Apple Workshops – Liking of Apples and Other Fruits among Children

Poster #77

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Introduction

- Fruit and vegetables (F&V) and berries are a rich source of fiber, vitamins and minerals and they are low in calories
- Consumption of F&V and berries is encouraged by health and nutrition professionals (VRN 2014, USDA 2016)
- Consumption patterns of many food items are formed during childhood
- In Finland, the consumption of fruits and berries (F&B) is 45 kg/person and vegetables and green salads 32 kg/person.

Objectives

The objectives of this study were to

- Explore consumption patterns of fruit and berries (F&B) in children
- Measure the liking of three apple cultivars among children
- Explore the reasons for liking (or not liking) these apples
- Organize Focus groups discussions to learn more about the attitude of children towards F&B

Materials and Methods

PARTICIPANTS

- A total of 89 children from four classes of a local primary school in Helsinki, Finland participated in the study
- Children were 6-10 years old (mean age 8.6), 45 girls, 45 boys
- Parents filled in a background questionnaire (demographic information and use frequency of F&B) beforehand and signed informed consent.

WORKSHOPS

- Workshops consisted of two parts: sensory evaluation and focus group discussions
- Participants evaluated three apple cultivars (facial hedonic scales, 1=super bad 7=super good) before and after tasting them.
- After evaluations, 4-6 children from each class (n=22) participated in a focus group discussion while the rest of the class had a parallel drawing session.

SAMPLES

- Three domestic cultivars were selected for samples (Fig. 1): 'Heta' (sweet, sour, juicy), 'Pekka' (sweet, somewhat mealy) and 'Lobo' (sweet, slightly sour, juicy). All cultivars were crunchy and red. 'Pekka' was the sweetest of them and it had a dark red color (Seppä et al. 2016).

Results

Apple workshops

CONSUMPTION OF FRUIT AND BERRIES

- Fruits were eaten daily by 57% of the children. They were eaten most often as snacks (84%).
- Those who ate F&B daily ate them usually also for breakfast.
- Favorite fruits were apple, pear, banana and citrus-fruits. The least liked were banana, pineapple, plum, kiwi, avocado and citrus-fruits.
- Favorite berries were strawberries and raspberries. Berries eaten most often were strawberries and bilberries (wild blueberries)
- According to the parents, some children eat F&B seldom while some eat them several times a day.

EVALUATIONS

- Cultivars 'Heta' and 'Lobo were liked the most both before and after tasting (Fig. 2).
- Girls preferred the red cultivars 'Heta' and 'Pekka' before tasting slightly more than the boys.
- 'Lobo' was selected 42 times as the most preferred cultivar, 'Pekka' 24 times and 'Heta' 19 times. Many commented that 'Pekka' looked suspicious because of its dark red color but that the taste was good.
- Reasons to select a certain cultivar included sugary flavor, sweet, tart, juicy, tasty, fresh tasting, looks nice, tastes like Christmas.

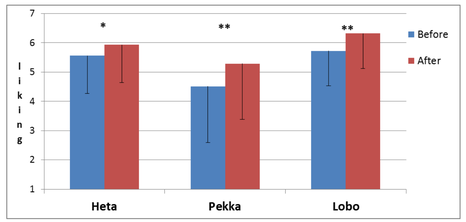

Fig. 2 – Liking of apple cultivars before and after tasting (n=80-86).



Fig. 1 – Tray setting and apple cultivars (from left to right) 'Heta', 'Pekka' and 'Lobo'.



Fig. 3 – Plate visualization presented in the apple workshops (VRN 2014).

Results

Procedure for focus group discussions

WORKSHOP STARTS

- We started with the introduction of the researchers, pupils and laboratory facilities where the activities related to the food samples took place
- Children evaluated three apple cultiuvars and selected their favorite.
- Presentation of MyPlate (USDA 2016) or other visualization (Fig. 3) of nutrition recommendations gives a good starting point for focus group discussions.

TOPICS COVERED

- What the participants think about F&V and berries
- When F&V and berries are eaten (In the morning? As a snack?) and how they are eaten (Fresh? Cooked?)
- What kind of F&B do you know? Have you tasted them?
- The role of gardens, fruit trees and picking berries in their lives
- How the harvested F&V and berries are prepared for food or storage.

WORKSHOP ENDS

Conclusions

- The children were positive about tasting the samples and discussing their likings and preferences. Primary school age seems to be an ideal time to introduce new eating patterns
- What fruits a child prefers varies. Especially banana and citrus fruits seem to divide opinions. Thus, good selection of fruits available encourages their consumption.
- Preparing food together with the whole family is a good way to enjoy food and get new experiences.
- Berry picking in the garden and in the woods was found to have an important role in Finnish family tradition.

References

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