"How Do You Like Them Apples?"

Examining gender differences in educational and labour market influences on adolescent dietary scores

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Research Objectives

1. Analyse how parental education and labour market engagement influence adolescent dietary quality.
2. Investigate gender differences in these relationships to identify whether boys and girls respond differently to family and socioeconomic factors.
3. Interpret findings through a human capital framework, with the aim of linking health behaviours to long-term wellbeing and productivity.
4. Provide evidence-based insights to inform policies and interventions that could promote equitable adolescent nutrition and health outcomes.

Rationale

Adolescent nutrition is a key investment in human capital, influencing learning, health, and future productivity.

Parental education and labour market engagement shape the household environment , affecting time, income, and health knowledge.

Gender norms and expectations may cause boys and girls to respond differently to these parental influences.

Understanding these pathways helps explain how families transmit health and wellbeing across generations.

Findings can inform targeted policies and interventions to promote more equitable health outcomes for boys and girls.

Some Previous Research

Previous research on maternal **employment** and child overweight / obesity (Ruhm, 2008; Kim, 2021,

Health eating scores associated with 2 parent families, higher SES, higher parental **education**, and parental working status (Chen et al, 2019)

Long maternal ***work hours*** from ages 1–14 prospectively associated with lower adolescent diet quality (reduced fruit/veg, higher snack intake); associations persisted after income & parental education adjustment. Li et al (2011)

"Parental time scarcity" **Working** > 40 h/week linked to "time-barrier" beliefs and lower fruit/veg intake—especially among young men (Escoto, 2012)

Dutch study (n = 1 318) showed higher maternal **education** predicts more fruit, vegetable & daily breakfast intake at age 11; (van Ansem et al, 2014)

Data and Methods

Data are drawn from the Growing Up in Ireland Child cohort.

The dependent variable is a composite dietary score, increasing in healthier diet patterns, constructed from food frequency data collected at ages 9 (Wave 1) and 17 (Wave 3).

Key explanatory variables include parental education, parental working hours, cognitive test scores at age 9, and Leaving Certificate results at 18.

Controls include exercise, mental health, household income, homeownership, health insurance, and household composition.

Random effects panel regressions are estimated separately for boys and girls.

Data and Methods: Dependent Variable

	Food / Drink Item	Once	Twice	>Twice	Not at All
A	Fresh fruit	☐	☐	☐	☐
B	Fruit juice				☐
C	Meat / Chicken / Fish				☐
D	Eggs				☐
E	Cooked vegetables				☐
F	Raw vegetables or salad				☐
G	Meat pie, hamburger, hot dog, sausage or sausage roll	☐	☐	☐	☐
H	Hot chips or French fries				
I	Crisps or savoury snacks				
J	Bread				
K	Potatoes / Pasta / Rice				
L	Cereals				
M	Biscuits, doughnuts, cake, pie or chocolate				
N	Cheese / yoghurt / fromage frais				
O	Low-fat cheese / low-fat yoghurt				
P	Water (tap / still / sparkling)				
Q	Soft drinks / minerals / cordial / squash (not diet)				
R	Soft drinks / minerals / cordial / squash (diet)				
S	Full-cream milk or full-cream milk products				
T	Skimmed milk or skimmed milk products	☐	☐	☐	☐

Healthy Items (14)

Unhealthy Items (6)

To code: Healthy Items

For consumption of each healthy item, a value of 0 for not eaten at all, 1 for eaten ce

Summary Stats

Boys: Mean = 10.46; SD = 4.12

Girls: Mean = 10.08, SD = 3.93

Unhealthy items were given a value of −2 for eaten more than once, −1 for eaten once and 0 for not eaten at all (Perry et al., 2015).

Mothers Working Hours (B: 31-40hrs)	Not working Less than 20 hours 21 to 30 hours 41 to 50 hours Above 50 hours	Expect stronger	**Fathers Working Hours** (B: 31-40hrs)	Not working Less than 20 hours 21 to 30 hours 41 to 50 hours Above 50 hours	Expect positive Expect negative
Mothers Education (Base: Non degree/tertiary)	Up to Lower Sec Hi Sec/Tec/Voc Primary degree Postgrad	Expect negative Expect positive	**ners Education** (Base: Non degree/tertiary)	Up to Lower Sec Hi Sec/Tec/Voc Primary degree Postgrad	Expect negative Expect positive
Child LC Points (B: 301-400)	200 LC Points or less 201-300 LC Points 401-500 LC Points 500+ LC Points	Expect negative Expect positive	**ation at 9**	Drumcondra	Expect positive
Child Exercise (Base: None)	1-2 times a week 3-4 times a week Almost every day	Expect positive	**Child SDQ** (Base: normal)	Borderline Abnormal	Expect negative
Child Health (Base: Healthy)	Healthy some minor issues Almost always ill	Expect negative	**HH Comp** (B: Single parent 1 or 2 children) **HH Income** **Proxies**	Single Par >=3 children Couple 1 or 2 children Couple >=3 children Owns Home Household Income Health Insurance **_cons**	Expect negative Expect positive Expect positive

Results

		β (Boys)	β (Girls)
Mothers Working Hours (B: 31-40hrs)	Not working	0.122	0.356**
	Less than 20 hours	0.501**	0.310*
	21 to 30 hours	-0.032	0.148
	41 to 50 hours	-0.266	-0.053
	Above 50 hours	0.274	-0.580
Mothers Education (Base: Non degree/tertiary)	Up to Lower Sec	-0.624**	-0.789 ***
	Hi Sec/Tec/Voc	-0.295*	-0.410**
	Primary degree	0.508**	0.082
	Postgrad	0.585**	0.392*
Child LC Points (B: 301-400)	200 LC Points or less	-0.863***	-0.902**
	201-300 LC Points	-0.558**	-0.497**
	401-500 LC Points	0.470**	0.491***
	500+ LC Points	1.341***	0.914***
Child Exercise (Base: None)	1-2 times a week	0.436	0.954***
	3-4 times a week	0.417	1.436***
	Almost every day	0.677**	1.466***
Child Health (Base: Healthy)	Healthy some minor issues	-0.241*	-0.050
	Almost always ill	0.270	0.084

		β (Boys)	β (Girls)
Fathers Working Hours (B: 31-40hrs)	Not working	-0.114	-0.295
	Less than 20 hours	0.776*	0.408
	21 to 30 hours	0.517	-0.433
	41 to 50 hours	0.144	-0.088
	Above 50 hours	0.085	0.007
Fathers Education (Base: Non degree/tertiary)	Up to Lower Sec	-0.685***	-0.441**
	Hi Sec/Tec/Voc	-0.450**	-0.431**
	Primary degree	-0.039	-0.136
	Postgrad	0.155	-0.159
Education at 9	Drumcondra	-0.001	0.003
Child SDQ (Base: normal)	Borderline	0.029	-0.510**
	Abnormal	-0.543	-1.357***
HH Comp (B: Single parent 1 or 2 children)	Single Par >=3 children	0.548	-1.081*
	Couple 1 or 2 children	0.363	0.082
	Couple >=3 children	0.417	0.464
HH Income And Proxies	Owns Home	0.792**	0.489**
	Household Income	-0.040	0.103
	Health Insurance	-0.046	0.391**
	_cons	8.805***	7.436***

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A positive coefficient = increase in healthy eating

Maternal work status: <20 hrs positive assoc with dietary quality for boys and girls

Lower **maternal and paternal** education strongly predicts poorer dietary outcomes, especially for girls

Higher **maternal** education (degree or postgraduate) improves dietary scores for both genders.

Results

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	201-300 LC Points	-0.558**	-0.497**				
	401-500 LC Points	0.470**	0.491***	**Child SDQ**	Borderline	0.029	-0.510**
	500+ LC Points	1.341***	0.914***	(Base: normal)	Abnormal	-0.543	-1.357***
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Child Education: Strong positive gradient with dietary quality: adolescents with 500+ LC points have the highest scores (β = 1.34 *** boys; 0.91 *** girls).

Frequent exercise shows one of the strongest effects, especially for girls (β ≈ 1.47 ***).

Poor mental health (SDQ abnormal) predicts significantly lower dietary scores, especially in girls (β = – 1.36 ***).

Results

Single-parent households with ≥ 3 children show reduced scores, particularly among girls (β = – 1.08 *).

Homeownership and health insurance are positively related to diet quality for both genders (β ≈ 0.5–0.8 **).

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Key Findings

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Family and resource stability appear protective for diet quality, underscoring socioeconomic gradients in adolescent nutrition.

Discussion

Moderate maternal work hours appear beneficial (more so for boys' diets), perhaps suggesting that parental time availability interacts with gender-specific needs.

Parental (maternal) and adolescent education enhance nutrition knowledge, resource management, and behavioural modelling, reinforcing intergenerational health advantages.

The strong overlap between mental, physical, and dietary health (especially among girls) supports the idea of interconnected wellbeing domains.

Stability in income and family structure protects diet quality, highlighting persistent socioeconomic gradients in adolescent nutrition.

These patterns indicate that investments in education and family wellbeing yield gendered returns to health-related human capital.

Conclusion and Implications

Adolescent diet quality can reflect family education, work patterns, and stability — all core parts of human capital formation.

Gender differences show boys and girls respond differently to time, education, and household conditions.

Balanced parental work hours and education can support healthier habits and overall wellbeing.

Evidence of intergenerational inequality

There is an economic value to early health investments to improve dietary scores.

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Thank you for listening. Any questions?