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Evaluating the Impact of a Nutrition Education in Baltimore City Schools

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MPH Capstone Project

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Introduction: Food Is Elementary

Background

- Food Is Elementary (FIE) nutrition education program implemented in 8 Baltimore City public schools
- Data collection took place at Patterson Park Public Charter School
- FIE curriculum developed by Antonia Demas, president of the Food Studies Institute (FSI)
 - Goal: provide hands-on sensory-based education
 - Secondary goal: Parent involvement
 - Food educator teaches classes
 - Other activities: gardening, cooking, eating, community dinners



Rationale for Study

- 37% of Baltimore High School students are overweight or at risk for being overweight (Youth Behavioral Risk Study, 2005)
- Greater prevalence of obesity among Hispanic and African American populations and lower socioeconomic status (Wang 2006)
- BCPSS: Further FIE expansion?
- Schools' interest: tailor FIE program to best fit schools' needs
- Growing concern about school food environment
 - Schools' role in obesity prevention
 - Local Wellness Policy

Study Goal

- Use qualitative research methods to understand diet and health impacts of program within context of broader influences on food decision-making behavior among students and families

Methods: Data Collection

- Data Collection: IDIs, FGs, participant observation
- IDIs & FGs conducted, recorded, transcribed, and translated by research team
- Ethical Considerations: Oral consent, identifiers removed
 - Hopkins SPH IRB approval

FFL Program at Patterson Park Public Charter School





Collection Method	Category	Profile	No. of IDI/FG	Sampling Strategy
Semi-structured Interview	2 nd grade parent	2 Caucasian Females	3	Purposive & Convenience
	3 rd grade parent	2 Hispanic Females 3 African-American Females 1 Caucasian Female	6	
	3 rd grade teacher	2 Caucasian Females	2	Purposive
	School administrator	1 Caucasian Female	1	
	FIE food educator	1 Caucasian Female, HHA 1 African-American Male, MWES 1 Caucasian Male, PPPCA	3	
	FIE administrator	1 Caucasian Female	1	
Focus Group	3 rd grade student	4 Girls: 2 African-American, 1 Hispanic, 1 unknown 6 African-American Girls 2 Hispanic Girls, 2 Hispanic Boys	3	Purposive & Convenience
Total		N = 28	19	

Interviews with Parents

- Themes:
 - Factors influencing food purchasing/consumption patterns
 - Environmental determinants of diet (school, home, and community)
 - Role of FIE program in shaping food choice



Results/Discussion

- Influences on family food purchasing, preparation, and consumption decisions:
 - Cost
 - Transportation limitations
 - Time constraints
 - Desire to please and satisfy children
 - Food marketing
 - Family's cultural background and individual food preferences
 - Desire to provide healthy meals for their family
 - School Food

Results/Discussion: Value of FIE Program

- Unanimous support from parents, students, and teachers of the FFL program and of value of teaching children about nutrition
- School - ideal setting to introduce kids to healthy eating
 - Students much more likely to heed advice from teachers than parents
 - Students reluctant to try new foods at home more likely to try them amongst peers
 - Schools should teach students important life skills, including choosing what foods to eat and how to prepare them

Results/Discussion: Limitations of FIE program

- Local community food environment
 - “You see them [the students] all the time with those little black bags that you get at the corner stores...that’s where they go in the morning before school, and they go after school...their parents probably give them two dollars in the morning and they stop at the corner store and get a bag of chips and a soda for breakfast.”
- Contradiction with school lunch
 - “I think as long as we keep doing Food is Elementary just on Wednesdays and then going back to eating the same old tater tots and fish sticks and chicken fingers... it’s just not going to have the same effect as if the school lunch program matched up. We’re telling kids two different things – kids are very astute when it comes to detecting hypocrisy in adults and we as a school.”
- Pervasive influence of food marketing
 - “It would be nice if they [my two daughters] weren’t so infatuated with fast food... The fast food companies are very smart in their marketing and the food is very appealing to kids... Half the time that they ask me to go to one of those fast food places it’s because they want the toy. And the food is just sort of a by-product.... Nickelodeon, for example, which is hugely popular for kids, if you look at the content of their advertising for kids, it’s all for junk. It’s, you know, McDonald’s, it’s sugary cereals, it’s all the sorts of things kids end up asking for that you don’t necessarily want them to be eating.”

School Food Environment at PPPCS

“. . . I'd talk to the lunch ladies, and they'd say that a lot of the kids get the school lunch and then buy chips, and just eat the chips and throw the school lunches away.” - Monique, 3rd grade parent & founder



Conclusions

- FIE unable to counter many of factors influencing diet
- FIE can play important role in shaping consumption patterns
 - In context of multiple influences promoting unhealthy food choices, encourages positive and healthy relationship with food
 - Students participating in FFL program more likely than peers to choose healthier options in the school cafeteria
 - Further impetus for schools to reform breakfast and lunch program

Limitations

- Small sample size: might not be generalizable to other schools
- Selection bias: recruitment process for FGs and IDIs
- Study conducted starting only one month after implementation

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