MEASURING EATING COMPETENCE: CONGRUENCE BETWEEN TWO SATTER INVENTORIES SUPPORTS SUPPLANTING THE ORIGINAL VERSION WITH THE LOW-INCOME ADAPTATION

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Learning Codes: 9020 & 6030

Abstract

Background: Eating competence (EC), a bio-psychosocial cluster of eating/food attitudes and behaviors, is measured with either ecSI or ecSI/LI inventories validated for general or low-income adults, respectively. Twelve items are identical for both versions; 4 are unique to each inventory. Two versions complicate assessment of EC across studies; therefore congruence between them in middle class adults was examined.

Methods: Participants (n=132) were parents from 7 private preschools, mostly white, non-Hispanic (89%) with college degrees (85%). Mean age was 35.8 ± 5.3 years. Only responses from the 99 who indicated never or rarely worrying about money for food and/or no current/past history of food assistance were used.

Results: Linear regression revealed ecSI score (mean 32.69 ± 6.70) predicted 99.8% of the ecSI/LI score (mean 32.93 ± 6.95). Absolute differences between ecSI and ecSI/LI scores ranged from 0 (28%) to 5 (1%). Scores differed by 1 point for 44%. Only 2 were classified as EC (i.e., total score ≥ 32) by one inventory and not the other. Borderline scores were not vulnerable because EC for 6 of the 7 with ecSI/LI scores from 31 to 33 was congruently classified. Examination of each of the 4 unique items affirmed all as equally discrepant. Correlations between versions for total score (r = 0.98) and the 4 survey items (range = 0.32 to 0.71) were significant at (P ≤ 0.001). ecSI/LI was confirmed as more sensitive than ecSI for those with a low-income marker.

Conclusion: ecSI/LI can supplant ecSI use in a general population. Renaming the ecSI/LI to ecSI 2.0 is suggested.

Background

- EC is a bio-psychosocial model consisting of four components that address intrapersonal approaches to eating and food-related behaviors.
- EC is currently measured with two instruments: One for low-income (ecSI/LI), and another for middle-income audiences (ecSI).
- This study was conducted to determine if the low-income version was appropriate for use with general and middle-income audiences.

Methods

Recruitment

Caregivers were recruited from seven preschools in State College, PA. Preschools were selected from locations that served both middle and low-income families.

Data Collection

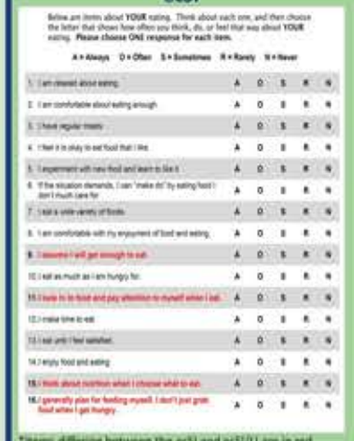
Preschool contacts sent study materials home with each child aged 2-5 years. These materials included a letter to parents, informed consent, survey and instructions, and a stamped, self-addressed envelope to return materials. The survey included the items from both the ecSI and ecSI/LI surveys: 12 items are identical to both inventories; 4 are unique to each inventory.

Data Analysis

Data were analyzed using SPSS (version 19; IBM, Arkmonk, NY). The four items that differed between the ecSI and ecSI/LI were explored using descriptives, cross-tabs, correlations, and chi square analyses.

Surveys

ecSI

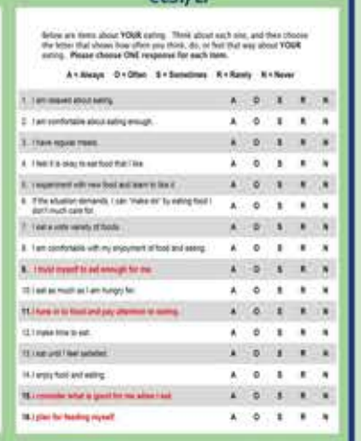


Below are items about **YOUR** eating. Think about each one, and then choose the letter that shows how often you think, do, or feel that way about **YOUR** eating. **Please choose ONE response for each item.**

A = Always O = Often S = Sometimes R = Rarely N = Never

	A	O	S	R	N
1. I am relaxed about eating.	A	O	S	R	N
2. I am comfortable about eating enough.	A	O	S	R	N
3. I have regular meals.	A	O	S	R	N
4. I feel it is okay to eat food that I like.	A	O	S	R	N
5. I experiment with new food and learn to like it.	A	O	S	R	N
6. If the situation demands, I can "make do" by eating food I don't much care for.	A	O	S	R	N
7. I eat a wide variety of foods.	A	O	S	R	N
8. I am comfortable with my enjoyment of food and eating.	A	O	S	R	N
9. I assume I will get enough to eat.	A	O	S	R	N
10. I eat as much as I am hungry for.	A	O	S	R	N
11. I tune in to food and pay attention to myself when I eat.	A	O	S	R	N
12. I make time to eat.	A	O	S	R	N
13. I eat until I feel satisfied.	A	O	S	R	N
14. I enjoy food and eating.	A	O	S	R	N
15. I think about nutrition when I choose what to eat.	A	O	S	R	N
16. I generally plan for feeding myself. I don't just grab food when I get hungry.	A	O	S	R	N

ecSI/LI



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4. I feel it is okay to eat food that I like.	A	O	S	R	N
5. I experiment with new food and learn to like it.	A	O	S	R	N
6. If the situation demands, I can "make do" by eating food I don't much care for.	A	O	S	R	N
7. I eat a wide variety of foods.	A	O	S	R	N
8. I am comfortable with my enjoyment of food and eating.	A	O	S	R	N
9. I trust myself to eat enough for me.	A	O	S	R	N
10. I eat as much as I am hungry for.	A	O	S	R	N
11. I tune in to food and pay attention to eating.	A	O	S	R	N
12. I make time to eat.	A	O	S	R	N
13. I eat until I feel satisfied.	A	O	S	R	N
14. I enjoy food and eating.	A	O	S	R	N
15. I consider what is good for me when I eat.	A	O	S	R	N
16. I plan for feeding myself.	A	O	S	R	N

*Items differing between the ecSI and ecSI/LI are in red.

Results

Description of Participants (n=127)

Characteristic	n (%)
Participation in food assistance program[1]	26 (20)
Race Ethnicity	
White/Non-Hispanic	117 (89)
Asian	11 (8)
Black/African American	2 (2)
White/Hispanic or Latino	2 (2)
Education Level	
High School	10 (8)
2 Year College	9 (7)
4 Year College	112 (86)
Worry about money for food	
Never	83 (63)
Rarely	32 (24)
Sometimes	12 (9)
Often	4 (3)
Always	1 (1)
Low-Income [2]	31(25)

[1] Participation in SNAP (Supplemental Nutrition Assistance Program) or WIC (Federal Assistance Program for Women, Infants, and Children)
[2] Low-income was defined as participation in a food assistance program, or sometimes, often or always worrying about money for food.

To examine ecSI/LI performance in middle/upper-income parents, results shown below excluded the 31 low-income participants

Comparison of eating competence status denoted by ecSI and ecSI/LI (n=96)

	EC[1]	Not EC
ecSI/LI	51(53%)	45 (47%)
ecSI	49 (51%)	47 (4%)

[1] EC defined by a ecSI/LI or ecSI score ≥ 32

ecSI/LI and ecSI score differences (n=96)

ecSI/LI - ecSI scores[1]		n (%)
ecSI Score Higher	3	5 (5%)
	2	6 (6%)
	1	17 (18%)
	0	27 (28%)
ecSI Score Lower	1	25 (26%)
	2	9 (9%)
	3	5 (5%)
	4	1 (1%)
	5	1 (1%)

[1] Mean difference 0.24 ± 1.55 points

Results

EC status compared between ecSI and ecSI/LI (n = 96)

EC ecSI	Not EC ecSI	EC ecSI/LI	Not EC ecSI/LI	n (%)
✓		✓		49 (51%)
✓			✓	0 (0%)
	✓	✓		2 (2%)
	✓		✓	45 (47%)

- Most participants (n=94; 98%) were identically categorized (as either EC or not) by the ecSI/LI and ecSI.
- Two people were discrepantly categorized as EC on the ecSI/LI and not the ecSI.
- Mean difference between ecSI/LI and ecSI scores for those with congruent EC categorizations (n=94) was .17 ± 1.5; for those with discrepant EC categorizations (n=2) was 3.5 ± 2.1 (P=.002).

Number of congruent item responses for the four items differing on the ecSI and ecSI/LI (n=96)

Number of Congruent Item Responses	Number of Participants
0	2
1	18
2	24
3	31
4	21

Comparison of responses to the four items differing on the ecSI and ecSI/LI (n= 96)

ecSI Item	Congruent Responses n (%) [1]	ecSI/LI Item
I assume I will get enough to eat.	60 (62.5%)	I trust myself to eat enough for me.
I tune in to food and pay attention to myself when I eat.	58 (60.4%)	I tune in to food and pay attention to eating.
I think about nutrition when I choose what to eat.	72 (75.0%)	I consider what is good for me when I eat.
I generally plan for feeding myself. I don't just grab food when I get hungry.	53 (55.2%)	I plan for feeding myself.

[1] Pearson correlations: r= .43, .62, .71, and .32, respectively. Item correlations all P < .001.

Of a possible 384 responses, 243 (63.2%) were congruent.

Conclusions

- **ecSI/LI can supplant ecSI use in a general population.**
- **Suggest renaming ecSI/LI to ecSI 2.0.**

Funding

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