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Add Health  
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Abstracts

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Thursday, June 26, 2014

## Plenary Session

### **The Effect of a Negative Shock to Fertility Preferences on Subsequent Childbearing, Schooling and Earnings**

*Kandice Kapinos, RAND Corporation*

*Olga Yakusheva (Marquette University), coauthor*

The negative economic consequences of teenage fertility outcomes have been well-documented. Studies show that teen health behaviors are highly susceptible to peer influences, however, and estimating causal peer effects is challenging. This study utilizes a young woman's exposure to a friend's teen childbirth as a shock to her fertility preferences to investigate how peer effects in teen pregnancy translate into longer term effects on subsequent fertility, human capital accumulation, and labor market outcomes. Using Add Health data, we find that women who were exposed to an exogenous shock of a friend's teen childbirth were 6.2 ( $p < 0.05$ ) percentage points less likely to have a teen childbirth themselves, and that effect persisted into mid-twenties with a 7.1 ( $p < 0.05$ ) percentage point reduction in the probability of having a child. These effects were similar for Black and non-Black women, although Black women were also slightly less likely to drop out of high school.

### **Conditional Health-Related Benefits of Higher Education: An Assessment of Compensatory versus Accumulative Mechanisms**

*Shawn Bauldry, University of Alabama at Birmingham*

A college degree is associated with a range of health-related benefits, but the effects of higher education are known to vary across different population subgroups. Competing theories have been proposed for whether people from more or less advantaged backgrounds or circumstances will gain greater health-related benefits from a college degree. This study draws on data from the National Longitudinal Study of Adolescent Health (Add Health) and recently developed models for analyzing heterogeneous treatment effects to examine how the effect of obtaining a college degree on the self-rated health of young adults varies across the likelihood of obtaining a college degree, a summary measure of advantage/disadvantage. Results indicate that a college degree has a greater effect on self-rated health for people from advantaged backgrounds. This finding differs from two recent studies, and possible reasons for the contrasting findings are discussed.

## Breakout Session 1

### **Methodology Session: Overview of Add Health for New Data Users**

Presenter: Kathleen Mullan Harris, University of North Carolina at Chapel Hill

This session will provide an overview of the Add Health design and data collection across all waves, from the In-school Administration in 1994 to the recent 2008 Wave IV follow-up. This session is intended for conference participants who have never used Add Health, are thinking about using Add Health, or are new to the study. Staff from ICPSR, which now has responsibility for disseminating both the public use and restricted-use files from all four waves of Add Health, will present information on the current data structures, data file descriptions, and data discovery tools and discuss how to find and explore metadata for all parts of the Add health data system. Additionally, new methods for applying for restricted-use licenses will be described.

**Paper Session: Crime/Delinquency & Victimization****An Examination of the Effects of Social Institutions on Juvenile Delinquency and Subsequent Adult Arrest**

*Kiesha Warren-Gordon, Ball State University*  
*Michael P. Brown, coauthor*

Evidence supporting the relationship between social institutions and delinquency is strong and substantial. Yet, much of this research excludes measures of religiosity on delinquency and future adult criminality. This research seeks to expand the literature by examining the direct and indirect relationships between law breaking and the institutions of family, school, education, and religion. Other variables included in this study are parental education and demographics. Research subjects are followed over all four waves of the Add Health data set.

**The Relationship between Sports Participation and Violent Delinquency**

*Jessica Finkeldey, Bowling Green State University*

It is largely recognized that sports are prominent social institutions that influence American culture. How sports participation during adolescence affects delinquent behavior, however, remains unclear. Some research finds that participation in sports reduces delinquent behavior, whereas other research finds that participation in sports increases these behaviors. Furthermore, some studies suggest the relationship between sports participation and delinquency depends on the type of sport and the type of delinquent behavior being examined. The current research intends to add to the literature by using in-school and in-home data from the National Longitudinal Study of Adolescent Health to further investigate if male adolescents involved in organized sports at school (comparing football, other contact sports, and non-contact sports) are more likely to engage in violent/aggressive delinquency than those not involved in organized sports. I expect logistic regressions to reveal that participation in sports will lead to a higher likelihood of young men engaging in violent delinquency even after controlling for demographic and social measures, including race and ethnicity, age, SES, low self-control, substance use, general delinquency, and prior violent delinquency. Furthermore, when parsing out the different types of sports, I predict participation in football will have the highest odds of engaging in violent delinquency. Preliminary analyses support my hypotheses.

**Maternal Incarceration and Children's Risky Behaviors in Young Adulthood**

*Xing (Sherry) Zhang, Cornell University*  
*Allison Dwyer, coauthor*

While a great deal of literature has focused on the effect a father's incarceration has for children, but much less has explored how children react to maternal incarceration. This paper looks at the long-term implications of childhood maternal incarceration for a set of negative outcomes in young adulthood: intimate partner violence, delinquent behavior, contact with the criminal justice system, and substance use. We hypothesize that a young adult whose mother was incarcerated during his or her childhood is more likely to be in abusive and aggressive relationships, report more delinquent behaviors and arrests, and have higher substance use as an adult. Using data from Wave I and Wave IV of the National Longitudinal Study of Adolescent Health as well as OLS and logistic regression models, we find that maternal incarceration is associated with higher levels of contact with the criminal justice system, delinquent behavior, and substance use in young adulthood. While maternal incarceration is also associated with higher levels of relationship abuse and aggression, these associations disappear upon introduction of other risk factors faced by children whose mothers are incarcerated. We conclude that maternal incarceration can have lasting implications for grown children, contributing to the intergenerational transmission of disadvantage.

**The Impact of School Climate and Policy on Delinquency and Justice System Careers***Nicolas Wical, Vera Institute of Justice**Tarika Kapur (Fairleigh Dickinson University), coauthor*

In 2011, the Vera Institute of Justice was awarded a grant to explore the independent and interactive effects of school-level and individual level factors on juvenile delinquency and long-term adult criminal offending. Specifically, we examined the impact of school climate and disciplinary practices (e.g. zero tolerance policies), controlling for personal and environmental factors on juvenile delinquency and adult criminal justice system involvement. These factors were explored using multi-level modeling techniques with data from the National Longitudinal Study of Adolescent Health (Add Health). Overall, we found no evidence that attending a school with zero tolerance policies either deters delinquency or places youth at a higher likelihood of becoming justice-system involved, in the short or long-term. In addition to a detailed discussion of our methods and results, the challenges and data limitations encountered during the analyses stages will be discussed.

**Exploring the Gender Gap in Handgun Ownership***April Dawn Holbrook, Bowling Green State University*

Research on gun ownership is becoming increasingly valuable due to the political issues surrounding gun legislation in the United States. Evidence for both sides of the debate abounds, but little is known about the gun owners themselves. In the United States men are much more likely to own handguns than women. It is possible that this gap could be explained through gender socialization, or because men amplify masculinity through gun owning. However, prior literature that examines the socialization of gun ownership has been limited by small sample sizes, retrospective accounts of socialization, and much of this prior work has used cross-sectional data. And work that explores the role of masculinity in handgun ownership has been primarily limited to qualitative research. Fear is also often cited as a reason for owning a handgun; however there is not much support for this hypothesis in the literature. I use the National Longitudinal Study of Adolescent Health (Add Health) to overcome these limitations while exploring the mechanisms responsible for the gender gap using logistic regression models.

**Paper Session: Sexuality and Childbearing****A Taxonomy of Adolescent Decisions for Sexual Behaviors: A Latent Profile Analysis***Diana L. Orozco-Lapray, The University of Texas at Austin*

Whether to engage in sexual behaviors is a critical decision often made during adolescence. The current study examines this sexual dilemma for the broader adolescent population through the theory of reasoned action. The current study uses data from adolescents who completed waves 1 and 2 of the National Longitudinal Study of Adolescent Health ( $n=8,152$ ) to develop a taxonomy of adolescent profiles of sexual behaviors. The measures for the current study are derived from the theory of reasoned action, and planned behavior, and address sexual intercourse and birth control use. The current study employs latent profile analysis to derive the proposed taxonomy, and examines the associations to outcomes through logistic and linear regression and analysis of variance. Current results indicate the existence of five consistent profiles among adolescents at waves one and two. These profiles are tentatively identified as: conservatively parented adolescents (27%), false-sense-of-control adolescents (27%), cautious adolescents (21%), precarious adolescents (12%), and impetuous adolescents (12%). Current analysis examines the association of each of these profiles with engagement in sexual intercourse, hooking-up and contraceptive use. It is expected that profiles reflect adolescents' projected decision when faced with opportunities for sexual activity, thus profile membership should indicate the extent to which an adolescent engages in the three outcome sexual behaviors.

**Contraceptive Use among College Women: Results from a National Survey***Leslie F. Morrison, University of Minnesota**Renee E. Sieving, Sandy L. Pettingell, Linda H. Bearinger, Wendy Hellerstedt, Barbara J. McMorris, coauthors*

Purpose: Using emerging adult developmental theory and a youth development framework, we explored risk and protective factors associated with consistent contraceptive use among emerging adult female college students, and whether effects of risk factors were ameliorated in the presence of protective factors.

Data: Wave III data from females ages 18-25 attending 4-year colleges (N= 842).

Variables: Consistent contraceptive use was defined as use "all of the time" during intercourse in the past 12 months. Risk indicators included heavy episodic drinking (>5 drinks at least 2 times/month), marijuana use (past month), and depressive symptoms (10 items from the CES-D). Protective factors included self-esteem (4 items from the Rosenberg Self-Esteem Scale), and responses to questions about confidence ("How confident are you of yourself?"), independence ("How independent are you?"), and life satisfaction ("How satisfied are you with your life as a whole these days?").

Analysis: We used multivariable logistic regression models to evaluate relationships between protective factors and consistent contraceptive use and between risk indicators and contraceptive use. We also examined whether protective factors moderated effects of risk indicators on consistent contraceptive use.

Results: In multivariable analyses, self-esteem, confidence, independence, and life satisfaction were positively associated with consistent contraceptive use. Marijuana use and depressive symptoms were negatively associated with consistent use.

**Maternal Parenting Style during Adolescence and Number of Sexual Partners in Young Adulthood***Amanda Berger, Maryland Population Research Center, University of Maryland**Sandra Hofferth, Maria Khan, coauthors*

Young adults have high rates of sexually transmitted infections, which are attributable to high rates of sexual risk-taking such as having multiple sex partners. Parenting style has been linked with youth's sexual risk-taking, but few studies have examined the relationship between parenting style and multiple sex partners, and none have examined the effect of parenting style on multiple sex partners in young adulthood. Using Waves I, II, and III of the National Longitudinal Study of Adolescent Health, we regressed lifetime and past year sex partners at Wave III on maternal parenting style at Wave I (using adolescents' reports of maternal warmth and control). Because parenting style is linked with psychosocial functioning, which is linked with sexual risk-taking, we also examined the indirect effect of parenting style on multiple partnerships, accounting for Wave II measures of self-efficacy and risk-taking. Results revealed that parenting style was not associated with lifetime partners but was with past year partners, and this association was direct, rather than indirect. Specifically, authoritarian and neglectful parenting were associated with multiple past year sex partners in young adulthood; adjusted associations revealed that neglectful parenting may be predictive of this outcome. Neither warmth nor control alone accounted for this association. Next steps include examining associations between parenting style and self-reported and biologically-confirmed STIs.

**A Multilevel Investigation of the Influence of Family and School Level Factors on Age of Sexual Initiation: A Focus on Sex Differences***Candace White, SUNY - Albany Dep't of Social Welfare*

The purpose of this study was to extend previous research that shows association of individual, family, and contextual characteristics with age of sexual initiation (ASI), by examining the influence of school level factors on ASI, and determining sex differences in predictors of ASI. Add Health data from Waves I and IV were analyzed using hierarchical linear modeling, a statistical approach that accounts for the collinearity of individual and school

level measures. Individual, family, and school level factors were assessed, including GPA, physical development, perception of peer attitudes about sex, perceived likelihood of higher education, alcohol use, delinquency, family structure, parents' education level, childhood abuse, perception of maternal approval of sex, parental monitoring, parent-child relationship quality, depression; and school level averages on parents' education level, perception of peer attitudes about sex, and likelihood of higher education; and cross-level interactions. Results support hypotheses that both family and school level factors influence age of initiation for girls and boys, and that school mean parental education attainment moderates the influence of individual level factors on age of initiation. Results also show that there are more predictors of ASI for girls than for boys, and that perception of peer approval of sexual activity is a primary predictor of ASI for boys. Implications for policy and intervention/prevention are discussed.

## **Breakout Session 2**

### **Methodology Session: Add Health Wave IV Biomarker Data**

Presenter: Eric A. Whitsel, University of North Carolina at Chapel Hill

This session will describe the methods used to collect and control the quality of biological data at the Add Health Wave IV examination. Emphasis will be placed on interpreting recently disseminated data in ways that are consistent with results of reliability and validity studies embedded in Wave IV.

### **Paper Session: Education**

#### **Concentrated Poverty and College Graduation: Latency in the Effect of Adolescent Neighborhood Disadvantage**

*Brian L. Levy, University of North Carolina at Chapel Hill*

Does adolescent neighborhood disadvantage affect an individual's educational trajectory and odds of graduating from college? When compared to their impact on secondary educational outcomes, observational research suggests a limited role for neighborhoods in postsecondary outcomes. The scant experimental and quasi-experimental research yields contradictory findings. In fact, the gold-standard Moving to Opportunity (MTO) experiment finds no neighborhood effect. Recent research, however, offers several reasons why an experimental design may not accurately estimate neighborhood effects (e.g., low compliance; small, short-lived changes in neighborhood quality, etc.). The present research uses propensity score matching to account for the endogeneity of neighborhoods while analyzing the impact of concentrated poverty using observational, longitudinal data (Add Health, Waves 1-4). This research also assesses institutional, collective socialization, relative deprivation, and epidemic models as mediators of the hypothesized negative effects of neighborhood disadvantage. Results indicate that concentrated poverty has a strong, negative impact on college graduation, whereas it has only a weak, marginally significant, negative relationship with college matriculation and evidence of a latent neighborhood effect. The impact of neighborhood poverty on graduation odds is explained by neighborhood economic opportunity, providing support for collective socialization theory.

#### **Education's Unequal Benefits? Conditional Effects of College Degrees on Health Behaviors**

*Elizabeth Lawrence, University of Colorado - Boulder*

Among U.S. adults, college degree earners live much healthier lives than those with less education, but we know little about why. This study seeks to determine heterogeneity in the causal effects of college degrees on multiple health behavior outcomes, including smoking, exercising, maintenance of healthy weight status, and heavy drinking. Identifying whether college degrees have greater benefits among those who are least or most likely to attain these degrees will indicate whether education serves to equalize or reproduce inequality. The restricted-use data from the National Longitudinal Study of Adolescent Health (Add Health) are uniquely positioned to test these competing hypotheses, as they offer longitudinal information on the educational experiences and health behaviors of individuals across adolescence to adulthood. Heterogeneous treatment effect models using propensity score matching to estimate causality will determine how college degree-health behavior associations differ across an



individual's likelihood of attaining a college degree. Dependent variables include Wave IV health behavior measures. Key independent variables are a Wave IV indicator of whether an individual earned a college degree and a Wave I measure of the likelihood of college degree attainment created from an array of individual, family, and school characteristics. I expect to find that those least likely to attain a college degree receive greater benefits than those most likely.

**Reassessing the Effect of Education on Health**

*Michael Esposito, University of Washington Dep't of Sociology*

If the effect of education varies across racial groups has been of interest to researchers for some time. Though the empirical work on the subject has yielded valuable insights, much is susceptible to the same criticism directed at research examining education and health more generally. That is, the set of confounding factors which influence both one's health and level of educational attainment is large and often left unaccounted for, and thus, estimates of the effect of education on health (or any variation in it across groups) are biased in that they reflect a great deal of the variation found in factors prior to education. Given these criticisms, this paper seeks to address if the effect of education on health does vary across racial groups while taking special care in accounting for confounders. To achieve this, I utilize Bayesian Additive Regression Trees (a nonparametric modeling procedure which is adept at handling a very large number of covariates) in conjunction with the rich information provided in Add Health. Specifically, I examine if self-rated health, obesity, and hypertension vary by race and highest level of education completed at Wave IV, while accounting for a set of continuous and categorical factors ( $p = 45$ ) from Wave I which likely served to influence later health and educational attainment. Given past research on the subject, I expect to find differences across racial groups, but for the degree of difference to be less than what has been previously reported.

**Pediatric Asthma and Academic Performance**

*Wendy Parker, Albany College of Pharmacy and Health Sciences*

*Julia Muzzy, coauthor*

Pediatric asthma is a leading chronic condition in children in the U.S. today. Asthma is disproportionately prevalent among the poor and correlated with other markers of socioeconomic disadvantage. The costs of asthma are significant and estimated nationally at \$14 billion in 2001 for physician office visits, emergency department visits, hospitalizations, and missed school or work days (National Asthma Survey, New York State Summary 2006). Human health and quality of life costs for children are also tremendous. Children with asthma may have to limit their exercise and outdoor activities, may miss more days of school, may visit the ED more often, and may be lethargic or unable to concentrate especially with uncontrolled asthma. Utilizing data from the National Longitudinal Study of Adolescent Health, the objective of this research is to discover whether there is a correlation between children's asthma and evidence of its control related to their academic performance during adolescence. Additionally we are interested in the role of parental education as it relates to the control of asthma and the influence on educational outcomes. We will look at self-reported asthma diagnosis, days missed in school, self-reported grades in school, failing grades or expulsion, and parental education. We expect to use these results to help build interventions targeting medication control in children with asthma.

**Paper Session: Romantic Relationships****Desistance from Risky Behaviors in Young Adulthood: Partnerships or Age**

*Emily Schondelmyer, Bowling Green State University*

Risk in adolescence is a well-studied area with an emphasis on the trajectories of individuals who engage in high risk behaviors during adolescence. Less is known about risk behaviors in young adulthood and any desistance that occurs. Both union formation and aging are seen as aspects of "growing up". Thus, each could result in desistance from risk behaviors. This study will use Add Health data from wave one and four to examine if desistance from risky behaviors is due to partnership or age. Change Score Analysis will be utilized to assess this transformation; this is a beneficial test as it easily illustrates desistance in risk behaviors. The sample is restricted to those who have formed and dissolved a co-residential union. This restriction allows for an analysis of any

lasting effects of forming a co-residential union even after the union has dissolved. Other key factors related to desistance will be accounted for including parenthood, education, and employment. Analyses addressing gender differences will also be applied. Events that influence a desistance in risk behaviors are important because the consequences related to risky behaviors. Moreover, it is important understand the role of emerging adulthood as a period of learning; if it is age related the effects of union formation may not be related to desistance from risky behaviors, where if union formation is related to the desistance from risk, then aging may not be related to desistance from risky behaviors.

### **Marriage and Cohabitation among Young Adults Diagnosed with Attention-Deficit Hyperactivity Disorder**

*Rhiannon A. Kroeger, Population Research Center, University of Texas at Austin*

*Debra J. Umberson, coauthor*

Using Waves 1 and 4 of the National Longitudinal Study of Adolescent Health (Add Health), we build on prior research considering attention-deficit hyperactivity disorder (ADHD) and interpersonal relationships by examining the instability of marital and cohabiting unions among young adults with and without ADHD. Specifically, we address two major research questions. First, does the number of marital/cohabiting partners ever involved with differ for young adults with and without ADHD? Second, among young adults reporting involvement in at least one marriage or cohabitation, are those with ADHD more likely to report relationship churning (i.e. separating and then reuniting with their partners) than their non-ADHD counterparts? We utilize poisson and logistic regression to examine our research questions, controlling for gender, age, race, and education in all models. Our results suggest that young adults who have been diagnosed with ADHD report involvement with significantly more marital/cohabiting partners than those without ADHD. In addition, individuals with ADHD have greater odds of experiencing relationship churning within their relationships than do their non-ADHD counterparts.

### **Beyond Propinquity: Do Interracial Friendships Facilitate Interracial Intimacy?**

*Jiannbin Lee Shiao, University of Oregon*

Researchers regard interracial intimacy as a mechanism for integration because of the assumption that the partners come from distinct social worlds, e.g. racially homogeneous friendship networks. Using the National Longitudinal Study of Adolescent Health (Add Health), I investigate the relationship between interracial intimacy and interracial friendship, specifically the question of how young adults' chances of having an interracial romantic relationship depend on the racial composition of their friends during adolescence and their exposure to interracial relationships among these friends. I hypothesize that: (1) Young adults' odds of having interracial relationships are higher if they had any interracial friends in adolescence. (2) Young adults' odds of having interracial relationships are higher if their friends in adolescence had any interracial relationships. Estimating multilevel logistic models with random intercepts for each school, I find that interracial friendship remains a significant influence on the likelihood of interracial intimacy, even after controlling for selection bias, group size, social distance, and personal characteristics. Moreover, interracial friendship influences interracial intimacy both independently and interactively with opportunities for casual contact. In brief, interracial contact is not only a "random walk" it also creates a "third space" of social relations that are distinct from racially homogeneous social worlds.

### **The Role of Socialization and Personality in Romantic Relationship Quality in Young Adulthood**

*Amy Lucas, University of Houston – Clear Lake*

Explanations for successful romantic relationships have often focused on two theoretical mechanisms: socialization and personality traits. This paper examines the role that both socialization and personality have in the development of romantic relationship quality in young adulthood. This study seeks to examine the role that both (1) parent-child interactions and (2) parents' relationship quality during adolescence play in romantic relationship quality in young adulthood. Two aspects of relationship quality with romantic partners in young adulthood are examined: satisfaction and partner's affection, which, in turn, correspond to two aspects of parent-child interactions in adolescence, satisfaction with communication and affection. In addition, two aspects of relationship quality with romantic partners in young adulthood are examined: happiness and future relationship



orientation, which, in turn, correspond to two aspects of parental relationship quality: happiness and thoughts of separation. In the analysis of the role that each socialization measure has on its corresponding romantic relationship quality measure, personality is also examined. Regression models predicting the dimensions of relationship quality are estimated using a sample of dating, cohabiting, and married individuals from Add Health. Findings suggest that socialization operates independently of personality and that both factors should be accounted for when studying romantic relationship quality.

### **Breakout Session 3**

#### **Methodology Session: Appropriate Analysis in Add Health – Correcting for Design Effects & Selecting Weights**

Presenter: Ping Chen, University of North Carolina at Chapel Hill

Add Health is a national longitudinal study that has special survey design features. This session will discuss how users can account for those features, including clustering, stratification, and unequal probability of selection. It will focus on how to choose correct sampling weights and avoid common errors. It will also give specific examples of using different statistical packages to run descriptive statistics, population-average models, subpopulation analysis, multilevel models, and weight scaling for multilevel analysis.

#### **Paper Session: Physiological Indicators of Young Adult Health**

##### **Social Integration in Adolescence and Physiological Dysregulation in Young Adulthood**

*Karen Gerken, University of North Carolina at Chapel Hill*

*Kathleen Mullan Harris, Claire Yang, coauthors*

A large literature has found that social ties, embeddedness in social networks, and engagement in social life improves physical health; whereas social isolation and lack of social connections is harmful for health. Most of this research, however, has focused on older and/or aging populations, with little attention to the early stage of the life course. We investigate how social integration and isolation in adolescence may have long lasting effects on physiological dysregulation in young adulthood, as indicated by objective biomarker measures of cardiovascular and immune functions including inflammation and blood pressure. We use longitudinal data from Add Health and measure social integration in the multiple contexts of adolescent life: family, peers, school and community contexts. Preliminary findings support our hypothesis that greater social integration and less social isolation in adolescence is associated with better health, or lower levels of CRP and blood pressure in young adulthood. We explore a number of mechanisms to explain this relationship, including connectedness across the life course, health behaviors and psychosocial resources.

##### **Childhood Poverty and Adult Allostatic Load: Predictors of Long-term Health Outcomes**

*Natalie R. Troxel, University of California - Davis*

*Paul D. Hastings, Jonathan L. Helm, coauthors*

Allostatic load is a measure of wear and tear on the body caused by constant adaptation to stress and represents the loss of the body's adaptability. The strain of prolonged exposure to stress can over-tax the body's self-regulatory abilities and lock physiological systems into an unhealthy state, leaving children vulnerable to many chronic health problems which may persist into adulthood. In this study, we hypothesize that adult allostatic load will be positively predicted by childhood and adolescent socioeconomic distress. Using structural equation modeling, we examine the associations between Wave 1 parent-, child-, and census-reported socioeconomic variables (e.g., family income, local unemployment) and Wave 4 biomarkers (e.g., glucose, blood pressure). Covariates (e.g., respondent age) and moderators (e.g., gender) will be included. Preliminary analyses using regression modeling have shown that neighborhood affluence, neighborhood safety, and family resources measured at Wave 1 accounted for 4.5% of the variance in allostatic load measured at Wave 4. Having a lower level of neighborhood affluence at Wave 1 was the single strongest predictor of adult allostatic load. These results

indicate that poverty experienced during childhood and adolescence has a significant effect on indicators of compromised physical health in adulthood.

**Youth Survival Expectations: Forecasts for Future Health**

*Naomi N. Duke, University of Minnesota*

*Barbara J. McMorris, Iris W. Borowsky, coauthors*

**Objective:** In national studies, some otherwise healthy youth report they will not live into adulthood. Belief in risk for premature death is more prevalent among youth of color, and may become a self-fulfilling prophecy as youth give up on future life investment. The purpose of this study is to describe the relationship between youth survival perceptions and health in adulthood.

**Methods:** Data are from Waves I-IV of the in-home interviews from the National Longitudinal Study of Adolescent Health. The study sample includes 10,120 respondents participating in all waves (11-34 years). Linear and logistic regression models are used to determine the predictive ability of low perceived survival (Waves I-III), defined as a belief in a 50-50 chance or less of survival to age 35 years, on health measures, including diagnostic profiles, reproductive outcomes, and cardiovascular/inflammatory (blood pressure; heart rate; hs-c-reactive protein) biomarkers.

**Preliminary/Anticipated Results:** Persistence in low perceived survival and uncertainty in survival perception over time are associated with disease burden and poor cardiovascular health indicators in adulthood (Wave IV). Mediators of these relationships will include health behaviors, subjective weathering, and educational attainment.

**Discussion:** Examination of youth survival expectations represents a unique mechanism to address health disparities by establishing a link between survival perceptions and long-term health outcomes.

**From Adolescent Schooling to Adult Health: School Experiences, Socioeconomic Disadvantage, and Inflammation**

*Kristen Schorpp, University of North Carolina at Chapel Hill*

Extensive research has identified the widespread benefits of positive academic and social experiences on adolescent well-being, but it remains unknown whether such experiences within the school context are tied to future physiological functioning. Using data from the National Longitudinal Study of Adolescent Health (1994-2006), this study examined the longitudinal relation between adolescent school experiences, school contextual disadvantage, and a physiological indicator of inflammation (C-reactive protein) in young adulthood. Results from ordinal logistic regression analysis provide evidence for the protective effect of academic achievement, cognitive aptitude, and extracurricular involvement on young adult C-reactive protein levels. Furthermore, school-level socioeconomic disadvantage moderated these associations, such that adolescents in contexts of high socioeconomic disadvantage experienced greater benefits from high academic achievement and school connectedness compared to adolescents in schools of lower socioeconomic disadvantage. These results identify the significant relation between adolescent schooling and physiological functioning, and also illuminate the potential for positive school experiences to promote individual resilience among adolescents in disadvantaged school contexts.

**Paper Session: Family****Satisfaction in Communication with Parents Provides Persistent Protection against Suicidal Ideation: Evidence from Nationally Representative Longitudinal Data**

*S. Janet Kuramoto, Substance Abuse & Mental Health Services Administration, Center for Behavioral Health Statistics and Quality*

*Mir M. Ali, Holly C. Wilcox, coauthors*

This study examined the relationship between satisfaction in communication with parents during childhood/adolescence and risk of suicidal ideation into early adulthood among a nationally representative sample of American children and adolescents. The study consists of 8,873 respondent's ages 11-18 with at least one parent in the first wave (1994) from the National Longitudinal Study of Adolescent Health (Add Health) conducted between 1994 and 2009. Respondents were classified into four groups based on their satisfaction in communication with their parent(s) at Time 1. Serious suicidal ideation in the past 12 months was assessed at four time points. Thirty percent of respondents who reported unsatisfactory communication with both parents during childhood/adolescence experienced suicidal ideation at Time 1 (1994-1995), 21.% at Time 2 (1996), 10.2% at Time 3 (2001-2002), and 9.5% at Time 4 (2007-2009). This was in contrast to 8.5%, 8.5%, 6.1%, and 4.8% across Time 1, 2, 3, and 4, respectively, among those who were satisfied with communication with both parents. Those who reported satisfactory communication with both parents were less likely to report suicidal ideation than those who reported unsatisfactory communication with both parents (OR (95%CI): 0.81(0.66, 0.99)). Improving quality of parent-child communication during child/adolescence should be considered an important area for intervention along with other initiatives to foster parent-child connectedness.

**Psychometric Evaluation of approaches to Measuring Maltreatment in Add Health**

*Lauren Brumley, University of Pennsylvania*

*Sara Jaffee, coauthor*

**Purpose:** Recent high-profile cases have highlighted the need for research to better identify and serve children experiencing maltreatment. Maltreatment is a multifaceted collection of experiences defined in specific terms due to associated legal implications. However, estimates of maltreatment in Add Health have ranged considerably (e.g., physical abuse estimates range from 8% to 53% of the sample). Using both Wave 3 and 4 data provides an opportunity to strengthen the validity and reliability of measuring maltreatment in Add Health. This paper describes the development and psychometric evaluation of a measure of maltreatment, which will be compared to factor analytic and weighted-average approaches to measuring maltreatment in Add Health.

**Method:** Measures of physical and supervisory neglect, and emotional, physical, and sexual abuse were examined for cross-item correlations, inter-wave reliability, convergent validity with related constructs, and predictive validity. Sensitivity tests were conducted to determine cut-points to be consistent with rates reported in other epidemiological surveys.

**Results:** Results indicate a lack of construct validity for supervisory neglect and emotional abuse items. Roughly similar to estimates from other surveys, 8% reported experiencing physical neglect, 13% reported physical abuse, and 5% reported sexual abuse. We expect the current measure will demonstrate stronger validity than factor analytic and weighted-average measures of maltreatment.

**Birth Spacing and Outcomes in Adolescence, Young Adulthood, and Adulthood**

*Nga Nguyen, Rutgers University*

Birth spacing is an element of family structure which is widely-viewed as an important determinant of human capital investment. Although previous research finds birth spacing affects early-life outcomes such as birth weight, neonatal mortality, pre-school cognitive development, and test scores at elementary school age, no research has been done on the impact of birth spacing on the later outcomes in adolescence and range of adulthood. My contribution in this paper is two-fold. First, I investigate a wide later-life outcomes including educational

achievement, labor market outcomes, and the engagement in risky behaviors. Second, I examine and test for the persistence of such aspects during the stage siblings transit from adolescence to a range of adulthood. My empirical results show that birth spacing does not have an impact on an individual's test scores in adolescence and young adulthood. However, birth spacing has positive effects for the older sibling and the younger sibling on years of schooling and the likelihood of enrolling college in young adulthood although these effects do not persist when siblings transition to adulthood. The finding suggests that the allocation of family resources to and across siblings changes overtime to adapt to the family's and sibling's abilities. I find no effect of birth spacing on annual earnings and smoking cigarettes behaviors. These suggest that the effects of birth spacing on individual's outcomes vary over life circle.

### **Does Parent-Child Educational Similarity Vary by Parental Favoritism?**

*Emily Rauscher, University of Kansas*

Stratification research typically assumes that children from the same family share equal opportunity, yet within-family variation accounts for about 75% of economic inequality (Conley 2004). To deepen our understanding of inequality and how it is transmitted between generations, I investigate the relationship between parental favoritism and parent-child educational similarity. Favoritism may increase parent-child similarity across all socioeconomic backgrounds, increasing between-family inequality. Alternatively, it may only provide more resources and increase parent-child similarity among high SES families. Using family fixed effects and controlling for earlier academic performance, I compare same-sex twins in the National Longitudinal Study of Adolescent Health to investigate whether parent-child educational similarity varies by parental favoritism. Twin comparisons address much of the potential concern about endogeneity. Twins share similar environments and, for identical twins, the same genes. Results of twin pair fixed effects models suggest that twins who believe they are favored enjoy a higher educational return to mother's education than those who do not report favoritism ( $p < 0.1$ ). However, this relationship only holds for children of highly educated mothers (at least 16 years,  $p < 0.05$ ). Thus, preliminary evidence suggests family dynamics moderate the intergenerational educational transmission process, but only at high SES levels.

### **The Effects of Homelessness and Child Maltreatment on the Likelihood of Engaging in Property and Violent Crime during Adulthood**

*Courtney Cronley, The University of Texas at Arlington*

*Seokjin Jeong, Jaya B. Davis, Elissa Madden, coauthors*

**Purpose:** Most published studies examining the adverse effects of homelessness and child maltreatment employ community samples and traditional observational designs. Furthermore, few examine the simultaneous effects of these two risks factors on adult behavior. This study examines how experiencing child maltreatment and homelessness through emerging adulthood predict adult property and violent crime.

**Methods:** We used data from Waves 3 and 4 of the U.S. National Longitudinal Study of Adolescent Health ( $N=10,818$ ). Propensity score matching was employed to correct for sample selection bias between homeless and non-homeless individuals. Logistic regression models were run to predict violent and property crime at Wave 4, controlling for child maltreatment.

**Results:** Participants who experienced homelessness were 1.6 times more likely to commit violent crime at Wave 4 and almost 30% more likely to commit property crime. Those who were victims of child maltreatment were 15% more likely to commit property crime, but no more likely to commit violent crime. **Conclusions:** In a national sample, comparing statistically equivalent groups, homelessness predicted adult criminality, but child maltreatment showed more variable results. Greater prevention efforts targeting youth at high risk of experiencing homelessness, as well as more intensive outreach services to this population, may moderate reliance on survival behaviors. Results for child maltreatment merit closer examination.

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Friday, June 27, 2014

## Breakout Session 4

### Methodology Session: Add Health Genetic Data

Presenter: Brett Haberstick, University of Colorado at Boulder

The importance of genetic differences in observed variation between individuals is an active and important area of investigation. Add Health is unique among many large-scale studies in its inclusion of genetically-related individuals and collection of DNA information. This session will discuss the availability of that DNA information. A review of how the DNA was collected and the lab methods used to characterize differences between individuals will be introduced. Discussion will be given to the particular polymorphisms available presently, the additional polymorphisms to be assessed in Wave IV, and some issues relevant to their analysis.

### Paper Session: Financial/Labor Market Outcomes

#### Neighborhood Attainment Processes and Their Mediating Mechanisms

*Andrea Krieg, Bowling Green State University*

Ecological researchers have long argued that neighborhoods are an important indicator of socioeconomic status attainment (Massey and Denton, 1993; Wilson, 1987). Recently, scholars linked the macro-neighborhood unit to individual decisions, attitudes, and behaviors via persons' ability to use various sources of capital (Sampson and Sharkey 2008). Importantly, this work posits that both past and present neighborhood status influences an individual's capital. My research draws on these arguments and all four waves of Add Health to predict neighborhood attainment in young adulthood as an outcome of adolescent neighborhood status and individual psychological capital. I examine the possibility that the self-concept mediates between one's adolescent neighborhood socioeconomic status and marriage and educational attainment in adulthood. Specifically, I measure neighborhood status at Wave 1 using the contextual database (tract-level measures regarding disadvantage; i.e. female-headed households and families with income under \$15,000); I measure psychological capital as self-esteem (Rosenberg scale at Wave 2) and the ideal self (questions gauging aspirations of where individuals see themselves in the future from Wave 2); and marriage and educational status (Wave 3). I hypothesize that, 1) neighborhood advantage leads to higher levels of psychological capital (self-esteem and higher aspirations); 2) neighborhood advantage indirectly influences the normative adult transitions via its influence on psychological capital; and 3) adult neighborhood advantage is a product of adult transitions and adolescent psychological capital. I test these longitudinal processes using HLM. Preliminary results show that neighborhood advantage leads to higher levels of the self-concept, which mediate part of the relationship to adult outcomes.

#### Personality Traits and Financial Outcomes

*Yilan Xu, University of Illinois*

*Andrea H. Beller, Brent W. Roberts, Jeffrey R. Brown, coauthors*

The recent economic crisis has brought into stark reality the inadequacy of financial literacy in the United States. For example, many people borrowed on mortgages that they could not sustain and thus ended up in default or foreclosure. Following the recent work on non-cognitive skills, we propose to adapt an interdisciplinary approach at the borders of economics, psychology, and finance to investigate the new question of the role of personality in such financial decisions for a sample of young adults born in the late 1970s. The National Longitudinal Study of Adolescent Health (Add Health) dataset uniquely combines individual personality measures with financial choices. It contains data in Waves I (1994-95) and IV (2007-08) on three of the "Big Five" personality traits: extraversion, neuroticism, conscientiousness. We use those traits available in adolescence as instrumental variables for personality traits in young adulthood when the financial decisions are made. The poor financial outcomes of the adults include high debt ratios, unaffordable home mortgages, and missing bills, which we consider as proxies for



financial literacy. The identification of relations between personality traits and financial decision-making can lead to important policy implications, whereby personality interventions in childhood can be used as an innovative approach to head off the over-indebtedness and other financial difficulties faced by U.S. households.

### **Civic Engagement and the School-to-Work Transition among Young People with Disabilities**

*Carrie L. Shandra, State University of New York at Stony Brook*

Previous literature suggests that volunteering and other forms of civic engagement contribute to more positive transitions to adulthood. Volunteering during adolescence is associated with improved average academic performance and educational attainment. It is also positively associated with the likelihood of employment. However, less is known about the relationship between volunteering and employment among students with disabilities, who typically experience lower rates of employment than those without disabilities. This study addresses that gap by using longitudinal data from the National Longitudinal Study of Adolescent Health to examine the role of civic engagement in the school-to-work transition for youth with disabilities. Data are used from Waves 1 and 3 of the public-use data file, with disabling condition and severity of limitation measured in Wave 1 and civic engagement and employment measured in Wave 3. Preliminary results suggest students with disabilities are less likely to participate in volunteer activities than their peers without disabilities. However, the estimated effect of volunteering on employment is greater for those with a disability than for those without a disability. Future work will extend these analyses to consider educational attainment, wages and tenure, and other forms of civic engagement (e.g. Duke 2009). Thus, results will help understand an alternate pathway through which adolescents with disabilities might increase labor market success.

### **Examining the Persistence of Public Assistance Participation from Childhood into Adulthood**

*Yuna Kim, University of North Carolina at Chapel Hill*

*Krista Perreira, Harsha Thirumurthy, Kathleen Mullan Harris, coauthors*

A key objective of public assistance programs is to provide a safety net for disadvantaged households and enable them to transition out of assistance and into improved economic well-being. Using data from Waves 1 through 4 of Add Health, this study will examine what factors predict public assistance or Medicaid receipt in adulthood and identify characteristics that influence the persistence of childhood public assistance or Medicaid participation into adulthood. Using linear probability models and a rich set of demographic and neighborhood controls, we estimate the reduced form association between public assistance or Medicaid exposure in childhood and public assistance or Medicaid participation in adulthood. To identify the mechanisms that explain the intergenerational transmission of public assistance, we estimate the probability of participating in public assistance or Medicaid in adulthood using an analytic sample that is restricted to individuals who received government support in childhood. We find that race and ethnicity do not explain the persistence of participation in government support programs. Rather, educational attainment (i.e. graduating high school) is a primary mechanism that explains the persistence of public assistance or Medicaid over time. These findings suggest that public assistance benefits are not sufficiently enabling children of recipients to complete the schooling necessary to ensure economic independence in the future.

### **The Economics of Natural Mentoring Relationships**

*Zach Timpe, Colorado State University*

*Erika Lunkenheimer, coauthor*

Mentors have been shown to help improve psychological and educational outcomes of youth, and may also serve a greater role for youth experiencing risk in the home. In this study, using publicly available data from Waves I, III, and IV, we investigated the effects of natural mentors during youth on income outcomes during early adulthood. We then examined the effects of mentors on youths' income outcomes based on environmental risk, in this case the absence of a father figure. We found little evidence that the presence of a mentor alone had a significant impact on annual earnings during adulthood; however, we did find evidence that the presence of a mentor, coupled with the absence of a father figure, significantly impacted future earnings. More specifically, youth without a father but who had a male mentor earned more, on average, than youth who had neither a father nor a male mentor. Additionally, these results were larger in magnitude and stronger in significance for a subsample of African



American youth. The economic concept of Net Present Value was then used to generate an estimate of the lifetime economic benefits to having a mentor. We found the present value of total lifetime benefits to having a mentor for youth without a father to be approximately \$130,000 in general, and \$300,000 for African American youth. These findings suggest that natural mentors may foster skills in at-risk youth which result in increased earnings.

**Paper Session: Psychological Health****Psychological Distress between Young Adult Female Survivors of Childhood Cancer and Matched Female Cohorts Surveyed in the Adolescent Health Study**

*Mary Ann Cantrell, Villanova University*

*Michael Posner, coauthor*

**Objective:** The psychological health of childhood cancer survivors is an essential treatment outcome. Female survivors are a subgroup of survivors with an increased risk for poor psychological outcomes. This study compared psychological distress in young adult female survivors of childhood cancer to young adult females in the general population with no history of childhood cancer. Psychological distress was measured by assessing respondents' subjective degree of depressive symptoms, anxiety, and somatization.

**Methods:** The study was a secondary data analysis. The sample was drawn from The National Longitudinal Study of Adolescent Health, which used a representative, probability-based sampling technique. The sample included 66 young adult female survivors of childhood cancer and 8,186 young adult females with no history of cancer. Randomized, nonparametric testing was used to construct 10,000 different age-matched female cohort samples from the general population.

**Results:** Young adult female survivors of childhood cancer had more depressive symptoms ( $p < 0.05$ ) as compared to matched cohorts with 589 of the 10,000 matched samples. There were no statistically significant differences between the cancer survivors and the matched cohort groups on anxiety and somatization symptoms.

**Conclusion:** Young adult female survivors of childhood cancer are at an increased risk of experiencing depression, which can decrease their psychological functioning and emotional well-being.

**Neighborhood Context and Mental Health over the Early Life Course**

*Peter Barr, The University of Akron*

A rapidly growing body of literature within the sociology of mental health has demonstrated the importance of neighborhood context in shaping mental health above and beyond individual level factors. Drawing on insights from social disorganization theory, we see how neighborhood disadvantage and disorder play an important role in shaping mental health outcomes. However, the majority of work has been limited in time span and found only modest effects. Drawing on a life course perspective within the stress process framework, I will explore how neighborhood context influences trajectories of mental health across the early adult life course. Using data from the National Longitudinal Study of Adolescent Health, I will examine changes in both depression and substance abuse across a fourteen year period as adolescents transition into early adulthood. Comparing these trajectories across outcome seeing how they interact with individual level factors will provide a deeper understanding of how these aspects of mental health change over time. Exploring the role of stress exposure will also demonstrate whether stressful experiences mediate the relationship between neighborhood context and mental health, or if they act as moderators.

**Wellbeing and Place: Nature vs City**

*Adam Okulicz-Kozaryn, Rutgers University - Camden*

I study the effect of urban and natural environment on subjective wellbeing. Urban environment is measured with a survey question about size (population) of a place, but I also plan to use ecological or environmental data about

socio-demographic characteristics of the place. Subjective wellbeing is measured either with happiness/life satisfaction item or a depression scale (depending on the wave), but I also plan to use other variables capturing mental health or wellbeing. I expect to find that people are most happy in small, natural areas and least happy in the biggest cities. This is the finding in the extant literature, but I am not familiar with any studies using Add Health or any other panel data to investigate this relationship. I will use a longitudinal design and possibly a multilevel model.

### **Adult Symptoms of Attention-Deficit/Hyperactivity Disorder: An Exploratory Analysis**

*Adam S. Vogel, Roosevelt University*

*L. Lu, A. Thomas, S.A. Kvaal, coauthors*

Research devoted to identifying symptoms in adults with ADHD has been sparse. The aim of the authors was to investigate behaviors associated specifically with adults with ADHD. Using the Retrospective ADHD questionnaire and problem behavior data from the Add Health database, we explored problem behaviors that best predicted ADHD categorization in a sample of 13,278 healthy adults and 945 adults with self-reported ADHD. Problem behaviors were grouped using factor analysis, and ADHD status was predicted using these factors via discriminant function analyses. Results found three factors of interest that predicted ADHD: Stimulation Seeking, Risky Sexual Behavior, and Heavy Drug Use. Interestingly, the former two were positively related to ADHD but Heavy Drug Use was negatively related to ADHD. When subtypes of ADHD were examined independently, factors that were associated with ADHD were different depending on the subtype being examined. Additionally, the author constructed clinical theoretical factors based on experience and found that Risky Sex, Stimulation Seeking, and Drugs, among others, were predictive of who had ADHD. Contrary to what was hypothesized, Inattention was negatively associated with ADHD. The results demonstrated that the symptoms associated with adult ADHD were fairly distinct from childhood symptoms of ADHD presented in DSM-5. Implications would include that the DSM-5 criteria, designed originally only for children, may be inappropriate for use in adults.

### **Do Depressive Symptoms in Male and Female Adolescents Predict Unintended Births in Emerging Adulthood?**

*Laurie James-Hawkins, University of Colorado Boulder*

*Danielle Denardo, Casey Blalock, Stefanie Mollborn, coauthors*

Hypotheses: Both women and men will be more likely to report an unintended pregnancy between the ages of 18-24 (in emerging adulthood) if they report higher levels of depressive symptoms in adolescence.

Method: Data from 14,271 respondents to the National Longitudinal Study of Adolescent Health, waves 1 and 4 (reproductive histories), will be used to examine the relationship between depressive symptoms in adolescence and unintended first birth in emerging adulthood in both females and males.

Key Variables: Average depressive symptom scores collected at wave 1 will be used to predict wave4 reported reproductive events occurring between the ages of 18 and 24 such as abortion, use of effective versus ineffective contraceptive methods, and unintended pregnancy. Background factors will be added differences examined by gender.

Analytic approach: OLS Regression and logistic regression will be used.

Expected results: It is expected that depressive symptoms in adolescence will be predictive of increased chance of abortion, unintended pregnancy, and use of ineffective contraceptive methods. In addition, it is hypothesized that this relationship will be stronger for women than for men.

**Breakout Session 5****Methodology Session: Modeling Contextual Data in Add Health**

Presenter: Sharon Christ, Purdue University

This presentation provides an overview of two approaches to modeling Add Health data utilizing the contextual variables available in the Wave I, II, III, and IV Contextual files and the Wave I and III ONE files. Multilevel and marginal modeling approaches will be discussed including longitudinal modeling within these frameworks. Special focus will be on how to properly adjust model estimates for the complex sample design of the Add Health, including applying the correct sampling weights and correcting for the non-independence (clustering) of observations. Treatment of missing data will also be touched upon due to its relationship to sample weight selection. Pros and Cons of the different modeling approaches and estimation methods will be considered.

**Paper Session: Nutrition/BMI****Longitudinal Predictors of Disordered Eating among US Latina Young Adults**

*Janet M. Liechty, University of Illinois*

*Meng-Jung Lee, Maria F. Pineros-Leano, Jaclyn A. Saltzman, coauthors*

We examined psychosocial risk factors for disordered eating among US Latinas from adolescence to young adulthood. The National Comorbidity Survey shows that Latino youth have higher rates of binge eating disorder and bulimia than other race/ethnic groups. Risk factors may differ for Latinas but this has not been examined at the population level. We used Waves 1 and 3 of the National Longitudinal Study of Adolescent Health ( $n=20,745$ ). Participants ( $n=7556$ ) were Latina ( $n=1172$ ), White ( $n=3963$ ), African American ( $n=1725$ ), and Asian ( $n=513$ ) females enrolled in grades 7-12 in 1994-95 at W1 who were followed for 7 years. Latina young adults had the highest prevalence of unsafe weight control (7.3%) and binge eating (5.5%). Lifetime prevalence of ED diagnosis, assessed in young adulthood, was 2.1% among Latinas compared to Whites, Asians, and Blacks (5.0%, 1.8%, 1.4%). Adjusting for background demographics, multivariate logistic regression found that binge eating was predicted by adolescent depression among Latinas ( $OR=3.27$ ,  $CI=1.45-7.36$ ,  $p<.001$ ) and Whites ( $OR=2.27$ ,  $CI=1.32-3.88$ ,  $p=.003$ ). Unsafe weight control in young adulthood was predicted by early dieting among Latinas ( $OR=3.12$ ,  $CI=1.41-6.89$ ,  $p=.005$ ) and Whites ( $OR=1.58$ ,  $CI=1.01-2.48$ ,  $p=.044$ ). Lifetime prevalence of ED diagnosis was predicted by early dieting among Latinas only ( $OR=15.99$ ,  $CI=3.55-71.85$ ,  $p<.0001$ ). Prevalence of disordered eating among Latina young adults is high, and risk factors vary by race/ethnicity.

**Boys' high school sports participation and their early adulthood physical activity and obesity in a representative longitudinal study**

*Robert W. Turner, University of Maryland College Park*

*Asheley Cockrell Skinner, Kivan Polimis, Eliana M. Perrin, Tamera Coyne-Beasley, coauthors*

**Purpose:** To understand the protective and risk factors of male high school sports participation (Football (FB) and Basketball (BB)) on early adulthood physical activity levels and obesity prevalence.

**Methods:** Data derives from the in-school student questionnaire, the in-home student interview and parent interviews during multiple waves of Add Health. We examined the association of adolescent male obesity with participation in BB, FB, both, or no sports. The final analysis contained 9,267 males with valid survey weights and activity data for at least one wave.

**Results:** Adolescent boys that reported that no high school sport involvement in Wave I were less likely to engage in traditional sports or cardiovascular activity in subsequent waves. By Wave IV, there were no significant differences in activity levels based on high school sports involvement. Higher physical activity levels in adolescents were consistently associated with lower early adulthood obesity prevalence. The prevalence of obesity increased among those who played BB or no sports in high school regardless of adult activity levels.

Conclusion: High school sports participation had different effects on physical activity levels and the prevalence of obesity among young adult males. Our findings suggest that as BB players age and become less active the prevalence of obesity begins to mirror FB players. Further research may determine the reason for BB players decreased activity levels.

### **Family Meals, Nutrition, and Obesity: A Generational Comparison among Mexican-American Adolescents and Young Adults**

*Carolyn Zambrano, University of California – Irvine*

Norms about food and meals can vary widely between families, communities, and countries. Family meals provide a venue to reinforce family values, create shared meanings, and provide an opportunity for parents to model good nutritional behavior (Neumark-Sztainer 2006). Research suggests that adolescents who share meals with their families are more likely to have nutritious diets (Hamilton and Wilson 2009), and the presence of a parent during the evening meal lowered the odds for the poor consumption of fruits and vegetables (Videon and Manning 2003). For Mexican-Americans, there is a protective effect in regards to nutrition for those who are less acculturated; they are more likely to consume a higher amount of fruits and vegetables (Neuhouser et al. 2004). Using Waves II and IV of Add Health, I will compare the number of family meals consumed per week for first, second, and third generation-plus Mexican-American adolescents. I predict that first and second generation Mexican-American adolescents will eat more family meals than third generation-plus Mexican-American adolescents. Furthermore, I predict that first and second generation Mexican-American adolescents will also be more likely to consume the recommended daily amounts of fruits and vegetables. Lastly, I expect to find that consuming the daily-recommended amount of fruits and vegetables at Wave II will be associated with lower rates of obesity (measured by using BMI and waist-to-height ratio) in adulthood (at Wave IV).

### **BMI and Musculoskeletal Pain among Hispanics and non-Hispanic Whites: Evidence from the National Longitudinal Study of Adolescent Health**

*Anna Zamora-Kapoor, University of Washington*

*Caro Monico, Adam Omidpanah, Dedra Buchwald, Raymond Harris, Nathalia Jimenez, coauthors*

Background: Hispanic adolescents exhibit, on average, a higher BMI than non-Hispanic Whites but report lower frequencies of musculoskeletal pain. This paper examines the extent to which Hispanics' acculturation, identified with the language spoken at home, could be explaining this racial/ethnic gap.

Design: We conducted a cross-sectional analysis to determine the role of BMI, acculturation, socio-demographic, behavioral, and socio-economic variables in adolescents' reported frequency of musculoskeletal pain.

Subjects: We used a sample of 11,616 adolescents identified as Hispanic or non-Hispanic White from the National Longitudinal Study of Adolescent Health, wave I (1994). We classified our subjects into three groups: English-speaking non-Hispanic White (ESW), English-speaking Hispanic (ESH), and Spanish-speaking Hispanic (SSH).

Methods: We employed a proportional odds logistic regression using ESW as a reference category.

Results: Most variables of our model were statistically significant. After controlling for BMI, socio-demographic, behavioral, and socio-economic variables, we found that both ESH and SSH were less likely to report an incrementally higher frequency of musculoskeletal pain than ESW.

Conclusion: Our findings provided evidence that acculturation is associated with adolescents' reported frequency of musculoskeletal pain.

## **Understanding the Role of Adolescent Social Networks on Ethnic Disparities in Healthy Eating Using Spatial Econometrics**

*Olugbenga Ajilore, University of Toledo*

Children of different minority populations face different levels of resources which impacts the availability of healthy options and an understanding of proper eating habits. Social learning theory posits that peers can influence youth behavior through observation. Determining both the direct effect of peers and the indirect effect of peers on healthy eating can enhance our understanding of the potential impact of interventions on children. The policy implications of understanding peer effects are that programs which provide exposure to peers in high-resource communities can strengthen existing school and community based interventions. The proposed project will establish the impact of these so-called "multiplier" effects that is missing from the current childhood obesity literature. The project aims to determine the effect of peer influence on the eating behavior of adolescents and its implications on childhood obesity. A second aim of this project is to establish the efficacy of spatial econometrics in studying adolescent behaviors using survey data. We hypothesize that peers have a positive direct impact on adolescent eating behavior, but that the indirect peer effects are going to be different based on race and ethnicity. It is the estimation of these indirect effects that will make a contribution to our understanding of childhood obesity factors.

### **Paper Session: Gene-Environment Interactions**

## **Dopamine Transporter Gene DAT1 and Leadership Role Occupancy: Examining Dual Mediating Mechanisms**

*Wendong Li, Kansas State University*

*Zhaoli Song, Nan Wang, Richard D. Arvey, Richie Soong, Saw Seang Mei, coauthors*

Research on trait theories of leadership has consistently shown that individual difference variables are critical in shaping leadership processes. Classical twin studies have further reported appreciable genetic effects on leadership role occupancy. In the new era of genomics, researchers have just begun to explore specific DNA markers related to leadership. Extending this line of inquiry, the current research examines how a dopamine transporter gene, DAT1, is related to leadership role occupancy by drawing upon leadership theories, molecular genetic research, and other related areas through two empirical studies. The first study finds DAT1 10-repeat allele to be negatively related to proactive personality, which in turn is positively associated with leadership. The indirect effect is found significant, but the overall relationship between the genetic marker and leadership role occupancy is not. The findings spurred the second study using a nationally representative sample. In addition to replicating the findings of Study 1, Study 2 reveals another countervailing mechanism: DAT1 10-repeat allele is found to be positively related to rule breaking, which is then positively associated with leadership role occupancy. Consistent findings across the two studies suggest that the pathways linking specific genes to leadership are complex. The results also have implications for future research on biological foundations of leadership and for adopting a more theory-driven approach.

## **The Contextual Heritability of Life Course Transitions to Adulthood and SES**

*J Micah Roos, University of California – Berkeley*

*Francois Nielsen, coauthor*

We use DeFries-Fulker (1985) analysis (DF) to estimate univariate quantitative genetic decompositions for 15 educational and socioeconomic outcomes related to life course transitions to adulthood and socioeconomic status, both with and without fixed effects (FE) controls for age, female gender, and race/ethnicity (white ref., black, Hispanic, other). We also compute a measure of familiarity (half the heritability plus the shared environment) that reflects predicted resemblance between ordinary siblings on the trait. We find that: (1) FE control does not affect estimates of heritability ( $a^2$ ), significantly decreases estimates of the shared environment ( $c^2$ ) and significantly increases the non-shared component ( $e^2$ ); (2)  $c^2$  represents a significantly greater share of familiarity for outcomes related to formation of the family (household income, household wealth, home ownership), although overall familiarity is low for these outcomes; (3) both  $a^2$  and  $c^2$  decrease, and  $e^2$



increases, with the position of an outcome later in the life course; these patterns are reflected in a strong trend of declining familiarity with life course position; (4) The etiology of some outcomes is close to purely genetic, with only small contribution from the shared environment: subjective social status, personal income, occupational wages, and college graduation.

**Depression and Alcohol Use Disorders as Gendered Phenotypes of 5-HTTLPR**

*Bryant Hamby, The University of Alabama at Birmingham*

The serotonin transporter linked polymorphic region has been associated with both depression and alcohol use disorders, but this association has not been consistent. Previous research on mental health has posited that depression and alcohol use disorders are functionally equivalent manifestations of distress, with men displaying alcohol use disorders and women displaying depression in response to stress. Utilizing data from the National Longitudinal Study of Adolescent Health, this paper tests the hypothesis that the presence of the risk-conferring serotonin gene alleles increases an individual's chance of expressing distress as either depression or alcohol use disorders in Wave IV in response to stressful life events (SLEs) encountered in Wave III, depending on gender. Increased symptoms of depression are expected for females who encounter SLEs with 1 or 2 copies of the risk alleles compared to others, while increased symptoms of alcohol use disorders are expected for males who encounter SLEs with 1 or 2 copies of the risk alleles compared to others. There are two regression models testing for the number of symptoms of either depression or alcohol use disorders, while controlling for the number of depressive symptoms or the number of weekly drinks from the previous wave respectively. Further, fixed effects among sibling pairs are used in order to control for population stratification and the models will be stratified by sex, which will be used as a proxy for gender.

**Latent Class Analysis of Adolescent Substance Use and Antisocial Behaviors Comorbidity: Gene-Environment Interplay and Gender Differences**

*Jinni Su, University of North Carolina at Greensboro*

*Andrew J. Supple, coauthor*

Using a person-centered approach, this study aims at examining co-morbidity typologies of substance use and antisocial behaviors among adolescents and gene-environment interplay in relation to co-morbidity typologies. Given past research suggesting gender differences in substance use and antisocial behaviors, gender differences in co-morbidity typologies will also be explored. Genetic factors considered in this study include the dopamine D4 receptor gene (DRD4) and the serotonin transporter gene (5-HTTLPR) collected at Wave IV in Add Health. Environmental factors considered will be childhood maltreatment (retrospective measure at Wave III), and parental warmth (adolescent-report at Wave I). Latent class analysis will be conducted using MPlus to examine co-morbidity typologies, using dichotomized substance use and antisocial behaviors measured at Wave I as indicators. Analyses will be conducted separately for males and females. It is expected that a large proportion of adolescents will be classified into a typology characterized by low risk for engagement in any substance use and antisocial behaviors and other adolescents will be classified into typologies characterized by risk for engagement in different combinations of substance use and antisocial behaviors. It is also hypothesized that genetic factors and environmental factors will interact in influencing adolescents' likelihood of being classified in different co-morbidity typologies.

**Breakout Session 6****Methodology Session: Add Health Relationship and Fertility Data**

Presenter: Mariah Cheng, University of North Carolina at Chapel Hill

This session will discuss relationship and fertility data available in Add Health Wave IV, with focus on the nested data collection design, the relationship selection criteria, and the hierarchical file structures across the relationship, pregnancy, live birth, and child sections. Descriptive statistics on these data, as well as some technical data checking and file merging tips will be provided.



**Paper Session: Peer Networks****Parental Monitoring, Structure, Self-Esteem, School Connection, and Network Position as Moderators of Peer Contagion of Delinquency***Andrew Reynolds, Boston College*

While previous research has demonstrated that adolescents are influenced by the behavior of their peers, less is known about moderators of this influence (Dishion & Tipsord, 2011). Using in-home and in-school questionnaire as well as social network data from Waves I and II of Add Health, this study examines the following moderators of delinquency contagion: parental monitoring, structure, self-esteem, connection, and social network position. Three hypotheses were tested: First, adolescents with higher levels of parental monitoring and structure are less vulnerable to delinquency contagion. Second, adolescents with higher levels of self-esteem and connection to the school environment are more resilient to the influence of peer delinquent behaviors. Third, higher status and popular adolescents are at greater risk for peer contagion. Additionally, three-way interactions were tested to examine how moderators may function differently by gender. Longitudinal models using generalized estimating equation (GEE) procedures were used to examine relationships between ego and alter depression scores and study moderators. Social network analysis was conducted using Pajek and UCINET. Preliminary analyses provide support for study hypotheses, controlling for selection effects (homophily) and contextual factors. Results highlight pathways for interventions to promote resilience and to reduce the potential negative effects of peer contagion. Implications for policy and research are discussed.

**Likelihoods for Fixed Rank Nomination Networks with Applications to Friendship Networks from Add Health***Alexander Volfovsky, Harvard University**Peter Hoff, Bailey Fosdick, Katherine Stovel, coauthors*

Many studies that gather social network data use survey methods that lead to censored, missing or otherwise incomplete information. For example, Add Health employs the popular fixed rank nomination (FRN) scheme, asking study participants to nominate and rank at most a small number of contacts or friends, leaving the existence of other relations uncertain. However, most statistical models are formulated in terms of completely observed binary networks. Statistical analyses of FRN data with such models ignore the censored and ranked nature of the data and could potentially result in misleading statistical inference. To investigate this possibility, we compare parameter estimates obtained from a likelihood for complete binary networks to those from a likelihood that is derived from the FRN scheme, and therefore recognizes the ranked and censored nature of the data. We show analytically and via simulation that the binary likelihood can provide misleading inference, at least for certain model parameters that relate network ties to characteristics of individuals and pairs of individuals. We also compare these different likelihoods in a data analysis of several adolescent social networks from Wave 1 of Add Health. For some of these networks, the parameter estimates from the binary and FRN likelihoods lead to different conclusions, indicating the importance of analyzing FRN data with a method that accounts for the FRN survey design.

**Great Expectations: A Study on the Determinants of Adolescent College Graduation Expectations***Thomas Maestas, University of New Mexico Sociology Dep't*

Past research indicates that peers are important for shaping adolescents' worldview, identity, and subsequent educational expectations. Building on this research, this study focused on the association between peers' anticipation of academic achievement and adolescents' own expectations for college completion. Using first wave data from the Add Health Study and multivariate logistic regression, I tested the association between peer's college graduation expectation and respondent expectations of college completion, holding constant potential confounding variables (e.g., student socioeconomic status, academic achievement, school-connectedness, etc.).

Results indicated peer's expectation of college graduation was positively associated with respondents' expectations of college completion. Additionally, the positive association between peers' expectations and respondent expectations of college completion was stronger for students with lower grade point averages. Importantly, results were robust to the inclusion of parents' expectations of their own children's college completion. The results underscore the importance of peers in shaping adolescents' expectations of college achievement, and may hold policy implications for programs that foster informal mentorship among low-achieving students and peers with high expectations for college completion.

### **Social Withdrawal and Delinquency and Violent Behavior over the Life Course: A Network Perspective**

*Michael Nino, University of North Texas*  
*Tianji Cai, Daniel Rodeheaver, coauthors*

Social withdrawal is considered one of the most commonly identified dimensions of behavioral dysfunction among children. While prior social withdrawal research has established that children are likely to experience negative behavioral and social outcomes, few studies have attempted to unpack the long-term effect social withdrawal in adolescence has on delinquent and violent behavior. Using Waves I-IV of the Add Health, we examined the extent to which different forms of social withdrawal influence these behaviors over the life course. Results demonstrate that adolescents in active isolation (sent nominations but did not receive nominations), along with the completely withdrawn (no sent nomination or received nominations) are no more likely to engage in delinquent and violent behavior when compared to students with more robust network ties. Adolescents that received peer nominations but did not send any nominations, on the other hand, were found to be more delinquent and violent when compared to those with more robust ties. These findings indicate that youth who receive some recognition from peers within their respective school but do not acknowledge peer friendships within the school are at a much higher risk for engaging in behaviors attributed to poor health outcomes throughout the life course.

### **Social Network Characteristics of Adolescents with ADHD**

*Barbara Wise, Ohio State University College of Nursing*  
*Jodi Ford, coauthor*

**Purpose:** Peer problems have been well documented among children with ADHD, but less so among adolescents, and the friendship networks of teens with ADHD have not been described. The purpose of this study is to compare the friendship networks of adolescents with ADHD to those without ADHD.

**Methods:** Adolescents whose childhood symptoms met ADHD criteria were identified by retrospective self-report in Wave III. Wave I public use pre-constructed network variables and in-school questionnaires were utilized in the analysis. Independent variables: ADHD inattentive (ADHDIN), ADHD hyperactive (ADHDHI), ADHD combined (ADHDCI) Dependent variables: Perceived social acceptance, social network measures, extracurricular activities

**Findings/discussion:** Social acceptance was lower for ADHDIN and ADHDHI. In-degree was lower for ADHDHI, and out-degree was lower for ADHDIN. Centrality was lower for ADHDIN and ADHDCI. Strength of ties was higher for ADHDHI. Reach, proximity prestige, and percentage of isolates and pendants were non-significant, but Reach was lower in ADHDIN. Total number of extracurricular activities was lower for both ADHDIN and ADHDHI. The findings of this study support the more recent research that has identified inattentive symptoms as more correlated with social difficulties than hyperactive symptoms in adolescents. Further research is needed to explore the developmental trajectory of these differences and associated outcomes.

**Paper Session: Race/Ethnicity****Testing the Behavioral Model of Health Services Use: Are Disparities in Diabetes Diagnoses for Young Adults Due to Differences in Help-Seeking or Diagnosis Allocation?**

*Anna Bellatorre, University of Nebraska – Lincoln*

Early detection and continued monitoring of diabetes is vital for proper health maintenance for diabetics. However, diabetes is increasing among young adults, but it is unclear whether increased diabetes risk is being diagnosed accordingly across demographic groups. Andersen's Behavioral Model of Health Services Use (1995) provides a theoretical framework to assess if diabetes diagnostic disparities are due to differences in help seeking or differences in diagnostic screening among young adults with diabetes. Tests of Andersen's model among young adult diabetics from the National Longitudinal Study of Adolescent Health (N=971) reveal no difference in help seeking across race/ethnic groups. However, although all race/ethnic groups are equally likely to seek care, large diagnostic disparities persist particularly for African Americans. As a result, young adult African American diabetics are five times less likely to receive a diagnosis for diabetes even when they seek care in the previous three months. Future research is necessary to determine what it is about doctor visits that contribute to this diagnostic disparity.

**Are We Happier Among our Own Race?**

*Adam Okulicz-Kozaryn, Rutgers University – Camden*

I study the effect of ethnic density on wellbeing. Ethnic density is measured as a proportion of given race in an area. Wellbeing is measured with survey question about life satisfaction or depression scale (depending on wave). There are conflicting theories about the effect of ethnic density on wellbeing. Ethnic density may improve wellbeing of persons or small areas: people prefer to live among their own race and tend to provide social support within their own race. On the other hand, ethnic density may decrease wellbeing of large areas because it increases feelings of exclusion and isolation, leads to concentrated poverty, crime, and reduces overall (metropolitan-level) social cohesion. Furthermore, ethnic density may improve wellbeing of the rich enclaves (Whites) and depress wellbeing of poor enclaves (minorities). I have produced some research using the Behavioral Risk Factor Surveillance System and found that people are happier to live among their own race. But I would like to replicate this finding using Add Health data. I will use a longitudinal design and possibly a multilevel model.

**Does Integration Produce Equity? A Longitudinal Study of the Effects of Neighborhood Conditions on Racial Health Inequality**

*Courtney Boen, University of North Carolina at Chapel Hill*

Research identifies racial residential segregation as a key determinant of health disparities, yet three critical gaps in the literature remain. First, whether neighborhood economic conditions and neighborhood racial composition operate through similar or unique mechanisms to affect health remains unknown, as many studies of racial residential segregation and health confound these distinct characteristics of neighborhood context. Second, the specific biophysiological mechanisms through which neighborhood context affects health remain largely unspecified. Finally, much of the research on segregation and health is cross-sectional and does not examine how neighborhood contexts affect health as individuals age. Using multilevel modeling strategies and three waves of data from Add Health, this study examines how neighborhood economic conditions and racial composition affect biomarkers of physiological functioning over time. Preliminary analyses indicate that neighborhood economic deprivation harms health by increasing physiological stress response and decreasing levels of social integration. After adjusting for neighborhood economic conditions, I find that increased levels of neighborhood racial homogeneity result in worse outcomes for Whites but improved outcomes for Blacks, in part because Blacks living in highly segregated neighborhoods report reduced exposure to racial discrimination. This study extends understanding of the links between race, place, and health.

**The Influence of Neighborhood Composition on Condom Use among Young Adults***Nichola Driver, University of North Texas*

Rates of STDs remain widespread among adolescents in the U.S., with nearly half of annual new infections occurring among minorities (CDC, 2009). Condom use is one of the most effective ways of preventing STD transmission, yet very little is known about the complex factors contributing to condom use among minorities. An ecological framework suggests that neighborhood factors, including shared norms, values, and behaviors, can be influential on adolescent sexual risk behaviors, including the use of contraceptives (Cubbin et al, 2005). The present study examines the relationship between neighborhood immigrant composition and condom use and the extent to which this relationship varies by race/ethnicity. Data from the Add Health Waves I and III In-Home Questionnaires were used. Multilevel mixed-effects ordinal regression was employed to predict condom use consistency among Wave III respondents who are not married. Preliminary findings suggest that family closeness, gender, religious attendance, and parental communication about birth control were all significantly associated with consistency in condom use. Interaction effects revealed that neighborhood proportion of non-English speakers was significant, but only for Hispanics. Therefore, living in a non-English speaking, immigrant community has an effect on condom use that varies by race/ethnicity.

**Peer Effects, Immigration and Homophily: Evidence from US Adolescents***Shanshan Wang, University of Illinois at Urbana-Champaign**Yilan Xu, coauthor*

Immigration of different ethnicity moving to the United States is a common phenomenon over the history. The various composition of immigrant status and race in high school among adolescents is a reflection of the U.S. society. The peer effects with homogeneous friends are frequently mentioned in the literature. In our paper, we consider the heterogeneous immigrant background among US adolescents. This paper categorizes four immigration statuses for adolescents in the U.S. between 1994-1995. We also tracked their record around 2008. Individuals with similar background are likely to make friends because of homophily, a tendency for persons to be closer with peers with similarity, which has impact on adolescents' outcomes. We use the Add Health data to study how the peer effects, when considering different immigrant status and ethnicity, affect education outcomes in the short run and psychological health in the long run. For the friendship information, we match the friends using the Add Health friend nomination data. The purpose of this paper is to study when taking the immigrant status and ethnicity into consideration and setting different weights and homophily index on an individual's different friends, how the peer effects will affect the outcomes. Using a modified linear-in-mean model, we also try to figure out whether endogenous and exogenous peer effects can be identified separately.

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