

Proposed Core Hypothesis/Question Justification

Social Environment Working Group

Family and Household

I. Proposed Core Hypothesis/Question

What aspect of family structure, resources and process affect child health and development?

II. Workgroup: *Social Environment*

III. Contact persons for proposed core hypothesis/question

A. Andrea Carlson – Office: 703-605-4436; Email: andi.carlson@cnpp.usda.gov

B. Christine Bachrach (co-chair) - Office: 301.496.9485; Email: cbachrach@nih.gov

C. Linda Burton (co-chair) – Office: 814.863.7108; Email: burton@pop.psu.edu

IV. Public health significance

The link between children’s health and household income, or health and parental education is well established. There is a health gradient which persists through all income and education levels. The questions as to why this gradient exists is the subject of another hypothesis (See SES hypothesis). In this question we seek to understand why 60% of the children in the poorest quintile are in excellent or very good health, despite the barriers associated with income. The hypothesis is that the families of these children are able to thrive despite the odds against them. A complete picture of what the families do is not understood.

[NEED MORE HERE—EXAMPLES, BETTER ATTENTION GETTER??]

V. Justification for a large prospective, longitudinal study

One of the major limitations in understanding the family and household’s role in children’s health and development is the lack of data which link social data with variables associated with health and development. As discussed below, describing the household’s role in children’s health is very complex. Models used by many social scientists require that we control for what happened to family and child in the past, since most social environment issues are cumulative. Longitudinal studies such as ___ and ___ are used to look at the family’s role in ___. **(refs using long. studies and any outcome).**

Unfortunately, the links between health outcomes and the household are limited to either smaller studies (**Linda’s asthma study, other examples?**), or data sets which either include good household data (such as the Panel Study of Income Dynamics, **National Longitudinal Study of Youth (name?)**) or good medical data (such as NHANES, **NHIS?, others?**).

There are several reasons why longitudinal data are required for a large number of children. These include:

- A. The context changes with time, and across the country. Need to document this. **(say more)**
- B. The United States is experiencing an immense and growing diversity. Acceptable family practices differ across each group. What causes a child to thrive in one culture may not work in another culture because of this diversity. We need the sample size to really explore the impact of family and the household on child health and development. Especially if the study wants to address ethnicity, culture, race, and immigration status.
- C. The large sample size over time will give a better understanding of public policy's impact on the household. In particular, what is missing in parenting for a particular group?
- D. More on resource justification in the SES Hypothesis

VI. Scientific Merit: Impacts on health

Social scientists look at families and households in a variety of ways. We propose dividing the picture of the family into three parts: family structure, family process and family resources. Family structure includes information on marital status and living arrangements, including which adult's names are on the lease or mortgage. The later is important because if an adult is listed on the lease, it is harder to ask the person to leave if they do not contribute to the family **(ref, more information?)** Children in families with dual heads have better quality diets in key areas such as fat, saturated fat and cholesterol (Lino, Basiotis, Gerrior, and Carlson 2002). Family structure also includes the proximity of other kin and the relative wealth of close family members. A study of single poor mothers showed that the women who came closer to meeting their budgets had close family members to provide extra cash and child care (Edin and Lein 1997). Parents who feel socially isolated may not give children all they need, so children turn to peers. Successful drug and alcohol programs for parents of addicted youth focus on problem solving skills and empowerment (Singleton 1994) Finally, the incidence and severity of asthma within an extended family may have an impact on how well the child manages the **disease (Linda- reference) What about race, gender and culture?**

Family process has three components: management, protection, and the time and quality of interactions. Management measures how the household is run within the house or apartment. It includes important aspects of child development such as daily routines for sleeping, eating, homework, and playtime. For older children and adolescents, family meals leads to higher odds of eating a healthier diet, particularly one with more fruits and vegetables and fewer fried foods (Gillman et al. 2000) Frequent family or household meals may lead to improved mental health **(need reference for Sam Goodicich?)**

Other aspects of family process include how well resources such as food and money are managed, and general cleanliness. Data from the U.S. Census Bureau's Current Population Study suggests that about half of households who receive food stamps experience food insecurity. This means the household believed they were not able to obtain acceptable and healthy foods by methods they felt were acceptable (Nord 2001). This implies that just over half

of all households who receive food stamps are able to provide meals they believe are healthy and adequate, through acceptable means. Household management may be part of the reason, along with other aspects such as proximity of kin, and the existence of non-parent adults living in the household. Another example relates to asthma and triggers within the house or apartment. How well the household keeps these under control relate to management (**Linda- reference to own work**).

Protection measures how well the child is protected as he or she moves across risky situations outside the home. For example, do older siblings, friends, or other relatives make sure the child comes home from school by the safest possible route? How well is the child protected from neighborhood stress, especially its impacts on asthma and mental health? How much is the child taught about street safety, traffic safety, and general health practices away from home? Finally, process includes the time and quality of interactions the child has with other members of the household. This would include both positive interactions and negative interactions such as domestic violence. In addition, the quality of the interaction examines how household members deal with conflict or disagreement. (**need references**) Protection might also include the perceived importance of certain health behaviors. For example if parents are overweight and believe they are, their kids are less likely to be overweight than children of parents who are overweight and do not believe they are (Variyam 2001). This also shows the complexity of the social environment. The parent's perception of their weight status may have come from other family members, their social networks, health professionals, or information received through the media or other source. Families may be using traditional methods to protect their children, which might be harmful to the children (**Linda- reference and flush this out more**)

The resources a household has available to it may make up for poor process or a less than ideal family structure. Parent's education has a direct impact on children's health because it opens doors to other resources such as social capital which will be discussed below. Education also begets education (**need some reference linking parent's education and their investments in children's education**). Education also impacts obesity and other food related health conditions. Several studies link parental education with improved diet quality, especially a diet lower in fats, and higher in fruits and vegetables. (Carlson and Gould 1994; Mitchell et al. 2000; Variyam 2001). Mitchell also points out that more educated parents are able to provide lower fat diets at the same cost as higher fat diets.

The education level of other relatives, especially grandparents can also impact children's health. The employment status of all involved adults, and the employers' attitudes and official policies towards children and pregnancy. Health insurance or Medicaid participation is another resource. Specifically, what preventative care is available, and what are the out-of-pocket expenses expected of the parents? Resources associated with money are also very important. These include household income, government transfers, and wealth. It is important to know who in the household earned the income and how it is allocated to the children. For unearned income such as child care support, we need to understand whether the money can be used for the child. Perhaps the child support is intended for another child in the household. Wealth includes savings, home ownership, stocks and bonds, savings for retirement of parents or education for the children. What monetary resources are available if the child becomes seriously ill. Another resource within a household is how the household identifies with a culture (race, ethnicity, etc). For example what are the positive resources a girl would get because she will grow up to be a Hispanic Woman? How is this taught to the young girl? The family's social capital is also an important resource. The final resource is human and social capital available

within the household. Human capital is the ability within the household to manage the household, protect the child, address common health concerns, practice activities such as healthy eating, exercise and cleanliness which can lead to good health, follow medical advice, and find and use resources in the community. Social capital measures who the family members know both socially and professionally. In the case of this study, we are most interested in those persons who can provide accurate health and development information, and those who can link the child with necessary services such as child care, education, health, and public assistance. A family's social capital can also reinforce what the family already has in its human capital. **(in general, need more references here. SES hypothesis has several which also apply here)**

A. Pets – I am not sure what to do with these. They might be related to asthma, but dogs especially are used in nursing homes and in the New York rescue and clean up efforts to reduce stress

VII. Potential for innovative research: This is the only longitudinal study with links between good health data and good social-economic variables.

- A. This will allow researchers to finally examine the interactions between behavior and treatment. For example, what are there differences in the family structure, process or management which allow some families to follow physician's advice on treating their child with asthma better than others of similar social economic status?
- B. Most children do not develop asthma, and over half are not obese. Are there elements within the family which might be protecting these children, even after controlling for biological or environmental triggers?
 - 1. Obesity: Many children still manage to make healthy food choices, despite the links. Focus groups of school administrators and school food service workers find that the barriers to healthy eating among middle school children include vending machines, competitive foods, limited time to eat lunch, menus served, and meal choices(Meyer et al. 2001). However, not all middle school children are overweight. This study would allow a more detailed look at what families are doing to prevent obesity. The links between family protection and food choices are not well understood. For example, as incomes rise, so do the dinning out occasions (Kinsey 1983). Dinning out of the home(Kinsey 1994) may expose adults to larger portion sizes (McCrary). However, diet quality of children and adults improves with income and education.
 - 2. Asthma
 - 3. Gene-behavior Interaction
- C. Interactions between biological conditions and behavior and social outcomes such as juvenile delinquency, or good school performance.
 - 1. **[I am not at all familiar with this area, but this study would allow us to examine it at different points along the way for the first time. What points are critical in a child's development? What family interventions are important?]**

VIII. Feasibility

- A. Critical periods: seem to be all points in child's life affects differently
 - 1. Obesity:
 - (a) A study of British youth (mostly Caucasian) suggests that by age 9, children have very negative images of overweight individuals (Hill and Silver 1995). Thus the socially negative aspects of being over weight start before this period
 - 2. Asthma
 - 3. Mental Health
- B. Sampling needs
 - 1. Targeted groups or special settings
 - 2. Special strategies
 - 3. Sample size
 - 4. Special subgroups of interest
- C. Contact –
 - 1. marital status - annual
 - 2. income – annual, need to find out who earns
 - 3. child support payments – self and siblings
 - 4. wealth – every 3-5 years, check on home ownership annually (also college fund)
 - 5. education – annual, especially for younger parents

6. management skills – different at different ages
 - (a) food security – This may be a proxy for management skills for poor households. It should be measured every two years.
7. protection – different at different ages
 - i. “Conflicts Tactics Scale” – (more information?)
8. Social Capital – Difficult to measure
 - (a) Income gradient in health is more pronounced in the US than other countries, perhaps because of wider income inequality. Wealth might be a marker for social capital, but more research is needed (Marmot 2001)

D. Nature of measurement –

1. interview,
2. not clear if standard instrument exists for management/protection
3. Food Security – standard measure exists

E. Burden – limited

F. Ethical Considerations – protect privacy

Reference List

- Carlson,K. and B.Gould "The Role of Health Knowledge in Determining Dietary Fat Intake." *Review of Agricultural Economics* 16(994): 373-86.
- Edin,K. and L.Lein *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work*. New York: Russell Sage Foundation, 1997.
- Gillman,M., R.Shimar, L.Frazier, H.Rockett, C.Camargo, A.Field, C.Berkey, and G.Colditz "Family Dinner and Diet Quality Among Older Children and Adolescents." *Arch Family Medicine* 9(2000): 235-40.
- Hill,A.J. and E.K.Silver "Fat, Friendless and Unhealthy: 9-Year Old Children's Perception of Body Shape Stereotypes"." *International Journal of Obesity* 19(1995): 423-30.
- Kinsey,J. "Working Wives and the Marginal Propensity to Consume Food Away From Home." *American Journal of Agricultural Economics* 65(1983): 10-9.
- "Food and Families' Socioeconomic Status." *Journal of Nutrition Education* 124(1994): 1878-85.
- Lino,M., P.P.Basiotis, S.Gerrior, and A.Carlson "The Quality of Young Children's Diets." *Family Economics and Nutrition Review* 14(2002): forthcoming.
- Marmot,M. "Income Inequality, Social Environment and Inequalities in Health." *Journal of Policy Analysis and Management* 20(2001): 156-9.
- Meyer,M.K., M.T.Conklin, J.R.Lewis, J.Marshak, S.Cousin, C.Turnage, and D.Wood "Barriers to Healthy Nutrition Environments in Public School Middle Grades." *The Journal of Child Nutrition and Management* 25(2001): 66-71.
- Mitchell,D., B.Shannon, J.McKenzie, H.Smiciklas-Wright, B.Miller, and D.Thomas "Lower Fat Diets For Children Did Not Increase Food Costs ." *Journal of Nutrition Education* 32(2000): 100-3.
- Nord,M. "Food Stamp Participation and Food Security." *Food Review* 24(2001): 13-9.

Singleton,J. "Nutrition and Health Education for Limited Income, High-Risk Groups: Implications for Nutrition Educators." *Journal of Nutrition Education* 26(1994): 153-5.

Variyam,J. "Overweight Children: Is Parental Nutrition Knowledge a Factor?" *Food Review* 24(2001):