Comparison of school lunch cut fruit and whole fruit consumption in a naturalistic elementary school cafeteria setting

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Methods

This was a cross-sectional study with 14 New York City schools. Data was collected over 33 days between September to November 2015 with researchers observing up to 4 students using the System of Observational Cafeteria Assessment of Foods Eaten (SOCAFE). Univariate ANOVAs were performed using SPSS version 24 (IBM Inc., Chicago, IL, USA) to test for mean differences between cut and whole fruit, and interaction effects with grade level (2nd versus 3rd grade).

Subjects

With each of the 14 schools, we randomly selected 2nd and 3rd grade students in the school cafeteria during scheduled lunch. For each school, we observed 10 students at least twice school days. Students per school ranged from 15 to 50 (333 observations total) for each grade. Students were observed until they had disposed of or packed up their food and left the cafeteria.

Procedure

School lunch fruit intake of students was assessed by observation using the System of Observational Cafeteria Assessment of Foods Eaten (SOCAFE), an instrument and protocol adapted from other research studies1. Observations were conducted during the school lunch period and were performed by trained investigators.

Data collection was assigned to teams of 3 or 4 trained volunteers who observed the intake of students during the school lunch period. After each observation period, the investigators recorded the number of fruit and vegetable servings observed. Data were collected using a confidential data sheet and were later entered into a database.

Results

Cut fruit was consumed significantly more than whole fruit.

Discussion

This study builds on previous research and confirms that serving cut fruit is promising for increasing intake, perhaps because young children have a hard biting into whole fruit. If cut fruit is served in packages, it should be unobtrusive and perceived as healthy by young children.

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