

Adolescent Independent Eating Occasion Frequency and Dietary Intake by Personal and Household Characteristics

W-4003 Multistate Group: Reicks M, Anderson AK, Gunther C, Jones B, Lora K, Richards R, Wong SS, Banna J, Edlefsen M, Hopkins L, Monroe-Lord L, Topham G.

Abstract

Background: Independent eating occasions (iEOs) among adolescents were associated with poorer diet quality and overweight status in previous studies. Little is known about how iEOs vary by personal and household characteristics and other factors. Objective: To determine associations among iEOs (frequency and food groups/food types consumed) and key personal and household characteristics among low-income adolescents in the US. Study Design, Settings, Participants: An online cross-sectional survey was administered to a national sample of low-income adolescents who reported iEOs and their parents (n = 622 dyads) from Qualtrics survey panelists (November/December 2021). Measurable Outcome/Analysis: Linear regression analyses were used to determine associations among mean iEO and overall daily food group intake frequencies and iEO frequency adjusting for demographic characteristics. Results: Frequency of iEOs was $\leq 3-4$ times/week (46%) and $\geq 5-6$ times/week (54%), with no differences by age group, sex, or in-person school attendance. Frequency of iEOs was positively associated with intake frequencies for all food groups both during iEOs and overall. Higher daily iEO intake frequencies of sugar-sweetened beverages, fast food/convenience foods, and all detrimental foods were also associated with food insecurity and non-Hispanic White race. Conclusion: More frequent iEOs were associated with greater daily intake frequency of less healthful and healthful foods during iEOs and overall. Nutrition education could focus on increasing intake of healthful foods during iEOs for food insecure youth.

Objective

To determine associations among independent eating occasions (iEOs) (frequency and food groups/food types consumed) and key personal (e.g., age, sex, race, ethnicity) and household (e.g., food security) characteristics and other factors (e.g., school learning format).

Methods

- Online cross-sectional survey
- National sample of low-income adolescents and parents (n = 622 dyads) from Qualtrics survey panelists (Nov/Dec 2021)
- An adapted 27-item FLASHE (Family Life, Activity, Sun, Health, Eating) Study food frequency questionnaire to quantify mean daily intake frequencies of food groups/types consumed
 - Overall
 - During iEOs
- Chi square tests to compare iEO frequency by demographic characteristics
- Linear regression analyses to determine associations among mean iEO and overall daily food group intake frequencies (dependent variables) and iEO frequency (independent variable) adjusting for demographic characteristics

Results

Youth

- 44% 11-12 years
- 53% boys
- 44% non-Hispanic White
- 52% from food insecure households
- 68% reported attending school in person

Parents

- 66% female
- 76% some college or 4-yr degree
- 58% employed full-time
- 52% food insecure, 42% receiving SNAP
- 67% married/cohabitating
- 51% only speak English at home
- 59% work 0-4 days away from home



<https://pixabay.com/vectors/my-plate-nutrition-nutrients-5336211/>

Table 1 Food Group	iEO intake frequency Mean (SD)	iEO Frequency	
		$\leq 3-4$ times/week Mean (SD)	$\geq 5-6$ times/week Mean (SD)
Junk Foods (candy/chocolate, cookies/cake, potato chips, fried potatoes, frozen desserts)	2.6 (3.0) n = 615	2.0 (2.0) n = 285	3.2 (3.5) n = 330
SSBs (soda, energy drinks, sweetened fruit drinks, sports drinks)	2.1 (2.4) n = 602	1.4 (1.4) n = 277	2.7 (2.9) n = 325
Fast/Convenience Foods (fried potatoes, fried chicken, pizza, tacos, burgers, heat-and-serve foods)	2.7 (3.5) n = 615	2.0 (2.4) n = 285	3.3 (4.16) n = 330
All Detrimental Foods (junk foods, SSBs, fast/convenience foods, sugary foods, fatty meat)	7.7 (8.8) n = 621	5.6 (5.5) n = 288	9.58 (10.5) n = 333
Fruit/vegetable (100% fruit juice, fruit, green salad, other nonfried vegetables, cooked beans, other potatoes)	3.0 (3.4) n = 613	2.3 (2.3) n = 284	3.6 (4.0) n = 329
All Beneficial Foods (FV, water, whole-grain bread, cooked whole grains, non-sugary cereal)	5.5 (5.4) n = 620	4.4 (3.7) n = 286	6.5 (6.3) n = 334

P<0.0001 for all comparisons

Results

Frequency of iEOs

- 46% $\leq 3-4$ times/week
- 54% $\geq 5-6$ times/week
- No differences by age group, sex, or in-person school attendance.

Associations between frequency of iEOs and intake frequencies

- Frequency was positively associated with intake frequencies for all food groups both during iEOs (Table 1) and overall

Results

Associations between frequency of iEO food group intake and personal and household characteristics

- Higher daily iEO intake frequencies of junk foods, sugar-sweetened beverages (SSBs), fast food/convenience foods, and all detrimental foods were associated with food insecurity.
- Higher daily iEO intake frequencies of SSBs, fast food/convenience foods, and all detrimental foods were associated with non-Hispanic White race.
- No associations with age, sex or school type

Affiliations

University of Minnesota, University of Georgia, The Ohio State University, Brigham Young University, The George Washington University, Oregon State University, University of Hawaii at Manoa, Washington State University, Baldwin Wallace University, University of the District of Columbia, Kansas State University

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Conclusions

More frequent iEOs were associated with greater daily intake frequency of less healthful and healthful foods during iEOs and overall. Nutrition education could focus on increasing intake of healthful foods during iEOs for food insecure youth.

