Low-Income Pennsylvanian Parents of 10-14 Year Olds Reveal Stressors That Challenge Obesity Prevention Efforts

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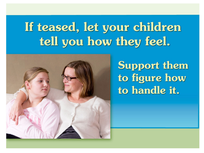
Abstract

Objective: To describe the psychographics of a lower income, parent/caregiver population recruited to evaluate My Child's Weight, a program that addresses parent/caregiver concerns about their child's body size, development, and weight changes. Study Design, Settings, Participants: Cross-sectional online survey (Qualtrics Pro, Provo, UT). Participants were parents/caregivers of children 10 – 14 y, recruited from low-income venues. Measurable Outcome/Analyses: Participants completed items from the SNAP-Education and Administration Reporting System, Satter Eating Competence Inventory, Three Factor Eating Questionnaire (TFEQ-R18), Sense of Coherence (3-item), Parent Modeling Behavior and Fruit and Vegetable Availability questionnaires along with items on weight perception and satisfaction, self-described eating disorders, food security, and the program evaluation. Data were analyzed using SPSS 22.0. Summary of Results: Participants (n=30) were white, mostly female (93%), lower income (90%), 28 – 63 y; SNAP participants (67%) with a profile of weight issues: Mean BMI was 34.7; 22 (73%) were overweight/obese; 53% were dissatisfied with their current weight, 30% perceived current or previous eating disorder issues; only 27% were eating competent; 60% reported feeling stressed. Nearly all (87%) were concerned about the weight of their 10 – 14 y old children, but more so for parents dissatisfied with their own weight (P=0.011). Conclusions and Implications: Findings suggest that developing successful childhood obesity prevention programs will need to address challenges presented by the high prevalence of parents/caregivers who are stressed, eating disordered and not eating competent. Consider parent vulnerabilities and weight-centered psychographics when developing and testing childhood obesity prevention interventions. Funding: USDA, SNAP-Ed.

Background & Purpose

- Childhood obesity is at the forefront of nutrition and public health interest.
- *My Child's Weight* is a 16-slide program designed for parents and caregivers of pre-teens and teens (ages 10-14) and addresses parent and caregiver concerns about their child's body size, physical development, and weight changes.[2]
- Pennsylvania schools are mandated to send a letter to parents if the child is considered overweight or obese (BMI).
- To our knowledge and based on a review of SNAP-nutrition education materials, there are no evidence-based materials available for parents and caregivers to help them approach the development and weight concerns of their children.



- Previous studies have shown that:
  - having higher levels of work-life stress was associated with lower healthfulness of family meals.[3]
  - children of highly stressed parents were less likely to meet the physical activity recommendations in comparison to children with less stressed parents.[4]
  - as a parent experiences more general stressors, his/her child has an increased risk of obesity.[5,6]

- The objectives of this study were to:
  - examine the evidence-base of a digital nutrition education program, *My Child's Weight*, using a formative evaluation.
  - better understand the psychographics of lower income Pennsylvania parents and caregivers of pre-teens and teens ages 10-14 years old.

Methods

Recruitment:

- Recruitment began with placement of informational flyers and business cards in geographically disparate Pennsylvania community settings.
- Recruitment materials targeted individuals who were parents or caregivers of children 10-14 years of age, were 18 years or older, English-speaking, Pennsylvania residents (Figure 1).

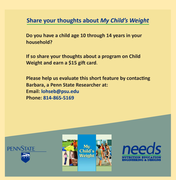


Figure 1. *My Child's Weight* informational flyer. The flyer targeted PA parents and caregivers of children 10 - 14 years of age.

Study Design:

- Cross-sectional online survey (Qualtrics Pro, Provo, UT).

Data Collection:

- Participants completed questions about cognitive behavior and food-related practices (including eating competence), perceptions of weight, demographics with required items for SNAP-Education (SNAP-Ed) from the Education and Administration Reporting System, and program evaluation questions.
- The study was determined to be exempt by the Pennsylvania State University's Office for Research Protections.

Data Analysis:

- Data were analyzed using SPSS 22.0. Data were assessed for normal distribution and analyzed using Chi-square or Mann-Whitney U as appropriate.

Instruments

Table 1. Description of the instruments included in the Qualtrics survey for data collection.

Measurement	Instrument	Description/Analyses
Eating Competence	Satter Eating Competence Inventory (ecSI 2.0)	16 items, 5 response options scored from 0 to 3. Possible score 0-48; scores ≥ 32 indicate eating competence. Cronbach α 0.57.
Eating Behavior	Three Factor Eating Questionnaire-18 (TFEQ-R18)	18 items on a 4-point response scale; items are summed into scales for cognitive restraint, uncontrolled eating, and emotional eating. Higher scores indicate greater frequency of the behavior. Cronbach α 0.66 cognitive restraint; Cronbach α 0.86 uncontrolled eating*; Cronbach α 0.92 emotional eating.
In-home FV availability[9,10]	Fruit, Juice, and Vegetable Availability Questionnaire (20-item)	20 items (fresh, frozen, canned fruits, vegetables and 100% juices) listed. Availability was affirmed or denied. Possible scores 0-20.
Sense of Coherence	Sense of Coherence (3-item)	3 items with 3 response options. The summed score of the SOC-3 ranged from 0 to 6, and higher values indicated a higher Sense of Coherence.
Child Quality of Life	Pediatric Quality of Life Inventory (PedsQL)	18 items with 5 response options summed to form 3 subscales: physical functioning (8 items); emotional functioning (5 items); social functioning (5 items). Items are reverse scored and transformed to a linear scale from 0 – 100 (higher QoL). Cronbach α 0.92.
Modeling Eating Behavior	Modeling Scale	11 items modified from original scale,[7] each with 4 response options. Possible scores 0-33. Cronbach α 0.86. Sample items: How often do you eat dinner with your child? How often do you eat vegetables at dinner with your child?
Self-efficacy/ Outcome expectancies (SE/OE)	Perceived ability to offer fruits and vegetables that their children will eat	12 items modified from tested measure[8] each with 5 response options. Possible score 12-60. Cronbach α 0.96. Sample item: I can prepare vegetables that my child will like.
Parent Perceived Stress[5]	Single item from the Community Health Database	Visual analog scale from 0 (no stress) to 10 (extreme stress).

*Note: uncontrolled eating subscale had an error in wording of one of the items; item 7 was excluded from subscale.

Results

Participants

Participants (n=30) were white and mostly female (93%). They were **lower income**, had a profile of **weight issues**, and were **highly stressed**.

Lower income:

- Low-income (90%) as defined by participation in assistance programs within the past year OR *sometimes, often, always* worrying about money for food.
- Two-thirds participated in SNAP (67%).

Weight issues:

- Overweight and Obese (73%).
- More than half (53%) were dissatisfied with their current weight.
- Only 27% were eating competent.
- High prevalence of self-reported lifetime eating disorders (30%, n=9).
- Parents reported having at least some concern about the weight of their child(ren) between the ages of 10-14 years old.

Highly stressed:

- A majority experienced a great deal of stress in the past year (60% selected 8, 9, or 10 on a scale from 0 to 10).

Table 2. *My Child's Weight* Evaluation: Participant Demographics[a,b]

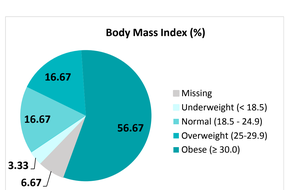
Variables	Mean (SD)
Age y	43.1 (8.6)
BMI	34.7 (10.4)
Eating Competence[c]	26.3 (6.2)
Three-Factor Eating Questionnaire	
Uncontrolled Eating (6 items)	16.7 (4.7)
Cognitive Restraint (9 items)	13.5 (3.4)
Emotional Eating (3 items)	6.8 (2.8)
In-home FV availability	
Fruit (8 items)	3.9 (1.9)
Vegetable (9 items)	7.0 (1.9)
100% Juice (3 items)	1.2 (1.0)
FJV Total (20 items)	12.2 (3.6)
Sense of Coherence	2.9 (0.9)
Child Quality of Life	
Physical functioning	73.4 (19.7)
Social functioning	68.5 (23.0)
Emotional functioning	63.1 (22.0)
Summary-Total Quality of Life	69.2 (18.3)
Modeling	14.4 (5.6)
SE/OE	51.7 (9.6)
Parent Perceived Stress	7.9 (2.0)
	n (%)
Assistance Program Use[d]	27 (90)

[a] Numbers may not sum to 100 because of missing data or rounding

[b] Table entries are mean and standard deviation (SD) with the exception of Assistance Program Use which is presented as frequency and percentage.

[c] Eating competence is defined as a score ≥ 32

[d] Participation in at least 1 assistance program currently or in past year — Food bank/food pantry: 80%; medical assistance: 80%; SNAP: 67%; LIHEAP: 50%; Medicaid: 37%; Medicare: 27%; TANF: 10%; EFNEP: 7%



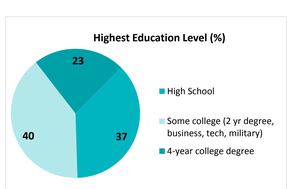


Table 3. Independent groups t-test for Child Quality of Life and parent concern about their child's weight.

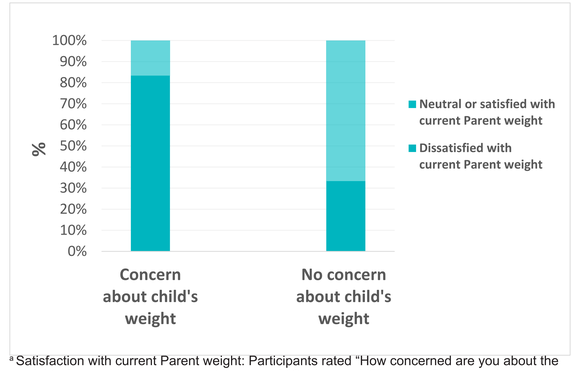
	Concern about child's weight		
Measure	< Median	≥ Median	Significance[a]
Child Quality of Life	82.5 ± 14.3	62.6 ± 16.5	P < 0.01

[a] t-test for independent groups

[b] Child Quality of Life scores range from 0-100 with higher scores indicating higher quality of life.

- Pediatric Quality of Life total scores were lower for parents with concern for their child's weight at or above the median.

Figure 2. Bivariate analysis of parent satisfaction with current weight and parent level of concern about their child's weight.



[a] Satisfaction with current Parent weight: Participants rated "How concerned are you about the weight of your child(ren) between the ages of 10-14 year old?" using a 5-point scale ranging from 1 "Not concerned at all" to 5 "Very concerned".

[b] Parent concern about their child's weight: Participants rated "How satisfied are you with your current weight?" using a 5-point scale ranging from 1 "Very Dissatisfied" to 5 "Very Satisfied".

- In the bivariate analyses, nearly all (87%) were concerned about the weight of their 10 – 14 y old child, but more so for parents dissatisfied with their own weight (P=0.011).

Study Limitations

- Parent and caregiver participants may not be representative of parents in this target age group.

Conclusions

- The Pennsylvania SNAP-Ed population of parents and caregivers of pre-teens and adolescents have a profile of weight issues and are highly stressed.
- Stress-related factors may include population psychographics such as lower income status, personal weight issues, and stress from parenting a pre-teen or adolescent child.
- Understanding psychographics in this SNAP population may help guide future nutrition education interventions related to childhood obesity.

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