

Home Food Access and Children's Heart Healthy Dietary Intake at Home and Child Care

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Introduction

Data from 2011-2014 indicated 21% of children and adolescents had at least one abnormal serum cholesterol measure [1,2]. Diets higher in plant-based foods are also higher in fiber and are important for reducing or controlling cholesterol to protect against cardiovascular disease [3]. Children living in food insecure homes are less likely to have access to fruits and vegetables [4].

Objective

To determine if greater access to fruits, vegetables, and snacks at home is associated with cardiac dietary health at home and at Early Care and Education Centers (ECE) in preschool-age children, and to determine whether there is a difference in cardiac dietary score between the home and ECE.

Methods

- Cross-sectional study
- Children (3-5 years old, n=88) and their primary caregivers
- 15 licensed early care and education centers (ECE) across the state of Oklahoma
- Healthy Home Survey used to measure obesogenic home environment of young children [5].
- 3-Dinner Dietary Recall (3DDR) documented the child's previous three dinner meals
- The Dietary Observation for Child Care (DOCC) system [6] used to assess all food and beverages served and eaten by the children in the ECE at lunch
- The cardiac dietary score was composed of six variables each with a single point to be summed:
 - consumption of fish, fruits, vegetables, fiber, and limited sodium and sugary drinks (e.g., fruit juice, sports drinks, and sugar sweetened beverages)
- A score of six was considered ideal

Results

At home, total fruit and vegetable (16.2±6.3) outnumbered snacks (5.5±3.0) with the mean ratio of total home fruits and vegetables to snacks at 3.8±2.7. There was no difference in cardiac dietary score between ECE (1.50±0.8) and home (1.27±0.9, p=0.0851). Children within both environments did not meet intake recommendations for most variables (vegetables [18.2-23.9%], fruit [5.7-10.2%], fish [4.5-10.2%], fiber [1.1%], sodium [21.6-38.6%]). There was no relationship between home food access variables and the cardiac dietary scores at home or ECE.

Child Dietary Intake and Cardiac Dietary Score Within the ECE and Home

Cardiac Dietary Score Elements	ECE	Home
Vegetables	18% (n=16)	24% (n=21)
Fruit	10% (n=9)	6% (n=5)
Fish	5% (n=4)	10% (n=9)
Fiber	1% (n=1)	1% (n=1)
Limited Sodium	39% (n=34)	22% (n=19)
Limited Sugar Sweetened Beverages	77% (n=68)	65% (n=57)
Highest Cardiac Dietary Score: 1-6	3 (n=9)	3 (n=8)
Median Cardiac Dietary Score: 1-6	1.5 (n=35)	1 (n=36)

Cardiac Dietary Scores at Home and ECE

Max Possible Score (6)	
Highest Score (3)	
Home Median Score (1)	
ECE Median Score (1.5)	

Conclusions

The cardiac dietary health of children at home and ECE does not meet recommendations. Increasing serving sizes of healthy food groups at ECEs might increase children's intake and thereby contribute to cardiovascular disease reduction.

References

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