

Does Early Food Insecurity Impede the Educational Access Needed to Become Food Secure?

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Introduction

- Education is considered one of the great equalizers of economic opportunity.
 - Pre-existing inequalities in educational access may lead to differences in educational investments.
 - This perpetuates the economic inequalities that education is supposed to mitigate!

Purpose

- Examine the role of educational compromises as a potential *mechanism* for the intergenerational transmission of food insecurity.
 - Food insecurity during childhood may reduce educational investment...
 - ...and reduced educational investment may increase food insecurity during adulthood.
- Identifying mechanism(s) is an essential step for designing effective policies.

Background: What is Food Insecurity?

- “Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum:
 - The ready availability of nutritionally adequate and safe foods.
 - Assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).”
- “Food insecurity is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”

(Source: <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx>)

Background: Measuring Food Insecurity

- CPS Food Security Supplement
- Responses to series of questions about conditions and behaviors
 - Specifies a lack of money and other resources to obtain food
→ Voluntary fasting or dieting are excluded.
 - 18 (10) questions for households with (without) children
- Four categories (depending on # of affirmative responses):
 - High food security (0)
 - Marginal food security (1-2)
 - Low food security (3-7)
 - Very low food security (8-18)

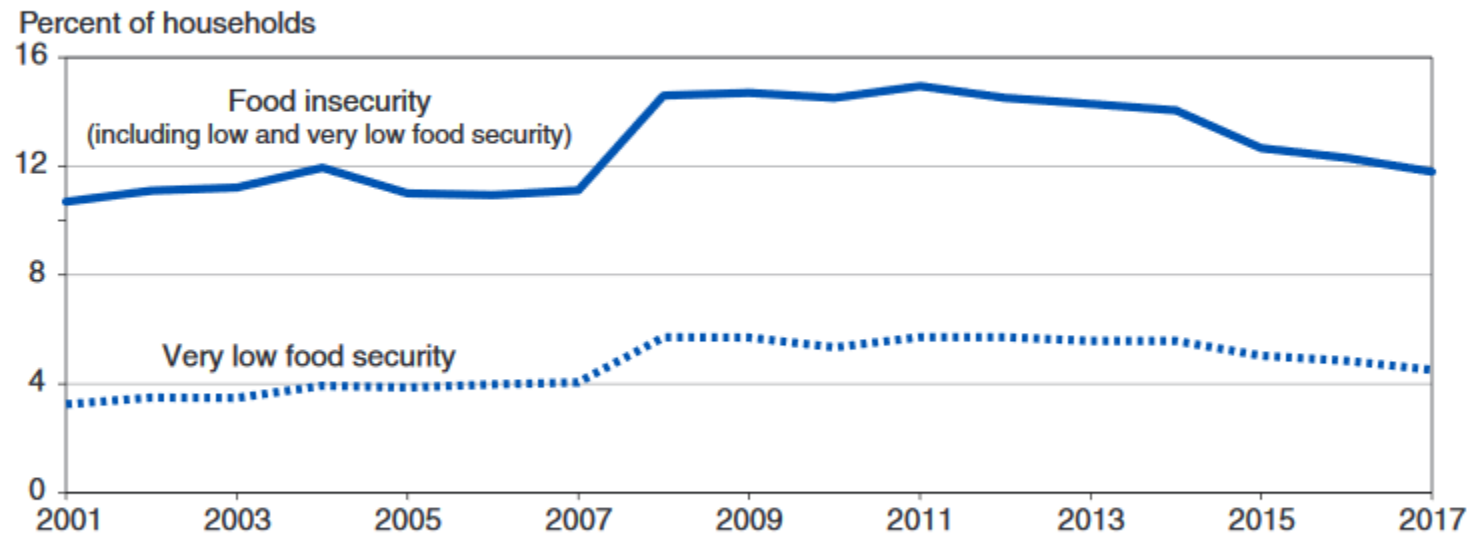
Background: Measuring Food Insecurity (cont.)

- Example questions:
 - “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
 - In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food?
 - In the last 12 months, did you lose weight because there wasn’t enough money for food?

[\[full list of questions\]](#)

Background: Trends in Food Insecurity

Prevalence of food insecurity and very low food security in 2017 is down from 2016



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, U.S. Census Bureau, Current Population Survey Food Security Supplement.

Background: Relevant Literature

- Food Insecurity and Teenagers

- Hamersma and Kim (2016)

- Teenage employment may contribute to reduced food insecurity of children in the household, particularly for those experiencing very low food security.

- Food Insecurity and College Students

- Chaparro et al. (2009), Gaines et al. (2012), Maroto (2013), Patton-Lopez et al. (2014), Goldrick-Rab (2017), Blagg et al. (2017)

- Many recent studies identify high rates of food insecurity among college students, above national averages for adults, though estimates vary with the representativeness of the sample.

- Hamersma and Kim (in progress)

Contributions

- Nationally-representative data (PSID)
- Sample = more than college students
 - Examine pre-college outcomes (e.g., high school graduation)
- Instead of contemporaneous relationships, we examine longitudinal (i.e., intergenerational) relationships.
- Mediation/Mechanism analysis

Conceptual Design

- Is lower educational investment a mediator/mechanism for the intergenerational transmission of food insecurity?
- Three-period model:
 - Childhood: (potentially) experience food insecurity
 - Young adulthood: make educational investments
 - Adulthood: (potentially) experience food insecurity (based on current and past factors)

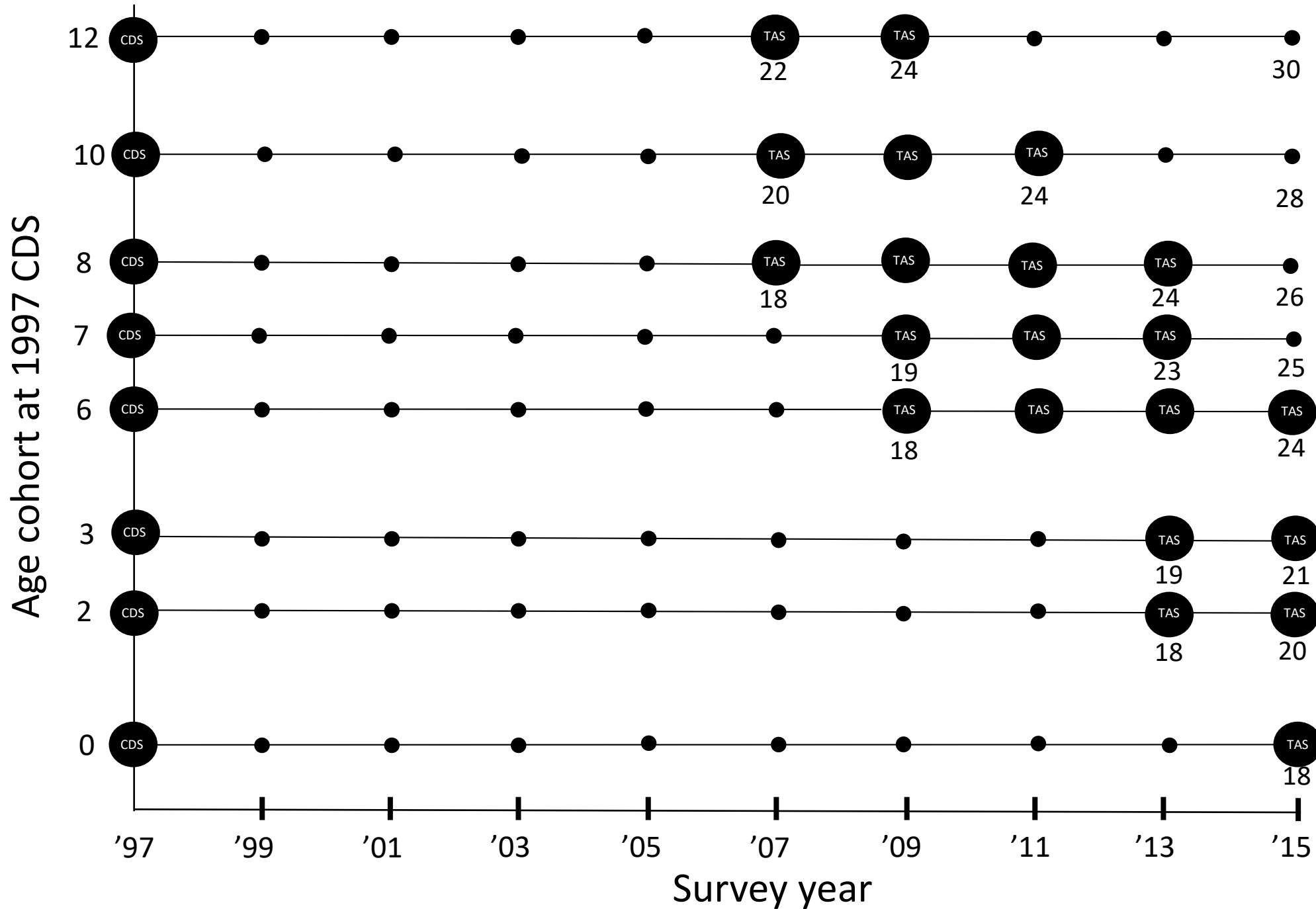
Conceptual Design (cont.)

$$FI_i^A = \alpha + \beta FI_i^C + \delta E_i^Y + \gamma X_i^A + \theta X_i^C + \varepsilon_i^A$$

- We expect:
 - $\beta > 0$: food insecurity during childhood increases the likelihood of food insecurity during adulthood
 - $\delta < 0$: education during young adulthood decreases the likelihood of food insecurity during adulthood

Data

- Sample from the Panel Study of Income Dynamics (PSID)
- Construct long panel
 - Child Development Supplement (CDS)
 - Transition to Adulthood Supplement (TAS)
 - Core PSID
- Key feature: Food insecurity data collected in 1997 CDS and 2015 core survey
 - Children in 1997 CDS have transitioned to adulthood by 2015
 - TAS contains information on intervening educational investments



Sample

- Children ages 3-12 in 1997 CDS
- N = 1,674
- Childhood: household food insecurity; head age, gender, marital status, # of children; child age, race, born in USA; food stamp receipt
- Adulthood: household food insecurity; head age, gender, marital status, # of children; positive earnings; food stamp receipt
- Education: graduate high school by age 24

[[Descriptive statistics](#)]

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)					
Marginal FS (8.7)					
Low FS (8.2)					
Very Low FS (2.8)					
Total					

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910 [77.5]	182 [11.7]	116 [6.0]	76 [4.8]	1,284 [100.0]
Marginal FS (8.7)					
Low FS (8.2)					
Very Low FS (2.8)					
Total					

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910 [77.5]	182 [11.7]	116 [6.0]	76 [4.8]	1,284 [100.0]
Marginal FS (8.7)	83 [55.5]	29 [14.2]	23 [11.8]	26 [18.5]	161 [100.0]
Low FS (8.2)	77 [44.4]	41 [23.0]	33 [15.1]	21 [17.6]	172 [100.0]
Very Low FS (2.8)	22 [37.5]	5 [4.9]	18 [42.5]	12 [15.1]	57 [100.0]
Total	1,092 [71.8]	257 [12.7]	190 [8.2]	135 [7.3]	1,674 [100.0]

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910 [77.5]	182 [11.7]	116 [6.0]	76 [4.8]	1,284 [100.0]
Marginal FS (8.7)	83 [55.5]	29 [14.2]	23 [11.8]	26 [18.5]	161 [100.0]
Low FS (8.2)	77 [44.4]	41 [23.0]	33 [15.1]	21 [17.6]	172 [100.0]
Very Low FS (2.8)	22 [37.5]	5 [4.9]	18 [42.5]	12 [15.1]	57 [100.0]
Total	1,092 [71.8]	257 [12.7]	190 [8.2]	135 [7.3]	1,674 [100.0]

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910	182	116	76	1,284
	[77.5]	[11.7]	[6.0]	[4.8]	[100.0]
Marginal FS (8.7)	83	29	23	26	161
	[55.5]	[14.2]	[11.8]	[18.5]	[100.0]
Low FS (8.2)	77	41	33	21	172
	[44.4]	[23.0]	[15.1]	[17.6]	[100.0]
Very Low FS (2.8)	22	5	18	12	57
	[37.5]	[4.9]	[42.5]	[15.1]	[100.0]
Total	1,092	257	190	135	1,674
	[71.8]	[12.7]	[8.2]	[7.3]	[100.0]

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910 [77.5]	182 [11.7]	116 [6.0]	76 [4.8]	1,284 [100.0]
Marginal FS (8.7)	83 [55.5]	29 [14.2]	23 [11.8]	26 [18.5]	161 [100.0]
Low FS (8.2)	77 [44.4]	41 [23.0]	33 [15.1]	21 [17.6]	172 [100.0]
Very Low FS (2.8)	22 [37.5]	5 [4.9]	18 [42.5]	12 [15.1]	57 [100.0]
Total	1,092 [71.8]	257 [12.7]	190 [8.2]	135 [7.3]	1,674 [100.0]

Food Security Transitions

FS in 2015

FS in 1997	Food Secure	Marginal FS	Low FS	Very Low FS	Total
Food Secure (80.3)	910 [77.5]	182 [11.7]	374 [22.5]	76 [4.8]	1,284 [100.0]
Marginal FS (8.7)	83 [55.5]	29 [14.2]	23 [11.8]	26 [18.5]	161 [100.0]
Marginal/Low/ Very Low FS (19.7)	182 [48.3]	41 [23.0]	208 [51.7]	21 [17.6]	390 [100.0]
Very Low FS (2.8)	22 [37.5]	5 [4.9]	18 [42.5]	12 [15.1]	57 [100.0]
Total	1,092 [71.8]	257 [12.7]	582 [28.2]	135 [7.3]	1,674 [100.0]

Estimated intergenerational correlations of food security (OLS)				
	(1)	(2)	(3)	(4)
A: Marginal/Low/Very Low FS (2015)				
Marginal/Low/Very Low FS (1997)				
Graduated HS by age 24				
B: Low/Very Low FS (2015)				
Low/Very Low FS (1997)				
Graduated HS by age 24				
C: Very Low FS (2015)				
Low/Very Low FS (1997)				
Graduated HS by age 24				
Additional controls	No	No	Yes	Yes
State fixed effects	No	No	No	Yes

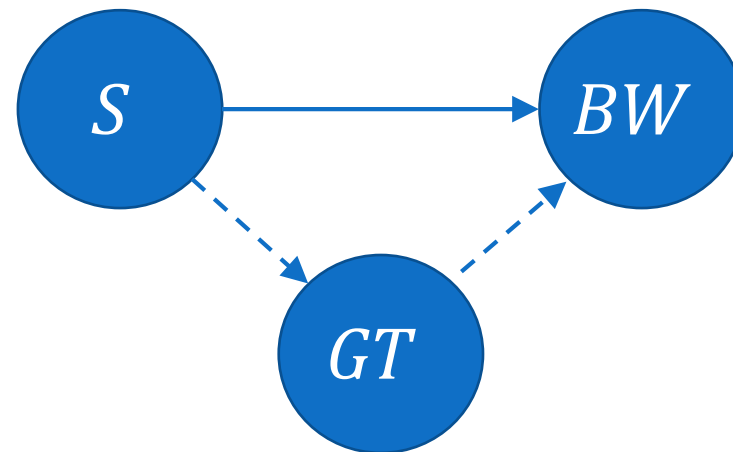
Table 3: Estimated intergenerational correlations of food security (OLS)				
	(1)	(2)	(3)	(4)
A: Marginal/Low/Very Low FS (2015)				
Marginal/Low/Very Low FS (1997)	0.292***	0.272***	0.181***	0.128***
	(0.040)	(0.041)	(0.040)	(0.030)
Graduated HS by age 24		-0.230***	-0.133**	-0.081*
		(0.052)	(0.049)	(0.036)
B: Low/Very Low FS (2015)				
Low/Very Low FS (1997)				
Graduated HS by age 24				
C: Very Low FS (2015)				
Low/Very Low FS (1997)				
Graduated HS by age 24				
Additional controls	No	No	Yes	Yes
State fixed effects	No	No	No	Yes

Table 3: Estimated intergenerational correlations of food security (OLS)				
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Graduated HS by age 24		-0.230***	-0.133**	-0.081*
		(0.052)	(0.049)	(0.036)
B: Low/Very Low FS (2015)				
Low/Very Low FS (1997)	0.262***	0.258***	0.206***	0.123***
	(0.051)	(0.051)	(0.049)	(0.034)
Graduated HS by age 24		-0.146**	-0.075	-0.076*
		(0.046)	(0.045)	(0.035)
C: Very Low FS (2015)				
Low/Very Low FS (1997)				
Graduated HS by age 24				
Additional controls	No	No	Yes	Yes
State fixed effects	No	No	No	Yes

Table 3: Estimated intergenerational correlations of food security (OLS)				
	(1)	(2)	(3)	(4)
A: Marginal/Low/Very Low FS (2015)				
Marginal/Low/Very Low FS (1997)	0.292***	0.272***	0.181***	0.128***
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		(0.052)	(0.049)	(0.036)
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Graduated HS by age 24		-0.146**	-0.075	-0.076*
		(0.046)	(0.045)	(0.035)
C: Very Low FS (2015)				
Low/Very Low FS (1997)	0.080	0.077	0.037	0.100
	(0.062)	(0.060)	(0.065)	(0.054)
Graduated HS by age 24		-0.134**	-0.100*	-0.087**
		(0.041)	(0.039)	(0.027)
Additional controls				
Additional controls	No	No	Yes	Yes
State fixed effects				
State fixed effects	No	No	No	Yes

Mediation (Mechanism) Analysis

- Example: Smoking during pregnancy may have a “direct effect” on birthweight, but it may also have an “indirect effect” by reducing gestation time, which may affect birthweight.
- (“Direct effects” are direct only relative to the mechanism of interest.)



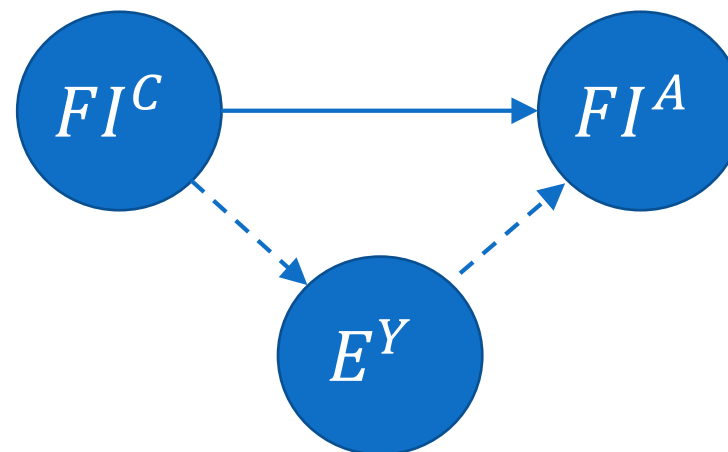
Mediation (Mechanism) Analysis: Setup

- Y_i : outcome of interest (e.g., birthweight)
- $T_i \in \{0,1\}$: binary treatment (e.g., smoking during pregnancy)
- M_i : mechanism of interest (e.g., gestation time)

- $Y_i(T_i, M_i(T_i))$: composite potential outcome under treatment T_i and mechanism value (post-treatment) $M_i(T_i)$

Mediation (Mechanism) Analysis: Food Insecurity

- Food insecurity during childhood may have a direct effect on food insecurity during adulthood, but it may also have an indirect effect by reducing educational investment.
 - Y_i = food security during adulthood
 - T_i = food security during childhood
 - M_i = education



Flores and Flores-Lagunes (FFL) Estimator

$$ATE = E[Y(1, M(1)) - Y(0, M(0))]$$

$$ATE = \underbrace{E[Y(1, M(1)) - Y(1, M(0))]}_{\text{“mechanism effect”}} + \underbrace{E[Y(1, M(0)) - Y(0, M(0))]}_{\text{“net-of-mechanism effect”}}$$

“mechanism effect”
(indirect effect)

MATE

“net-of-mechanism effect”
(direct effect)

NATE

- Under “unconfoundedness” assumptions, these are point identified.
- Under weaker assumptions, these are partially (bounds) identified.

FFL Estimator (cont.)

- $MATE = E[Y(1, M(1)) - Y(1, M(0))]$
 - What is the effect of reduced educational attainment (that is due to food insecurity during childhood) on food insecurity in adulthood?
- $NATE = E[Y(1, M(0)) - Y(0, M(0))]$
 - What is the effect of food insecurity during childhood (net of the effect of reduced educational attainment due to food insecurity during childhood) on food insecurity in adulthood?

Estimates of Mediation Effects (Product method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
Total Effect			
Direct Effect			
Indirect Effect			
Proportion Mediated			

Estimates of Mediation Effects (Product method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
Total Effect	0.184***		
	(0.038)		
Direct Effect	0.180***		
	(0.038)		
Indirect Effect	0.004		
	(0.004)		
Proportion Mediated	0.020		
	(0.022)		

Estimates of Mediation Effects (Product method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
Total Effect	0.184***	0.189***	
	(0.038)	(0.046)	
Direct Effect	0.180***	0.191***	
	(0.038)	(0.046)	
Indirect Effect	0.004	-0.003	
	(0.004)	(0.003)	
Proportion Mediated	0.020	-0.014	
	(0.022)	(0.017)	

Estimates of Mediation Effects (Product method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
Total Effect	0.184***	0.189***	0.010
	(0.038)	(0.046)	(0.065)
Direct Effect	0.180***	0.191***	0.019
	(0.038)	(0.046)	(0.064)
Indirect Effect	0.004	-0.003	-0.009
	(0.004)	(0.003)	(0.007)
Proportion Mediated	0.020	-0.014	-0.992
	(0.022)	(0.017)	(6.884)

Estimates of Mechanism Effects (FFL method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
ATE			
("Total Effect")			
NATE			
("Direct Effect")			
MATE			
("Indirect Effect")			
Mechanism share			
("Proportion Mediated")			

Estimates of Mechanism Effects (FFL method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
ATE	0.242***		
("Total Effect")	(0.027)		
NATE	0.223***		
("Direct Effect")	(0.027)		
MATE	0.018*		
("Indirect Effect")	(0.008)		
Mechanism share	0.077*		
("Proportion Mediated")	(0.035)		

Estimates of Mechanism Effects (FFL method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
ATE	0.242***	0.198***	
("Total Effect")	(0.027)	(0.032)	
NATE	0.223***	0.188***	
("Direct Effect")	(0.027)	(0.032)	
MATE	0.018*	0.010	
("Indirect Effect")	(0.008)	(0.008)	
Mechanism share	0.077*	0.052	
("Proportion Mediated")	(0.035)	(0.044)	

Estimates of Mechanism Effects (FFL method)

Measure of Food Security in 2015			
	Any Food Insecurity (M/L/VL)	Low or Very Low Food Security	Very Low Food Security
ATE	0.242***	0.198***	0.134**
("Total Effect")	(0.027)	(0.032)	(0.053)
NATE	0.223***	0.188***	0.117
("Direct Effect")	(0.027)	(0.032)	(0.124)
MATE	0.018*	0.010	0.017
("Indirect Effect")	(0.008)	(0.008)	(0.110)
Mechanism share	0.077*	0.052	0.129
("Proportion Mediated")	(0.035)	(0.044)	(0.800)

Estimates of Mediation/Mechanism Effects

Measure of Food Security in 2015

	Product Method			FFL Method		
	M/L/VL	L/VL	VL	M/L/VL	L/VL	VL
ATE						
("Total Effect")						
NATE						
("Direct Effect")						
MATE						
("Indirect Effect")						
Mechanism share						
("Proportion Mediated")						

Estimates of Mediation/Mechanism Effects

Measure of Food Security in 2015

	Product Method			FFL Method		
	M/L/VL	L/VL	VL	M/L/VL	L/VL	VL
ATE	0.184***	0.189***	0.010			
("Total Effect")	(0.038)	(0.046)	(0.065)			
NATE	0.180***	0.191***	0.019			
("Direct Effect")	(0.038)	(0.046)	(0.064)			
MATE	0.004	-0.003	-0.009			
("Indirect Effect")	(0.004)	(0.003)	(0.007)			
Mechanism share	0.020	-0.014	-0.992			
("Proportion Mediated")	(0.022)	(0.017)	(6.884)			

Estimates of Mediation/Mechanism Effects

Measure of Food Security in 2015						
	Product Method			FFL Method		
	M/L/VL	L/VL	VL	M/L/VL	L/VL	VL
ATE	0.184***	0.189***	0.010	0.242***	0.198***	0.134**
("Total Effect")	(0.038)	(0.046)	(0.065)	(0.027)	(0.032)	(0.053)
NATE	0.180***	0.191***	0.019	0.223***	0.188***	0.117
("Direct Effect")	(0.038)	(0.046)	(0.064)	(0.027)	(0.032)	(0.124)
MATE	0.004	-0.003	-0.009	0.018*	0.010	0.017
("Indirect Effect")	(0.004)	(0.003)	(0.007)	(0.008)	(0.008)	(0.110)
Mechanism share	0.020	-0.014	-0.992	0.077*	0.052	0.129
("Proportion Mediated")	(0.022)	(0.017)	(6.884)	(0.035)	(0.044)	(0.800)

Alternative Estimates of Mechanism Effects (FFL Method)

	Any Food Insecurity				Low or Very Low Food Security				Very Low Food Security			
Estimate	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
ATE	0.242*** (0.027)	0.225*** (0.028)	0.197*** (0.029)	0.194*** (0.030)	0.198*** (0.032)	0.196*** (0.032)	0.181*** (0.034)	0.180*** (0.034)	0.134** (0.053)	0.144** (0.059)	0.139* (0.062)	0.138* (0.062)
NATE	0.223*** (0.027)				0.188*** (0.032)				0.117 (0.124)			
MATE	0.018* (0.008)	0.002 (0.011)	-0.026 (0.015)	-0.029 (0.016)	0.010 (0.008)	0.008 (0.016)	-0.007 (0.021)	-0.008 (0.022)	0.017 (0.110)	0.027 (0.116)	0.021 (0.118)	0.020 (0.118)

Alternative Estimates of Mechanism Effects (FFL Method)

	Any Food Insecurity				Low or Very Low Food Security				Very Low Food Security			
Estimate	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
ATE	0.242*** (0.027)	0.225*** (0.028)	0.197*** (0.029)	0.194*** (0.030)	0.198*** (0.032)	0.196*** (0.032)	0.181*** (0.034)	0.180*** (0.034)	0.134** (0.053)	0.144** (0.059)	0.139* (0.062)	0.138* (0.062)
NATE	0.223*** (0.027)				0.188*** (0.032)				0.117 (0.124)			
MATE	0.018* (0.008)	0.002 (0.011)	-0.026 (0.015)	-0.029 (0.016)	0.010 (0.008)	0.008 (0.016)	-0.007 (0.021)	-0.008 (0.022)	0.017 (0.110)	0.027 (0.116)	0.021 (0.118)	0.020 (0.118)
Mechanism share	0.077* (0.035)	0.007 (0.052)	-0.139 (0.088)	-0.156 (0.093)	0.052 (0.044)	0.038 (0.083)	-0.051 (0.133)	-0.061 (0.139)	0.129 (0.800)	0.186 (0.594)	0.154 (0.747)	0.148 (0.758)

Conclusion

- We examine the possibility that food insecurity could be perpetuated by compromised educational attainment for children growing up in food insecure households.
- We use mediation/mechanism analysis to separately estimate the “direct” effect of intergenerational transmission of food insecurity from the “indirect” effect of childhood food insecurity via educational attainment.
- In preliminary analysis, we find only a small amount of evidence for the education mechanism, though estimates vary widely across specifications such that large effects are not ruled out.

Next Steps

- Use better and additional measures of educational attainment (e.g., college matriculation, persistence, and completion).
- Include additional pre-1997 PSID variables.
- Develop ATE models.
- Develop partial identification method.
- Instrumental variables?

Thanks!

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Questions to Assess Food Security

[\[back\]](#)

- 1) “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
 - 2) “The food that we bought just didn't last and we didn't have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?
 - 3) “We couldn't afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
 - 4) In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food?
 - 5) (If yes to question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
 - 6) In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?
 - 7) In the last 12 months, were you ever hungry, but didn't eat, because there wasn't enough money for food?
 - 8) In the last 12 months, did you lose weight because there wasn't enough money for food?
 - 9) In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?
 - 10) (If yes to question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
- (Questions 11-18 were asked only if the household included children age 0-17)
- 11) “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
 - 12) “We couldn't feed our children a balanced meal, because we couldn't afford that.” Was that often, sometimes, or never true for you in the last 12 months?
 - 13) “The children were not eating enough because we just couldn't afford enough food.” Was that often, sometimes, or never true for you in the last 12 months?
 - 14) In the last 12 months, did you ever cut the size of any of the children's meals because there wasn't enough money for food?
 - 15) In the last 12 months, were the children ever hungry but you just couldn't afford more food?
 - 16) In the last 12 months, did any of the children ever skip a meal because there wasn't enough money for food?
 - 17) (If yes to question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
 - 18) In the last 12 months did any of the children ever not eat for a whole day because there wasn't enough money for food?

Descriptive Statistics

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Table 1: Descriptive Statistics

		Mean	Std. Dev	Min	Max
Food security, 1997					
	Marginal/Low/Very Low FS indicator	0.196	0.398	0	1
	Low/Very Low FS indicator	0.110	0.313	0	1
	Very Low FS indicator	0.028	0.164	0	1
Food security, 2015					
	Marginal/Low/Very Low FS indicator	0.282	0.450	0	1
	Low/Very Low FS indicator	0.155	0.362	0	1
	Very Low FS indicator	0.073	0.260	0	1
Education					
	Graduated HS by age 24	0.883	0.322	0	1

Descriptive Statistics

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Table 1: Descriptive Statistics (cont.)

		Mean	Std. Dev	Min	Max
Childhood variables					
	Household head age in 1997 (in yrs)	37.9	7.9	19	92
	Household head = female	0.212	0.409	0	1
	Marital status = Married	0.738	0.440	0	1
	Marital status = Never married	0.102	0.303	0	1
	Marital status = Widowed	0.015	0.123	0	1
	Marital status = Divorce/Sep/Annul	0.145	0.352	0	1
	Number of children = 1	0.144	0.351	0	1
	Number of children = 2	0.508	0.500	0	1
	Number of children = 3	0.250	0.433	0	1
	Number of children = 4+	0.099	0.298	0	1

Descriptive Statistics

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Table 1: Descriptive Statistics (cont.)

		Mean	Std. Dev	Min	Max
Childhood variables (cont.)					
	Child age in 1997 (in months)	95.3	33.8	36	155.9
	Born in USA	0.971	0.167	0	1
	Race = White	0.657	0.475	0	1
	Race = Black	0.183	0.387	0	1
	Race = Hispanic	0.097	0.296	0	1
	Race = Other	0.064	0.244	0	1
	Received food stamps last year	0.169	0.375	0	1

Descriptive Statistics

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Table 1: Descriptive Statistics (cont.)

	Mean	Std. Dev	Min	Max
Adulthood variables				
Household head age in 2015 (in yrs)	37.9	14.6	20	88
Household head = female	0.298	0.457	0	1
Marital status = Married	0.410	0.492	0	1
Marital status = Never married	0.454	0.498	0	1
Marital status = Widowed	0.021	0.143	0	1
Marital status = Divorce/Sep/Annul	0.115	0.319	0	1
Number of children = 0	0.710	0.454	0	1
Number of children = 1	0.166	0.372	0	1
Number of children = 2	0.085	0.279	0	1
Number of children = 3	0.026	0.160	0	1
Number of children = 4+	0.013	0.113	0	1
Received food stamps last year	0.138	0.345	0	1
Earnings > 0	0.889	0.314	0	1