

Identification of factors affecting vegetable liking in children ages 9-12

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Introduction

Childhood obesity in North America has reached epidemic proportions. Factors that continue to lead to such high rates of childhood obesity include low intakes of fruits and vegetables, along with high intakes of energy dense foods that are often not nutrient dense. One of the simplest ways to combat the childhood obesity epidemic is increase the amount of vegetables being eaten by children. Factors influencing vegetable intake in children may include cost or availability, but one of the biggest factors continues to be liking of vegetables (1).

Method

I collected data for this study by interviewing 15 low-income children between the ages of 9-12 years. Interviews were completed after a typical meal in the child's home on a week night. The questions asked about liking vegetables, trying new vegetables, their role in deciding which vegetables are served, how to improve liking, and rules parents had to get children to eat vegetables. Children also rated their liking for common raw and cooked vegetables on a 1 (hate it) to 10 (like it a lot) scale. The interviews were recorded, transcribed and analyzed. A code book was created and used to develop the themes that summarize the results. Children were primarily either African-American or non-Hispanic White from the Minneapolis/St. Paul metropolitan area.

Results

General findings

Half had positive perceptions of vegetables, either in general or for specific favorites. From the rating scales, many vegetables were rated highly for liking, but no trends were observed for differences between cooked vs. raw vegetables.

Liking vegetables

Half described liking the taste of a variety of vegetables.

Taste was described based on several descriptors: fresh, sweet but not too sweet, tangy, or just positive (good). Some provided a reason for positive liking of taste - how cooked or what it went with.

Preferences for cooked or raw vegetables were explored.

Half indicated that they like vegetables cooked (carrots/broccoli).

Reasons were that they are sweeter, not crunchy, and have more flavor when cooked. Six liked their vegetables cold/raw (super crunchy, more flavor) (carrots, salad, celery, broccoli, vegetables in general). Several had no preference for cooked vs. raw.

Other factors affecting liking included texture, eating with other foods, or being influenced by others.

A few commented on liking vegetables for texture (not crunchy, crunchy, mashed, juicy). Half described liking vegetables with something added (cheese or seasonings with cooked vegetables and ranch or peanut butter with raw vegetables). Four liked vegetables plain, five described liking vegetables in combinations: with starch component, mixed with other cooked vegetables, in salads.

Vegetable

1
Never
Had it

2

3

4

5

6

7

8

9

10

Like it a lot

It's okay

Vegetable	Mean Rating
Corn-Cooked	7.9
Celery-Raw	6.8
Tomatoes-Cooked	6.7
Lettuce-Raw	6.5
Green Beans-Cooked	6.6
Tomatoes-Raw	5.6
Broccoli-Cooked	5.5
Carrots-Cooked	5.2
Carrots-Raw	5.0
Green Peas-Cooked	5.0
Red Bell Pepper-Cooked	4.9
Spinach-Cooked	4.4
Cucumbers-Raw	4.3
Cabbage-Cooked	4.3
Avocado-Raw	3.8
Broccoli-Raw	3.6
Cauliflower-Cooked	3.4
Green Peas-Raw	2.9
Celery-Cooked	2.9
Cabbage-Raw	2.6
Cauliflower-Raw	2.5
Spinach-Raw	2.5
Black Beans-Cooked	2.4
Red Bell Pepper-Raw	2.3
Brussels Sprouts-Cooked	1.6
Green Beans-Raw	1.2
Brussels Sprouts-Raw	0.6

Conclusion

The results showed that in some cases children are able to give detailed explanations of what they like/dislike about vegetables. This information can be used in further research to develop techniques to improve the overall vegetable liking of children.

Results Continued

Disliking vegetables

Two-thirds indicated not liking the taste of specific vegetables.

General reasons for disliking vegetables were that they are gross, nasty, or weird. Specific reasons were sour taste, no flavor, and tastes like grass.

Several indicated disliking the texture of vegetables; Several disliked cooked vegetables for non specific reasons (funny, nasty) or specific reason (smushy).

Improving liking for disliked vegetables

More than half had a positive response when asked about improving a disliked vegetable.

Most suggested adding seasoning/flavor, or putting in a salad or a favorite meal, or serving them fresh.

A few children indicated they disliked vegetables and nothing could be done to improve their vegetable liking.

Five described a situation in which they ate a dislike vegetable.

Reasons for eating were that they were hungry and there was nothing else to eat, they were forced to eat it, they did not want to waste it, and it was already mixed in with other foods.

Many children indicated they liked a vegetable better the second time.

Half of these did not describe reasons for this. The other half mentioned that it was cooked differently the second time, there was something added to it, they were older in age, the juice was drained, and the form of the vegetable was changed.

Rules about eating vegetables

Seven children mentioned rules for eating vegetables:

These included having to eat vegetables in order to get a dessert, to finish what they started, to eat it, to try it, to eat a vegetable with other foods, and to take small bites.

Five reported no rules for them in terms of vegetable eating.

Roles at home with respect to eating vegetables

Only a few children mentioned involvement in preparing meals including cutting, cooking, and serving.

Half described who decided which vegetable would be served.

Four said only parents decide, others said parents prepare based on child preferences. Only five children mentioned who served the vegetables (mostly parents) serve.

Trying new vegetables

Half of the children described the process of trying new vegetables.

Processes included taking just a small piece, smelling it first, seeing if it is familiar, looking at the color and overall appearance.

Seven children mentioned liking to try new vegetables, three disliked trying new vegetables, and one was unsure.

Reference: Birch, LL, Ventura AK. Preventing childhood obesity: What works? Int J Obesity. 2009;33:S74-S81.