kajaani early education are: considerate and respectful interaction between adults and children, education partnership with parents and reinforcing the professional awareness of staff members. The main objective of planning in recent years has been to ensure that a good day spent in day care produces wellbeing now and in the future and that the children are well and parents are satisfied with childcare services.

How is the wellbeing of children promoted? What constitutes a good day at nursery?

“In order to promote wellbeing, the health and physical capability of children is nurtured and their basic needs are met” (Heikkilä, M; Välimäki, A-L; Ihalainen, S-L., 2005, 15.)

High quality care that increases basic feelings of security consists of ensuring cleanliness and hygiene, as well as being educated in matters of cleanliness, tidiness and hygiene. Rest, relaxation, and listening are part of a good day at nursery and children are not forced to sleep while they are there. In addition, attention is paid to healthy food and good manners while eating. Children’s exercise needs are met according to exercise recommendations for children (Early Education Physical Exercise Recommendations, Ministry of Social Affairs and Health, Ministry of Education and Culture, 2005).

Children’s wellbeing is promoted by creating a respectful and warm working atmosphere with good interaction. Children are sensitive to the general atmosphere. If it is encouraging, the children will make use of all their abilities and assets. An expressionless, distant adult on the other hand, discourages contact. (Kalliala, 2012, s. 54.) “Children must feel that they are valued and accepted as themselves: they must be heard and seen thus strengthening their self-esteem.” (Heikkilä, M; Välimäki, A-L; Ihalainen, S-L., 2005, 15.)

What is good early education today?

Modern early childhood education has been studied extensively and high quality research and doctoral theses on the subject are available. The task of the nursery is to offer activities that bring something new and valuable even to good home rearing (Kalliala, Lapsuus hoidossa, 2012, s. 33).

Today, skills and artistic activities should have a central role in early education, where lessons are not strictly timetabled. Skills and arts subjects include painting, moulding, music making, wood and handicrafts, drama, acting, rhymes, narrative and stories.

Play occupies a central role in day care. The play environment must be pleasant and encouraging. Adults can also instruct and enrich play. Children have a lot more time for voluntary activities while attending nursery than at school. The children are permitted to play according to their own interests or to do something else. A fundamental part of early education pedagogy involves creating, maintaining and renewing a motivating play and learning environment. (Kalliala, Lapsuus hoidossa, 2012, s.218.)

#### Children who need special support

If a child is in need of special support, day care aims to offer such support at the earliest possible stage. The parents' role is crucial when support is being planned and they are helped by cooperation partners from the Kainuu Social and Healthcare organization. Four peripatetic special needs nursery teachers are available to assess support needs in early education. We use so called three-step support according to the child's needs: general support, special support and intensified support. The child is observed in more detail at the age of 3, 4 and 5 years and during the pre-primary preparatory school year (figure 3).

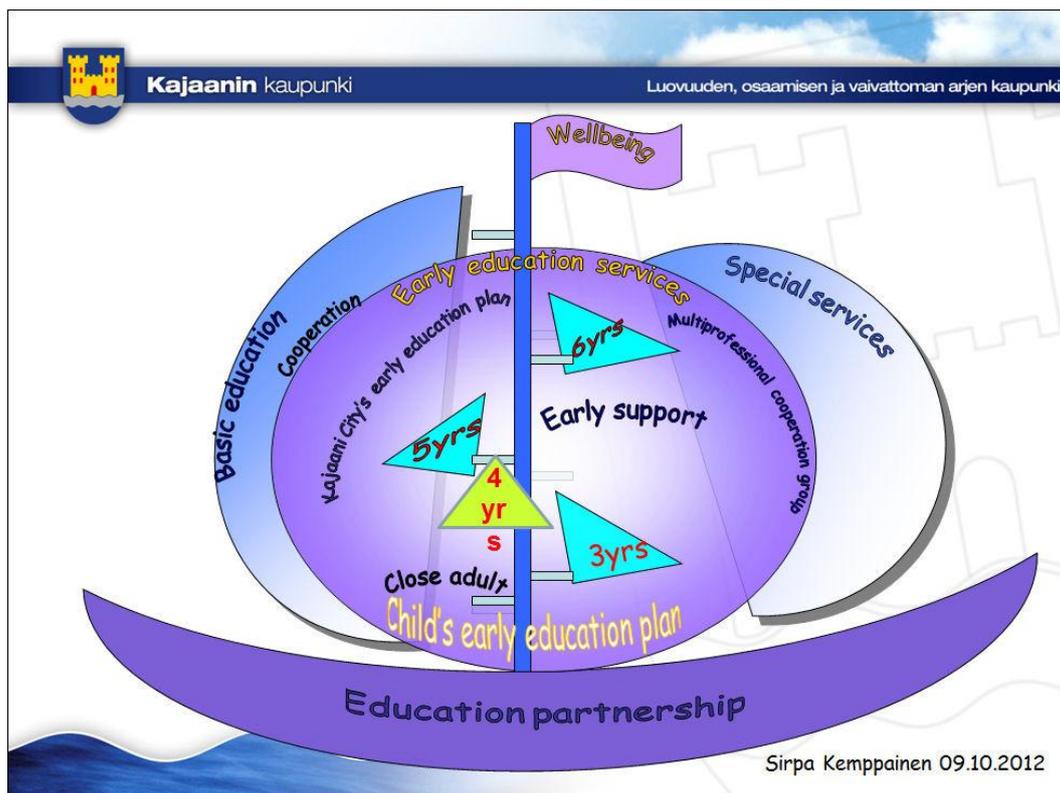


Figure 3. Child support in early childhood education in Kajaani

#### Early education in figures in Kajaani

- Operational funds allocated in budget for 2015: EUR – 23 304 261
- 19 municipal nurseries, 14 private nurseries
- 26 municipal child minders, 36 private child minders

#### Employees in autumn 2014

- 19 nursery managers/nursery teachers (the nursery managers work as nursery teachers with groups of children)
- 73.5 nursery teachers
- 113 nursery nurses
- 28 special helpers
- 30 nursery trainees

## Administration

- Performance area director with own area (7 nurseries + special day care) and overall responsibility for early education in Kajaani
- Performance unit manager, responsible for 12 nurseries and for placing children in day care
- Private day care manager, responsible for 14 nursery businesses and 36 private child minders
- Managing supervisor with responsibility for municipal family day care (child minding), and morning and afternoon activities
- Immigrant coordinator (Salary from immigration services)

## Challenges

A risk factor in early education is that a considerable amount of employees will be retiring within the next ten years. During 2015-2019, 18 nursery teachers will retire and 27 during 2020 – 2024, i.e. 45 teachers within ten years. 13 nursery nurses will retire 2015 – 2019 and 35 will retire 2020 – 2024, i.e. 48 nurses in ten years.

## Sources

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## 2.2 Huuhkajanvaara Nursery

Mirja Lavento, Ritva Niskanen

*“From the big house at the bottom of the hill,  
can many a carefree voice be heard!”*

Unofficial translation of Huuhkajavaara Nursery’s motto from website

We were informed of the Lifelong Wellbeing project by the Municipal Director of Early Education. We were asked whether we would be interested in taking part and the matter was discussed amongst the staff. We felt that this project could benefit our work. We also felt we would be able to find enough families in our big nursery interested in taking part in a cross-border project concerning children and families.

Our nursery has eight groups and in total, 125 children. Six persons were allocated responsibility from different groups. Their task was to encourage parents to take part in the project and show them how to complete the food and exercise diary. They also participated in the seminars and meetings.

To gain the interest of parents we initially distributed an announcement and told them about the project. The families expressed an interest and eight participated in the project. One child from each family participated in the project. The children were aged 4-6 years. Cooperation with parents has been natural throughout the project and the families found completing the diaries easy. Many felt it was important to observe what their children were really eating and some hoped the project would support a varied diet.

One of the parents who had already kept a food diary and studied whether a sufficient amount of proteins and fibre were consumed, said "I've done this before!" Before the start of the monitoring week, one of the parents wondered: "Will we have time to exercise?" However, the families were reminded that during the monitoring week they should just live their everyday lives.

Students from Kajaani University of Applied Sciences participated in the project and their task was to plan, organize and carry out activities for the groups of children and families with the nursery staff. The students were involved in delivering Mothers' Day crafts, indoor exercise and an all-day excursion to Joutenlampi Recreation Centre. The students planned the content and programme of a family exercise day held on the shore of Lake Vimpelinlampi.

Using money we obtained from the project, we purchased different types of bicycles, and foot or hand-powered cars for the nursery. This equipment is suitable for children of different ages and it enables them to practice foot and hand coordination. The new equipment has been extremely popular and the children enjoy using it.

After familiarizing ourselves with nursery work in Kostomuksha we formed the impression that we work more or less according to the same principles and procedures although differences were apparent. Compared to nurseries in Kajaani, the nurseries in Kostomuksha were much bigger. The groups were bigger and they were based on age. There were no children under the age of 2 at the nurseries. The groups are staffed by two educators and an assistant. The groups of children are also taught by sports and music teachers. We observed that music and exercise are emphasized in early education work in Kostomuksha. The professional structure of nurseries in Kostomuksha is wider than in Finland. The nursery has a public health nurse, speech therapist, social worker and psychologist.

In addition to regular nursery activities the children were also offered paid music and drawing clubs as well as English language clubs. Here in Kajaani, the nurseries do not offer extra-curricular clubs. In Finland, families buy leisure activities for their children offered by music colleges, adult education centres and sports associations, amongst other organisations.

In Kajaani all the nurseries follow the same food menu while in Kostomuksha each nursery plans its own menu. In Kostomuksha, the children receive two warm meals per day and each meal always includes a starter of soup and a main course.

In Kostomuksha, children's healthcare is consistently evident in nursery care because the nurseries have their own public health nurse for the children. In Finland, families are cared for by the maternity and children's clinic system and it is the responsibility of the parents to attend the clinics. The clinics collaborate with nursery care and guide families in need of support to contact the early education department.

Something that really made an impression was the importance of exercise, healthy feet and good posture. We noticed that it is possible to affect foot health with just small but regular exercises. We aim to take these issues into account in our work and to consider how to use our existing exercise equipment more systematically.

## 2.3 Lohtaja Nursery

Matti Sirviö

Lohtaja Nursery, of the City of Kajaani started in the Lifelong Wellbeing project in November 2013. Lohtaja Nursery is a shift nursery, open daily between 5.30 and 22.30. Our nursery has five groups of children. The Päivänsäde group contains 14 children under the age of three. Möriäinen contains 21 children with 12 children of preparatory school age (6 - 7 years). Menninkäiset also contains 21 children aged between 3-5 years. Maahiset and Pikku-Maahiset are our nursery's shift groups. Maahiset contains 19 children aged 3-5 years and Pikku Maahiset contains 13 children under the age of 3. In addition, preparatory school aged children (6 – 7 years) from the Maahiset group work as their own group in the nursery hall. There are 14 of them. Therefore we care for just over one hundred children in our nursery.

In autumn 2013, we agreed that families for the LLW project would be chosen from the two day groups containing children aged 3-6 years and from the shift group, Maahiset. One person in each group was appointed to talk to parents about participating in the project. They were also responsible for completing the exercise and food diaries on behalf of the nursery. Our nursery managed to acquire seven (7) pilot families. We were disappointed that we were unable to persuade any Russian families to take part. A parents' evening was organized for providing information about the project. Each family was told personally how to keep the diaries. Both the pilot families and the staff had a very positive attitude towards the project.

A significant part of the LLW project involved the participation of students from Kajaani University of Applied Sciences. In March 2014, the students visited the nursery and got to know the groups. At the same time we planned activities for spring 2014. Within the framework of the project the students arranged days with different themes at Lohtaja Nursery. One day

they baked with the children in groups. During the same day parents had the opportunity to have their blood pressure taken and to indulge in a moment of relaxation before going home. A health school was held on two days: the children were allowed to taste different vegetables and to play at visiting the nurse or the clinic. They were measured, weighed, their eyesight was tested and their blood pressure taken. In May, a family outing was held in the Vimpelivaara recreation area. During the evening, after some ice-breaking games, the parents went from one check-point to another where they identified birds, played catch with balls and played with companion dogs. The evening ended with a sausage barbecue.

The LLW project gave us the opportunity to supplement our exercise equipment using EUR 3000. The money was used to purchase various balls, floor-ball equipment and gym mats. We purchased kick-bikes for outdoor use. These have proved ingenious for the development of balance because the children do not have to focus on pedalling but on balancing. We will certainly be purchasing more kick-bikes in the future. We purchased five (5) Oiva skating frames, which are a great help for children who are just learning to ice-skate. It is not necessary for novice skaters to concentrate on remaining upright but rather on getting the kicks/pushes right. We lent the ice-skating frames to families for the weekend and they were really pleased with the chance to use them.

Before the LLW project we had very little, if any knowledge of Russian early education. 'Strict discipline' and 'adult-led' were terms that arose in discussion at the nursery. We also thought the system was controlled inflexibly from the outside. Additionally, we recalled from our own studies, how children were hardened in many different ways. Based on these assumptions it was very interesting to actually see the Russian nursery system in action in Kostomuksha.

During our visit it became clear that parents in Kostomuksha participate more in events organized by the nursery. The nurseries organized many different types of events for parents. We have a lot to learn from this in Finland. It is often rather difficult to attract parents to events and other functions. The parents of children at Lohtaja Nursery participate best in preparatory school parents' evenings and family exercise events. For example, an exercise event involving the whole nursery organized at the time of the Sochi Olympics attracted 140 children and their parents to participate in games and activities at the nursery.

The way the members of staff (teachers and specialists) threw themselves into their teaching sessions in the Kostomuksha nurseries made a great impression. The children obeyed and followed instructions without the adults having to raise their voices. The sessions were so gripping and interesting that it would not have occurred to the children to do anything else. The use of storytelling and fairy-tale figures was strongly visible during the sessions. Likewise, the instructor was not alone during the session but had an assistant and/or specialist to provide help. In Finland, the teacher often has a colleague to help out; a children's nurse or e.g. a trainee. However, this is not always possible. The atmosphere is easily ruined when it is necessary to focus on multiple tasks. More efficient planning and considering preliminary arrangements carefully could diminish this problem.

It was also a surprise that the Kostomuksha nurseries had their own public health nurse to take care of the children's health matters. The nurseries have special rooms for cases of sudden illness and children are vaccinated in the nurseries. Here the system in Finland differs from Russia. I think it is good that children can receive care immediately from a specialist in the nursery if they fall ill. The nurseries also had their own sports, music and art teachers. This opportunity does not exist in Finland. We could certainly make use of the special expertise of all staff members more effectively.

In Kostomuksha nursery food services are organized in a different way. Whereas in Kajaani, food is supplied to the nurseries by a central food service kitchen, each nursery in Kostomuksha has its own kitchen where the food is prepared. The food is definitely fresh and food quality is monitored very carefully. Similarly the energy, nutritional and vitamin requirements of the children are measured. Pre-school age children do not yet suffer from obesity problems in Kostomuksha as they often do in Finland.

Something that really stood out in the nurseries we visited in Kostomuksha was the tidiness of the facilities. All objects and toys were arranged neatly in their own place. It would have been interesting to see how the staff succeeded in doing this since the children's groups are clearly larger in Kostomuksha than in Kajaani. Similarly the proportion of staff to the number of children differs. In Kajaani nurseries there are more adults/children's group. We would also be very interested in observing how situations involving changes from one place/situation/session to another are organized.

We observed, but there is still a lot to see. There are good points and points that still require development in early education in both Kajaani and Kostomuksha. The LLW project has allowed us to become familiar with early education on both sides of the border. In our opinion, the cooperation initiated in this project should by no means end. It should continue so that solutions are found to unanswered questions for the further development of early education in both cities.

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## 2.4 Ratamo Nursery

Tarja Karppinen, Pirjo Väyrynen, Jaana Mustonen, Piia Niva, Riitta Flöjt

*“The children are free to study and learn in play  
ideas might inspire a play brand new,  
what a great chance to learn something too!  
Nature and trips are important –  
as the seasons change awakening  
experiences dormant!”*

Unofficial translation of poem from Ratamo Nursery’s Year Plan

The Ratamo Nursery in Kajaani joined the Lifelong Wellbeing project in November 2013. The nursery operates as a shift nursery and it is open between 5.30 and 22.00, Monday to Saturday. Ratamo Nursery has a group of 1 to 2 year-olds known as ‘Vanamot’ with which two nursery teachers and four children’s nurses work. Two nursery teachers and five children’s nurses work with a group of 2 to 4 year-olds, known as Mesikit. The children in the Mansikkaiset group are aged between 4 to 6 years and they are cared for by the nursery manager, two nursery teachers and four children’s nurses. All of our children’s nurses do shift work.

5 pilot families and 6 children from Ratamo Nursery participated in the project. Information was sent to the homes of all parents with children aged between 4-5 years and a parents’ evening was also held where the leaders of the LLW project explained the objectives and actions of the project to children and families. Families were selected on a voluntary basis according to their own interests. During the parents’ evening, the families in the project were told how to keep the exercise and food diaries and how to fill in the health behaviour questionnaire.

Nursing students from Kajaani University of Applied Sciences also participating in the project held exercise sessions for the children, a nutrition day, a Teddy bear hospital and a family exercise event in which all the children attending the nursery and their families were entitled to attend.

Our nursery ordered exercise and play equipment worth EUR 3000 from Lekolar-Printel Oy. The equipment has been use regularly during weekly supervised exercise sessions and for uninstructed activities. The children's rough motor skills and balance have been reinforced, their three dimensional perception has improved and their independence and use of imagination has become more varied with using the equipment. It has also been a pleasure to observe how the children's social skills and interaction have increased. The equipment has also been used considerably with children needing special support (motor skills practice).

Before the project we possessed little knowledge of Russian early education and nursery operations and we were therefore enthusiastic about starting the project without any preconceived ideas. During the Benchmarking visit to Kostomuksha in spring 2014, the structure of early education and the many norms and decrees governing education made an impression. We would have liked more information on early childhood pedagogy and cultural differences in child rearing. It would also have been nice to follow everyday activities more in the nurseries.

During the nursery visit in Kostomuksha we were struck by the tidiness and neatness of all the facilities. It also seemed as if the children appreciated the toys and took care of them. We Finns have something to learn from this.

All the nurseries in Kostomuksha have their own kitchens where the nurseries healthy meals were prepared according to the individual needs of each child. Nursery meals in Kajaani come from a central institutional kitchen. The meals supplied to Ratamo Nursery are healthy and they follow the nutritional recommendations for pre-school age children. Food is delivered to the nursery according to a six week rotating menu and special diets are always taken into consideration.

We gained the impression that a lot of instruction is organized for children attending nurseries in Kostomuksha. We would have liked to have known more about the Russian children's play activities and how much of the children's day these activities occupied and whether such activities were considered important. We at Ratamo Nursery consider play to be the children's fundamental form of activity and a learning tool. All the adults support play by supplying ideas, space, time, materials and by observing and participating in play themselves.

In Finland basic early childhood staff qualifications (practical (children's) nurse/nursery teacher) consist of a variety of studies including different areas of content, for instance the significance of play in child development and growth.

The cooperation conducted with parents in the Kostomuksha nurseries seemed to be good and varied: we became particularly interested in evening activities which the parents attended voluntarily at the end of their working day. It is more difficult for us at Ratamo Nursery, a shift nursery, to get parents involved in evening activities because they also do shift work.

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## 2.5 Tapiola Nursery

Jaana Savolainen

*“I travel the world, just bread and sour milk in my bag.*

*With a bit of luck I might find a friend glad.*

*When I say “hello”, he’ll say “privet”.”*

Unofficial translation of Finnish children’s song

The City of Kajaani’s Tapiola Nursery joined the Lifelong Wellbeing project in November 2013. 11 families with children aged from 5-6 years old from our nursery participated in the food and exercise habit survey and in research on the parents’ health behaviour. In February 2014, parents participating in the study answered questions on their health behaviour and kept food and exercise diaries on behalf of their children for a week covering the period when their children were at home. In addition, members of the nursery staff recorded the physical activities the children engaged in and what they ate while at the nursery.

During spring 2014 nursing students from Kajaani University of Applied Sciences conducted several health promotion events for the children of the nursery and their families. The aim of these events was to increase collaboration between the nursery staff and families and to activate the children and their families to engage in a variety of physical activities taking into account the development needs and skills of the children.

During the Lifelong Wellbeing project we became familiar with the early education system of Kostomuksha and the everyday life and activities of pre-school age children attending nursery school, where special attention is paid to the health, wellbeing and learning of the children.

We were already aware of the systematic methods used by the Russian education and teaching system which aims to reinforce children's physical growth and health. We were interested in gaining further information on how the aims of Russian education and teaching culture and associated methods were actually implemented in the everyday activities of pre-school aged children at the nursery. Our visit confirmed how comprehensively the early education system in Kostomuksha supports the physical wellbeing of young, pre-school age children.

Our interest was awakened by the healthcare and nursing practices available to Kostomuksha nursery children during a benchmarking visit to nurseries in Kostomuksha in May 2014. According to procedure, Russian nurseries have their own public health nurse, who is responsible for monitoring the children's health, dealing with sudden illness, vaccinating the children and keeping parents informed of issues related to their children's health.

Our benchmarking nursery, Skazka employed carefully planned operational programmes for each day. The daily objectives supported, developed and helped the children's physical development and reinforced their health. Exercise facilities with a variety of different devices and equipment enabled the implementation of planned activities both inside and in outdoor facilities at the nursery.

Other pedagogical activities included in early education were the responsibility of nursery teachers who were qualified in certain subjects. The Russian teaching and education system enables nursery teachers to specialize in certain subjects. At Skazka Nursery there was for example, a children's physical exercise, music and art teacher who took charge of teaching these subjects.

In our opinion the growth and learning environment of Skazka Nursery consisted above all of the solid basic security and healthy mental atmosphere experienced by the children in addition to the promotion of health and exercise. The early childhood staff members created a good atmosphere by working according to common operational principles with the aid of good interaction and interpersonal skills.

Early childhood educators in Finland and Russia must possess an awareness of and the skills to promote children's physical growth. Additionally they must support the development and requirements of the children's own activities, as these enable and strengthen children's mental wellbeing and build the foundation for the internal motivation to learn new things through meaningful experiences.

A meaningful activity is a child's own activity – playing alone or interacting with another child and under the supervision of an adult. When children experience physical activity, music, different phenomena and doing things by hand as important and when they can link them with their own activities we know that learning has taken place.

Tapiola Nursery has taken part in research based early education work since 1983 and its staff members possess a strong knowledge and skills based competence in the significance of play in early childhood in promoting a child's learning and wellbeing. For this reason play related issues are of particular interest to our staff.

Using funding provided by the Lifelong Wellbeing project our nursery purchased exercise and play equipment. With the devices we selected for purchase, we wanted to add variety to our existing equipment and how it is used by all age groups (1-6 years). The funding was also particularly intended for enriching play equipment supporting different play functions.

The play equipment purchased with the project funding is used in the everyday play activities of the children in our nursery as they wish and the exercise equipment has created a variety of activity-based opportunities in the everyday physical activeness of the children and various exercise events.

In the future the challenges of early education in Finnish and Russian education and teaching culture differ but one common aim can be seen in both countries – the promotion of children’s wellbeing and learning. The different social and cultural historical contexts of Finland and Russia affect each country’s education and teaching methodology and create different focuses within the objectives and content of early education in both countries. Mental wellbeing, health promotion, nutritious food and physical exercise affect our operations and promote the quality of life.

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## 2.6 Hoijakka Nursery

Marita Aalto

### The situation before the project started

The LLW project was presented to the staff members of Hoijakka Nursery in the summer of 2013 and they agreed to take part. Our nursery is small, with only 35 children and two groups. Parents and guardians were informed of the project during a parents' evening in September of the same year, when we were also given further information. Six families (eight children) volunteered to take part and agreed to keep exercise and food diaries for a week. To our surprise the project expanded later in the autumn when more nurseries from Kajaani and Kostomuksha joined in. At this point four families (five children) from Hoijakka were involved. In the spring of 2014 nursing students from Kajaani University of Applied Sciences also took part, organizing out and indoor activities for children of different ages (Teddy bear hospital, exercise sessions, health school) and joint activities with the staff members (grandparents' day and a family exercise day).

The project has enabled us to use EUR 3000 to buy out and indoor exercise equipment. Kick and pedal bikes have been the most popular of the outdoor equipment purchased and the children's cycling skills and enthusiasm have improved. Other popular equipment includes soft floor-ball sticks which have already enabled us to practice team games and skills. Sports and exercise activities increase the social interaction skills of children, strengthen self-esteem, and provide an opportunity to test and exceed one's own limits and the chance to teach how to work as a group. Developing mobility and motor skills is crucial in early childhood. As children acquire basic sports and exercise skills, their observation, thinking and memory skills also develop.

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## Benchmark experiences

Before the project, our own perception of Russian day care for children was based on books we had read during our studies. We recalled a system of rearing using extremely systematic and determined methods. It was therefore interesting to take part in the project and to hear how their nursery system differs from our own today, with only 200 km between us.

We had already discussed various nursery care related issues in April in Kajaani with our own benchmarking group from Kostomuksha. Before the actual event, we were shown around the facilities of the Korablik nursery in Kostomuksha where we saw staff members and children in action. Their presentation introduced us to meal, outdoor recreation, and sleeping arrangements. We saw lessons ranging from preparatory school age children's swimming to music for four-year-olds.

The results of the visit: What was discovered and learnt? What good practices were observed?

## Adults threw themselves into teaching events

The teaching sessions we observed always included a fairy tale figure or an enthusiastic adult who motivated the children. We had previously assumed that the children worked in a very adult-led way with strict discipline. However while there, we noticed that the practice used by the Kostomuksha nurseries is to involve the children with play or the motivation of an enthusiastic teacher.

The activities were carefully planned in advance with material set out within easy reach. There are fewer members of staff to provide assistance in Kajaani nurseries and consequently it is difficult to organized teaching sessions in advance, since nursery teachers are responsible for both arrangements and instructing the group.

In Kostomuksha, the nursery nurses accompanied and motivated the group of children led by the nursery teacher. The use of fairy tale figures in teaching is, of course familiar, and a good technique but it is forgotten during the everyday rush although arranging such sessions would only require a little time and effort. It would help if we could use our planning time more effectively and change attitudes. Throwing ourselves into play and roles could be challenging for us our Kainuu people.

### Nappy-free nursery

In Kostomuksha, children of the age of two or thereabouts are invited to attend nursery school. Information events are held for parents concerning the start of care, and nursery actually begins step by step a month after the care period commences. The children must be potty trained by the time they enter the nursery as nappies are not in use. This led us to consider how we could encourage Finnish families to potty train their children earlier. There are currently children aged 3-4 years in our care who still use nappies. In Kostomuksha the parents are given instructions stipulating that the child must use a potty regularly and after a month of potty-training, nappies should no longer be used. A potty-trained child can attend the nursery. In case of accidents the parents provide a change of clothing and nappies are not used.

### Nutrition

In Kajaani the main meal of the day is prepared in a central institutional kitchen from frozen and semi-prepared ingredients early in the morning. The meals are stored for some time before being served. The nutritional value of such food does not match the value of healthy food prepared quickly from fresh ingredients. Kostomuksha emphasises quality and not price which is not the case in Kajaani.

Each nursery has its own kitchen in Kostomuksha where food is prepared by staff members from fresh ingredients and served immediately. Energy, nutrient and vitamin requirements according to age are calculated for each child and determine the food offered to each child. Nursery children in Kostomuksha are healthier, do not suffer from influenza and do not have obesity problems. Children in Kostomuksha also eat an afternoon meal as well as lunch, at the nursery.

#### Length of teaching sessions

Teaching in the Kostomuksha nurseries is organized into short yet intensive sessions whereas our music and exercise sessions are often longer than necessary. For example, our under three year-olds take part in a sing-a-long session lasting half an hour although the recommended time children are required to concentrate on something enjoyable, is 15 minutes. The children react by becoming restless and the adults by chiding them, although this could easily be rectified with more child-centred planning.

In Kostomuksha, three half-hour teaching sessions are held for preparatory school age children, one during the afternoon. We do not have any educational reason to transfer this practice into our use directly but we could try shorter and more intensive sessions on different topics instead of holding longer teaching sessions focusing on one topic. This would allow the children to rest taking into particular consideration children who find it difficult to concentrate. Depending on the group and teaching content, it could be possible to try out teaching sessions of different lengths.

## Guiding parents

Well attended information and training sessions as well as family events are often held for parents in Kostomuksha. According to our experience, very few parents have attended sleep schools and nutrition evenings. However, parents do participate enthusiastically in family events such as exercise adventures. We wondered how we could also encourage parents to participate in education and teaching related events.

## Assessment

Benchmarking and the whole project have been interesting. Several topics arose in discussion that created new sparks of inspiration and something to consider in terms of our work. There has been very little discussion between the nurseries. We would have benefited more had we been able to discuss the transfer of practices across the border. However, the discussions that took place were friendly, open and child-centred. Early education staff training is of a high standard in both countries. It is important that we work to promote the learning and wellbeing of children. It is excellent that within the Russian early education system, each area of content has its own trained subject teacher. This also shows how pre-school age education is respected in Russia.

## 2.7 Early Education in Kostomuksha

Inna Andrejenok

Preschool centers of Kostomuksha urban district represent a diverse range of educational services, taking into account the age and individual characteristics of the child and the needs of society. The city has seven municipal preschools, two pre-school groups of children aged from two to six years in Voknavolokskoy secondary school. 2,000 children in Kostomuksha visit the day care centers.

Demographic processes in the city are characterized by a stable the tendency to growth of the child population, not only by increasing the birth rate, but also the migration of population growth, which in 2013 amounted to 360 people. Number of children in the district between the ages of 0 and 18 years makes 5832 people between the ages of 1 year to 7 years -2600 children. From 2009 to 2013, the positive trend in the growth of the birth rate of children (an average of 8% over five years).

The city has created a unified accounting system of priority in preschool centers On the 1st of January 2014 in the unified city line registered 715 children aged from 0 to 3 years. Annually in a queue are about 400 children and 450 persons comes into the day care centers every year.

The proportion of children of preschool age, covered by various forms of pre-school education is 74%, including: children aged 1 to 3 years - 48.2%; 3 to 5 years - 97%; 5 to 7 years - 95.6%. In the district achieved 100% availability of pre-school education for children aged from three to seven years.

In December, 2013. was put into operation a new preschool center "Aurinko" with 300 seats. On the capital repair of the building, the purchase of technological equipment and educational equipment were used up subsidy funds from the Republic of Karelia, the budget funds of Kostomuksha urban district, in the amount of 65.0 million rubles.

In 2013 the came into operation Federal Law "About Education in the Russian Federation." By federal law was changed the system of education levels: as one of the levels is allocated preschool education, the first time it becomes a full level of general education.

In October 2013 the first time in the Russian Federation approved by the Federal State Educational Standard of preschool education. Introduction of the standard is a complex and multifaceted process, the result of its introduction should be the formation of the individual, the author, an effective system of pedagogical activity providing high quality of preschool services itself, maintenance, supervision and care of children of preschool age.

The task of providing high quality of preschool services on the territory of Kostomuksha urban district includes: the introduction of the general educational standards of preschool education; update the basic educational programs of preschool education with the requirements of the standard; personnel maintenance of pre-school education. One of the priorities of the state policy is to create conditions for the provision of children with disabilities, taking into account the characteristics of their development, having equal access to quality education in educational institutions. In kindergartens annually brought about 40 children with disabilities, for them is acquired educational manuals, sports equipment, soft and baby furniture, office equipment, etc. The result of the organization of work: successful adaptation of children in society, organization capacity and ability to building healthy and safe way of interacting and communicating with others.

The Federal Law "About Education in the Russian Federation" establishes the right of parents of preschool children receiving pre-school education in the form of family education (not attending preschool educational institution) to get a methodical, psycho-educational, diagnostic and counseling help free of charge. In kindergartens of Kostomuksha are working consulting clubs of pedagogical support for the families caring for preschool-age children at home. Parents get consultations in education and development of children, including the use of distance forms. The main purpose of the work: the formation of a positive image of kindergarten children and their parents, prevention manifestation of desadaptation.

To determine the educational route children with disabilities are sent to the city psychological medical and pedagogical commission. The results of the Commission children enroll in correctional kindergarten group "Bereska". Pupils in most of these groups have mental retardation, unformed purposeful activity, hypoplasia of the emotional-volitional sphere, general underdevelopment of speech. With the children are working in the groups teacher-speech pathologists, speech therapists, educational psychologists.

To achieve the objectives of improving the efficiency of sports and recreation activities, reducing morbidity, the need for the formation of a healthy way of life, in kindergartens are used learning technologies of healthy lifestyle. Each institution has created all necessary conditions: a comfortable, safe environment in the developing groups, modern gymnastic halls, playgrounds, equipped plots for organized walks.

Every year in autumn, as part of the city program "Kostomuksha- city of health" is held a festival "Kindergarten - the territory of Health ", where groups of all preschool centers are taking part. In kindergartens organized sports events and activities to promote healthy lifestyles among children and their parents: Health Week, hiking, cross country skiing, joint physical training sessions with children and parents, the projects on health and their gender education.

"The Olympic Games" has also become traditional, these games involve teams of pupils and parents of all kindergartens. In the kindergarten, "Solnyshko" the program "Healthy child - a gifted child" is held, main aim of the program is the qualitative improvement of the physical condition, health and development of children. The uniqueness of the kindergarten "Korablik" is defined by the presence of the pool where the children from the early childhood learn to swim with instructor in swimming. In order to correct violations of the musculoskeletal system in the kindergarten "Zolotoy Kljutsik" children are engaged step aerobics for what were made individual shells - the step. Implementation of health-technology, the system of sports and recreational activities, active cooperation with the parents of pupils can effectively solve the problem of forming the foundations of a healthy lifestyle among the younger generation.

In kindergarten children provide a guaranteed 4-balanced meals a day in accordance with the age and residence time in kindergarten. Each kindergarten operates in accordance with an exemplary ten-days menu with having sanitary conclusion. Children receive the necessary wide choice of dishes with an optimal set of vitamins, regardless of the season. For children who are overweight, allergies, is provided an individual nutrition.

The current pre-school education is of variability in nature. Teaching teams work on a range of new programs and pedagogical the technologies created by scientific teams and individual contributors. It promotes the development of initiative and creativity of teachers.

In kindergartens are developed educational programs of preschool education, on the basis of which the entire educational activity is made. Main target psychological and pedagogical installing programs help to competent forming of a unified variative educational space. Each kindergarten organizes the work in accordance with the priority direction either artistic and aesthetic, physical, cognitive or verbal).

Much attention is paid to the national-regional component, given the regional specifics: national and cultural traditions.

Preschool period is favorable for immersion of the child in the origins of the regional culture. Kindergartens are actively working to put into practice the system of ethno-cultural education and upbringing. The regional component is implemented through all educational areas and regime moments, using a variety of forms of work: project activities, conversations, reading the works of children's literature, holidays, quizzes, games, and dramatization.

In kindergartens "Gnomik", "Zolotoy Kljutsik" operates ethnographic Museum-log hut "Karelian room", in groups were created local historical mini-centers, the teachers working with children –are the teachers of the Finnish language, if they teach children spoken Finnish languages. One of the preschool center programs, "Gnomik" in 2014 won the contest "Best Practices for ethno-cultural education in pre-school educational institutions of the Republic of Karelia." Pupils of the kindergarten for the first time participated in the Russian -Finnish folk music festival "Winter Somello" organized in the framework of ENPI program «Tourist route" Ontrey Malinen's Kantele."

Early initiation of the child to the world of beauty allows you to bring him not only as the beholder, but also as an active creator of beauty. In kindergartens "Solnyshko", "Skaska" pupils are engaged in the art studios, vocal and dance groups, perform successfully at festivals, contests and city holidays. Many graduates in the future addicted to artistic activities, are engaged in art school, art studios, creative circles. Work of children and parents are regular participants and winners of competitions of children's creativity: "Fire Flower", "Kostamuksha - a city of sport", "Street familiar and unfamiliar."

Kindergartens systematically have been working with gifted and talented children: different game trainings on the development of intellectual - cognitive areas, organizing the exhibition "Our young talents"; the presentation of the best practices of family education of gifted children; Making of the Portfolio: "Our successful child," "The Talented child in the eyes of the parents." Over the past two years, pupils of the kindergarten "Solnyshko" participate in a distance interregional tournament of talented children "Super Mind" "RostOk", showing good results.

Preschool institutions are fully staffed. in day care centers work 500 employees, 260 of which teachers and professionals (teachers, music teachers, physical education instructors, psychologists, speech pathologists, speech therapists). 62% of teachers have the highest and the first qualifying category. The large share of workers with long experience (more than 20 years - 55%), low share of workers with work experience of 10 years. Young professionals in pre-school education are only 15% of the total number of teachers. The main reason for holding back the influx of young professionals is a lack of housing.

On the territory of Kostomuksha urban district saved social benefits for employees of preschool institutions. Teachers who do not have work experience in the Far North, paid financial support in 2013 -18 persons got a financial support from the local budget. At the expense of the local budget were made additional payments babysitters, serving and support staff.

In accordance with the Decree of the President of the Russian Federation from the 1st of October 01.2013 was an increase in the average salary of teaching staff of pre-school institutions. Salaries were increased by 20.3% and amounted to 24,420 rubles. From the 1st of October 2013 were also 5.5% increments allowable of teaching and support staff and serving personal dealing with pre-school educational institutions (the growth of wages was 18.3%).

On the territory of Kostomuksha urban district normative acts set fee for supervision and care of children in pre-school educational institutions. The amount of payment is maintained at 17-20% of the actual cost of raising children, parental contributions in the cost is 20%. The cost of maintaining a child in kindergarten, taking into account parental contributions in 2013 amounted to 118.5 thousand Rubles. \_(In 2012. 107.3 thousand Rub) In addition, in accordance with the approved position, to certain categories of families established concessionary rates \_(in 2013 freed from payment - 218 families, 50% privilege payment had the 121 families, 30% privilege payment had 44 families).

Kostomuksha urban district administration provides of compensatory payments of parental payments for child in kindergarten, families with one child will be compensated at the rate of 20%, a family with two children - 50%, with three children and more or 70%. In 2013, the compensation received 1,608 families in 2012 - 1458 families. Also, on the basis of the established order, families with children between the ages of one and a half to three years who did not get a place in a preschool institution, receive compensation in the amount of 3700 rubles per month.

## 2.8 Berzka Nursery

Elena Albitskaja

In kindergarten, "Beryozka" are 12 groups who are visiting 250 children from one and a half to seven years old. In the day care center there are 3 groups for children with mental retardation where are specialists - speech pathologists are working.

Our kindergarten, as well as other pre-school institutions, solves an important problem - the preservation and strengthening of the health of children by creating a harmonious environment for their development and for the systematic implementation of preventive and promotive efforts, involving parents in the process.

The tutor for physical culture works to build the children's ideas about health and healthy lifestyles, together with teachers and parents trying to teach children to maintain and strengthen their health.

Much attention is paid to the prevention of violations of the musculoskeletal system in children. On the formation of musculoskeletal system affect the innate characteristics, environmental conditions, daily routine, diet, physical overload during sports activities, past illnesses. Among the major disorders of the musculoskeletal system, occurring in preschool children, we can distinguish impaired posture and flat feet.

Flat feet - a disease of the musculoskeletal system of the person which is characterized by change, or deformation shape of the foot. There are several main causes of flat feet: increased body weight, frequent prolonged standing on feet, wearing poor quality shoes, feet injuries and other factors. The main symptoms of the flatfoot are: fatigue when standing or walking, pain and tightness in the calf muscles, increasing pain in the legs by the end of the day, etc.

For the prevention of violations of posture and flat feet need a collaborative effort of the kindergarten and the family. In our kindergarten this work is done by the teacher of physical culture and tutors of groups, nurses.

Throughout the stay of the child in the kindergarten maintained optimal motor regime- held daily morning exercises, 2-3 times a week physical training sessions, during the day physical activities, outdoor games (in the group and a walk), 2 times a week musical-rhythmic classes, 1 time in 2 months for children and parents organizing sports events and entertainment, winter skiing and other events. Sports and recreation activities in the kindergarten is conducted in close cooperation with the family. Our children with their parents are involved in physical entertainment, holidays, city festivals and other events.

Working on the prevention of violations of posture and flat feet educators use the following methods of operation:

- Physical exercises.
- Using a variety of starting positions (sitting, lying standing by the wall).
- Exercises on the trainers.
- Hardening, prevention of colds, weakening illnesses, including the muscular system.
- Development of general endurance by using cyclic exercise.

Correction of defects of posture is achieved by means of special exercises, and their effectiveness depends largely on initial positions. The most important for the development and strengthening of muscles are exercises that are performed lying on the back, on the stomach, standing in the palm, on my knees and on all fours. Exercises are very effective by doing near the wall.

Development and strengthen skills of correct posture also occurs during the execution of various general developmental exercises in which is necessarily to preserve the correct position of the body, as well as the exercises in balance and coordination. Widely used games with rules that provide for compliance with good posture (" stand like me", "Keep your shoulders straight," "Ice Rink", "Do not drop the bag", "squats against the wall").

Flat feet should be treated, it can also be prevented by prophylactic measures. In our garden organized the work of the "Healthy feet," which in 2014 visited 20 children with violations of the foot. Group lessons are held 2 times a week. For the treatment and prevention of flatfoot are used a variety of methods. Children are engaged barefoot, it has not only health improving, but also quenching-effect.

In working with children are used:

- Different exercises in walking: on the toes, on heels, on ribbed and orthopedic paths, massage mats, on an inclined plane.
- Exercises from the original standing position: roll the ball from heel to toe, squats on the toes, ball alternately right and left foot.
- Exercises from the original sitting position: flexion and extension of stop, grip and lifting small objects.
- Exercises from the starting position lying on his back: sliding movement of the foot on the other leg tibia, circular movements stop.
- Exercises on the trainers.

As a result reduced and stopped the pain in the legs, recovering spring function of the foot, increases overall body tone, strengthen weakened muscles of the legs, training coordination of movements, formed the right and a beautiful gait.

“Healthy feet” -group achieved positive results as follows:

- In years 2010-2011 - 30% of children.
- In years 2011-2012 - 42% of children.
- In years 2012-2013 - 35% of children.
- In years 2013-2014 - 70% of children.

Unfortunately, not all children reach a positive result. There are may be the following reasons:

- Failure to comply with the recommendations of the educator for physical culture.
- Incorrectly matched shoes.
- The absence of a shoe insoles, arch supports.
- Frequent disease (weakened muscular corset).
- Frequent absence from classes.

It is necessary to strengthen the unity of the approach to improve the health of children in kindergarten and at home. For this purpose we regularly hold parent meetings, consultations, opening views sessions, joint sports activities, holidays and entertainment.

The personal example of parents helps in upbringing of certain habits in physical activity in the child. Content of the classes of parents with children largely depends on their interests and desires, but it is necessary to explain to them the importance and usefulness of unloved exercises by the children, those exercises which is difficult to do, an advice to teach children based on the characteristics of their development. We tell to the parents what kind of games is necessary to play with children. We give some advices:

1. Do not keep the child while walking in the same hand, do not limit their freedom of movement.
2. Pay attention to the child not to unwrap foot inward or outward.
3. Do not use tight socks, shoes.
4. Give the opportunity to a child to walk barefoot on the ground, grass, sand, gravel, on the mat with embossed surfaces.
5. Explain and show how to stand, to walk, to sit.
6. Special attention should be paid to the child's posture during sleep.
7. Remember, the baby's health is in your hands. In those families where the adults are healthy, children are generally healthy.

## 2.9 GnomiK Nursery

Irina Bogdanova

*"To make a child smart and reasonable,*

*make the child strong and healthy:*

*let him works, acts, runs, shouts,*

*though he is in constant motion."*

Jan Jack Russo

Preschool age is decisive in shaping the foundation of physical and mental health, when not only personality is formed, but also builds motor experience, the foundations of health. It is important at this stage to form the children base of knowledge and practical skills for a healthy lifestyle, the need for systematic physical culture and sports.

How to strengthen and preserve the health of our children? How to promote the formation of the physical culture of the child? How to inculcate habits of a healthy lifestyle? Such questions we ask constantly looking for new ways of working.

System of physical education in our kindergarten is built taking into account the age and psychological characteristics of children, aimed at preserving and improving the health not only of all children, but each child individually.

The main objectives of the kindergarten in physical education are:

- protect and promote the health of children
- development of physical qualities, the formation of essential motor skills of the child in accordance with its individual characteristics
- creation of conditions for the implementation of the needs of children in motor activity
- education in need of a healthy lifestyle
- education for physical and mental well-being

One of the most important aspect of physical education of preschool child is the development of physical qualities. The total level of physical fitness of children is determined by how they have developed physical aspects such as strength, agility, speed and endurance. Physical qualities are shown through certain skills, motor skills, and motor skills exist only in the presence of certain physical qualities. Therefore, for the harmonious development of the child in kindergarten are created conditions for the development of motor skills and physical qualities.

In the preschool years is necessary to ensure the optimum mode of physical activity that contributes to the timely development of motor skills, the proper formation of the major organs and systems. Our model motor mode for preschoolers consists of several blocks:

1. Sports and fitness classes
2. Organized game on a walk
3. Independent games on a walk
4. Sport and public events
5. Work with parents in the organization of sporting events

To create an integrated system of health preservation of children is very important the organization of motor developmental environment in preschool. In kindergarten are created the necessary conditions for increasing physical activity for children, as well as for their relaxation and recreation.

There are playgrounds, mini-stadium, running track, an obstacle course, sports and playground equipment. On group plots are built places for games, turnstiles, stairs, racks for throwing, etc. health corners are arranged in groups, where a varied physical training equipment, as well as equipment, made by hands, which increase the interest in physical education, developing vital quality, increase the efficiency of training. Staying in the fresh air for children is important for physical development and health of children, so we pay great attention to the organization of sports and recreation outdoor activities.

One of the organized form in motor mode of kindergarten are outdoor gymnastic exercises. In carrying out educational activities are used both traditional and non-traditional forms of classes: training, monitoring, complex games, relay races, sports fitness equipment. Learning process is differentiated, variability in nature. Very important is the principle of differentiation of active work with exercises on breathing, relaxation.

Physical education classes provide the development and training of all systems and functions of the body of the child through a specially organized, optimal physical activity; allows each child to demonstrate his motor skills to other kids and to learn from them. We use organized forms of classes to include mobile games, sports exercises with elements of competition, walking, hiking, trekking, sports events, and entertainment. One of the favorite classes for preschool children are mobile games. Unusual game forms of exercise, play activities make lessons more entertaining.

A walk is an obligatory moment in the kindergarten. Optimization of physical activity for children on a walk contribute to a properly fitted and correctly alternated games and exercises that will give children a lot of joyful emotions and develop their agility, stamina, coordination, as well as contribute to the expansion of the motor experience of children, improve spatial orientation and the ability to work together. On the walk the children play and move a lot of.

While planning, we take into consideration the learning process together with the types of movement, the development of motor skills and abilities of children. At the same time, they have some freedom and autonomy of action, stimulating their creativity and initiative. Self-motor activity that occurs on the initiative of children, gives a wide scope for developing their individual motor abilities.

An independent activity is an important source of activity and self-development of the child. Its duration depends on specific aspects of children in motor activity, and therefore pedagogical guidance is taking into account the level of physical activity.

Between older preschoolers are popular Games- races, games with rules, the elements of the competition, sport games: football, badminton, basketball exercises with the ball.

Traditionally some "Sports Day" for preschool children on the "circuit training." are organized. "Circuit Training" - a form of organizational and methodological training, which is based on the repetition of several types of physical exercises combined into a complex according to a certain scheme. Children continuous flow from one sports equipment to the other sports equipment, from station to station. When designing systems and exercises for practicing "circuit training", we use the load on different muscle groups, variably change activities. We organize circuit training in a game form.

An interesting form of organization of physical activity of pupils is hiking. Experience shows that this form of outdoor activities along with other forms of work in physical education provides enough exercise and increases stamina of child's body, improving motor skills, physical qualities of children, increasing their physical activity, improve their health.

We also perform different campaigns, depending on the season and weather conditions. We plan a variety of activities in the campaign: walking at a different pace, jumps, outdoor games, sports exercises, jogging at a slow to medium pace. We start with simple hiking, gradually acquiring the skills of tourism. At the lessons we include the theoretical knowledge about the tourism, the equipment of tourist, conversations about the rules of behavior during walks on nature, on the protection of nature. In hikes, children learn the practical things of the tourist: how to pack a backpack, arrange and put the tent, and to cross the obstacles. In the camp, at rest we organize different events, games, relay races, outdoor games, drink aromatic tea. There are happy about such campaigns! In the forest you can meet fairy-tale characters, learn more about the birds and the animals.

Winter provides natural conditions for organization of physical activity for children associated with changing climatic conditions. On winter playground covered with snow, we perform games, including a variety of movements: walking, running, circling, throwing snowballs, bouncing up and shaking off the branches of trees with snow, jumping in a snowdrift from small stumps, step over a snowball. Most delightful of our children - is to create snow buildings, ice tracks. Under the guidance of adults - teachers and parents kids make iced towns, snowman, make snow hills (Photo 7). In winter, the kids love sledding on the sledge. In organized game "Toboggan train" they build wagons of sledges, perform a variety of tasks with a sledge. We perform skiing at the ski stadium. (Photo8) Skiing and are educational in nature, children admire the nature in winter, watching as trained adult skiers. As a rule, at the end of winter children surely master the skills of walking on skis with sticks.

Along with the types of physical training of considerable importance is given outdoor activities, sports and events. These include "Health Week", sports leisure activities, sports events, games - competitions, sports days, which are attended by both children and parents.

All forms of work in physical education are interrelated and complementary. Positive results achieved under the condition of close collaboration between the preschool and family. The most popular form of working with parents - joint sports events: "Together with my mother, with my dad," "Knight tournaments", "Young tourists".

At such events, most fully are open the possibilities of cooperation: the trustful relationship established by the warm, emotional contact between teachers, parents and children. Adults with children involved in outdoor games, relay races in performing various tasks. Participation in the competition increases among children and parents interested in physical exercise has a positive effect on family relationships, a feeling of pride in general and individual victory makes it easier to get to know each other and encourages parents to promote sport interests of the child.

A Family largely determines the attitudes of children to physical culture, their interest in sport, activity and initiative. This is facilitated by emotionally close communication of children and parents in a variety of situations: discussion of successful sports life, watching TV, sports, joint holidays, leisure, entertainment, events and amusement in preschool institution.

Our aim is that all members of the pedagogical process - teachers, children, parents - have been involved in joint activity. Only at such interaction we can really achieve great results in the strengthening of physical and mental health of children.

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## 2.10 Korablik Nursery

Julia Novikova, Natalia Arkhipova

*“If you want to be healthy – swim,*

*if you want to be beautiful – swim,*

*if you want to be clever – swim!”*

Ancient greek aphorism

Teaching a child to swim is a great event in his or her life. Children get a lot of new impressions, as well as valuable life experience. Numerous researches confirm reasonability of teaching children to swim from an early age. Swimming translated from Greek means “treatment by water and move”.

Swimming, water games are favorable to all-round physical development of children and bring them positive emotions. Regular swimming exercises improve work of respiratory organs and heart function, strengthen the nervous system, develop movements, increase endurance, and train the whole body.

While learning to swim children receive self-service skills, swimming also forms their personalities, develops different individual features, such as sense of purpose, insistence, self-possession, resoluteness, bravery, discipline, team spirit, self-dependence. Moreover, swimming skills are essential for life, because every year there is a huge number of water accidents involving children.

One of the main aims of the nursery school is to introduce children to physical training in general and swimming lessons in particular. Presence of a swimming pool in the nursery school «Korablik» not only determines competitiveness and specificity of the work of institution, but also creates additional opportunities for health physical development of pupils.

Learning to swim takes place under the supervision of a physical training teacher. Nurse takes care of children's well-being during lessons in the pool. Cooperative work of the teacher and health worker ensures safe and comfortable environment for children in the pool.

Learning to swim is effecting in accordance with the educational program, which provides compliance with the basic requirements for organization of teaching process, following of safety instructions and essential sanitation and hygiene rules. For each age group is provided the special length of staying in the water: for junior group – 15-20 min., for average group – 20 min., for senior group – 25 min., and for pre-school group – 30 min. All lessons are based on the gaming method with the use of active, thematic games and gaming exercises.

So, what does the swimming in the nursery school start with?

Learning consists of several stages. Already 3-year-old toddlers (in small groups of 8-10 people) begin to attend classes in the pool. At the first stage 3-4-year-old children get to know about water structure, learn to move freely throughout the pool, to water their heads from bucket or watering can, not to be afraid of splash and diving, to breathe out on the water (playing toy).

At the initial stages contact with water brings pleasure and joy not to all children, some of them are afraid to go deep into the water. Psychologists found that, the main danger in the water is not the actions, but feelings (for example, fear of depth). That is why first steps of learning to swim are focused on helping children to overcome this disturbing and harmful feeling.

The second stage involves acquiring skills that will help children to feel safe in the water. 4 5-year-old children learn to breathe in and out into the water, to open their eyes, to move and orient in the water, and also tread water (float up, lie, slide).

At the third stage 5-6-year-old pre-school children learn to swim in a certain way. In our nursery school it is the crawl. By the end of the third stage children can swim 10-15 meters and coordinate movements of arms, legs and breathing. At the last (fourth) stage continues developing and improving of swimming style, simple turns and elementary jumps into the water.

In order for learning to bring the maximum developing and health-giving effect, it should be organized cooperative work of family and nursery school. In our nursery school are frequently used traditional forms of communication between swim teacher and parents (teacher-parent meetings, conferences, school celebrations). At the end of the school year are organized open lessons for parents where children can demonstrate their progress and achievements. Adults get an opportunity to visit the events not only as spectators, but also as the main characters of the celebration. Children always take it with great enthusiasm.

In order to inform parents about some organizational aspects of the pool in our nursery school are regularly organized excursions, consultations, photo-exhibitions «We are swimmers». In the teacher-parents meetings are discussed different issues, such as «Swimming as an effective way of cold training», «Swimming skills of pre-school children» etc. Questioning of parents showed that 98% of children attending the pool feel positive emotions, and 100% of parents are satisfied with results of the teaching children to swim.

Our pupils attending lessons in the pool receive essential for life skills, develop harmoniously, and also tell with pleasure that swimming is great, healthy and interesting!

## 2.11 Skazka Nursery

Elena Popova

The psychological aspect of health implies attention to the inner world of the child's emotional well-being and peace of mind. In kindergarten, "Skaska" there is a certain system of work to maintain and strengthen the psychological health of preschool children from the moment of a child in preschool, and before it is released to the school.

We note main steps which have a great influence on the formation of the inner world of the child.

- Step 1: Adaptation of the child to preschool.
- Step 2: Emotional and personal development of children during the preschool years.
- Step 3: Preparing for training at school.

Successful children's living stages of data service is provided by psychological, pedagogical, medical and social support preschool "Skaska", which includes a senior educator, educational psychologist, speech therapists, teachers, and medical personnel. The greatest role is played here educational psychologist.

### Step 1

Organization of work to ensure favorable conditions for the adaptation to the conditions of children of kindergarten is one of our priorities, every year come and take part in this complex process from 50 to 70 kids. In most cases the child enters preschool accompanied by problem adapting to the new rules and regulations of life, and not all children successfully cope with it. All these difficulties of adaptation is a direct result of child's psychological unwillingness to leave the family.

Long-term project "In kindergarten with joy!" developed by psychological service preschool "SKASKA", just aims to support the child and his family during the preparation and admission to kindergarten.

The project includes the following activities:

- Organizational meeting and consultation meetings for parents.
- Training in the "School of young parents" (the theme sessions: "Features of the adaptation period", "Why it is difficult to let go of my mother", "Bad habits of kids", "Formation of self-help skills in young children", "Development of speech and skills of communication»).
- Daily support of the adaptation period of the teacher - psychologist: writing of the individual graphics adaptation to the characteristics of the individual child and his family, keeping cards support noted the length of time in kindergarten, child sleep, his appetite, behavioral reactions.

The result of the project is the prevalence of mild adaptation kids and absence of the phenomenon disadaptation over the past five years. Moreover, the project is a big psychological and informational support for parents, established a close cooperation of the family and the kindergarten.

## Step 2

In the process of growth of a child is a change in his emotional and personal sphere.

In order to promote the harmonious development of the child's personality, his emotional comfort and preservation of mental health in the kindergarten, the project "A world in which I live." is realized.

The project includes:

- Developing psychological training (knowledge of themselves, their emotions, cognition partners in communication, the ability to communicate).
- Diagnostic procedures.
- Meetings and consultations for parents (parents' survey at the beginning of the project, at the end of the project, diagnosis of personality characteristics of pupils).
- Drawing up of individual pupils albums "My inner world" (as part of the portfolio preschooler).

The project resulted in the gradual formation of children's ideas on how to effectively communicate and conduct.

It is important that children have successfully used these skills in a real dialogue, and this requires a sensitive adult support and personal example.

### Step 3

One of the priorities of the preschool is to prepare children for school. Through training and development training of teachers and psychologists form a psychological readiness for school: motivation to learn, develop memory, attention, thought, speech, the total stock of knowledge and understanding about the world. Result of joint work of the teaching staff is a good level of school readiness of kindergarten graduates and their successful adaptation for school.

In addition, the preservation and strengthening of mental health contributes to pupils in kindergarten carrying out activities for children, teachers and parents. Activities are aimed at maintaining a favorable psychological climate, optimizing parent-child relationship.

- "Week of psychology" (psychological health days).
- Psychological and pedagogical actions ("Take care, childhood," "Day, filled with joy," "Day of good friends", "The screen mood", etc.).
- Open Days for the family.
- Workshops and seating areas with participation of the families of pupils.
- Seminars and workshops for teachers.
- Interactive Forms of parent meetings.

Thus, in the kindergarten "Skaska" pays great attention to the psychological health of preschool children as a component of human health and welfare.

## 2.12 Solnyshko Nursery

Tatjana Mosina

Nutrition - one of the key factors determining the quality and life of the child, his growth and development. Day care centers the catering is organized from the funds allocated by local budget and payment by parents for keeping children in the day care center.

The basis of catering of children are average daily sets of products recommended by the sanitary-epidemiological rules and regulations, Sanitary rules 2.4.1.3049 -13, and preparation of the prospective 10-days menu.

Kindergartens of the city work with 12 hours of attendance. For children is organized 4 meals a day: breakfast, the second breakfast, lunch, afternoon tea, dinner.

Children with food allergies, replacing dishes based on relevant rules of nutrition and menu. Individually for each child is prepared meals substitutes. In the preparation of menu is taken into account all the requirements of medical contraindications for food.

Nurses developed individual menus for medical indications and long-term 10-days menu. Monthly analyzes natural food standards, calculated calories. All food products that come in an day care center, are checked for compliance with state standards. When you receive perishable products it is necessarily required quality certificate, indicating the date of production, grades or categories, implementation period, a number of laboratory data (for example, milk and dairy products - fat content, protein content).

In accordance with the requirements of sanitary rules and regulations is implemented the principles of good nutrition:

1. Calories of food should not exceed energy requirements of the body of the child.
2. In the daily diet consists of food substances in a balanced way.
3. Special regime of catering diet.
4. Right combination of dishes.
5. All products are fresh and benign. In cooking there is no deviation from the technology of preparation.
6. Taking into consideration the seasons of the year.
7. Esthetic design of the prepared dishes.

#### Basic norms of menu

In the preparation of diet of catering is carried out the correct distribution of the products for a week and, especially during the day. It is unacceptable that in the daily menu are two cereals, and also groats garnish to the main course.

It is essential that the children during the day received two vegetable dishes and only one groats. It is also important to remember that foods rich in protein, especially when combined with fat, staying longer in the stomach of the child and require large amounts of digestive juices, it is recommended that meals containing meat, fish, eggs give in the first half of the day - for breakfast and lunch. For dinner, we offer children milk-vegetable, easily digestible food, so as the in night during deep sleep the digestive processes slow down.

In developing the menu, we take into account that some of the products should be included in the diet of the child every day, and some products it may be received in a day or 2-3 times a week. So the kids' menu every day included all the daily rate of milk, dairy butter and vegetable oils, sugar, bread, meat. At the same time, fish, eggs, cottage cheese, sour cream, we give the children not every day but during the decade (10 days) the amount of these products is presented in the full life-cycle requirements. Permissible repeatability meals is not exceeding 3 times in 10 days.

The amount of food and meals is in strict conformity with the child's age. Large amount of food reduces appetite, causes a violation of the normal function of the digestive organs. Small amount of food do not cause a feeling of saturation.

Selection of entrees for children 3-7 years is not particularly limited. Kindergartens are preparing: broths; Soup on these broths, dressed with vegetables, cereals, dumplings, vegetarian soups; milk soups, fruit. As a second course is offered cutlets, meatballs, meatballs, steamed vegetables with meat, fish, poultry.

The lunch includes a salad necessarily, mainly from raw vegetables, preferably with the addition of green onion, lettuce, dill, parsley. For the third course is the best for children to get fresh fruit or juice, if it is not available compotes from fresh or dried fruit, and canned fruit or vegetable juice, fruit puree for baby food. For breakfast and dinner, the children can be given various milk porridge, porridge with vegetables and fruits.

Afternoon tea in preschool center usually consists of two courses - milk beverage (yogurt, sour milk, milk) and baking or of confectionery products (biscuits, crackers, wafers). Very good to give to the children also fresh fruit, juice or puree.

Catering of children in preschool center necessarily combined with proper nutrition of the child in the family. For the organization of proper nutrition of preschool children parents are advised to follow the following principles:

- Adequate energy value.
- The balance of nutritional factors.
- Adherence to diet.

In order to ensure the continuity of nutrition in kindergarten and at home for parents is posted daily menu with a recommendation about cooking for dinner, consultations about catering of the children at home.

Great role in catering fulfill teachers. Professional duty for a kindergarten teacher is to teach the child how to behave at the table. This training takes place both at specially organized classes and during mealtimes. Correct and beautiful table setting raises the appetite and creates a friendly attitude between children. Ability to behave at the table, using cutlery and napkins develops in children their own confidence. Great attention is paid to the strict observance of the rules of cooking.

The most important condition for the proper organization of child nutrition is a device, equipment and maintenance of the catering department. Premise catering department have all the necessary production and storage facilities, equipped with the necessary technology and refrigeration equipment, tools, utensils, containers, etc.. in accordance with sanitary rules and norms. Catering is under constant control head of the kindergarten and senior nurse.

Main components:

- Monitoring the quality of delivered food
- Their proper storage,
- Compliance with the terms of realization,
- The observance of the rules of natural products in the preparation of the menu,
- Quality of food preparation, the compliance of its physiological needs of children in basic nutrients.

In assessing the effectiveness of nutrition great importance is attached to control the dynamics of the physical development of children, which is directly related on the quality of food, especially among young children. Assessment of the level of physical development is carried out in children aged from 1 to 3 years - 1 time in the quarter, from 3 to 7 years - one time in every six months, using the tables in the distribution of body weight depending on the age and growth, taking into account local and regional standards. Along with this assessment are taken into account and an absolute increase in body weight over a certain period of time (monthly). As an estimate of the adequacy of nutrition is used also the incidence among the children, particularly acute respiratory infections and digestive disorders, so as the wrong nutrition decreases immune system and decreases resistance of the child's body.

Analysis of nutrition in kindergartens gives a positive picture in the performance of natural norms of basic food products. Based on the available range of products, the chefs prepare a delicious and varied dishes, following heat treatment technology, saving vitamin structure of vegetables, fruit, meat and milk.

Center of Hygiene and Epidemiology, 2 times a year, carry out a laboratory control on ready made meals on calories and volume. It was established that the amount of calories and the volume are within the permissible norms.

Approximate menu in kindergartens of Kostomuksha

**Breakfast** - milk porridges: oatmeal, rice, millet, buckwheat, barley porridge, semolina, porridge made of different cereals, named, "friendship", omelet natural. As a drink - tea, cereal coffee, cocoa with milk and a sandwich with butter or cheese.

**The 2nd breakfast** - from 10.00 to 10.30 for children is served with fruit or yogurt, lemon, the vitaminized beverage.

**Lunch** - appetizer in the form of salads with fresh vegetables (cucumbers, tomatoes) with vegetable oil, salad, salad of boiled carrots with apple, vitaminized salad, red beet salad "svekolka."

For the first course - cabbage soup, borsch, a vegetable soup, potato soup, soup with groats or pasta, consomme with chicken or beef broth. The second course - dishes from meat, fish, chicken, liver with garnish. The third dish - stewed fresh fruit, dried fruit (), dried apricot jelly, juice, vitaminized beverage drink.

**Afternoon tea** - different drinks (milk, yogurt, barley coffee drink) and flour products (loaf with butter or jam, waffles, biscuits).

**Dinner** - includes dishes of cottage cheese - baked pudding, cheese cake, pudding, pasta with cheese, boiled sausage, rice or semolina casserole with apples, fish, chicken, vegetables, and beverage - tea with lemon, the vitaminized drink.

Dinner in kindergarten should not be the last meal of the child. It is recommended to give to a child fresh fruits, juices, dairy products at home.

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## Educational support for families in a kindergarten

Tatjana Mosina, Svetlana Koiti

*"Our life - is a joint work with many people, physical, mental and spiritual cooperation."*

S.Soloveychik

Staff of the kindergarten "Solnyshko" succeeded in developing a model of preserving and strengthening the health of the children, taking into account the regional characteristics and health status of students.

Constituent components of the model identified the following areas:

1. **Communication adults with children.** We are based on an individual approach to children, creating a favorable climate on the basis of an interesting and meaningful communication with children and adult, children between them. The general style of the dialogue unregulated communication became the basis of children's activities.
2. **The organization of different types of children's activities.** Special attention we devote to outdoor games, collective forms of assignments.
3. **Priority - game activity.**
4. **Interaction activities with parents.** We aim to become an educational center for parents. Consultations, meetings, conversations, which help us to establish communication, learn to play with the kids, give the opportunity to discuss the existing anxiety.

5. **The role of a psychologist is balanced not on a single pedagogical process.** We involve all teachers to conduct psycho pedagogical consultation. It is important that the child does not become unsuccessful in life, were not afraid of different situations in life. The leading direction for the educator must be his good heart, and then the program. Tutor of a kindergarten takes care that the child were not overloaded too much with unnecessary information, takes into account the health status, mood, state of health, the interests of each child.

As a result of studying the needs of parents to determine the prospects for the development of kindergarten, content of the work, forms of organization of education of parents in the kindergarten program is developed "Steps Forward". The motto of the program and strategy have become thoughts and studies of famous psychologist K.K. Platonov, "I am deeply convinced - to bring up children is necessary to begin nine months before birth ... their parents."

We carry out interaction with parents through the position:

- **Education through contacts.** "One moment of communication provides for the education more than many hours of teachings"
- **Education through cooperation.** "All powers of the soul, all spiritual ways are used to the fact of drawing the child into an exciting life together with their parents"
- **Parenting through communication.** "One moment of communication provides for the education of more than many hours teachings".
- **Parenting creativity.** "As I evolve with the child? Where, in what even small is an element of co-creation?" Conscious attitude to own health should be formed primarily from parents.

We accumulated an extensive experience of working with the families of students. In recent years there has been increased interest of parents whose children are new entrants to kindergarten, pre-school education system, their trust in teachers. Parents listen to the views of teachers. . And it encourages professional specialists constantly improve the communicative culture of communication with parents, actively introduce new technologies cooperation with the family.

All these tasks formulated in the psycho-pedagogical program "Steps towards each other ", which is implemented in our day care center. We do not limited only by lectures giving pedagogical knowledge, in which parents are only passive participants. We organize the common space of the child, where close interaction, collaboration, of teachers and parents. There is a parent club "Magic Touch" in our day care center. Through participation in this program is a realization of the course body - oriented therapy and sensory interaction of parents with children.

Educational psychologist Svetlana Koiti and teacher of physical culture Lepehova L.I. give special classes for parents with the body - oriented exercises. The main task of training – take position of child, to live fully the life of a child, to feel his emotional state. As a result, parents have the opportunity to feel the psychological closeness to their child, better understand the child, to learn new ways of game interaction with the child.

Psycho-technical games and exercises are of great importance for the development of children. They help children to direct their attention to internal sensations, emotions, feelings. At the same time teach children to catch, understand and distinguish other people's emotional states.

As a result, of systematical work in a kindergarten we have got trusting and equal relations, we involve parents in the emotional world of the child. The parents understand, that tactile contact and child health are closely linked. Medical workers and psychologists proved that a beloved child is sick less, child feels care, feels kind look, warm touch of loved ones. All this give to the child the confidence and self-importance in this world.

We carry out a special, comprehensive preparatory work with the family to the adaptation of preschool period of life. As part of the "Mother's School" we conduct psychological parenting classes, individual counseling, family psychological games.

The main task of "Mother's School" is the formation of skills of participants of educational process adequately and competently behave when the child faced with difficulties in adaptation to the conditions in the kindergarten, study of various personal approaches to education of kid, sharing family experience; development and strengthening of parental competence and awareness of education and development of their child.

Topics of meetings and sessions with parents are different. "Psychological portrait of the child: the character, temperament, emotion "; "Family games to determine the nature of the child"; "The rules of communication with the child"; "Boys and girls grow differently"; "Age-related fears and their impact on the child during the period of adaptation."

The result is to increase the competence and active position of the parents in matters of right and correct preparation of the baby to kindergarten, early warning of cases of difficulty and emotional exacerbations during the child's adaptation to kindergarten.

Realization of the model by forming the health of children in kindergarten is provided:

- By several recreational activities in the mode of the day depending on the time of year;
- By creation optimal teaching conditions for children in kindergarten;
- By approaching of the interaction with the family and the development of social partnership.

It is worth to say that no one, even the best sports and wellness program will not be able to give full impact, if it is not being implemented in collaboration with the family.

Level of professional skill of teachers is determined by attitude the family to kindergarten, to teachers and their requirements. Only by providing positive results throughout the sports and recreation activities with preschool children, the parents begin to trust the recommendations of teachers, willingly go with them on contact.

In the joint work of the kindergarten and the family found the most effective pedagogical training, workshops, debates, meetings with experts, where parents learn to see closer complex multifaceted process of educating the child, learn practical skills.

Educator of physical education together with nurse, conduct workshops for parents of children with impaired posture. After master classes, for parents is recommended special complexes of exercises to perform at home.

Widely used visual information "The movement - the basis of health," "How to develop in children the correct posture," "Winter Walk", "Advice of a doctor Aybolit." In kindergarten work consultative items: speech therapy service, psychological service, where parents can receive the qualified consultation of experienced professionals.

The most effective methods are the parents reflected methods. We conduct the workshops "Magic Touch", "Parents of the future first-graders" and also training, games, joint meetings, where parents are active participants, feeling the more competent in the upbringing of children.

Orientation to success, high emotional intensity training, regime moments, constant reliance on the children's interest, upbringing sense responsibility for their work - all this have a positive effect in our work: the majority of preschoolers have a tendency a conscious attitude to their own health and use of the available means of strengthening, the desire to expand the movement experience.

Thus, an integrated system of education, rehabilitation, psychopedagogical support, based on the classic samples and in pedagogical innovation promotes the harmonious development of children.

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## 2.13 Zolotoi Kljutsik Nursery

Lubov Geronimus

Children's health depends not only on the physical features, but also on the conditions of life. None, even the best sports and wellness program is not be able to give good results if it is not solved with the family. Therefore, the pedagogical staff of our kindergarten makes sports - health work with children in close contact with parents. Every year we conduct a survey of children and parents for: "Keeping children healthy" (2 times). According to the results of the survey we put the following tasks:

- To acquaint parents with sports and recreation activities in kindergarten
- To bring up a desire to live a healthy lifestyle
- To know and use the best family experience of education

At the beginning of the school year, we make a plan to work with the family - consulting, trainings, workshops, parents meetings, sports events, entertainment with children and parents. In order the holidays were bright and interesting, we use music, various attributes: theatrical costumes, masks, massage runners, mats, balls. In the manufacture of attributes, and other equipment we use the help of the parents. The active participation of parents in family holidays with children make them really bright, so as the parents play the roles of the leaders of the performances, fairy-tale characters.

A bright event of the year was a family celebration - the game "Fort Boyard". Parents and teachers together with children have done most of the preliminary work on the preparation of the holiday: by hands made masks, costumes, invitations, and poster.

In the game took part two joint teams of children and parents. Children with great pleasure performed complex of exercise to help adults to overcome obstacles, to guess riddles and to receive "magic" keys. Holiday is ended in a tea ceremony. Children and parents have received a lot of positive emotions. During the year, we have a lot of activities with parents: the game "Summer Lightning," holiday "Wide Maslenitsa", traditional cross-country skiing, competitions' "Ruddy cheeks ", " Autumn Marathon ", " Dad, Mom, I - sports family ", " Week of health. "

Every year our team of children and parents involved in city sport events. During this school year they were awarded a diploma as the best team. Involvement of parents to hold these events, is very important for adults and children, they actively communicate, get experience, enjoy success.

Although in the kindergarten are held regularly sport activities festivals, theme "Olympic Games" causes in a lot of questions. As teachers notice, preschoolers do not have enough knowledge about international competitions, their history, and parents help us. The most popular and favorite form of the parents' help in our garden was the production of wall newspapers, collages, albums, folders, "Olympic Movement", "We love the sport," family opening day "My family and sport", the newspaper of the sporting interests of the family, which is exposed to view in a special place.

Children commented photos, talked about the athletic achievements of their loved ones. These works are made with the children not only diversify the family entertainment, but also combine them in the general affairs. Through these activities we show the way to a healthy lifestyle.

A "Week of Health", "Olympic Movement" was held in February year 2014, it was attended by children of middle, senior and preparatory groups. Children competed in cross-country skiing, sledding, teachers used the game with elements of sports: hockey, biathlon. Parents are helped with pleasure, and built hockey courts, forts.

Much work is being done in a kindergarten for hardening the children, prevention flatfoot and strengthen locomotor system. We familiarize the parents to the method of quenching, breathing exercises.

Since year 2009, in the kindergarten was introduced a health saving program "Step Aerobics". Objectives of the program;

- Formation of a correct posture and strengthen locomotor system.
- Prevention flatfoot - strengthening the muscles of the foot and lower leg.
- Improvement of coordination of movement.

For this program was required a special equipment (step platform). the parents of children were involved in this process. Step-platforms, we use for morning exercise, physical education classes, holidays . Sports and musical fairy tale "The Mansion" using of steps-aerobic has been developed by a teacher of physical culture and is shown in the open lesson to parents and teachers to other kindergartens. Scenario of a theatrical tale was sent to the national competition, where it received a I st degree diploma.

The step aerobics deliver children pleasure, as they are carried out under the cheerful rhythmic music, but the most important advantage of step aerobics its health benefits - strengthening locomotor system, prevention flatfoot. We plan to continue to engage in step aerobics, and parents interested in this and help us.

At the end of the year we hold up our work with parents. From comparative analysis of the questionnaires can be seen:

- Increase in the number of families that have a common kindergarten mode of the day, use methods of hardening of children, in common with the methods of hardening of children in the group.
- Parents actively attend holidays, open days, taking part in the joint celebrations, events.

Thus, we can say that the chosen forms and methods of work with parents promotes interest of adults in the development and recovery of the children

## 2.14 Russian nursery teachers' benchmarking visit to nurseries in Kajaani

Elena Khabarova

The subject of benchmarking was to study the positive experience of the kindergartens in Kajaani on the formation of pre-school children, the basics of a healthy lifestyle, namely acquaintance with the terms of the organization of health-preserving and developing space for the child, with features of catering.

Before the project idea of preschool in Finland was not comprehensive enough. In Finland, the law on pre-school education institutions defines the main task of day care for young children as the support of parents in the upbringing of the child. Therefore, we assumed that preschool institutions are more supervision and care.

Benchmarking was held in kindergartens "Hoijakka", "Tapiola", "Lohtaja", "Ratamo" and "Huuhkajavaara" with participation of heads institutions and specialists. For benchmarking were prepared questions relating to the various activities of the kindergarten, as well as issue related to the subject matter of the project - Formation of bases a healthy lifestyle among preschoolers.

The main objective of kindergartens in Finland is to support individual development and education of the child in a safety educational environment, as well as co-operation and co-parenting with their families for the welfare and training of the child. Teachers in the education of children of preschool age have focused on creativity, happiness, responsibility and new experiences.

Following a discussion of benchmarking experts of preschool institutions of Kostomuksha noted the following positive aspects in the work of the Finnish kindergartens: rational use of space of the kindergarten, number of employees at the same group of children, a flexible regime, the organization of working minutes and in small groups, individual approach to each child through the implementation of individual itinerary support, the use of gaming devices, change of physical activity and recreation. All this provides a relaxed friendly atmosphere conducive to a comfortable stay of children in kindergarten.

During visits to the kindergartens was interesting to get acquainted with catering. Finnish partners gave the opportunity during lunch to take part in the meal and taste the proposed for children lunch meals. It should be noted the high level of self-service children at lunch time and tailored to individual needs of the child. In our opinion the benchmarking has been informative and useful for us. Realizing that in our countries have different requirements for the organization of pre-school, we came to the conclusion that the approaches to cooperation with pupils and their families are the same and we have something to learn from the Finnish colleagues, and to offer them to use in their work.

One of the valuable aspects deserve more attention, is the realization of individual approach of development the child in kindergarten. The experience of kindergartens in Kajaani actual, as currently the implementation of a student-centered approach to the development of the child, taking into account his individual, psychological and gendering aspects, partnership of the kindergarten and the family in matters of education, training and early childhood development is one of the key directions of kindergartens in Russia.

Positive experience of colleagues from Finland allows to find and to use in the work new ways of development in the organization of the developing environment, the physical education of children, in the interaction with the families of children.

### 3 PHYSICAL EXERCISE IN EARLY EDUCATION

#### 3.1 Physical Exercise Recommendations in Early Education and their Implementation in Finland

Anneli Pönkkö

##### 1. The importance of physical exercise to children's development, wellbeing and learning

###### Physical growth and development

The growth and development of children is holistic and partly genetically programmed. However, the physical, social, emotional growth environment and conditions significantly affect development, wellbeing and learning. Children need a varied and healthy diet, sufficient rest and sleep and a variety of forms of strenuous physical activity. Parents and early educators should know how children develop because children's needs change as they grow (Pönkkö & Sääkslahti 2013).

Children's skipping and jumping games as well as vigorous sparring and frolics promote bone growth since they include enough strain and jolts (Strong et al. 2005). Bone, muscle, tendon and joint strain affects the types of physical load children are able to carry and the strength of twists and large collisions they can endure. Children's everyday environments must offer the opportunities and encouragement to engage in physical activity that strains and strengthens the musculoskeletal system. (Malina et al. 2004; Pönkkö & Sääkslahti 2013).

Physical exercise that develops the respiratory and circulatory organs must be vigorous and cause breathlessness, to ensure that children cope with everyday games and physical effort without tiring. It is typical that children engage in physical activity in spurts, of which running and tag

games are good examples. Young children should engage in outdoor physical exercise and play at all times of the year. (Malina et al. 2004.)

Physical exercise also has a positive impact on the nervous system because the reception, processing and transmission of information forwarded by the senses and coordination of the senses develop in a variety of ways during physical activity. The nervous system becomes denser and it operates more effectively the more frequently and variedly it is used in early childhood, thus better preparing children for all types of activity and learning. (Ayres 2008.)

Basic motor skills such as balance, mobility and equipment handling skills as well as motor cognition skills are important secondary factors in motor development. Fundamental basic skills are walking, running, jumping, throwing, catching, kicking and hitting. Physical and motor skills affect the development of voluntary movements. The good coordination of basic motor skills is crucial to learning different forms of physical exercise and sports later. According to research, children with good basic motor skills are more physically active and engage more often in sports pursuits than children whose motor skills lack good coordination. (Gallahue et al. 2012; Iivonen & Sääkslahti 2014; Stodden et al. 2008.)

### Cognitive and socio-emotional development

Children's opportunities to examine the environment, move, try new things and independently solve problems, develop their cognitive skills. Perception, memory, and language are built upon previous experiences. In addition to a rich physical environment that gets children moving, parents and early educators can create an atmosphere motivating children to experiment and supporting cognitive development using positive interaction, encouragement and inclusiveness. (Ayres 2008; Numminen 2005; Pönkkö & Sääkslahti 2013.)

Socio-emotional development consists of experiences of autonomy, proficiency and social belonging as well as emotional and interaction skills.

Children's environments at home and nursery should support the creation of positive experiences and help children to build strong self-knowledge and good self-esteem with social support. Physical activity provides children with situations where they can experience success and learn new skills, and where they can receive positive feedback and the encouragement to take on new challenges. A positive self-image as a physically mobile person increases motivation and courage to take part in situations involving physical exercise with other children. (Pönkkö 1999; Reunamo et al. 2014.)

Shared play and game situations require children to listen to each other and to take others into account, control their feelings, help others as well as to wait their turn, negotiate in disputes and cope with losing. It is possible for children to practice such socio-emotional skills in play and games involving physical activity and in consequence be socially accepted by their friends (Kokkonen et al. 2013; Pönkkö 1999; Takala et al. 2009.)

## 2. Exercise recommendations for early education

In 2010, the World Health Organisation (WHO) published its international recommendations for the physical activeness of children aged between 5-17 years. According to the recommendations, a child's day should include at least 60 minutes of moderate to vigorous physical activity (MVPA) which can also consist of short periods of exercise. (WHO 2010.)

Other wide-spread recommendations for the physical activeness of children have been published for example, in Australia, Great Britain, Canada and the United States. They differ to some extent in terms of the amount, content and quality of exercise recommended. In Australia, Canada and Great Britain, it is recommended that children should be physically active for at least three hours per day. For at least 60 minutes of this time, they should engage in moderate to vigorous physical activity (MPVA). (Department of Health and Aging 2010.)

In Finland the recommendations for early childhood physical activity were compiled by a multidisciplinary group of specialists in 2005. The recommendations were planned for early education conditions in Finland to support the implementation of the Early Education Plan (2007) (Vasu in Finnish). The physical activity recommendations for early education describe in more detail how children's overall growth, development, learning and wellbeing are supported by exercise or physical activity and play. In contrast to the international recommendations, the Finnish recommendations provide guidelines not only on the total amount of exercise but also on the quality, environment and suitable equipment of exercise, and likewise on planning and implementing physical education. (Physical Activity Recommendations for Early Education 2005.)

#### Amount

According to Finnish recommendations pre-school aged children should engage in moderate to vigorous physical activity (strenuous exercise inducing breathlessness) for at least two hours per day. This amount can consist of several shorter periods of activity. Environments must be organized for the under threes where they can move as much as possible without encountering obstacles because they do not become breathless as older children do. (Physical Activity Recommendations for Early education 2005, 9-11.)

#### Quality

As regards quality, the document recommends that children should be able to practice basic motor skills in a variety of ways in different environments every day. With a lot of practice, children should achieve the ideal basic motor skills model (automatic stage) before school age, since these skills form an important basis for the acquisition of later skills in different forms of exercise. (Physical Activity Recommendations for Early Education 2005, 12 – 15.)

## Planning and implementation

Early educators must plan and organize goal-oriented and varied physical education every day and one longer instructed exercise session inside and outside. Mathematics, natural sciences, mother tongue and music content should be integrated into physical education. Instructed exercise should be arranged so that the children have to do as much as possible and can practice. Immobility and waiting should be minimised. (Physical Activity Recommendations for Early Education 2005, 16 – 19.)

Early educators should also observe and assess systematically the amount and quality of the physical activity engaged in by children while monitoring the development of basic motor cognitive and fundamental motor skills. The recommendations present points for observation in the physical activity of 0-3 year-olds and 3-6 year-olds. (Physical Activity Recommendations for Early Education 2005, 21 - 24.)

## Environment

The task of early educators is to create an environment that encourages children to engage in physical exercise, removes obstacles to exercise and teaches them how to engage in physical activity safely in different environments. It is thus possible to support children to take part voluntarily and safely in physical activity in different environments and to learn via such activity. (Physical Activity Recommendations for Early Education 2005, 25 - 27.)

## Equipment

Nursery facilities should have enough children's basic sports equipment within easy reach of the children to enable them to engage in voluntary exercise and games. The recommendations define the basic equipment for 0-3 year-olds and 3-6 year-olds. (Physical Activity Recommendations for Early Education 2005, 28 - 30.)

## Cooperation

Early education staff members should work in active and interactive cooperation with parents. Cooperation with parents, i.e. the education partnership, includes for instance, discussion concerning the physical activeness of the children at home and the nursery. Family exercise, for example, is considered a good form of cooperation.

### 3. Research on physical activity during childhood

The lives of families and young children, their living environment and use of time have changed. According to the Children's Media Barometer, the time children spend using media has already increased so much amongst three-year-olds that 70 % of them watch television or use a computer for about 60 minutes every day. Playing computer games and using the internet also take up a concerning amount of the time 5 – 6 year-olds spend awake. The new media devices are also competing for children's time with traditional games, keeping busy, playing outside and engaging in physical exercise. (Kotilainen 2011; Mäki et al. 2010.)

The physical activeness of children has traditionally been studied with the aid of parents' and educators' assessments. As new objective measuring methods have developed it has been proven that parents tend to overestimate their children's physical activeness. The assessments of parents that their children exercise sufficiently are often inaccurate. (Tammelin 2009). Results obtained using objective indicators show that about 40 percent of children spend two hours outside every day but none achieve the recommended level of daily physical activity in other words moderate to vigorous physical activity for two hours each day (Figure 1). Children who spend time outside are more physically active than children who spend a lot of time indoors. (Soini et al. 2012.)

Evidence based on research strongly indicates that the level of physical activeness and lifestyle of children as young as three begin to form a pattern. Three-year-olds who do not engage in much physical activity also continue to engage in little physical activity as time passes. (Malina et al. 2004; Yang 1997.)

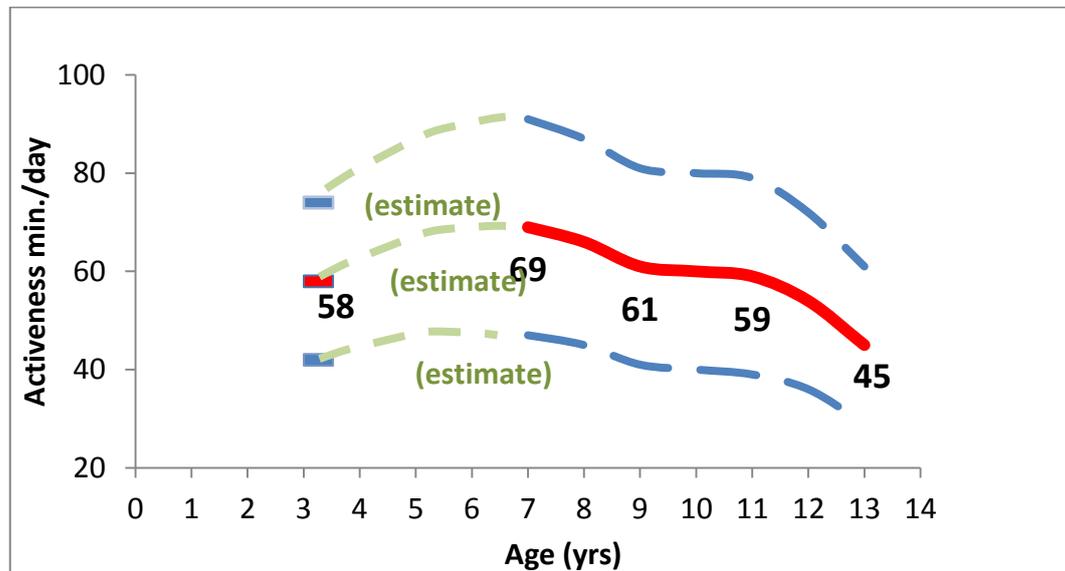


Figure 1. Objectively measured (unbroken line) level of physical activity (MVPA) of Finnish children (Soini et al. 2012; Tammelin et al. 2013.)

It is estimated that the physical activeness of 3-6 year old children will increase (Figure 1) but more than one third of them will not achieve the recommended level of activity. Physical activeness increases particularly during free-time and weekends but in the nurseries it decreases. Similarly the differences between individuals and gender increase and children's interests start to differ. The overall activeness of children is affected by their families' way of life, their parents' positive attitude towards exercise and their physical activeness. The physical activeness of children starting school then starts to decrease once again. (Heininen et al. 2008; Nupponen et al. 2010; Pönkkö 1999; Tammelin et al. 2013.)

Observation studies at nurseries indicate that children's nursery days are mostly sedentary. According to results (Figure 2) by Reunamo et al. (2014), the children only engaged in MPVA for 10 % of the time they were observed, i.e. for 24 minutes during the morning. At that time their activity consisted of physical efforts, running, jumping etc. Walking and different body movements required a moderate amount of strain (33.80 %). On average, 56 % of the children's activities in the morning (Reunamo et al. 2014) and 59 % during the whole day (Jämsen et al. 2013) required very little physical effort: sitting, using a pencil, eating etc. The boys engaged in slightly more vigorous exercise (11.5 %) than the girls (11.2 %). The 1-3 year-olds engaged in less vigorous exercise (7.4 %) than the 6-7 year-olds (11.2 %).

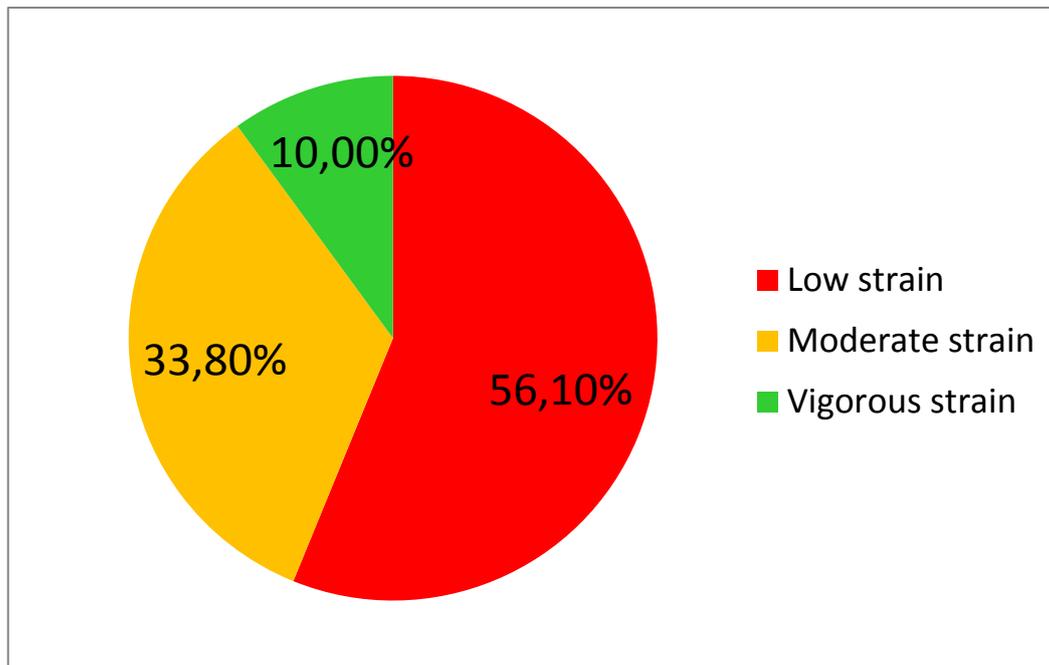


Figure 2. Level of children's physical activeness at the nursery in the morning, 8.00 – 12.00 (Reunamo et al. 2014)

The children were observed to be most physically active when they played and moved freely outside and indoors. The physical activeness of the children decreased during activities instructed and supported by an educator. Children who actively play physical games outside have good motor skills, a positive sense of their own proficiency, a strong motivation

to be physically active, courage and a variety of experiences. Children, who need exercise the most, engage in physical activity the least. According to research based evidence it can be said that shy and clumsy children and those with special needs do not have enough opportunities to practice basic motor skills and to reinforce their physical exercise orientation. (Kyhälä et al. 2012; Reunamo et al. 2014.)

The proportion of instructed physical education in all supervised activities varies in early education but it is often 0.5 – 1 hour/week. Children cannot participate in goal-oriented, instructed physical education in all nurseries. Unfortunately there are too often problems with organising exercise, since according to research (Iivonen 2008; Laukkanen 2007), children remain passively still for most of the time (49 %) during instructed indoor exercise sessions. They listen as the early childhood educator explains, organizes the room or fetches and gives out equipment. The over-emphasis of safety at home and in early education also restricts children's physical activeness.

Studies (Iivonen 2008, Salo 2009) indicate that physical education in early education can be promoted with the aid of a well-designed and implemented development intervention. The City of Kajaani, Kajaani Teacher Training Unit and Kainuun Liikunta ry implemented an extensive project: Physical education in early education plan research and development project in the early education organisation of Kajaani. Development work in the nurseries and with child minders was conducted with the aid of a training intervention, mentoring and various forms of practical support. The development process (Figure 3) started with obtaining the commitment of management and assessing the point of departure in each unit and continued with setting jointly agreed development targets. Development was targeted at the exercise environment, instructed and voluntary exercise and developing cooperation and competence among the staff in a variety of ways. All the nursery units and child minders developed their own early education plans as a result of the process (Kempainen et al. 2008; Pönkkö et al. 2008).

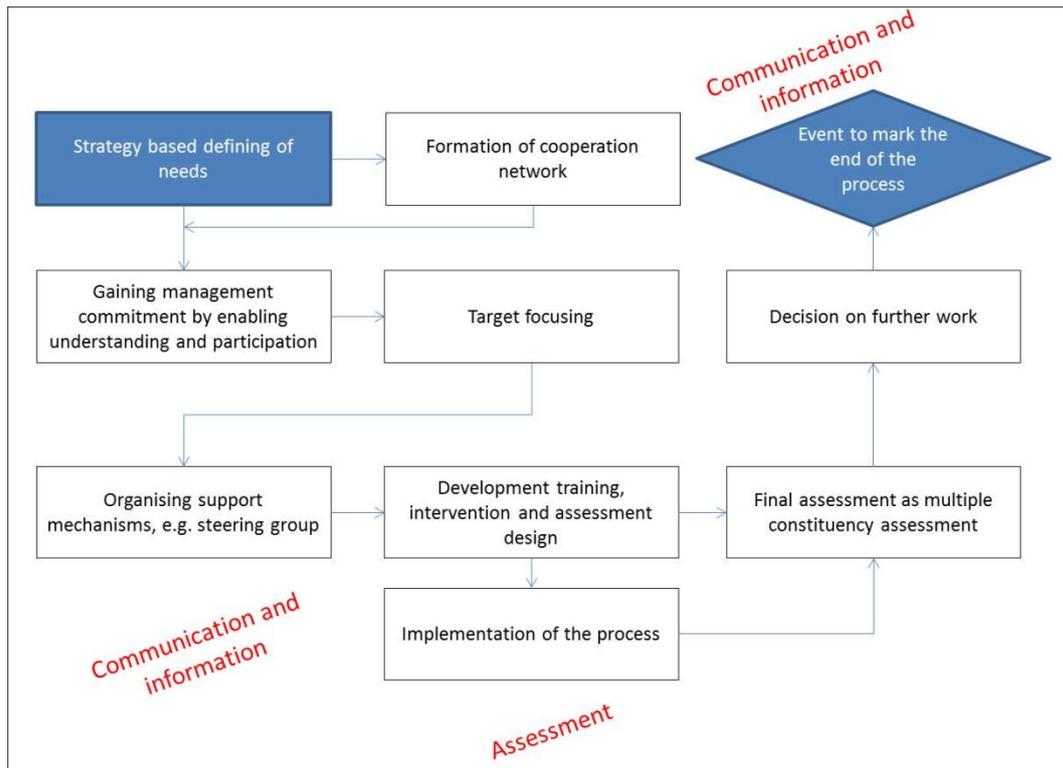


Figure 3. Physical exercise early education plan development and research project process model (Kemppainen et al. 2008)

#### 4. New national exercise and wellbeing programme in early education

As the research has shown, physical activeness recommendations are not implemented in the everyday lives of all children attending nurseries and who are in the care of child minders. For this reason the national sports association VALO ry (previously known as Nuori Suomi ry – Young Finland) assembled an extensive specialist network under the theme of an Expedition into the new Practices of Early Education in 2012. The aim of the network is to compile a National Children’s Exercise and Wellbeing Programme for early education and to impact the content of the principles of the Law on Early education, which is under review, and the early childhood curriculum. Legislation should emphasise that the basic task of early education is to ensure the comprehensive wellbeing of children and to record sufficient play and exercise as the basic rights of children.

Valo ry in cooperation with the early education exercise specialist network (Expedition into the new physical exercise practices of early education network 2013) has presented five premises as the principles of the national exercise and wellbeing programme:

1. Children have the right to engage in exercise and the joy of movement every day.
2. The task of early educators is to enable that each child is sufficiently physically active every day.
3. The working culture of early education must change to encourage exercise with the aid of binding normative guidelines.
4. Pedagogical competence and leadership must be emphasised.
5. Children must be given the space to be physically active.

Children have the right to be, learn, function and learn in their own way. This is possible if there is enough time and space for physically active games, movement and activity-based learning in early education. It is the duty of early educators to plan and implement the nursery's physical exercise oriented everyday life (operational culture): its rules, practices, staff members' responsibilities and duties, and how work is shared, etc. An operational culture that embraces physical activeness requires a professionally skilled staff, good leadership, commitment to common goals and operational practices, an open atmosphere, good cooperation and a positive attitude to development. (Expedition into the new physical exercise practices of early education network 2013)

Changing the operational culture requires a more binding set of normative guidelines than are currently available. More detailed definitions of comprehensive wellbeing and physical activeness must be set out when the new principles of the early education plan are compiled so they can be transferred to the individual level via municipal early education plans. The nursery manager and child minding managers are obliged to lead the

implementation of an operational culture that embraces physical exercise and activeness.

The development of an exercise-based operational culture progresses in small steps from assessing the situation before starting, to setting goals and changing operational models. The exercise and wellbeing programme offers the tools for such development. The best forms of development take place in local networks to which for instance, other early education units, sports and exercise clubs, the municipal sports department, parents etc., belong. When a nursery can indicate that it is a “physically active nursery” after being assessed according to certain criteria, it is publically recognised and certified. It takes several years to make a permanent change to a more exercise-oriented operational culture within children’s everyday life in early education. (Expedition into the new physical exercise practices of early education network 2013)

The education partnership between homes and early education supports children’s growth. Early educators must work actively with parents, cooperate with them and arrange ‘personal progress reviews’ (early education reviews) with parents. The review covers children’s motor development and learning as well as physical activeness. Parents and educators have positive experiences of early education family exercise and see it as a form of cooperation that motivates both parties. Parents are offered models for spending time together and are encouraged to exercise with their children. A regular family exercise programme conducted at the nursery has been proven to increase interaction between home and nursery. Parents also felt that family exercise added variety to their free time pursuits. (Anttonen & Kemppainen 2001; Pönkkö 2004; (Expedition into the new physical exercise practices of early education network 2013)

Educators must encourage children to exercise. According to the research (Reunamo et al. 2014), members of staff rarely provide verbal encouragement to increase physical activeness: for 90 % of the time observed the children did not receive any form of encouragement to

exercise from adults. The assessment of daily physical activeness and how children are activated must be included in the individual early education plans of each child. All 4-year olds are screened and checked at the maternity and children's clinic within Finland's national monitoring system. At this point the transfer of information and cooperation between the clinic and early education must be guaranteed.

Early educators must have a high level of pedagogical competence and knowledge of all content areas. Early education needs responsible, pedagogically qualified education professionals who understand children's growth, development and learning. Basic and supplementary early childhood education should ensure that studies sufficiently take into account children's holistic development. The transformation of new early physical education practices into real activity needs strong pedagogical leadership in order to succeed. Joint planning and clearly defining basic tasks is central in pedagogical leadership. The implementation of high quality early physical education also requires sufficient staff resources (2 teachers/group). (Expedition into the new physical exercise practices of early education network 2013)

The new physical activeness and wellbeing programme will be launched in 2015 and its selected theme is 'Exercise grows happiness' (Picture 2). The programme document is specifically aimed at policy makers and key practitioners. The programme material includes handbooks for managers, early educators and local authorities. The handbooks provide concrete help and tools in starting up and implementing the development process in municipalities and early education units everywhere in Finland. Establishing the programme in all the municipalities and early education units in Finland will require extensive communication, marketing and training as well as many forms of networking and cooperation at a national, regional authority and municipal level.



Figure 4. Exercise grows happiness - theme and logo of the Early Education Physical Exercise and Wellbeing Programme

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### 3.2 The Exercise Habits of Pre-school Aged Children in Nurseries and at Home in Kajaani and Kostomuksha

Ville Manninen, Kaisa Mikkonen

#### Gathering the material

The exercise habits of pre-school aged children at nursery and at home were examined using a research questionnaire. The questionnaire was prepared in spring 2014 in cooperation with the staff of the Finnish and Russian nurseries. The form was edited based on their feedback and translated from Finnish into Russian to ensure that all respondents would understand the questions. Information events were also held for the staff of the nurseries where the questionnaires were double checked in preparation for possible problems.

The project staff presented the project and its aims to the nursery staff and parents. All the families participated in the project voluntarily. In order to preserve anonymity the parents chose pseudonyms for their children which were used in all the research questionnaires. The questionnaire concerning exercise habits was completed in February 2014 during seven days (in week 7). All the questionnaires covered a period of five weekdays and one weekend. The parents were given an envelope with the questionnaire in which they enclosed all the questionnaires completed during the week of the study. The sealed envelope containing the questionnaires was returned to the nursery staff or directly to the project staff.

The nurseries were responsible for completing the questionnaires when the children in the study attended nursery. At other times the parents filled in the questionnaire. The amounts the children exercised are based on entries in the exercise diaries. Kaisa Mikkonen was in charge of reading the exercise diaries and compiling the exercise timeframes. The

timeframes are divided into three classes: exercise at the nursery, at home and during hobbies.

The project staff opened all the envelopes and gave each one its own number to ensure that each family's information remained in one piece. The exercise diaries from Kostomuksha were submitted for translation. The material was fed into the SPSS programme starting with the forms of the Kajaani children and continued with feeding information from the forms of the Kostomuksha children, once they had been translated into Finnish.

71 forms were returned to the project staff. Two of the responses from Kostomuksha had only partially been completed during the week of the study. Due to the missing entries it was decided to omit them from the study and thus 69 answers were fed into the statistics programme. During the analysis stage, it was decided that any children who had been ill during the study week would be omitted from the analysis (one from Kajaani and five from Kostomuksha). In addition, one child from Kostomuksha did not attend nursery for part of the week and so was omitted from the analysis. These choices were made to ensure that the children would not decrease the results concerning exercise amounts.

The processing of exercise times in this article has been done according to accuracy in minutes as, due to the method of collection, this was the level of accuracy according to which the information was gathered. The exact figures are shown in the tables.

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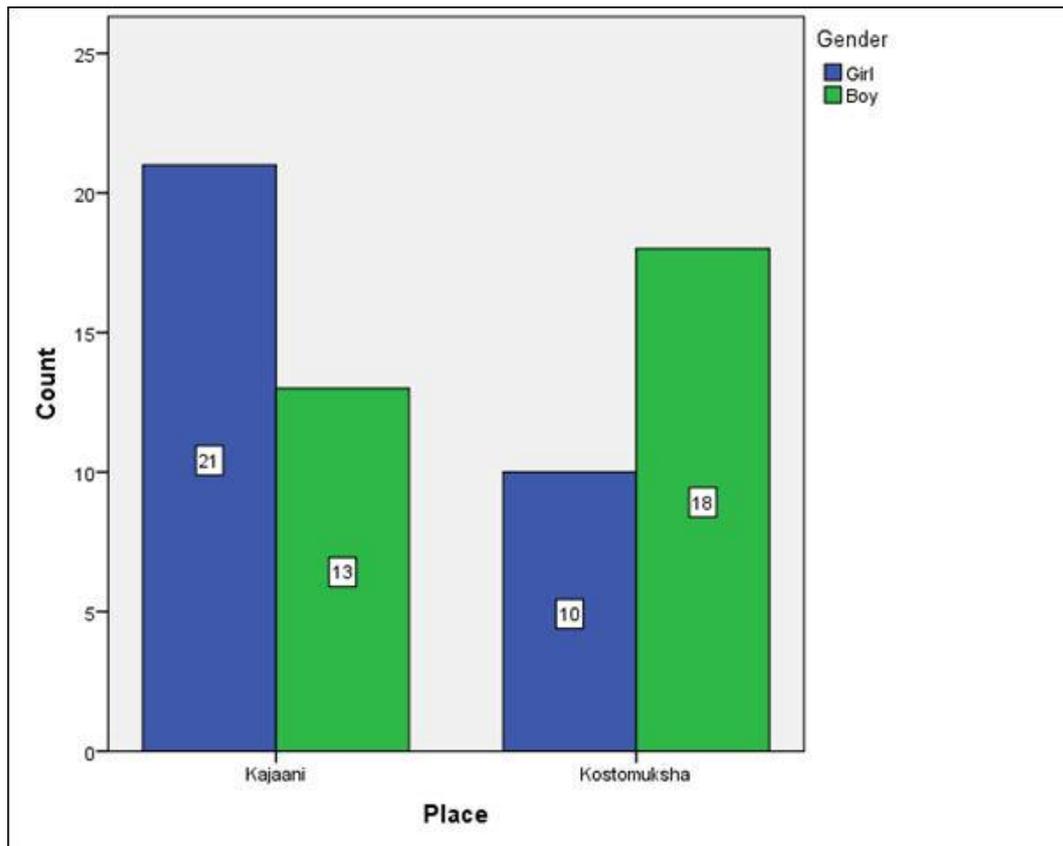


Figure 1. Pre-school aged children shown according to gender and place.

This material includes 62 pre-school aged children. 34 of them live in Kajaani and 28, in Kostomuksha. 13 of the children from Kajaani are boys and 21 are girls; correspondingly, 18 of the children from Kostomuksha are boys and 10 are girls. The boys are a little underrepresented in the answers from Kajaani (38 % of the children). In Kostomuksha, boys are overrepresented, (64 % of the children). However, in the overall material there is exactly the same number of boys and girls, 31 of both.

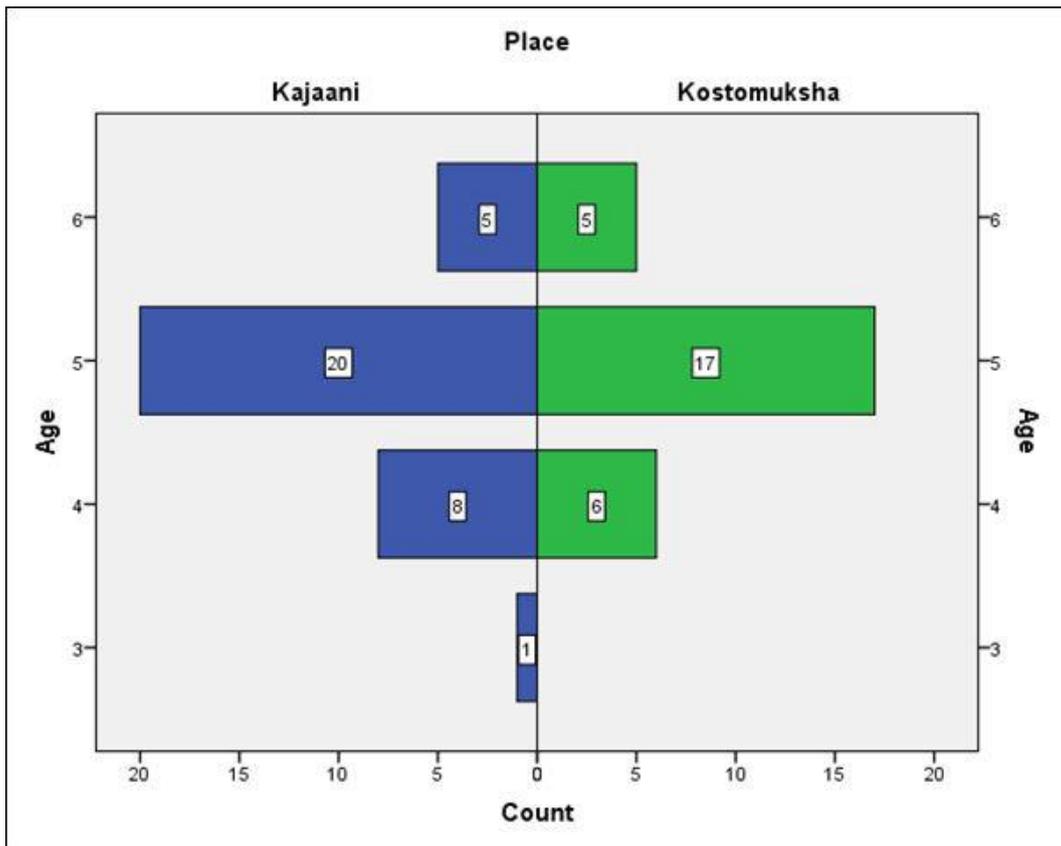


Figure 2. The age distribution of pre-school aged children (N=62) in Kajaani and Kostomuksha.

To ensure that the children's results would be as comparable as possible, it was decided that pre-school aged children of approximately five years of age would be included in the study. One child from Kajaani was three years old but otherwise the children were divided fairly evenly into different age groups in Kajaani and Kostomuksha. The mean age of the Kajaani children was 4.85 years in this material (standard deviation 0.702) and the mean age of the children from Kostomuksha was 4.96 years (standard deviation 0.637). The mean age of the whole group was 4.9 years (standard deviation 0.670).

Table 1. The mean age of pre-school aged children (N=62) by place.

Place	Mean	N	Std. Deviation
Kajaani	4,85	34	0,702
Kostomuksha	4,96	28	0,637
Total	4,9	62	0,67

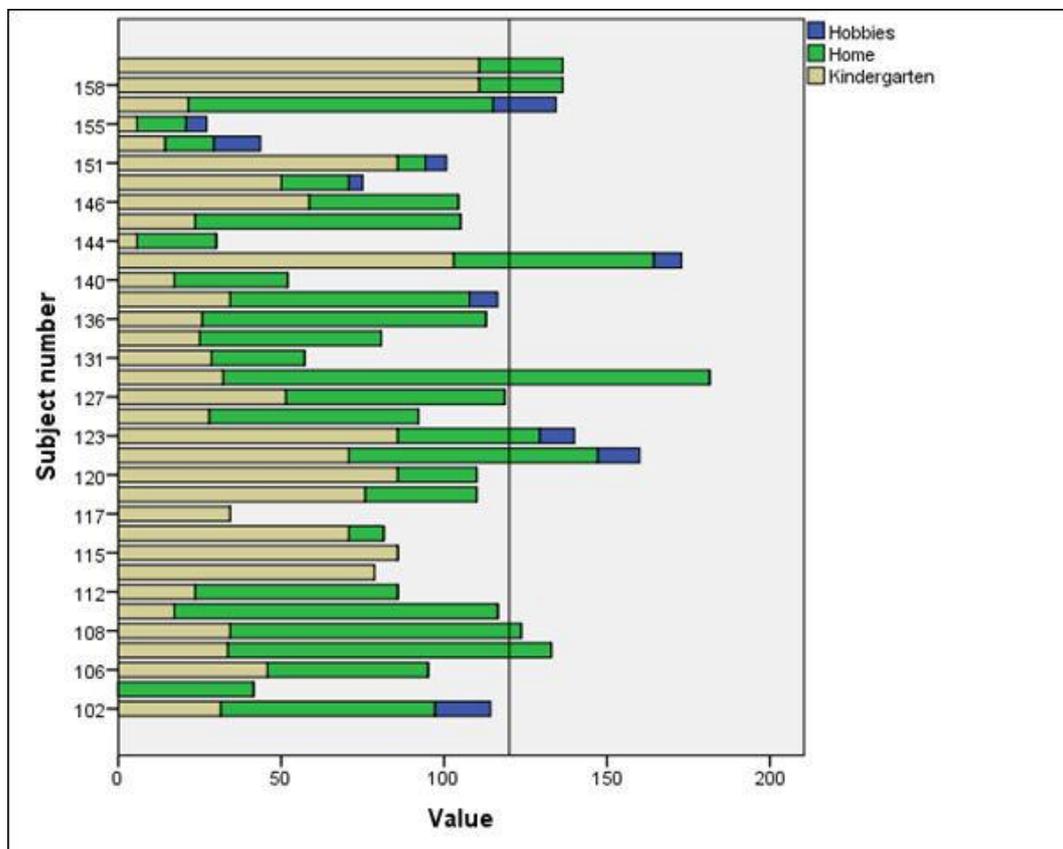


Figure 3. Periods of physical activeness in minutes engaged in by pre-school aged children (N=34) attending nurseries, at home and during their hobbies in Kajaani. The recommended 120 minutes of mean exercise time is represented on the graph as a vertical line.

According to early education physical exercise recommendations from the Ministry of Social Affairs and Health, children aged 3-6 should exercise for at least 120 minutes each day. Based on the children's total exercise times calculated using the exercise diary entries, nine children from Kajaani (approx. 26 % of the children) achieve this objective. Five children also come close to achieving it. The children from Kajaani engage in physical activity for an average of 100 minutes per day (standard deviation 41.997). A mean of 47 minutes of exercise time occurs in the nurseries (standard deviation 31.784), 49 minutes at home (standard deviation 35.012) and 3 minutes during hobbies (standard deviation 5.644). (Table 2. Mean amount of physical activeness of pre-school aged children).

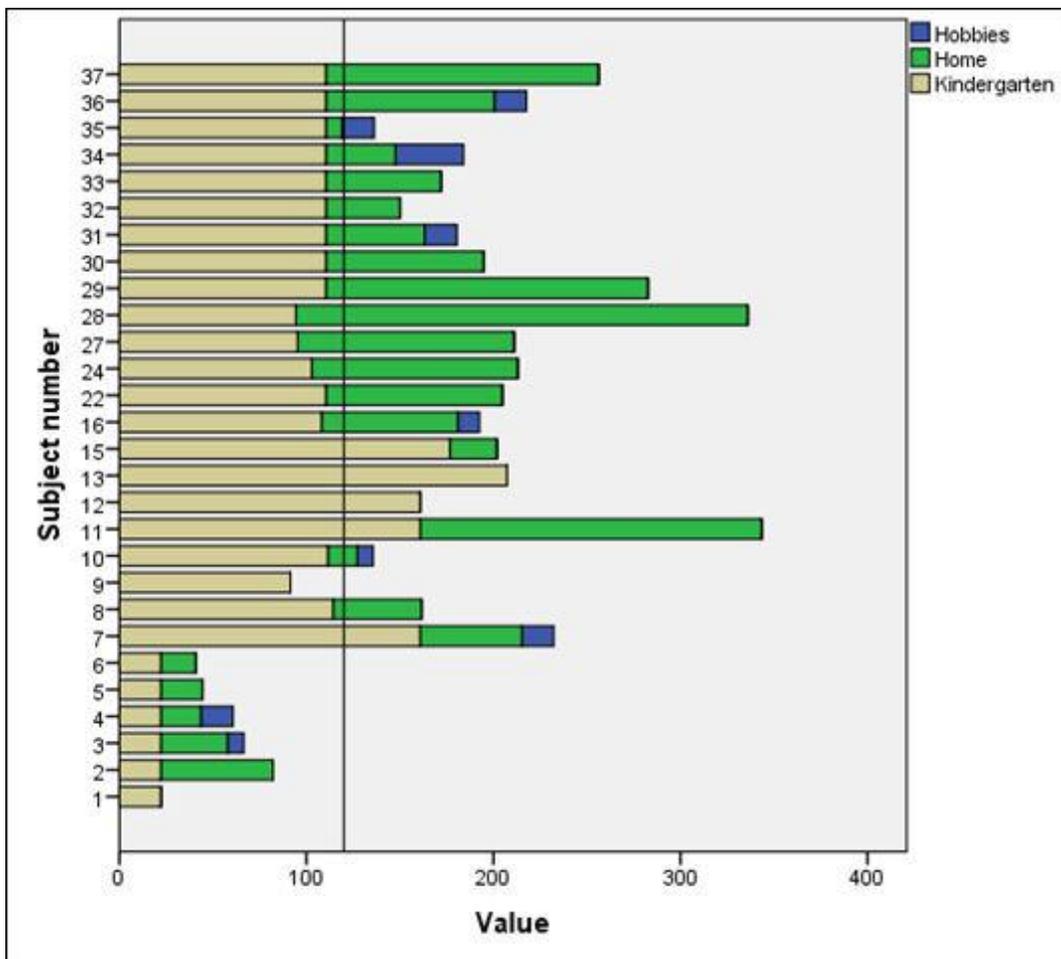


Figure 4. Periods of physical activeness in minutes engaged in by pre-school aged children (N=28) attending nurseries, at home and during their hobbies in Kostomuksha. The recommended 120 minutes of mean exercise time is represented on the graph as a vertical line.

21 of the children (75 %) from Kostomuksha exceed the daily exercise recommended for Finnish children. The Kostomuksha children accrue a mean of 175 minutes per day of physical activity (standard deviation 81.961). A mean of 101 minutes (standard deviation 49.622) of exercise is engaged in at the nurseries, 65 minutes at home (standard deviation 61.561), and 4 minutes during hobbies (standard deviation 9.155). (Table 2. Mean amount of physical activeness of pre-school aged children).

The difference in the daily amount of time used for exercise in Kajaani and Kostomuksha is statistically significant (t-test;  $p=0.000$ ). Similarly the difference between groups in the time used for exercise at the nurseries is also statistically significant (t-test;  $p=0.000$ ). There is no statistically significant difference in the time used for exercise at home and during hobbies. (Table 3. T-test of the significance of differences between mean exercise times)

Exercise recommendations pay attention to the amount of voluntary exercise (Varhaiskasvatuksen liikunnan suositukset 2005, 11 Early Education Physical Exercise Recommendations 2005). The children in Kajaani engaged in voluntary physical activity for a mean time of 64 minutes per day. Likewise in Kostomuksha voluntary activity was engaged in for a mean time of 29 minutes. The difference between the mean times is statistically significant (t-test;  $P=0.000$ ). A mean of 64 % of all physical activity engaged in by the Kajaani children, is voluntary and likewise, 17 % of the physical activity engaged in by the children in Kostomuksha is voluntary. (Table 4. T-test of the significance of differences between mean voluntary exercise times).

Table 2. Mean exercise times for pre-school aged children (N=62) in minutes per day.

Place		Exercise time per day	Exercise time at kindergarten	Exercise time at home	Exercise time in hobbies
Kajaani	Mean	100,50	47,18	49,22	3,19
	N	34	34	34	34
	Std. Deviation	41,997	31,784	35,012	5,644
Kostomuksha	Mean	174,82	100,77	64,59	5,38
	N	28	28	28	28
	Std. Deviation	81,961	49,622	61,561	9,155
Total	Mean	134,06	71,38	56,16	4,18
	N	62	62	62	62
	Std. Deviation	72,922	48,572	48,990	7,452

Table 3. T-test of the significance of differences between mean exercise times.

### Group Statistics

	Place	N	Mean	Std. Deviation	Std. Error Mean
Exercise_time_per day	Kajaani	34	100,50	41,997	7,202
	Kostomuksha	28	174,82	81,961	15,489
Exercise_time_nursery	Kajaani	34	47,18	31,784	5,451
	Kostomuksha	28	100,77	49,622	9,378
Exercise_time_home	Kajaani	34	49,22	35,012	6,004
	Kostomuksha	28	64,59	61,561	11,634
Exercise_time_hobbies	Kajaani	34	3,19	5,644	,968
	Kostomuksha	28	5,38	9,155	1,730

### Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Exercise_time_per day	Equal variances assumed	-4,608	60	,000
	Equal variances not assumed	-4,350	38,467	,000
Exercise_time_nursery	Equal variances assumed	-5,148	60	,000
	Equal variances not assumed	-4,940	44,199	,000
Exercise_time_home	Equal variances assumed	-1,235	60	,222
	Equal variances not assumed	-1,174	40,924	,247
Exercise_time_hobbies	Equal variances assumed	-1,154	60	,253
	Equal variances not assumed	-1,104	43,095	,276

Table 4. Mean exercise times of the children and a t-test of the significance of differences between mean voluntary exercise times.

#### Group Statistics

	Place	N	Mean	Std. Deviation	Std. Error Mean
Voluntary_exercise	Kajaani	34	64,24	40,051	6,869
	Kostomuksha	28	29,42	26,494	5,007

#### Independent Samples Test

		t-test for Equality of Means		
		df	Sig. (2-tailed)	Mean Difference
Voluntary_exercise	Equal variances assumed	60	,000	34,820
	Equal variances not assumed	57,534	,000	34,820

#### Discussion

According to this research, a significant difference exists between the children's overall physical activeness and in the amount of physical activeness occurring in the nurseries. On the other hand, no significant difference in physical activeness at home and during hobbies was perceived. An extensive amount of the exercise engaged in by the children in Kajaani was voluntary, and this difference is statistically significant.

The 120 minutes of daily physical activeness-target stipulated in the Finnish Early Education Physical Exercise Recommendations was reached by 9 of the Kajaani children, which is about 26 % of the children involved. Correspondingly, 21 of the Kostomuksha children reached the target, which is about 75 % of the children.

The factor which best explains this result is the level of physical activity occurring in the nurseries: in Kajaani the children engaged in physical activity for 47 minutes per day and respectively in Kostomuksha, for 101 minutes per day. On average, the children in Kostomuksha exercised for 75 minutes more than their Kajaani counterparts.

The gathering of material was based on the observations recorded by the staff of the nurseries and the children's parents. The observations were recorded to the accuracy of minutes and thus they do not provide an exact description of the children's actual amounts of physical activeness (compare Soini et al. 2012; Tammelin et al. 2013). However, the differences perceived between these control groups were so extensive that they cannot in all probability be explained simply by differences in recording information but by real differences in physical activeness. In the future it would be interesting to study using objective methods the real amount of physical activeness amongst pre-school aged children in Finland and Russia.

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### 3.3 The Health Behaviour of Parents of Pre-school Aged Children in Kajaani and Kostomuksha

Ville Manninen

#### Gathering the material

The health behaviour of the parents of pre-school aged children was examined using a research questionnaire. The questionnaire was prepared in spring 2014 in cooperation with the staff of the Finnish and Russian nurseries. The form was edited based on their feedback and translated from Finnish into Russian to ensure that all respondents would understand the questions. Information events were also held for the staff of the nurseries where the questionnaires were double checked in preparation for possible problems.

The project staff presented the project and its aims to the nursery staff and parents. All the families participated in the project voluntarily. In order to preserve anonymity the parents chose pseudonyms for their children which were used in all the research questionnaires. The questionnaires were completed at the same time as the exercise and food habit diaries of the children in February 2014. The parents were given an envelope with the questionnaire in which they enclosed all the questionnaires completed during the week of the study. The sealed envelope containing the questionnaires was returned to the nursery staff or directly to the project staff.

The project staff opened all the envelopes and gave each one its own number to ensure that each family's information remained in one piece. The exercise diaries from Kostomuksha were submitted for translation. The material was fed into the SPSS programme starting with the forms of the Kajaani children and continued with feeding information from the forms of the Kostomuksha children, once they had been translated into Finnish. 111 questionnaires were returned to the project staff.

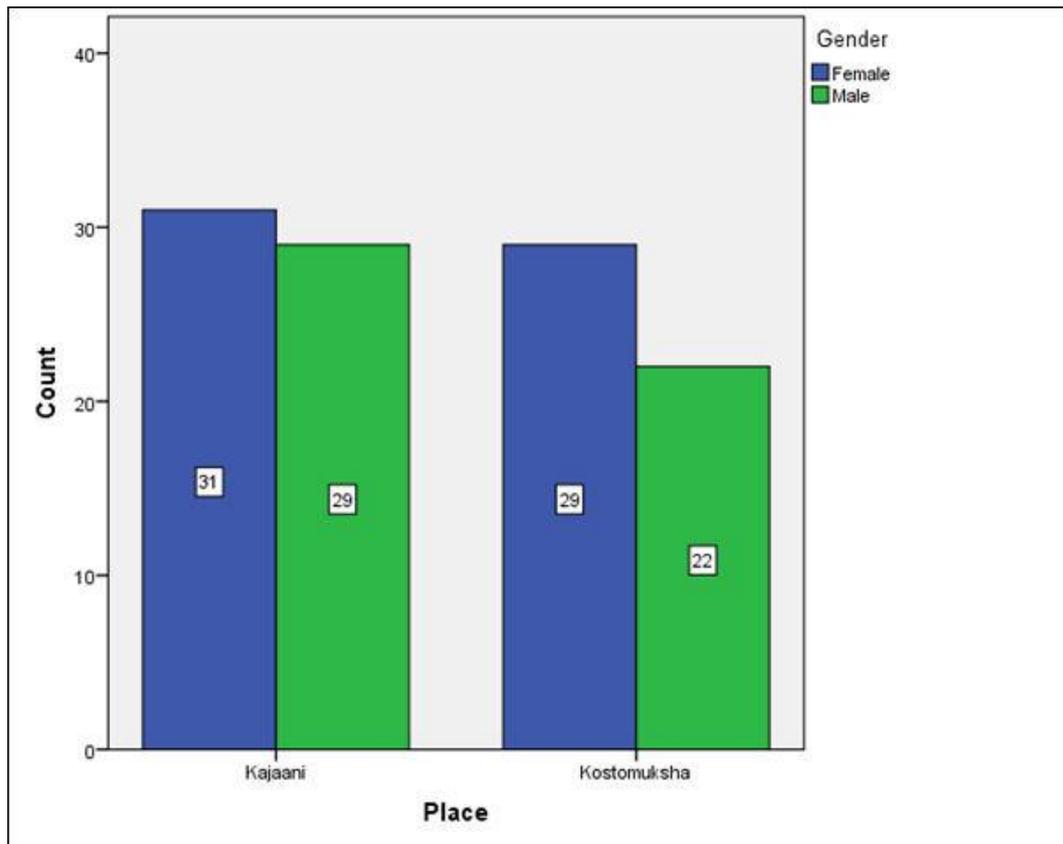


Figure 1. Parents who responded to the questionnaire (N=111) by place and gender.

A total of 60 persons from Kajaani answered the questionnaire for parents (31 women and 29 men) and 51 persons from Kostomuksha (29 women and 22 men). A similar number of women responded in both cities but the proportion of men from Kostomuksha who responded was lower than the male response from Kajaani. About 43 % of the responses are from men in Kostomuksha and the equivalent figure in Kajaani is 48 %.

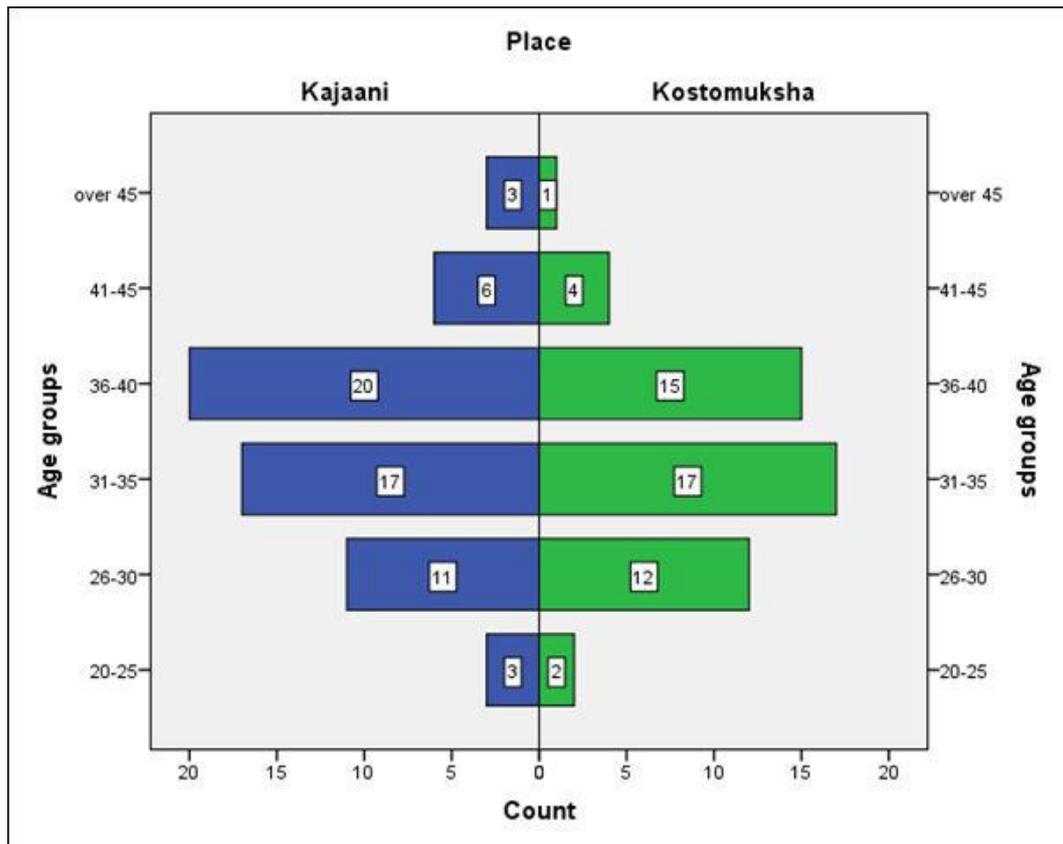


Figure 2. Respondents (N=111) by age group and place.

The respondents were divided into five year age groups. The over-45 year olds formed a separate group. The first three groups (20-25 year olds) are the same size in both cities. However it is significant that in Kostomuksha age distribution follows normal distribution and the largest age group comprises 31-35 year olds. In Kajaani the largest age group comprises 36-40 year olds. On average, the Kajaani respondents seem to be older than the Kostomuksha respondents in this study. This is understandable because the parents were chosen for the study according to the age of their children (5-6 year olds) and the mean age of giving birth for the first time has risen to 28.6 years in Finland (Tilastokeskus, 2013). In 2006, the mean age of giving birth for the first time in Russia was 24.21 years. In Russia, highly educated women also give birth for the first time when still relatively young (Zakharov 2008, 927, 971).

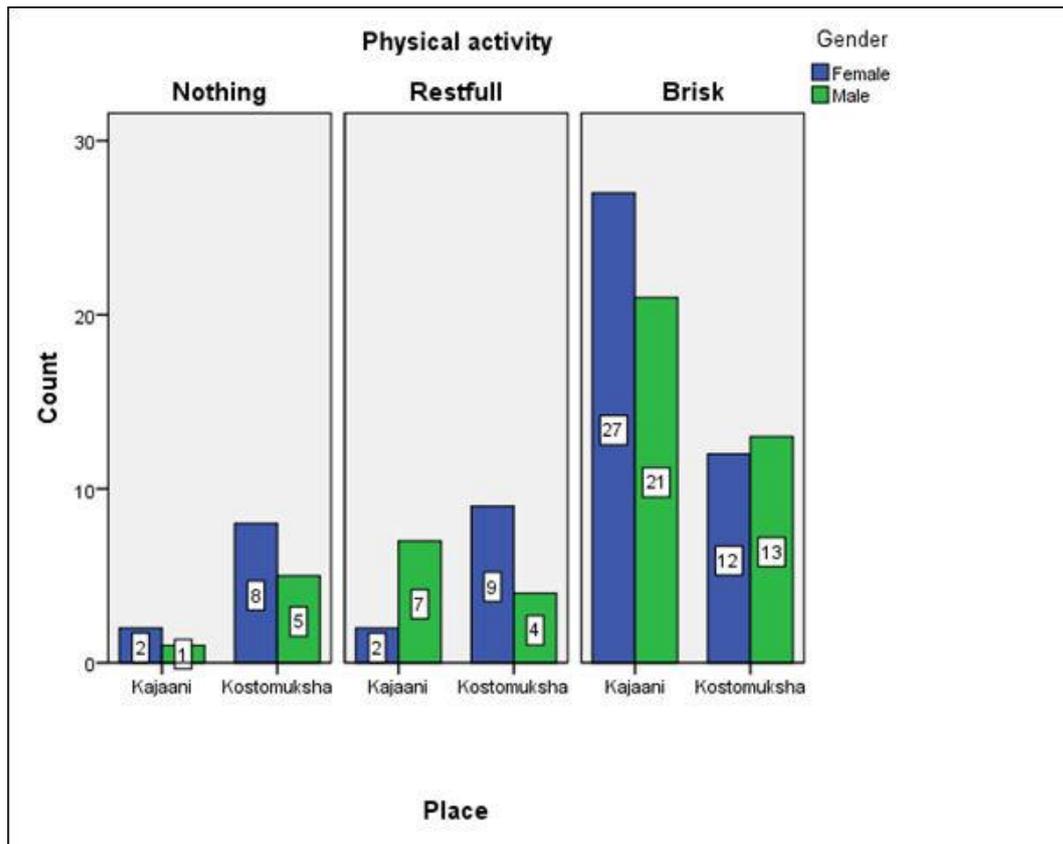


Figure 3. Recorded weekly physical activeness of the respondents (N=111) according to gender and place.

73 of the respondents (approx. 66 % of respondents) recorded that they engage in brisk exercise on a weekly basis. 22 (about 20 %) of the respondents recorded that they engage in peaceful exercise on a weekly basis. 16 (about 14 %) of the respondents replied that they did not engage in any exercise. No differences were observed between genders in engaging in exercise. However, the Kostomuksha engaged in less exercise than respondents from Kajaani. 26 respondents from Kostomuksha replied that they engage in peaceful exercise on a weekly basis or that they did not engage in any form of exercise. This is 51 % of the total number of respondents from Kostomuksha. The equivalent percentage was 20 % of the Kajaani respondents since only 12 respondents replied that they engage in peaceful exercise or no exercise at all.

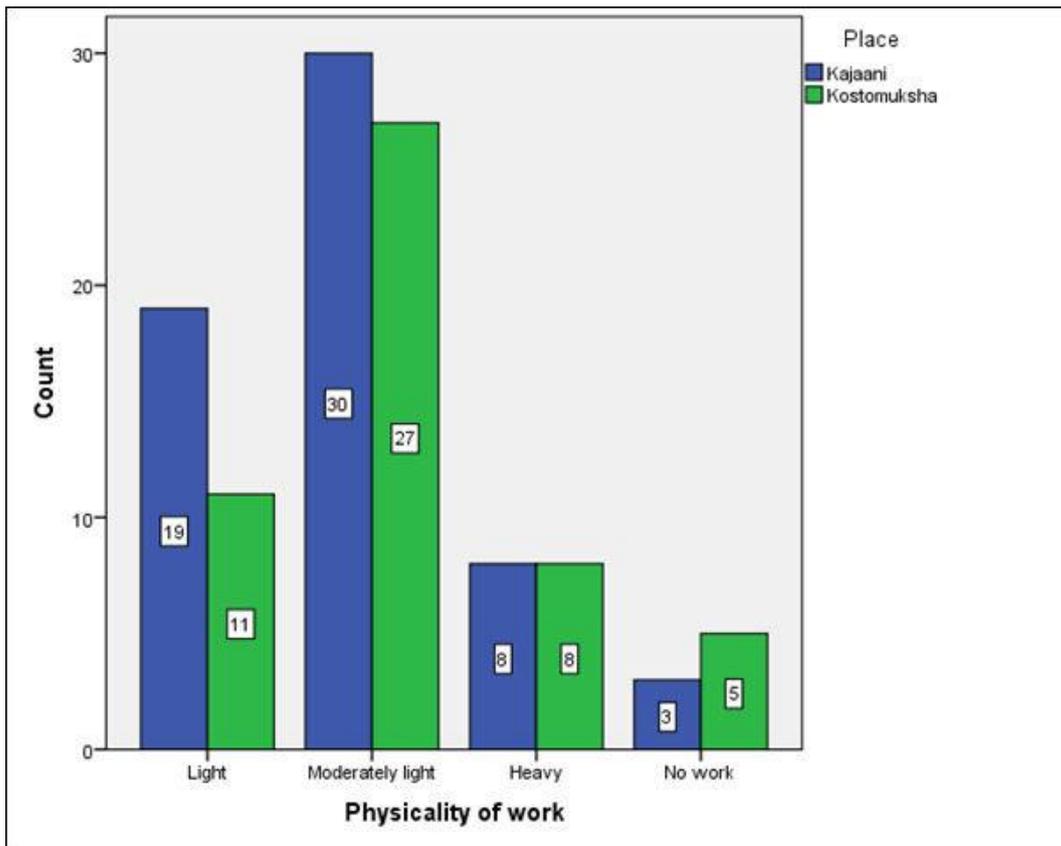


Figure 4. Recorded physicality of the work of the respondents (N=111).

The respondents were questioned on the physicality of their work. Eight respondents replied that they did not work. Eight respondents from Kostomuksha and Kajaani respectively do physically heavy work. 27 respondents from Kostomuksha and 30 respondents from Kajaani indicated they did moderately heavy work. 11 respondents from Kostomuksha and 19 from Kajaani did light work. About 82 % of the answers from Kajaani indicated that the parents engaged in light or moderately light work. The equivalent percentage in Kostomuksha was 75.

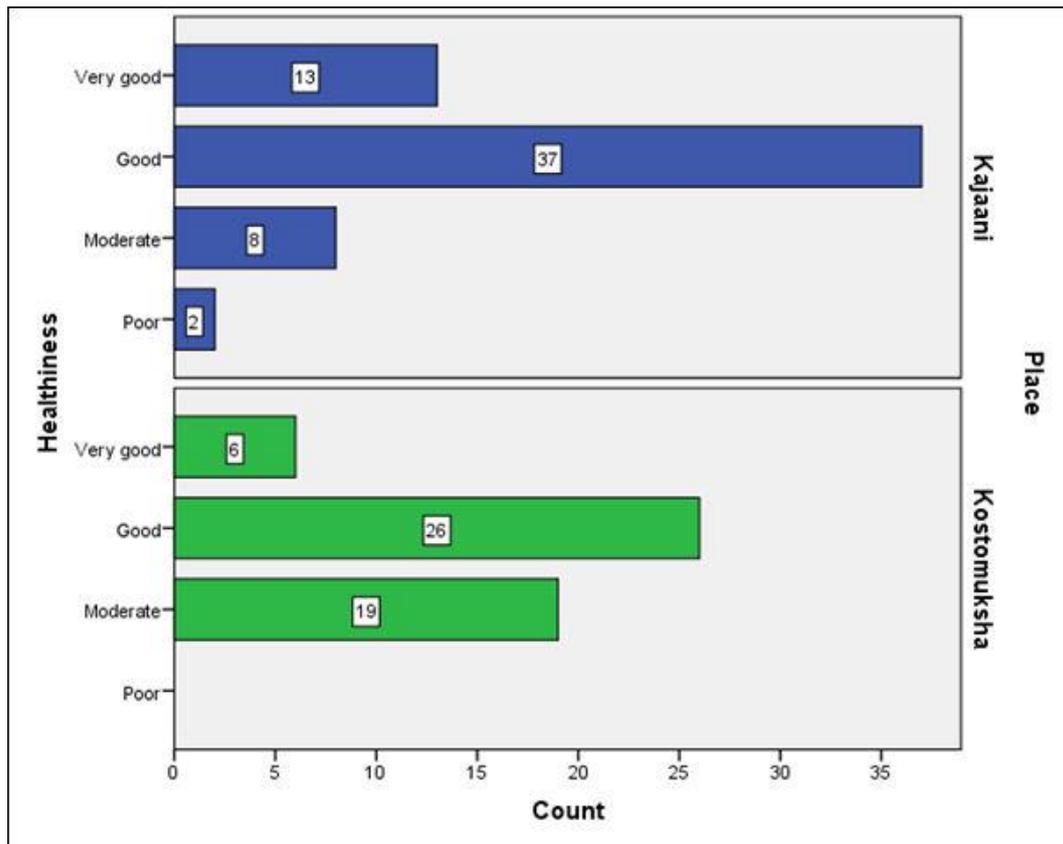


Figure 5. Respondents (N=111) awareness of own health by place.

The respondents were asked to assess their own health. Two respondents from Kajaani assessed their health as poor while there were no such responses from Kostomuksha. 8 respondents from Kajaani and 19 from Kostomuksha estimated that they had moderate health. 37 respondents from Kajaani and 26 from Kostomuksha estimated that they were in good health. 13 respondents from Kajaani and 6 from Kostomuksha estimated that they were in very good health.

According to statistics published by Eurostat (2013) 67.7 % of Finnish women and 70.5 % of Finnish men consider themselves to be in good or very good health. In this study 83 % of the Kajaani respondents considered their health to be good or very good, which is a higher than in the Eurostat study.

Equivalent information concerning Russia was not available but the high mortality of the working age adult population is an extensive problem particularly amongst men. Only 53 % of men, who reach the age of 15 in Russia, actually reach the age of 60. To a large extent, the mortality of Russian men is due to various external causes such as heart and vascular diseases. (Zakharov 2008, 908.).

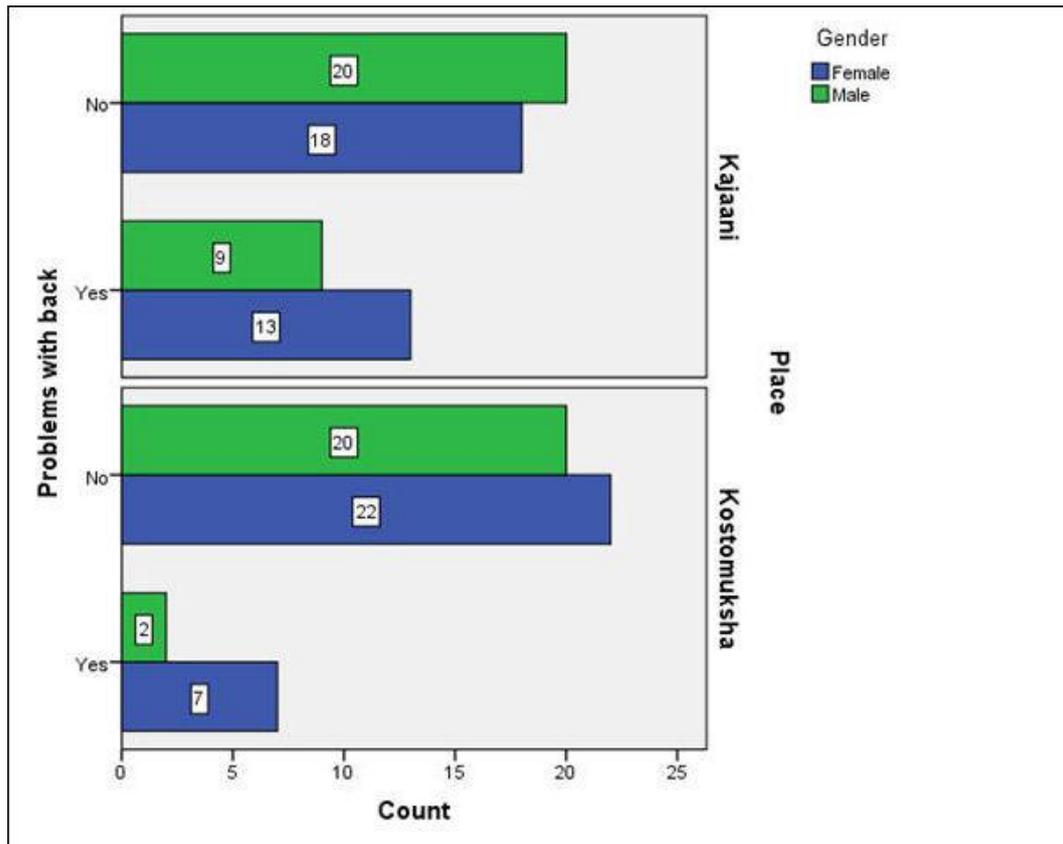


Figure 6. Back pain experienced by gender and place (N=111).

The most common health problem experienced by the respondents was back pain. 21 respondents (13 of them women) from Kajaani suffered from back pain. 9 respondents (7 of them women) from Kostomuksha suffered from back pain. 6 respondents (3 men and 3 women) from Kajaani and 4 respondents from Kostomuksha (three men and one woman) said they suffered from heart problems. One man from Kostomuksha replied that he suffered from heart symptoms while resting. One man from Kajaani and six respondents (four of them, men) from Kostomuksha suffered from high blood pressure.

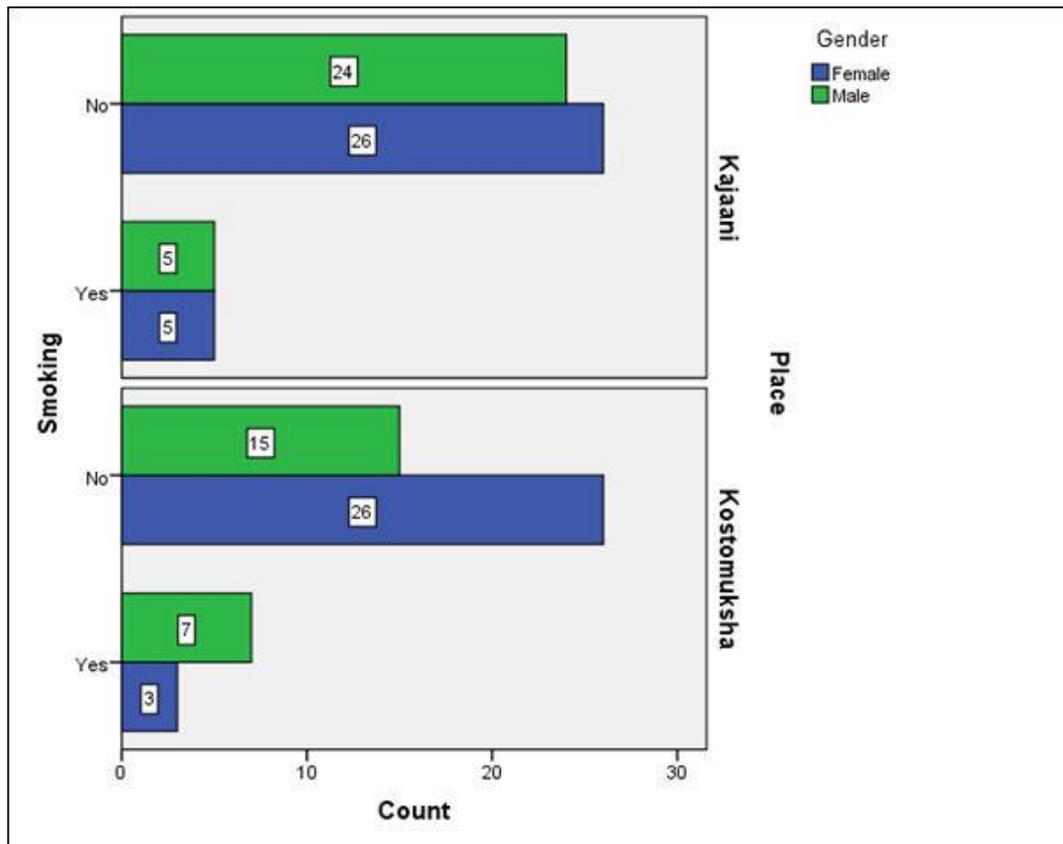


Figure 7. Smokers amongst the respondents (N=111) by gender and place.

91 respondents (approx. 82 %) did not smoke according to their answers. 10 respondents from Kajaani (the same amount of men and women) said they smoked. The amount of smokers was the same in Kostomuksha but only three of them were women. 32 % of the men who answered in Kostomuksha smoked whereas in Kajaani the equivalent figure was 17 %. The difference between the answers given by women was not as large with about 10 % of the respondents from Kostomuksha being smokers and 16 % of the respondents from Kajaani.

In research conducted in 2013, 19 % of Finnish men and 10 % of women smoked (Helldán et al. 2013, 5). The amount of smokers amongst the respondents in this study was very close to these figures. The amount of smokers amongst the Kajaani male respondents was 2 % less than in the study conducted by the National Institute for Health and Welfare. However the incidence of smoking amongst the female respondents from Kajaani was 3 % more than in the study conducted by Helldán and partners. In a study conducted by the World Health Organisation (2009, 20), 29.1 % of the adult population smoked tobacco. 60.2 % of men and 21.7 % of women were smokers. In contrast to the results of the WHO's study, roughly half the amount of respondents from Kostomuksha smoked tobacco.

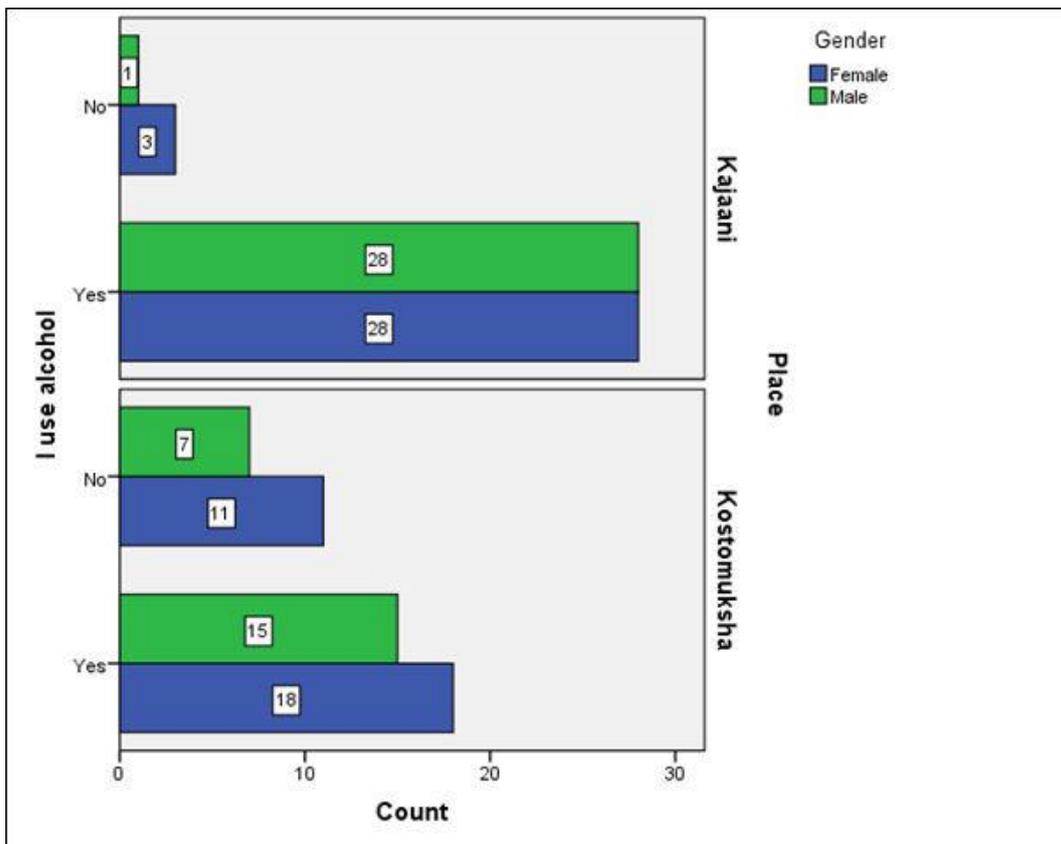


Figure 8. Alcohol use amongst the respondents (N=111) according to themselves.

The respondents were asked whether they used alcohol. 4 respondents from Kajaani replied that they did not use alcohol. Three of these respondents were women. 18 respondents from Kostomuksha replied that they did not use alcohol and 11 of these respondents were women. In Kajaani 6.7 % of the respondents are teetotallers, whereas the equivalent figure for Kostomuksha is 35.3 %. When examined by gender, 3.4 % of men who replied and 5.9 % of women from Kajaani were teetotallers. 31.8 % of the men from Kostomuksha who replied and 37.9 % of the women, were teetotallers.

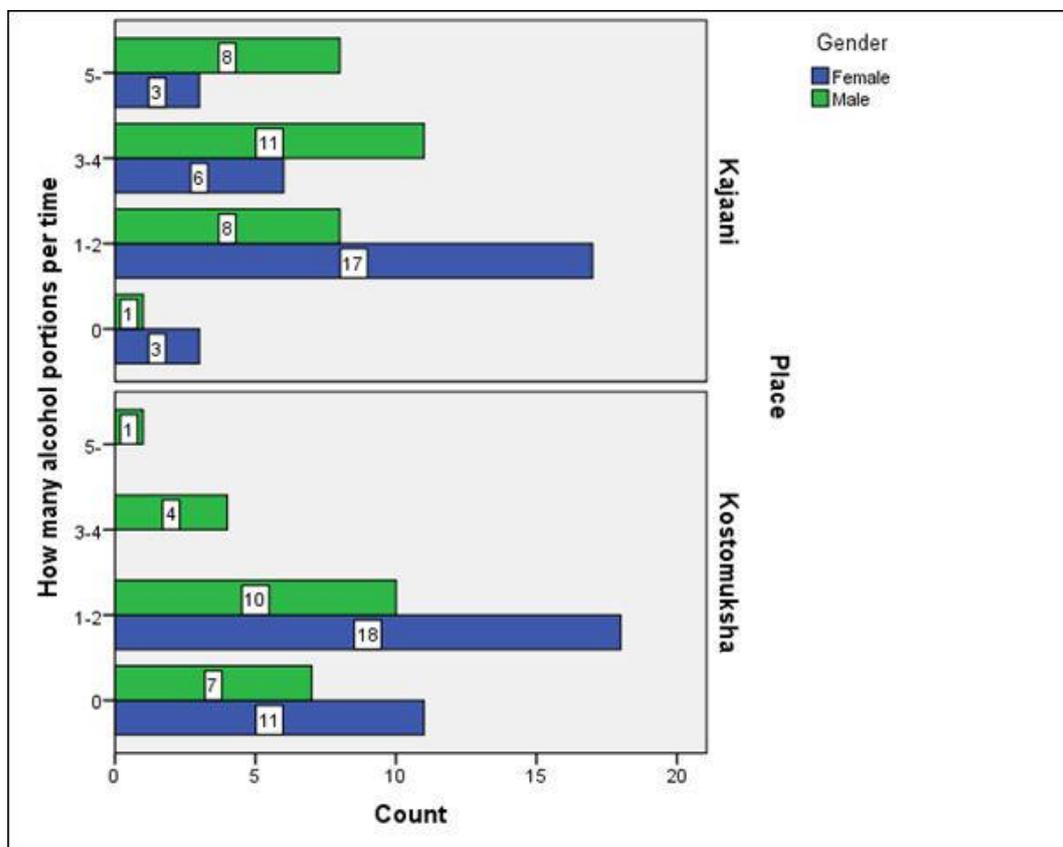


Figure 9. Mean number of alcohol portions consumed by respondents (Kajaani N=57; Kostomuksha N=51) according to themselves.

The respondents were asked to estimate how many alcohol portions they consume on average during the same period. In Finland a portion of alcohol means an amount containing 12 grams of 100 % alcohol, i.e. one alcohol portion is 0.33 l of beer/cider or 12 cl of unfortified wine or 8 cl of fortified wine or 4 cl of spirits (A-klinikkasäätiö, 2011). The descriptions of the portions were displayed on the answer form of the questionnaire and the respondents were asked to estimate how many portions of alcohol they consumed based on the description. 4 respondents from Kajaani and 12 from Kajaani replied that they did not consume any alcohol. This response is the same as in the responses concerning alcohol use.

25 respondents from Kajaani replied that they consumed 1-2 alcohol portions during the same period, 17 of the respondents were women. 17 respondents from Kajaani replied they consumed 3-4 portions of alcohol during the same period, 6 of the respondents were women. 11 replied that they consumed five or more portions of alcohol during the same period, three of the respondents were women. 28 respondents from Kostomuksha replied that they consumed 1-2 alcohol portions during the same period, 18 of the respondents were women. 4 respondents from Kostomuksha replied they consumed 3-4 portions of alcohol during the same period and one replied that they consumed five or more portions of alcohol during the same period. The women respondents from Kostomuksha all consumed less than 2 portions of alcohol at once; while 9 women from Kajaani indicated that they consumed on average at least 3 alcohol portions during the same period..

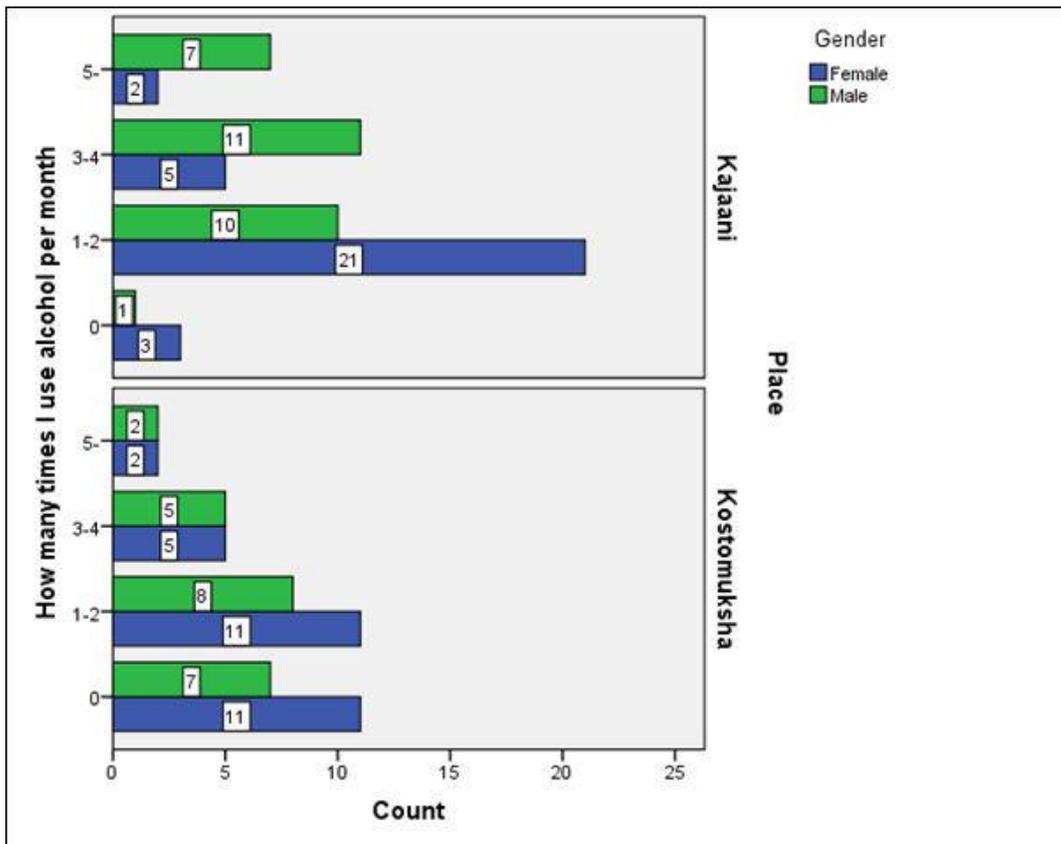


Figure 10. Mean monthly use of alcohol of the respondents (Kajaani N=60; Kostamus N=51) according to themselves.

The respondents were asked to estimate how many times per month they consumed alcohol. 4 respondents from Kajaani and 18 from Kostomuksha replied that they did not consume any alcohol in one month. 31 respondents from Kajaani (21 of them women) replied that they consumed alcohol 1-2 times per month. 16 respondents (5 of them women) said they consumed alcohol 3-4 times per month. 9 respondents from Kajaani (2 of them women) replied that they consumed alcohol more than five times per month. 19 respondents (11 of them women) from Kostomuksha replied that they consumed alcohol 1-2 times per month. 10 respondents (5 of them women) replied that they consumed alcohol 3-4 times per month. 4 respondents from Kostomuksha replied that they used alcohol five times per month on average.

In the recent study conducted by the National Institute for Health and Welfare, 13 % of men and 14 % of women were teetotallers (Helldán et al. 2013, 17). Compared to such figures, there were comparably fewer teetotallers in our study, when the difference amongst men was 10 % and amongst women, 8 %. According to the WHO's study, Russians consume a mean amount of 15.1 litres (100 %-alcohol to one over 15-year-old person) of alcohol per year. The mean consumption of alcohol amongst men is 23.9 litres and 7.8 litres amongst women. Likewise, Finns consume 12.3 litres of alcohol per person, with the mean consumption amongst men being 17.5 litres and amongst women 7.3 litres per person. (Global Status Report on Alcohol and Health. 2014, 209,233.) Based on these statistics, there is only an approx. 0.5 litre difference in the consumption of alcohol per person amongst Russian and Finnish women. In this light, there are comparatively many female and male teetotallers from Kostomuksha in our study.

## Discussion

The respondents in this study were in relatively good health. There were fewer teetotallers amongst the Finnish respondents than in research conducted by the National Institute for Health and Welfare, but relatively few of the respondents consumed alcohol often and in large amounts. The respondents from Kostomuksha consumed very little alcohol compared to results generated by the World Health Organisation study in 2009. Differences were particularly noted amongst the women respondents in our study. Most of the Finnish women consumed alcohol and some women were found to consume three or more portions during the same period. However, based on this study it is not possible to say that any one respondent could have an alcohol problem.

Where smoking is concerned, very few smokers from Kostomuksha seemed to have been selected for the group this study. The number of smokers was half of the number of smokers indicated in research conducted by the World Health Organisation in 2009. The number of male smokers from Kajaani was a few percent lower than the percentage for the whole country while there were more women smokers than indicated in the study conducted by the National Institute for Health and Welfare. However, the differences are so small that they could be due to the size of the sample population rather than differences in health related behaviour.

111 parents responded to this study – enough to draw conclusions. The respondents were all volunteers, which may have meant that families in a weaker position could have been eliminated from the research. Such families have enough to do just to survive their everyday lives and the threshold to participate in extra activities is perhaps rather high. This may have accounted for the parents, who volunteered and were selected to participate in the study, being healthier than other representatives of the parents' age group are on average.

Information provided by the respondents has been processed so that no one family or parent can be recognised. Only the project workers handled the answer forms when collected. The aim of such precautions was to ensure that the parents would have the courage to answer the questions as honestly as possible. The collection of material using a questionnaire has also impacted the results because the parents have supplied answers according to their own concepts. For instance, completing a diary as the children did would perhaps provide a more detailed description of the parents' exercise and health habits.

The National Institute for Health and Welfare study perceived a strong correlation between educational background and lifestyles. A lower level of education is linked with smoking, how nutritional recommendations are followed, engaging in hobbies involving exercise during free time and obesity. Where alcohol consumption is concerned, the differences are smaller and have almost disappeared amongst men. (Helldán et al. 2013, 25, 27). Since such background variables were not noted in this study, it is impossible to assess their impacts on the results.

An interesting area of research for the future would be to study the exercise and health related behaviour of parents of pre-school aged children in more detail in order to confirm or disprove the observed outcomes of this research.

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## 4 NUTRITIONAL RECOMMENDATIONS FOR PRE-SCHOOL AGED CHILDREN IN FINLAND AND THE NUTRITION OF PRE-SCHOOL AGED CHILDREN IN NURSERIES IN KAJAANI AND KOSTOMUKSHA

### 4.1 Nutrition of pre-school age nursery children in Kajaani

Mervi Mustonen

Adults play a large role in shaping the food habits and attitudes of pre-school age children at home and during day care. Children's meal routines, attitudes to eating and food choices develop at home. Pre-school age children need regular meal times to ensure that they grow and develop.

In nursery care, meals are a part of basic childcare, rearing and education. Nursery meals do not simply satisfy hunger but they also teach social skills such as good eating habits and table manners and taking other children and adults into consideration. Meals are a learning situation where the children become familiar with new flavours and gradually adopt healthy eating habits. Mealtimes should be unhurried and peaceful. Positive feedback concerning for instance, good behaviour can increase a child's liking for food.

Nursery meals are planned according to nutritional recommendations. Healthy and varied meals are provided. Meals containing fish are prepared once or twice per week and meals containing meat and chicken several times per week and sausage meals, once per week at the most. In addition to the main raw ingredients, a variety of potato, rice and pasta dishes are provided during the week.

The children also enjoy fresh vegetables, berries and fruit every day. The children also receive the soft fats they need from spreads based on vegetable fat and salad dressing. It is recommended that people drink three glasses of milk per day. The calcium in milk is good for the teeth and bones of a growing child. It is ensured that salt and sugar are only used in food preparation according to nutritional recommendations.

The new nutritional recommendations for Nordic countries pay more attention to overall diet than previous recommendations. They also include guidance on physical activity. Children should take a variety of exercise for 60 minutes every day. It is intended that life-style related diseases will be reduced with the aid of the new recommendations. The recommended dose of vitamin D and selenium for the over two-year-olds has been increased slightly. The range of recommended fats is 25-40 E % in the new nutritional recommendations (previously 25-35 E %) and the range of carbohydrates is 45-60 E % (previously 50-60 E %).

Kajaani Mamselli supplies 1000 – 1200 children with meals in 25 nurseries. In 2014, lunch cost EUR 3.10. About 17 % of the children follow special diets. Typical food allergies are wheat, milk protein and citrus allergies. Children with many allergies are allergic to several raw ingredients. In this case, the children are always prepared their own meals. Menu planning takes into account the food cultures, (religious) festivals and themes of different countries. When planning menus, customer feedback is taken into consideration. The children's parents and nursery staff can give feedback by telephone, email or during the joint parents' evenings arranged by the nurseries and Mamselli.

## 4.2 Eating Habits of Pre-school aged Children at Home and at Nursery in Kajaani and Kostomuksha

Kaisa Mikkonen

71 children of late pre-school age (3-6 years old) participated in the Lifelong Wellbeing project. 5 nurseries and 34 children from Kajaani and 6 nurseries and 37 children from Kostomuksha took part. One of the participating children from a nursery in Kajaani was 3 years old.

The physical development of pre-school children is rapid. Regular meal times and moderate gaps between meals are more important for children than for adults. Children can only eat small portions and they are more susceptible to tiring due to gaps between meals and hunger than adults. Healthy children usually only eat what they need. Thus portions should match individual needs in line with the plate model. Children do not eat to excess but only what they need. Meals provide routine. Regular meals and snacks increase children's security and enjoyment at home and nursery. (Aapro, Kupiainen Leander 2008, 15-75; Hasunen, Kalavainen, Keinonen, Lagström, Lyytikäinen, Nurttila, Peltola, Talvia 2004, 18 ; Hermanson 2007, 37. )

Pre-school children's energy consumption varies. A lot of energy is needed during rapid growth spurts and special attention should be paid to meal quality and portions to ensure that necessary building and protective nutrients are provided. In Finnish nutrition recommendations (2014), energy provision reference values focus on gender, age, weight and physical activeness. Daily energy requirements are calculated with a coefficient based on metabolism and physical activeness usually used in meal service planning. (Hasunen ym. 2004, 18-19; Hermanson 2007 40; Suomalaiset ravitsemussuositukset 2014, 25.)

Children cannot use energy in the same way as adults. Thus energy provision should be divided between main meals and snacks. A good routine for use at home and at the nursery is breakfast, lunch, an afternoon snack, dinner and an evening snack. Some pre-school children may need an extra snack in the morning or evening. Snack quality is as important as the main meal. As children approach school age, they start to grow more slowly and need less food. Children's hunger levels also vary. As children grow, an inbuilt ability to regulate food intake develops and they learn to regulate the amount they eat. (Hermanson 2007, 40; Lehto, 2004, 20-21; Suomalaiset ravitsemussuositukset 2014, 25; Venäläinen, 2010, 1.)

Eating habits form throughout childhood. Family food choices, meal situations, discussions over meals and attitudes, guide eating habit development. Parents can support the development of positive food preferences and eating habits. They decide what food to buy, how meals are prepared and where to eat. Pleasant and shared meal times guide children to make healthy food choices. Amongst others, Venäläinen (2010) has shown that parents' awareness of healthy food increases the consumption of fruit and vegetables and decreases fat consumption. Pre-school children may be very suspicious of new foods. New food becomes familiar after tasting it a few times. On average a child needs to taste a new food 10-15 times before liking it. Thus it is important to give children time to get used to new flavours. Coercion may create a dislike for new food and even for mealtimes. (Haglund 2007,130; Hermanson 2007,40; Lehto, 2004, 20-21; Nurttila 2001, 111; Venäläinen 2010 1-5.)

The use of food services in day care is a part of Finnish food culture. Thus food services partly dictate food choices and which foods are liked. According to nutrition recommendations, nurseries should offer meals that cover 2/3 of a full timer's and 1/3 of a part-timer's nutritional needs. There is little research on the nutritional quality of catered food. The little research there is, shows that its nutritional quality needs further development. Finnish families prepare less food at home and eat out more often, buying more ready, pre-prepared and frozen food for everyday meals. Fast food is also eaten more. However, families still want to consider healthy eating although flavour still remains one of the most important factors when choosing food and how to prepare it. (Hasunen ym. 2004, 136-157; Oranen 2006. 10-13.)

Regular meals ensure the continuous supply of energy and nutrients. Cereals, fruit, vegetables and berries provide carbohydrates, vitamins, and minerals. Each meal or snack should include vegetables, fruit or berries in some form. A good target would be five portions of vegetable, fruit or berries per day. One portion means one small tomato, carrot, fruit or 1 dl of grated vegetable; about 50 grams per day. Children should eat full grain products for fibre and protective nutrients. Bread as well as cereal porridges and gruels are children's food. Children should eat about four-five slices of bread per day and bread should accompany every meal. Part of the bread portion can be replaced by porridge. Foods rich in fibre release energy slowly and keep blood sugar levels stable. Fibre also prevents constipation. The continual use of breakfast cereals and muesli is not recommended due to their high salt and fat content. (Arffman, Partanen, Peltonen, Sinisalo 2009, 91-93; Hasunen ym. 2004, 137-157.)

More unsaturated fats should be used by choosing fat-free or low-fat milk and meat products. To ensure a sufficient supply of unsaturated fats, margarine should be used on bread and margarine and vegetable oil for preparing food. Children only need 20-30 grams (4-6 tsp) of visible fat per day. Vegetable oils and margarine made from vegetable oil ensure a sufficient supply of soft fat, essential fatty acids, and vitamin E. Various types of fish must be eaten at least twice per week. Fish and white meat are preferable for children because of their good fat content. Oily fish contains essential fatty acids and is an excellent source of vitamin D. Children need unsaturated fat for the development of their nervous and central nervous system and unsaturated fat prevents heart and vascular diseases from developing in childhood. (Arffman ym.2009, 91-93; Mustonen 2014; Suomalaiset ravitsemussuosituksset 2014 , 22-23.)

Children will consume enough protein if their diet includes milk products, meat, and fish according to the plate model. The recommended daily portion of milk or sour milk products for children is 5-6 dl and 20 grams or 2-3 slices of cheese. A pre-school aged child needs about 1-1.5 litres of fluids per day. It is best to quench thirst by drinking water and skimmed milk or sour milk is recommended with meals for the whole family. A glass of fresh fruit juice, decaffeinated tea or coffee can also be consumed. Daily fluids for under school aged children do not include sugary juices and fizzy drinks or full-fat and sugary milk, cocoa and yoghurt drinks because they expose children to weight gain and are bad for their teeth. (Hasunen ym. 2004, 137-157; Leikki-ikäisten ravitsemus.)

Children gain enough protective nutrients apart from vitamin D if they eat as recommended. The amount of salt and additives increases when children start to eat the same food as adults. Foods with high salt content stress children's kidneys. (Hasunen ym 2004, 137-157.)

It is good to become used to a low-salt diet because it can prevent heart and vascular diseases. Additives are present in cold cuts of meat and sausage and frankfurters (nitrite) and in shop fruit juices (benzoic acid). Therefore cold cuts and sausage meals are not recommended as children's everyday food and their use should be restricted to once or twice a week. Liver dishes once or twice per month are recommended for children. (Hasunen ym 2004, 137-157.)

The food triangle (figure 1) illustrates an overall health-promoting diet and the plate model (figure 2) can be used for combining a healthy set of provisions for one main meal. (Mustonen 2014; Suomalaiset ravitsemussuosituksset 2014, 19-20.)

#### Food services in nurseries in Kajaani and Kostomuksha

Kajaani Mamselli supplies all the meals for nurseries in Kajaani taking into account Finnish nutritional recommendations. The Kostomuksha nurseries' catering staff prepares all of the children's meals. Nursery managers, nurses and the head cook monitor the quality and taste of food prepared in the Kostomuksha nurseries. The different authorities of Kostomuksha also monitor the quality and purchase of raw ingredients and the nursery menus include detailed information on raw ingredient amounts, oils used in preparation, carbohydrates and proteins.

Children are cared for in nurseries in Kostomuksha from 7.00 – 19.00 and they usually receive all main meals and snacks during their day at nursery. Parents may fetch their children earlier. For this reason the main afternoon meal is served slightly earlier, at about 17.00 to ensure all the children have time to eat. Thus, it remains for parents to offer their children a light evening meal at home.

As regards the Kajaani nurseries involved in the project, Ratamo Nursery offers day care in shifts and it is open from 05.30 – 22.00. Children's day care in the other nurseries is possible from 6.30 – 17.00. Kajaani nurseries provide children in their care with breakfast, lunch and an afternoon snack. The children eat dinner and an evening snack at home. Children arrive at Ratamo Nursery at various times during the day and this is taken into account when their meal routines are planned.

Research results on the eating habits of pre-school aged children at the nursery and at home

#### Gathering material

The same methods are used to measure children's and adult's eating habits. The participation of pre-school aged children in the study requires the involvement of adults. The most common research method for studying eating habits is a food diary. (Kyttälä P, Ovaskainen M, Kronberg-Kippilä C, Erkkola M, Tapanainen H, Tuokkola J, Veijola R, Simell O, Knip M, Virtanen, SM 2008, 115.)

Individual daily food habits, especially weekday and weekend habits differ or if the object of research falls ill. Nelson et al. (1989) proposed that a 7-day food diary would suffice for describing the amount of energy and energy nutrients consumed individually by 1-4 year olds in enough detail. Keeping a food diary requires care and commitment. It requires knowledge of foodstuffs, recipes and food preparation methods. The difficulties associated with keeping a food diary are its effect on eating, omitted information, and estimating the size of portions. (Aapro, Kupiainen Leander 2008, 15- 17.)

Food diary entries were made using separate forms at the nursery and at home. The nursery staff members were instructed to record in detail all the food, drinks and the size of portions consumed by the children, as well as how the food was prepared and observations on the children's eating behaviour during the 7 days of the study. Likewise the nursery staff instructed parents on how to make food diary entries. Food diaries in Russian were given out in the Kostomuksha nurseries at the same time as in the Kajaani nurseries and persons in charge in the Kostomuksha nurseries instructed children's parents and staff members on how to complete the food diaries.

The nursery staff members gave out the food diaries for completion by the families accompanied by written instructions on how to complete them and a return envelope. In Kajaani, the food diaries were returned to the project practitioners by post and marked with a pseudonym to Kajaani University of Applied Sciences and in Kostomuksha, to the nursery staff, in sealed envelopes, from where they were sent to Kajaani University of Applied Sciences.

The staff of the Kajaani and Kostomuksha city nurseries kept the children's food diaries for one week (Week 7/2014) during day care and the children's parents kept diaries for when the children were at home. The aim was to gain information on the type and quantity of food made of different raw materials that the children ate. It was also intended that information on food preparation methods would be gathered. The diaries were also intended to show what fluids the children drank and the differences and similarities between children's nutrition in Kajaani and Kostomuksha.

## Analysis of material

The quality of the diary entries varied greatly in both countries and different day care units. In addition, the Finnish translation of the Russians' diaries was not sufficiently detailed and a lot of important information was not obtained.

The diary entries did not provide information on the quality, amounts and adequacy of energy nutrients and nutrients consumed individually in relation to pre-school aged children's nutritional recommendations which are the actual recommended quantities and levels of energy, energy nutrients, vitamins and minerals children should receive. The diary entries did provide information on whether food recommendations were implemented by describing food-ingredients with the aid of the food triangle. The diaries also provided information on pre-school children's eating behaviour and meal routines while at the nursery and at home.

The material was analysed by recording the meals and drinks consumed by each individual child according to ingredients and meal routine (breakfast, snack, lunch, snack, dinner and evening snack) from Monday to Sunday. The food and drink portions were not counted in grams and decilitres because the entries only gave approximate amounts. The amounts were recorded as how many pieces or drinks were recorded by the glass. Then a form was compiled which recorded the number of children whose breakfast consisted of e.g. cereal or milk products or how many children ate an unhealthy snack such as sweet buns, sweets, biscuits etc. The form enabled a description of the children's meal routines and the nutrient groups their various meals consisted of at home and at the nursery to be compiled.

## Results

### Home and nursery meal routine

The eating routine of pre-school aged children in day care in Kostomuksha was in line with recommendations. The children ate breakfast, a snack, lunch, a snack, and dinner while at nursery. They also ate a light evening meal at home. Some children also ate dinner at home during the week. In general, food intake of the Kostomuksha children consisted of six different meals per day. This rhythm changed at the weekend when there may only have been three meals instead of the maximum 6 meals per day. In Kostomuksha at weekends, breakfast would be eaten at home at 9.00 – 10.00. The next warm meal would be at 13.00 – 14.00 followed by a snack at 15.00 – 16.00, a warm meal at 17.00 – 19.00 and then an evening snack generally eaten at 20.00 – 22.00.

In Kajaani, the children eat three meals per day while at nursery: breakfast, lunch and a snack. Dinner and the evening snack were eaten at home. On weekdays, the children's meal routines occurred according to recommendations, but at weekends gaps between meals became longer and the amount of meals could fall to three a day, after a maximum of five meals per day. Six families from Kajaani recorded that their children ate a piece of bread, drank milk, cocoa or ate yoghurt before coming to nursery. The children in these families started nursery before 7.00.

*Example of three-meal routine and combinations of different foods in Kostomuksha at home at the weekend:*

*10.00 Cereal and a glass of milk*

*14.00 Borsch, macaroni and cheese, berry fool, tea*

*19.00 Vegetable-meat casserole, tea and bread*

*Example of five-meal routine and combinations of different foods in Kostomuksha at home at the weekend:*

- 9.00 Tea and biscuit*
- 11.00 Quark and blini with Smetana and juice*
- 13.00 Vegetable-meat soup, kale salad*
- 17.00 Risotto, vegetables, bread, tea and juice*
- 20.00 Juice, tea, milk, bread and cheese*

*Example of three-meal routine and combinations of different foods in Kajaani at home at the weekend:*

- 9.00 Cereal, milk and bread*
- 13.00 Frankfurter sausages and noodles*
- 18.00 Cereal, milk and a bar of chocolate*

*Example of five-meal routine and combinations of different foods in Kajaani at home at the weekend:*

- 8.00 Porridge, milk, bread, cheese, cucumber*
- 11.00 Elk soup, milk, ice-cream and sweets*
- 13.00 Fruit and juice (shop juice)*
- 17.00 Chicken and meat steak, macaroni, vegetables and milk*
- 19.00 Milk, bread, cheese + slice of ham, fruit*

Meal routines change in both cities at the weekends. Three of the Kajaani girls and one boy ate only three meals on Saturday and similarly in Kostomuksha one girl and one boy ate three meals on Saturday. On Sunday in both cities, the amount children eating only three meals increased.

In Kajaani, five girls and one boy ate three meals on Sunday while three boys and one girl ate three meals on Sunday. Most of the children in Kajaani and Kostomuksha ate five meals per day during the weekend. In this study, unhealthy snacks such as sweets, ice-creams, popcorn and confectionary were counted as one meal when they were eaten as a whole snack or replaced a warm meal. There were also seven children in Kostomuksha who ate six times on Saturday and on Sunday.

#### Breakfast at the nursery on weekdays

Since meals are prepared by the nurseries themselves in Kostomuksha, the breakfasts differ slightly in consistency. The breakfasts consisted almost without exception of porridge and bread in Kostomuksha and Kajaani. In Kostomuksha, rice, barley and oatmeal, as well as millet, buckwheat and corn were used to make porridge. Macaroni cheese and quark-raisin bake were also offered in Kostomuksha.

Berry fool, milk and pieces of fruit were served with breakfast porridge in Kajaani. Dark bread, either soft rye bread or hard crisp bread was served with breakfast. Vegetable margarine was used as a spread for bread in Kajaani and the children were also offered cucumber, tomato and low-fat cheese. Slices of sausage meat on bread were also recorded on several days. According to the diary entries, children in Kajaani seem to be particularly fond of dry crisp bread. In the Kostomuksha nurseries, children often ate bulka, like a Finnish white roll with breakfast. Bulka was usually served with butter.

### Breakfast at home at the weekends

Out of 34 children in Kajaani 17 ate morning porridge on Saturdays and 15 children on Sundays. Similarly, in Kostomuksha, of 37 children, 20 ate porridge on Saturdays and 10 children on Sundays. Three children in Kostomuksha ate macaroni in milk in the morning and one child in Kajaani ate macaroni gruel. Two children in Kostomuksha had also eaten frankfurter sausages for breakfast and one child, blinis with Smetana. Six of the children from Kajaani added berries to their porridge and 11 of them ate fruit in the morning. Likewise, nine of the children from Kostomuksha drank berry juice and four children ate fruit in the mornings. According to the parents' diary entries the juice consumed by families in Kostomuksha, is home made.

Over half of the children in Kajaani ate bread with their breakfast. In Kostomuksha the children ate less bread. 14 of them ate bread on Saturday mornings and 9 children on Sunday mornings. Cheese was the most used ingredient on top of bread in Kajaani and in Kostomuksha. Only one diary entry from Kostomuksha mentioned sausage or cold cuts while in the diaries of the Kajaani children, there were 11 entries on the use of sausage or cold-cuts on bread. Two children in Kajaani had liver pate on their bread.

Three of the Kajaani children ate savoury rice pies for breakfast and three also ate sweet buns or biscuits. In Kostomuksha 17 children ate sweet buns or biscuits in the mornings. 16 children in Kajaani ate yoghurts and five ate sweet dairy puddings in the mornings. The diaries indicated that seven children in Kostomuksha ate yoghurt for breakfast and seven ate quark and Smetana. None of the Kajaani children's diaries recorded Smetana for breakfast but one child had quark with berries.

There were no vegetables for breakfast recorded in the diaries of the children from Kostomuksha. There were 11 entries concerning the use of vegetables on Sunday in the Kajaani children's diaries and for Saturday, four entries. 10 of the children from Kostomuksha ate eggs and various egg dishes for breakfast whereas no entries concerning eggs were made during the weekend.

More than half of the Kajaani children drank milk with their breakfast. Two diaries recorded water and one, a fizzy drink with breakfast. Nine of the children from Kostomuksha drank milk and 34 drank tea, decaffeinated coffee or juice in the mornings.

#### Snacks in the nurseries

The Kostomuksha nurseries offered the children two snacks: between breakfast and lunch and in the afternoon before dinner. In Kajaani, the nurseries served a snack in the afternoon after the daily rest. In Kostomuksha the snacks varied in each nursery. In the mornings the nurseries served a drink – juice, water, cocoa, tea and decaffeinated coffee. The children were also offered a biscuit or a roll with their drink. One of the nurseries also offered fruit or yoghurt drinks as a morning snack.

The afternoon snacks also varied in Kostomuksha with fruit, biscuits, rolls, waffles, quark buns, yoghurt drinks, berry pies or bread fried in butter being offered. The children were given tea, juice or sour milk to drink. However several of the diaries mentioned that the children did not particularly like to drink sour milk. It was also mentioned that a child had wanted something to drink but nothing to eat.

During the week of the study the Kajaani nurseries served pancakes with jam, berry porridge, fruit and chocolate fool, fruity quark, yoghurt drinks as snacks. The pancakes were convenience food. The children were also given bread and milk during the snack. The food diaries occasionally mentioned slices of luncheon meat or cheese on bread. There were only a few such entries.

#### Weekend snacks at home

At the weekend, snacks were eaten at very irregular intervals in both cities. Sometimes a snack would replace lunch or dinner. Tea and juice were the main drinks of the children from Kostomuksha during their snacks. Seven food diaries mentioned milk during snacks and one child had drunk sour milk. The most common drink while snacking was milk in Kajaani while five diaries mentioned that the children had drunk fizzy drinks, mostly after having a sauna bath. The children drank the same amount of cocoa in both cities and it was not mentioned often in the diaries, with only three entries during the week of the study.

Children in Kostomuksha twice as much fruit as snacks. The Kajaani diary entries showed that 12 children had eaten fruit when the equivalent figure in Kostomuksha was 24. Berries were used very little in both cities. The diary entries for both cities contain only three mentions of berries being eaten as such or added to milkshake.

The Kajaani children ate more bread and sausage and/or cheese than their Kostomuksha counterparts. Only four children from Kostomuksha had eaten bread as a snack when 11 of the children in Kajaani had eaten bread included in the snack. In Kostomuksha sweet buns and biscuits were often eaten as a snack in the nurseries as they were at home. There were 22 entries on such snacks for 22 children in the Kostomuksha diaries and for 11 children in Kajaani. 8 children in Kostomuksha snacked on quark and yoghurts and blinis with Smetana were also mentioned.

Children in Kajaani snacked on pizza and popcorn. More sweets were eaten in Kajaani than in Kostomuksha during the weekend. This could be because in Finland children have a 'candy day' once a week usually at the weekends. Children also go to the cinema at weekends and buy popcorn to take in with them. Ice-cream was a treat in both cities at the weekend but only for a very small number of children. Only two children in Kostomuksha ate ice-cream and four children in Kajaani. The use of vegetable snacks was very limited at weekends in both cities. Only two children were clearly mentioned to have eaten cucumber and tomato as a snack.

### Nursery lunches

The most common ingredient in salad was cabbage in Kostomuksha, with added fresh vegetables or fruit. Fish was served in all the nurseries once a week either in soup, fried and/or as fish cakes. Soups were made from various vegetables with added chicken, small meatballs, rice or pickled cucumber. Smetana was often served with lunch. In addition the nursery menus included meat and potato bake, scrambled eggs or egg soufflés and one nursery served liver stroganoff. The children were served three different courses in the Kostomuksha nurseries. The diaries included several observations about children who did not manage to eat all of the food or failed to eat one of the courses.

Kajaani Mamselli supplies the same lunches to all the nurseries in Kajaani. During the monitoring week the children ate chicken soup on Monday, fish and mashed potato on Tuesday, and kebab and potato bake on Wednesday (a ready meal). On Thursday the children had minced meat sauce with potato and on Friday, minced meat steaks with potato. The children were given salad containing vegetables (tomatoes, cucumber), cabbage and often cheese and/or fruit with their lunch. The children mainly drank milk, and ate dark bread (often crisp bread) with their lunch.

## Dinner at the Kostomuksha nurseries and at home at the weekends

Each nursery offered a different late afternoon meal (dinner). Dinner omitted soup as a starter but vegetables prepared in many ways were on offer. They were served e.g. as salads including fish or as stews. Quark pies and omelettes were on the dinner menu in all the nurseries. It was mentioned that the nurseries use condensed milk products to make quark pies. Pasta and cheese and liver pancakes were also on the menu. The children were served tea to drink and rolls (bulka) with their dinner. They also often drank water or berry juice. In general, the children liked the nurseries' afternoon meals.

During the week, the children in Kostomuksha ate their late afternoon meal comparably later than in Kajaani on weekdays and at the weekends. On weekdays this lighter dinner was served at home at about 19.00. During the week of the study, the most commonly served meals on weekdays consisted of rice or potatoes with meat, buckwheat, chicken or fish. Several fish species were used to make soups, salads or fried dishes. The most commonly used fish species were cod, pike, vendace and perch. The salads included mackerel or prawns. Ten families served macaroni and sausage meals. The most popular soups were cabbage-meat soups and chicken soups. The children were also served pelmeni dumplings, blinis and quark with Smetana. The children of almost all the families also had vegetables and fruit during dinner.

Bread and milk as a beverage accompanied dinner very rarely in the homes of the Kostomuksha children. The most common drinks were juice or tea. Ten diaries mentioned that the children had eaten berry fool or berry juice as a dessert with dinner or shortly after dinner.

At weekends, late afternoon meals most commonly included chicken, fish, potatoes and rice. One weekend dinner option with fish or chicken was macaroni and/or pasta with cheese. In the diaries, it was often mentioned that the children enjoyed macaroni or pasta dishes very much (with entries concerning such meals). During the monitored weekend, three families offered their children pizza and/or French fries for dinner and two children were given frankfurter sausages.

Dinner in the homes of the Kajaani children during the week and at weekends

During the week of the study, 15 families offered their children meals made from minced meat such as minced meat sauce or meatballs with potato and vegetables or minced meat soup. Almost all the families had recorded vegetables being offered with dinner on every weekday. The Kajaani children's favourite meals also included macaroni and minced meat bake with tomato ketchup.

During the week of the study 10 families ate macaroni bake, often on consecutive days during the week. The third most popular ingredients were frankfurter and sausage products. The children were served fish by 20 families and chicken by all the families during the week of the study. Eggs were used as a side-dish or to make scrambled eggs in nine families. Pizza and hamburger and chips were eaten by ten children during the week. The other most popular ready-meals were spinach soup, chopped spaghetti mixed with a meat and vegetable sauce (Italian hot-pot), blood and spinach pancakes and ham and potato bake. Three children ate noodles with frankfurters or tuna and three ate shop bought fish fingers. A few families had game products served with rice and potato and some of these products were convenience foods.

In all the families, the children drank milk the most with their dinners. There were several mentions of water and juice being drunk on weekdays and one child had drunk a fizzy drink with dinner. Half of the children ate bread with sausage or cheese and the meals of five children included rice pies. The use of fruit and berries was very limited with dinner on weekdays. In 12 families sweets, sweet buns and biscuits were given to children once or twice on weekdays during the week of the study.

The late afternoon meal ingredients did not change much over the weekend. Minced meat meals remained more popular than meals with fish or chicken. The use of convenience foods such as pizza and hamburgers as complete meals increased and on Sundays in particular, the children's dinners were replaced by ready meals or bits and pieces in many families.

In this study it was interesting that the children's dinners included a lot of vegetables, meat, chicken, fish, potatoes and cereal and milk products during the week but that the ingredients changed to red meat at the weekends while the amount of vegetables and fruit decreased along with the use of milk and cereal products.

#### Evening snacks in the homes of children in Kajaani and Kostomuksha

During the week of the study 15 children consumed yoghurt drinks and bread and cheese or sausage as an evening snack. For three children there was no mention of any evening snack.

In Kajaani the children often had yoghurt or bread with cheese or sausage and drank milk. Karelian rice pies and milkshakes formed another type of evening snack as well as porridge. Breakfast cereals, berries and fruit were eaten the least as evening snacks.

The time of the evening snack varied by several hours in both cities, from 18.00 – 22.00. When analysing the diaries, it was difficult to distinguish between the evening snacks and the later afternoon meals because the families did not record the time of day very accurately and the word 'evening' could have meant various times of the day on different days even for the same child.

## Summary

Food and meal culture was emphasised in the meal planning of both cities in the nurseries and at home. The nurseries took the food recommendations of their own countries into account in children's meal planning in both countries. Cabbage, potato and beetroot were the main ingredients of the children's meals in Kostomuksha. Fish and chicken products were used more often in the nurseries and at home in Kostomuksha. In Kajaani red meat and chicken took alternated as the main ingredient at home and in the nurseries but fish was less used in Kajaani homes and nurseries. Egg products were used more in nurseries in Kostomuksha than in the Kajaani nurseries and the same trend was observed for meals eaten at home.

Children in Kostomuksha ate less bread than children in Kajaani and their bread was often white rolls (bulka). The children in Kajaani often had cheese, sausage or meat products on their bread. The children ate cereal products as porridge at home and at the nurseries in both cities. More types of cereals were used with more variety in Kostomuksha than in Kajaani.

Sour milk products such as quark and Smetana are part of the everyday meals of children in Kostomuksha whereas milk as a beverage was very uncommon compared to the beverages used by children in Kajaani. Cheese was a more common source of protein for children in Kajaani. It is not possible to provide a reliable description of the types and amounts of fats and oils used in this study. Only one diary from Kajaani contained an entry mentioning the use of nuts and seeds in meals.

Vegetables and fruit are on the menu of nurseries and at home in both cities. However, they could be eaten more often since many of the diaries mentioned that vegetables were not the favourite food of the children and that the children would only eat a bit of fruit, not the whole fruit. The use of berries in the nurseries and at home was very limited in both cities.

The greatest food difference between the cities lay in the drinks that accompanied meals. In Kostomuksha the children drank lemon or sweetened tea or decaffeinated coffee, beverages that were not mentioned at all in the diaries of the Kajaani families. The use of different berry juices and water is also more common in Kostomuksha than in Kajaani. The diary entries for the Kajaani children mention the use of fizzy drinks, which were not mentioned in the diaries for the Kostomuksha children.

The use of unhealthy snacks i.e. sweets, biscuits, and buns were also a part of children's meals in both cities. Biscuits and buns were served to the children more often in the Kostomuksha nurseries than in Kajaani, but the amount of buns and biscuits consumed at home was the same in both cities.

Kajaani households used more convenience foods for weekday and weekend meals. Food was prepared at home by the Kostomuksha households in the study. Meal routines varied in both cities particularly at weekends and some food diaries mentioned that the children ate their dinners and/or evening snacks alone in the living room in front of the television.

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**REPORTS AND SURVEYS**

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