Add Health Parent Study
Overview & Recent Findings

V. Joseph Hotz
PI of AHPS (with Kathleen Mullan Harris)
Duke University

Add Health User Conference
July 11, 2021
Add Health Parent Study (AHPS) funding:

R21 AG042663-01, Locating the Parents of Add Health, K. M. Harris, V. J. Hotz, & J. A. Seltzer, PIs.

R01 AG042794-01, Add Health Parent Study: Phase I, V. J. Hotz & K. M. Harris, PIs.

P30 AG034424, Center for Population Health and Aging (Duke), S. Lynch, PI.
What is the AHPS?

• A data source to study aging processes in 2+ generations & intergenerational linkages in health, behaviors & relationships.
Research Questions
Motivating the Add Health Parent Study
Health conditions & behaviors run in families:

- Cardiovascular disease (CVD)
- Obesity
- Substance abuse, e.g., alcoholism, smoking, drugs.

Can parents’ health statuses & trajectories be used to predict their (adult) children’s health trajectories?
Cognition, Personality & Preferences

- **Cognitive ability** (e.g., IQ) **predictive of range of outcomes**, including health, successful careers, other indicators of well-being
  - So are **non-cognitive skills, personality traits & preferences** (e.g., aversion to risk, impatience)

- Are **parents’** cognition & non-cognitive skills **predictive of their children’s** cognition & skills?

- Do they help account for **similarities & differences** in **health & well-being across generations**?
Caring for *Baby Boomer Generation*

- *Family members* are important source of *caring* for *elderly* who are *ill & disabled*
  - Arno et al. (1999) estimate costs of informal care provided by family = $197B; costs of than nursing home care = $83B; costs of formal home health care = $32B.

- *Will kids take care of their step-dads?*
  - Incidence of *divorce* or *non-marital fertility* is sizable for those in *Baby Boomer Generation*.
  - Figuring out its consequences are crucial for assessing costs to families & adequacy of public policy of caring for this generation over the next 20-30 years.
Relationships between Generations

- Economic demographers Ronald Lee & Andrew Mason have characterized *nations’ transfer of resources between generations*, especially public transfers, & their *effects on society well-being*.

- What is the extent of transfers of resources (time & money) *between generations within families*?

- What *effects* do *transfers* have on *health & well-being of each generation*?

- Do *economic and health disparities adversely affect families’ capacity* to provide intergenerational *safety nets*?
Intergenerational Mobility

• Growing evidence that *what parents do & don’t do* for *young children* and *adolescents* is important for whether *initial inequality in economic & social status* and *health* is *perpetuated*.

• Does *what parents do & don’t do* in a child’s *adult life* continue to matter?
Add Health Parent Study

Sample Design & Data Collection
Origins of Add Health Parent Study

• In Wave I (1995) of Add Health, a parent (mostly mothers) of each Add Health Sample Member (AHSM) was interviewed.

• Parents referred to as Wave I Parent (W1P).
  – At Wave I they were 35-50 years old.
Data Collected on Parents in Wave I of Add Health Study

<table>
<thead>
<tr>
<th>A: About themselves</th>
<th>B: About then Spouse/Partner</th>
<th>C: About their AHSM Child(ren)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, race, ethnicity</td>
<td>Sex, age, race, ethnicity</td>
<td>Relationship to child</td>
</tr>
<tr>
<td>Marital status</td>
<td>Religion</td>
<td>Presence of bio parents in household</td>
</tr>
<tr>
<td>Religion, church attendance</td>
<td>Education</td>
<td>Child’s friends</td>
</tr>
<tr>
<td>Education</td>
<td>Work, disability</td>
<td>Educational expectations</td>
</tr>
<tr>
<td>Work, disability</td>
<td>Public assistance</td>
<td>Involvement in child’s school and schoolwork</td>
</tr>
<tr>
<td>Income, material hardship</td>
<td>Relationship satisfaction</td>
<td>Relationship with child</td>
</tr>
<tr>
<td>Neighborhood conditions</td>
<td>Life happiness</td>
<td>Cognitive functioning</td>
</tr>
<tr>
<td>Marital history</td>
<td>General health</td>
<td>Health, health insurance</td>
</tr>
<tr>
<td>Life happiness</td>
<td>Health behaviors (alcohol &amp; tobacco use)</td>
<td>Birthweight</td>
</tr>
<tr>
<td>General health</td>
<td></td>
<td>Health behaviors</td>
</tr>
<tr>
<td>Health behaviors (alcohol &amp; tobacco use)</td>
<td></td>
<td>Communication about sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Child’s social life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Family health history</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(child, bio mother, bio father)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For twins: determination of fraternal vs identical</td>
</tr>
</tbody>
</table>
Add Health Parent Study

- **Add Health Parent Study [AHPS, 2015-2017]** 20-year follow-up study of subsample of W1Ps.

- Sample of **W1Ps** re-interviewed around **Wave V** of **Add Health Study** in years 2015-2017.
  - Sampled *biological, adoptive* or *step parents* of living **AHSMS**.
  - Sampling based on population representativeness of **AHSMS**.
  - Data collected paralleled that in previous Waves of **Add Health Study** & *other aging studies* (HRS, NSHAP)

- Also interviewed current *spouses or partners* (**S/Ps**) of **W1Ps**.
  - May or may not have been a parent of **AHSMS** back at **Wave I**.
  - Data collected from **S/Ps** paralleled that collected from W1P.
AHPS Parent & AHSM Child Pairs

WI Family Cluster A

- WI Parent
- Current Spouse/Partner
- AHSM 1
- AHSM 2

2 AHSM – WI Parent Pairs
2 Parent-Figures
(WI Parent & Current Spouse/Partner)

WI Family Cluster B

- WI Parent
- Current Spouse/Partner
- AHSM 1

1 AHSM – WI Parent Pair
2 Parent-Figures
(WI Parent & Current Spouse/Partner)

WI Family Cluster C

- WI Parent
- AHSM 1

1 AHSM – WI Parent Pair
1 Parent-Figure
(WI Parent)

• Some Family Clusters include both biological parent-figures of AHSMs; Others include bio parent & step-parent.

• AHSMs in multiple-AHSM Family Clusters include twins, non-twin full sibs &/or half-sibs.
### AHPS Sample Targets & Completed Interviews

<table>
<thead>
<tr>
<th>Target Wave I Parents (W1Ps)</th>
<th>3,108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Spouse/Partners (S/Ps) (60% of interviewed W1Ps)</td>
<td>1,492</td>
</tr>
<tr>
<td>AHSMs of Targeted W1Ps</td>
<td>3,416</td>
</tr>
</tbody>
</table>

**Completed Sample:**

<table>
<thead>
<tr>
<th>Wave I Parents (W1Ps)</th>
<th>2,013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse/Partners (S/Ps)</td>
<td>988</td>
</tr>
<tr>
<td>AHSMs of Completed W1 Parents*</td>
<td>2,247</td>
</tr>
</tbody>
</table>

*So we have **2,247 parent-child “pairs”** available for analyses.
# Completion Rates (W1Ps)

<table>
<thead>
<tr>
<th>Wave 1 Parents (W1Ps)</th>
<th>Total</th>
<th>Replicate 1</th>
<th>Replicate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Pool of W1Ps</td>
<td>3,805</td>
<td>2,691</td>
<td>1,114</td>
</tr>
<tr>
<td>Target Sample for W1Ps</td>
<td>3,108</td>
<td>2,198</td>
<td>910</td>
</tr>
<tr>
<td>Non-completed Screeners</td>
<td>1,702</td>
<td>1,138</td>
<td>564</td>
</tr>
<tr>
<td>Completed Screeners but Not Interviews</td>
<td>89</td>
<td>63</td>
<td>26</td>
</tr>
<tr>
<td>Completed Screeners &amp; Interviews</td>
<td>2,013</td>
<td>1,489</td>
<td>524</td>
</tr>
<tr>
<td>Completion Rate (Completes/Target)</td>
<td>64.8%</td>
<td>67.7%</td>
<td>57.6%</td>
</tr>
</tbody>
</table>
## Completion Rates (S/Ps)

<table>
<thead>
<tr>
<th>W1Ps’ Spouse/Partners (S/Ps)</th>
<th>Total</th>
<th>Replicate 1</th>
<th>Replicate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1Ps Completed Screener &amp; Interview</td>
<td>2,013</td>
<td>1,490</td>
<td>524</td>
</tr>
<tr>
<td>Eligible/Available S/Ps</td>
<td>1,269</td>
<td>943</td>
<td>326</td>
</tr>
<tr>
<td>S/Ps Completed Interview</td>
<td>988</td>
<td>757</td>
<td>231</td>
</tr>
<tr>
<td>Completion Rate (Completes/Eligible)</td>
<td>77.9%</td>
<td>80.3%</td>
<td>70.9%</td>
</tr>
</tbody>
</table>
### Completion Rates
**(AHSMs of AHPS W1Ps)**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Rep 1</th>
<th>Rep 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AHSM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total of Non-completed Screeners</td>
<td>1,835</td>
<td>1,226</td>
<td>608</td>
</tr>
<tr>
<td></td>
<td>(43.85%)</td>
<td>(41.36%)</td>
<td>(49.92%)</td>
</tr>
<tr>
<td>Total of Completed Screeners but no Completed Interviews</td>
<td>100</td>
<td>72</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>(2.39%)</td>
<td>(2.43%)</td>
<td>(2.30%)</td>
</tr>
<tr>
<td>Total of Completed Screeners &amp; Interviews</td>
<td>2,248</td>
<td>1,666</td>
<td>582</td>
</tr>
<tr>
<td></td>
<td>(53.75%)</td>
<td>(56.21%)</td>
<td>(47.78%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,182</td>
<td>2,964</td>
<td>1,218</td>
</tr>
<tr>
<td><em><em>AHSMs of Ineligibles</em> W1Ps</em>*</td>
<td>257</td>
<td>192</td>
<td>65</td>
</tr>
<tr>
<td><strong>Adjusted Interview Completion Rate</strong></td>
<td>3,925</td>
<td>2,772</td>
<td>1,153</td>
</tr>
</tbody>
</table>
1. Health and Health Conditions
- Physical and mental health, medications inventory (*Add Health, HRS, NSHAP*)
- Health insurance, access to care (*HRS*)
- Health behaviors (*Add Health, HRS, NSHAP*)
- Chronic disease, disability, acute health shocks (*Add Health; HRS*)
- Social integration, support, strain and stress (*NSHAP, HRS, MIDUS*)

2. Personality, Cognitive Processing & Preferences
- Big 5 (*Add Health, Wave IV*)
- Duckworth Grit Index (*New*)
- Word Recall Tests (*Add Health, Wave IV*)
- Counting Backwards (*HRS*)
- Risk & Patience/Time Preferences (*GSOEP*)

3. Relationships between generations
- Gathering Family Rosters (one up, one down) (*PSID*)
- Time & Money Transfers (*PSID*)
- Long Term Transfers & Financial Help (*PSID*)
- Notions of Safety Net provided & expected (*New*)
- Parents’ Perceptions & Knowledge of (Adult) Child’s situations & behaviors (*New*)

4. Economic & time capabilities
- Employment (*HRS*)
- Labor Market Earnings (*HRS*)
- Retirement: Pensions received & expected (*HRS*)
- Housing (*HRS, PSID*)
- Assets & Income from Assets (*HRS*)
- Debt (*HRS, PSID*)
Additional Information Collected:

- **Collection of Family Health Histories** with leave-behind questionnaire
  - We collected *health data* on *3-generations*.
  - 75% completion rates,
  More on these data below.

- **Consents** to link **Administrative Records** (present, past & future)
  - *Medicare & Medicaid*
  - *Housing valuations* & foreclosures of place-of-residence
  - Links have not been made, but can be.

- **Residential Locations** for linking to data on:
  - Economic, demographic status of neighborhoods
  - Food environments
  - Environments for exercise, etc.
  - Others.

Such contextual data can be linked through **Add Health Ancillary Data Process**.
Timeline of AHPS & Add Health Surveys

Add Health Sample Members
Grades: 7-12
(N = 20,745)

Add Health Sample Members
Grades: 8-12
(N = 14,738)

Add Health Sample Members
Ages: 18-26
(N = 15,197)

Add Health Sample Members
Ages: 24-32
(N = 15,701)

Add Health Sample Members
Ages: 32-42
(N = 12,300)

Wave I
1994-94

Wave II
1996

Wave III
2001-02

Wave IV
2008

Wave V
2015-18

Add Health Parents, Wave I
(W1Ps)
Ages: 29-59
(N = 17,670)

Add Health Parents (2015-2017)
(W1Ps+S/Ps)
Ages: 50-80
(W1P N = 2,013
(S/P N = 988)
AHPS Benchmarked against Other Health-Related Data Sets
AHPS Benchmarked against Other Health-Related Data

• Majority of **AHPS W1Ps** interviewed at Wave I (97%) are **female** & all **had children**.

• We *compare* **AHPS W1Ps in Parent (2015-17) with** women in **HRS & NHANES**.
Comparison of AHPS with HRS & NHANES

Race/Ethnicity

- NH White
- Hispanic
- NH Black
- Less Than High
- High school
- Some College
- College+

Education

- Excellent
- Very Good
- Good
- Fair
- Poor
- Cancer, lymphoma
- H-blood pressure
- Heart attack
- Lung disease
- Arthritis

General Health

- AHPS
- HRS
- NHANES

Health Conditions
AHPS & Add Health Linked Data: Ways to Use It & Some Findings
1. **Longitudinal** (2-waves) analyses of parents to study life cycle changes

2. **Contemporaneous** comparisons of status & interactions **between generations**

3. **Intergenerational correlations** of outcomes & attainment at **comparable ages**.

4. Intergenerational analyses with “**sibling**” comparative designs.
Changes from Age

- One can use data on *Parents @ Wave I* and *Parents @ Wave V* to changes over life course, i.e., *changes with age*.

- These *two waves* of data on parents contain *comparable measures* of general health, health behaviors & some other outcomes at *ages 29-59 & at 50-80*. 
Changes with Age

Add Health Sample Members
Grades: 7-12
Wave I
1994-94

Add Health Sample Members
Grades: 8-12
Wave II
1996

Add Health Sample Members
Ages: 18-26
Wave III
2001-02

Add Health Sample Members
Ages: 24-32
Wave IV
2008

Add Health Sample Members
Ages: 32-42
Wave V
2015-18

Add Health Parents (W1Ps)
Ages: 29-59

Add Health Parents (W1Ps+S/Ps)
Ages: 50-80
Construction of Analytic file:

• Merge `allwave1.xpt` with `Parent2.xpt` using the **AHSM** unique identifier (**aid**).

• Keep unique parent observations using the parent 2 respondent ID (**pfmid**).
Changes with Age

Self-Reported General Health

Typical Drinking

Currently Smoking
Changes with Age

Educational Attainment

Marital Status

Employment
Comparisons across the Generations

• **Comparable measures for parents** (in **AHPS**) & their **Add Health children** – especially when adults – allow one to analyze **intergenerational linkages & relationships** in
  – Health & health behaviors
  – Cognition
  – Relationships
  – Economic capacities
Intergenerational Mobility & Connectedness 1

Add Health Sample Members
Grades: 7-12

Wave I
1994-94

Add Health Sample Members
Grades: 8-12

Wave II
1996

Add Health Sample Members
Ages: 18-26

Wave III
2001-02

Add Health Sample Members
Ages: 24-32

Wave IV
2008

Add Health Sample Members
Ages: 32-42

Wave V
2015-18

Add Health Parents (W1Ps+S/Ps)
Ages: 50-80

Add Health Parents (W1Ps)

Add Health Sample Members
Grades: 7-12

Wave I
1994-94

Add Health Sample Members
Grades: 8-12

Wave II
1996

Add Health Sample Members
Ages: 18-26

Wave III
2001-02

Add Health Sample Members
Ages: 24-32

Wave IV
2008

Add Health Sample Members
Ages: 32-42

Wave V
2015-18

Add Health Parents (W1Ps+S/Ps)
Ages: 50-80
We also can compare AHSMs @ Wave V with their Parents @ Wave V to examine contemporaneous linkages & relationships when both are adults. See next slide.
Add Health Sample Members
Grades: 7-12

Add Health Sample Members
Grades: 8-12

Add Health Sample Members
Ages: 18-26

Add Health Sample Members
Ages: 24-32

Add Health Sample Members
Ages: 32-42

Add Health Parents (W1Ps)
(Ages: 29-59)

Add Health Sample Members
Ages: 50-80

Add Health Parents (W1Ps+S/Ps)
(Ages: 50-80)

Contemporaneous Comparisons across the Generations 2
A total of 1,701 AHSMs in Wave V have parents (W1Ps) in AHPS.

There are 1,581 W1Ps in matched sample.

Tabulations below restricted to this subsample of parents.
Contemporaneous Comparisons: Intergenerational Mobility & Connectedness

**Self-Reported General Health**

- **AHPS**
- **AHSM 5**

**Prevalence of Health Conditions & Other Health Indicators**

*From Wave IV*
Contemporaneous Comparisons: Intergenerational Mobility & Connectedness

Freq. of Contact

Closeness
Contemporaneous Comparisons: Intergenerational Mobility & Connectedness-3

Education Attainment

- AHPS
- AHSM 5

Born in U.S.

Annual Income

- Less than High School
- High school
- Some College
- College
- Graduate

- $0
- $10,000
- $20,000
- $30,000
- $40,000
- $50,000
- $60,000

- $0
- $10,000
- $20,000
- $30,000
- $40,000
- $50,000
- $60,000
Intergenerational Correlations

• One can also examine more traditional *intergenerational correlations* taken at comparable (adult) *ages* of parents and children.

• These correlations can be calculated using data when *each* generation is around the *same age* (~40) using data for Parents @ Wave I and their AHSMs @ Wave V. See next slide.
Intergenerational Correlations

Add Health Sample Members
Grades: 7-12

Wave I
1994-94

Add Health Sample Members
Grades: 8-12

Wave II
1996

Add Health Sample Members
Ages: 18-26

Wave III
2001-02

Add Health Sample Members
Ages: 24-32

Wave IV
2008

Add Health Sample Members
Ages: 32-42

Wave V
2015-18

Add Health Parents (W1Ps)
Ages: 29-59

Add Health Parents (W1Ps+S/Ps)
Ages: 50-80
Intergenerational Correlations 3

• Construction of the Analytic sample:
• Merge allwave1.xpt with wave5.xpt using AHSM unique identifier (aid)
Intergenerational Correlations

Self-Reported General Health

Educational Attainment

Wave I 1994-94
Wave V 2015-18

Parent W1
AHSM 5

Excellent Very good Good Fair Poor

Less than High School High school Some College College Graduate

0.5

0.4

0.3

0.2

0.1

0

43
• Finally, **Add Health** Design of *multiple children* (AHSMs) with common parent (W1P) presents opportunities for “**sibling**” *comparative designs* for studying intergenerational health and behaviors.

• Note, as well, that genetic data for AHSMs could be exploited.
Composition of AHSM and AHPS “Pairs”

**WI Family Cluster A**
- WI Parent
- Current Spouse/Partner
- AHSM 1
- AHSM 2

**2 AHSM – WI Parent Pairs**
- 2 Parent-Figures (WI Parent & Current Spouse/Partner)

**WI Family Cluster B**
- WI Parent
- Current Spouse/Partner
- AHSM 1

**1 AHSM – WI Parent Pair**
- 2 Parent-Figures (WI Parent & Current Spouse/Partner)

**WI Family Cluster C**
- WI Parent
- AHSM 1

**1 AHSM – WI Parent Pair**
- 1 Parent-Figure (WI Parent)

- Some Family Clusters include both biological parent-figures of AHSMs; Others include bio parent & step-parent.
- AHSMs in multiple-AHSM Family Clusters include twins, non-twin full sibs &/or half-sibs.
Recent Studies using AHPS Data
The Role of Family Health History in Predicting Midlife Chronic Disease Outcomes

Naomi N. Duke MD, PhD, MPH 1, 2, 3, Todd M. Jensen PhD 2, Krista M. Perreira PhD 3, V. Joseph Hotz PhD 4, Kathleen Mullan Harris PhD 5

1 Duke Department of Pediatrics, Division of General Pediatrics and Adolescent Health, & Duke Center for Childhood Obesity Research (DCCOR), & Department of Sociology, Duke University, Durham, North Carolina
2 School of Social Work, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
3 Department of Social Medicine, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
4 Department of Economics, Duke University, Durham, North Carolina
5 Carolina Population Center, & Department of Sociology, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
• **Family health histories (FHH)** source for predicting one’s health & wellness.
  
  – Reflect *intergenerational transmission of health* via heritable factors, learned health behaviors, etc.

• Most studies using FHH focus on:
  
  – FHH of *first-degree relatives*.
  
  – Role of FHH on *particular condition/disease* (CVD, diabetes, cancer, depression).
  
  – Seldom have FFHs on *multiple generations* of families.

• This study leverages data from **Add Health** & FHH collected from **W1Ps** in **AHPS** to address both.
### Add Health Parent Study
### Family Health History

**Is your parent still alive?**

**Biological Mother**
- [ ] yes → How old is she? Age in years: [ ]
- [ ] no → When did she die? Age at death: [ ]
- [ ] don't know

**Biological Father**
- [ ] yes → How old is he? Age in years: [ ]
- [ ] no → When did he die? Age at death: [ ]
- [ ] don't know

---

*Consider only your biologically related relatives, and please fill the answers for each of the following conditions.*

<table>
<thead>
<tr>
<th>Your biological . . .</th>
<th>mother</th>
<th>father</th>
<th>any brother/sister</th>
<th>aunts/uncles</th>
<th>any grandparent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes</td>
<td>no</td>
<td>don't know</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Coronary Heart Disease</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>If yes, diagnosed before age 55?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Heart Attack</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>If yes, 1st one before age 55?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Stroke</td>
<td>[ ]</td>
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<tr>
<td>If yes, 1st one before age 55?</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td>Diabetes or high blood sugar</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td>Hypertension or high blood pressure</td>
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<tr>
<td>High Cholesterol or Hyperlipidemia</td>
<td>[ ]</td>
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</tr>
<tr>
<td>Cancer ever</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Prostate Cancer ever</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

---

*Please return to: Carolina Population Center, 201 W. Franklin Street, 2nd Floor Suite 201, Chapel Hill, NC 27516*
Add Health Parent Study
Family Health History (continued)

<table>
<thead>
<tr>
<th></th>
<th>mother</th>
<th>father</th>
<th>any brother/sister</th>
<th>aunts/uncles</th>
<th>any grandparent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes</td>
<td>no</td>
<td>don't know</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If yes, prostate cancer before age 60?</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Breast cancer ever</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>If yes, breast cancer before age 50?</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Colorectal (or colon) cancer ever</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>If yes, Colorectal (or colon) cancer before age 55?</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Ovarian Cancer ever</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Lung cancer ever</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Other Cancer ever</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>If so, which ones (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Dementia or Alzheimer's Disease</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Heavy alcohol use or alcoholism</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Obesity</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Asthma</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
<tr>
<td>Arthritis</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
<td>⬠</td>
</tr>
</tbody>
</table>
Data Collected in AHPS

**Incidence of health conditions/diseases for four generations [G1 – G4]:**

**G1** Any bio *great grandparent* of AHSMs (*grandparents* of W1Ps) from FHH of W1Ps in AHPS (2015-2017) data.

**G2** Each bio *grandparent* of AHSMs (*parents* of W1Ps) from FHHs.

**G3** *Mothers* of AHSMs (W1Ps) from AHPS (2015-2017) data

**G4** AHSMs at midlife from Add Health Wave V data
<table>
<thead>
<tr>
<th></th>
<th>AHSM (G4)</th>
<th></th>
<th>W1P - Mother (G3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean or %</td>
<td>Mean or %</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td>37.4</td>
<td></td>
<td>62.9</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>46.4%</td>
<td></td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NH White</td>
<td>82.9%</td>
<td></td>
<td>84.2%</td>
<td></td>
</tr>
<tr>
<td>NH Black/African/African American</td>
<td>7.7%</td>
<td></td>
<td>7.0%</td>
<td></td>
</tr>
<tr>
<td>NH Asian</td>
<td>1.0%</td>
<td></td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>NH Other/Native American</td>
<td>1.1%</td>
<td></td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>7.4%</td>
<td></td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School or Less</td>
<td>17.5%</td>
<td></td>
<td>42.3%</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>38.7%</td>
<td></td>
<td>31.5%</td>
<td></td>
</tr>
<tr>
<td>College Degree or More</td>
<td>43.8%</td>
<td></td>
<td>26.2%</td>
<td></td>
</tr>
</tbody>
</table>

*Based on Wave V data, Weighted statistics.*
<table>
<thead>
<tr>
<th>Health Condition</th>
<th>AHSM (G4)</th>
<th>W1P Mother (G3)</th>
<th>Maternal Grandparent (G2)</th>
<th>Any Maternal Great Grandparent (G1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Attack</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.1</td>
<td>12.2</td>
<td>16.0</td>
<td>30.5</td>
</tr>
<tr>
<td>Male</td>
<td>1.3</td>
<td>31.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.1</td>
<td>3.0</td>
<td>16.9</td>
<td>21.3</td>
</tr>
<tr>
<td>Male</td>
<td>0.2</td>
<td>15.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4.6</td>
<td>19.0</td>
<td>26.4</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5.2</td>
<td>21.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>15.6</td>
<td>44.1</td>
<td>48.9</td>
<td>23.8</td>
</tr>
<tr>
<td>Male</td>
<td>21.6</td>
<td>41.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elev. Cholesterol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11.3</td>
<td>48.1</td>
<td>30.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Male</td>
<td>15.5</td>
<td>25.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>38.9</td>
<td>40.3</td>
<td>19.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Male</td>
<td>41.2</td>
<td>10.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVD Factor Risk Index</td>
<td>(0-4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.7</td>
<td>1.5</td>
<td>1.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Male</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>2.5</td>
<td>13.7</td>
<td>33.4</td>
<td>33.7</td>
</tr>
<tr>
<td>Male</td>
<td>2.1</td>
<td>34.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>34.1</td>
<td>25.5</td>
<td>25.1</td>
<td>6.5</td>
</tr>
<tr>
<td>Male</td>
<td>18.9</td>
<td>11.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Self-reported by AHSM or W1P, respectively, in Wave V surveys.
2 Reported by W1P in FHH at Wave V.
3 CVD Risk Factor Index is sum of Diabetes, Hypertension, Elev. Cholesterol and Obesity.
<table>
<thead>
<tr>
<th></th>
<th>Diabetes</th>
<th>Hypertension</th>
<th>Elev. Cholesterol</th>
<th>Obesity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 4</td>
<td>Model 1</td>
<td>Model 4</td>
</tr>
<tr>
<td>W1P Mother (G3) Had¹</td>
<td>2.13</td>
<td>1.21</td>
<td>1.19</td>
<td>1.07</td>
</tr>
<tr>
<td>Maternal Grandfather (G2) Had²</td>
<td>2.41</td>
<td>1.18</td>
<td>0.57</td>
<td>1.07</td>
</tr>
<tr>
<td>Maternal Grandmother (G2) Had²</td>
<td>0.68</td>
<td>1.26</td>
<td>1.10</td>
<td>0.95</td>
</tr>
<tr>
<td>Any Maternal Great Grandparent (G1) Had²</td>
<td>3.05</td>
<td>1.29</td>
<td>2.81</td>
<td>1.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CVD Risk Index (0-4)</th>
<th>Cancer</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 4</td>
</tr>
<tr>
<td>W1P Mother (G3) Had¹</td>
<td>1.17</td>
<td>1.11</td>
</tr>
<tr>
<td>Maternal Grandfather (G2) Had²</td>
<td>1.01</td>
<td>0.85</td>
</tr>
<tr>
<td>Maternal Grandmother (G2) Had²</td>
<td>0.99</td>
<td>0.39</td>
</tr>
<tr>
<td>Any Maternal Great Grandparent (G1) Had²</td>
<td>1.07</td>
<td>0.56</td>
</tr>
</tbody>
</table>

**TABLE NOTES:**
(a) Model 1 includes health condition of Mother (G3) but no covariates or health conditions of G1 or G2.
(b) Model 4 includes all G1-G3 corresponding health conditions + sociodemographics + other risk factors (modifiable ones). Joint significance of ages of G4 & G3 and current age or age-at-death of G3 were tested but were not significant for any of models.
(c) Estimates are Adjusted Relative Odds of AHSM having disease given that older generation had it. Estimates for CVD Risk Index indicate effect of additional risk factor on AHSM's Index.
(d) Odds statistically different from 1.00 at 0.05 level are denoted in RED.
(e) Tests for Joint Significance of Effects of Chronic Conditions of G1 (Any), G2 (both) & G3 (Maternal) were all statistically significant at conventional levels.
¹Self-reported by AHSM or W1P, respectively, in Wave V surveys.
²Reported by W1P in FHH at Wave V.
Findings:

1. Health of first-degree relative \([G3]\) predictive of many chronic diseases of \(G4 \at midlife\) (cholesterol, obesity, CVD risk, cancer, depression).

2. But, conditions of other generations \([G2, G3]\) do matter for some diseases: diabetes, cholesterol.

3. More generally health of all older generations \([G1, G2, G3]\) jointly predictive of conditions/diseases of \(G4 \at midlife\), although not always individually significant.

4. One exception: Hypertension among older generations \([G1, G2, G3]\) not predictive for hypertension in \(G4\).
   - Early onset of hypertension in older generations may be predictive (Framingham Heart Study)
   - We did not collect age of onset in AHPS FHHs.
ORIGINAL STUDIES

Association between intergenerational violence exposure and maternal age of menopause

Foster, Holly PhD\textsuperscript{1,2}; Hagan, John PhD\textsuperscript{2,3}; Brooks-Gunn, Jeanne PhD\textsuperscript{4}; Garcia, Jess MS\textsuperscript{1}

Menopause: Journal of the North American Menopause Society
doi: 10.1097/GME.0000000000001923
**Objective**: Test mid-life *intergenerational weathering hypothesis* of *maternal reproductive aging*: Maternal & children’s exposure to violence/abuse accelerates onset of maternal menopause.

**Background**:

- Established: *Exposure to violence/abuse* associated with *mental and physical health problems*, including *pace of reproductive aging*.
- Established: *Early menopause* (before age 45) is *associated* with *higher risks* of *cardiovascular disease (CVD)*, *osteoporosis*, lower bone density, & *premature death*.
- Few studies investigate association of violence against women – in childhood or intimate partner violence (IPV) – with timing of menopause.
- No studies have included association with children's exposure to violence/abuse.
Data:

- Use data on mothers from **Wave I** and **AHPS, 2015-2017** to measure age at menopause & their exposure to own violence/abuse in childhood & with intimate partners.
- Use data from **Add Health Waves I-IV**, to measure children’s exposure to violence/abuse.

Findings:

- **Mother’s own childhood physical abuse** & her **child’s sexual abuse** both **associated** with **earlier age of menopause**.
- **Mothers** who were **physically abused in childhood** & have **child who experienced regular sexual abuse reached menopause 8.78 years earlier** than mothers without a history of personal abuse or abuse of their child.
Research Article

Adult Children’s Educational Attainment and Parent Health in Mid- and Later-Life

Christopher R. Dennison, PhD and Kristen Schultz Lee, PhD*

Department of Sociology, University at Buffalo, SUNY, USA.
**Objective**: Examine *influences* of *adult children's education* on *parents' health & well-being*.

**Background**:  
- Theories of intergenerational influences have focused on effects of parents' education on children's SES and subsequent health.  
- Fewer studies of *influence* of *children’s educational attainment* on *parents' health & well-being*.  
- **Mechanisms** for latter influence include adult children's capacity to provide parents with resources & care which affects parents health.  
- Such association is confounded by background characteristics that predict both children’s educational attainments and parents’ subsequent health.
**Data & Methods:**

- Use data from **AHPS, 2015-2017**, to measure parents’ self-reported health statuses & from **family roster** to measure their **children's educational attainment** and other SES factors.
- Use propensity score methods to adjust children's educational attainment for confounders that are sources of selection bias.

**Findings:**

- Having **no children who completed college** is **negatively associated** with parents’ self-rated health & **positively associated** with depressive symptoms.
- Adjusting for potential confounders, **associations remain**, though **magnitudes** are **attenuated**.
- Association of children's education with parents’ depressive symptoms more robust than with parents' self-reported health.
Original Article

Grandparents' Support to Young Families: Variations by Adult Children's Union Status†

Teresa M. Cooney✉
Objective: Investigates whether grandparents’ support to their children’s families & offspring varies by child’s union status – single, cohabiting, or married.

Background:
• More young families today headed by unmarried parents due to increases in nonmarital childbearing, cohabitation & divorce,
• Latter families have fewer resources than married-couple families.
• Grandparents can provide an important safety net to families in need.
• Less is known about whether their support varies based on their adult children’s union status.
Grandparent’s Support
Children’s Union Status

**Data:**
- Use data from **AHPS 2015–2017** on parents' instrumental & financial support to grandchildren children, among those with adult children, ages 40+, who themselves have children (as reported by parents in family roster).

**Findings:**
- **Grandparents more likely** to provide instrumental & financial assistance to cohabiting & single children than married children.
- **Cohabiting female children** receive **more hours** of instrumental help from grandparents than married females.
- **Single & cohabiting children** receive **more financial assistance** than married children.
- Overall, it appears **nontraditional families now receive more extended-family support** than in past.
Future Possibilities for AHPS

• Addition of Health data by linking of Medicare & Medicaid Admin Data.
• Addition of contextual data via permissions to link housing-related data.
  – Potential to link “Zillow”-type data on current and past housing locations for W1Ps.
  – Possibility of linking individual/household-level admin records from data sources.
• Further Data collection (Phase 2) in planning stage:
  – Conduct AD/ADRD Cognitive Tests on AHPS Phase 1 W1Ps & bio-S/Ps comparable to those being collected in Add Health Wave VI on AHSMs
  – Collect DNA on AHPS Phase 1 W1Ps and bio-S/Ps
  – Collect Survey, FHHs & Above Data data on additional Minority W1Ps & bio-S/Ps.
• Stay tuned! Let us know about your interests!
• **AHPS Parents (2015-2017)** data *available* through a *Restricted-Use* Data Contract:
  
  – Apply for the above data, as well as the **AHPS Parents Phase 1 & Add Health** data, through the [CPC Data Portal](#).

• **Public release version** (more limited sample) available in [ICPSR](#) & [Dataverse](#).

• To *keep informed* about data releases **sign up** for the [Add Health](#) list serve by emailing [addhealth@unc.edu](mailto:addhealth@unc.edu).

• **Other questions** about Study, contract us at:
  
  [v.joseph.hotz@duke.edu](mailto:v.joseph.hotz@duke.edu)
  
  [kathie_harris@unc.edu](mailto:kathie_harris@unc.edu)