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Add Health
Users Conference

National Institutes of Health
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Abstracts





Thursday, July 22, 2010

Plenary Session: Early Life Origins of Adult Health and Well-Being

Moderator: Michael Spittel, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development

Genetic Interactions with Prenatal Social Environment: Effects on Academic and Behavioral Outcomes

Dalton Conley, New York University
Emily Rauscher, coauthor

Caspi et al. (2002, 2003), Guo et al. (2008), and Pescosolido et al. (2008) all claim to have demonstrated allele-by-environment interactions, but in all cases environmental influences are endogenous to the unmeasured genetic characteristics of the subjects and their families. Thus, gene-gene interactions cannot be ruled out as an alternative explanation. Second, these studies have not deployed adjustments for multiple hypothesis testing—always an issue, but particularly so for GE studies with multiple alleles and outcomes. We address these limitations of previous studies by taking advantage of a natural experiment that randomizes a particular environmental influence – fetal position that results in birth weight discordance within monozygotic twin pairs (validated with dizygotic twins as well). Whether or not we use a Bonferroni correction for multiple statistical tests, we find no support for any of the past research (including main effects of genes and birth weight) and, in fact, the only significant allele-birth weight interaction we find works in the opposite direction of Caspi et al.'s classic finding on 5-HTT and maltreatment.

Impact of Early Life Health on Educational Attainment: Racial/Ethnic and SES Differentials

Jon M. Hussey, University of North Carolina at Chapel Hill
Liana J. Richardson and Narayan Sastry, coauthors

The association between socioeconomic status (SES) and health is one of the most widely studied relationships in the social and health sciences. While support for the social causation hypothesis (i.e., that SES affects subsequent health) is consistently found, evidence for the social selection hypothesis (i.e., that health affects subsequent SES) is mixed. The combination of these findings has led to the dominant assumption that selection mechanisms have a minor influence on relationships between SES and health. However, a growing number of studies challenge this assumption. Our research seeks to extend these studies in a number of important ways. Drawing on multiple waves of Add Health data, we examine the impact of early life health on educational attainment. Specifically, we model the relationship between multiple indicators of adolescent physical and mental health (including self-rated health, depressive symptoms, BMI, and drug use) and three measures of educational attainment: high school completion, college enrollment, and college completion. We also evaluate whether these associations differ by sex, race/ethnicity, and parental SES. In all analyses, we adjust for potential confounders and, when appropriate, we explicitly account for errors in measured variables.

**Early Life Obesity and Social Stratification in Adulthood***Hedwig Lee, University of Michigan**Kathleen Mullan Harris, coauthor*

This paper examines the social and economic consequences of obesity trajectories in early life— from adolescence through the transition to adulthood. We use data from all waves (Wave I to Wave IV) of Add Health. With data on measured height and weight, we track BMI and obesity trajectories from adolescence (Wave II) through the transition to adulthood (Wave III) and classify young people according to the following trajectories of obesity experience: i) persistent obesity—those who were obese in adolescence and through the transition to adulthood; ii) become obese—those who were not obese in adolescence and become obese in early adulthood; and iii) not obese—those who were never obese, or only obese in adolescence and then not obese by early adulthood. We then examine the social and economic consequences in adulthood (Wave IV) associated with different trajectories of obesity, controlling for various important family background and demographic measures in childhood/adolescence (Wave I). We will examine the relationship between obesity trajectories in early life and multiple measures of social stratification in adulthood when the Add Health cohort is aged 24-32. The outcomes we plan to examine include impacts on education (finishing high school, attending college, finishing college), employment, idle status (not in school or at work), personal earnings, welfare usage, poverty status, household income, assets, debts, home ownership, family formation, and marriage. We anticipate that greater exposure to obesity in early life, especially persistent obesity, will place individuals at the bottom of the social stratification system on these outcomes, relative to no exposure to obesity.

How Do Genes, Environmental Stressors and Their Interactions Get Inside the Body to Increase Disease Risk in Add Health Participants at Wave IV (and Thereafter)?*Redford Williams, Duke University**Beverly Brummett and Ilene Siegler, coauthors*

Genes, environmental stressors, and their interactions can only influence the development of medical disorders via effects on psychosocial, behavioral and biological characteristics (endophenotypes) that are directly involved in etiology and pathogenesis. Lower socioeconomic status (SES) is one environmental factor that has been shown to have profound effects on risk of cardiovascular disease (CVD). Using Wave IV biomarker data, we have been able to replicate ($p < 0.0001$) an earlier finding in a French cohort that one's educational level is inversely associated with systolic blood pressure (SBM). This association was largely accounted for by BMI, race/ethnicity, gender, marital status and lifestyle characteristics (physical activity, alcohol consumption and smoking).

Our prior research has identified several genetic variants that are also associated with pre-disease endophenotypes. The more active allele (L) of a serotonin transporter promoter polymorphism (5HTTLPR) is associated with increased SBP reactivity to acute stress in both men and women, blacks and whites. In comparison to women carrying the 5HTTLPR L allele and exposed to high or low stress life situations, women who are homozygous for the less active allele (SS) and exposed to high stress have higher levels of depressive symptoms (a risk factor for CVD), but those in low stress situations have lower depressive symptom levels. Among men, it is those with the 5HTTLPR L allele who have high depressive symptom levels in stressful life situations. A single nucleotide polymorphism (SNP) on the APOE gene is associated with an adverse lipid profile in persons exposed to a high live stress situation, but with a more positive profile in those not so exposed. A functional SNP on the 5HT2C serotonin receptor gene is robustly associated in men with larger cortisol responses to acute mental stress.

It will be possible, in our ongoing investigations using Add Health Wave IV data, to both replicate these associations and determine whether these same genetic variants influence the development of major medical disorders. Is, for example, the incidence of hypertension significantly higher among those with low education levels who also carry the 5HTTLPR L allele? Is the 5HTTLPR SS genotype associated with increased depression among women exposed to stressful life situations, but with decreased



depressive symptoms in those not so exposed? Is the LL genotype associated with increased depression in men exposed to chronic stress? Is the APOE SNP we find associated with bad and good lipid profiles in persons exposed to high vs normal stress life situations also associated with similar profiles in Wave IV participants, depending on stress exposure? And is the 5HTR2C SNP we find associated with larger cortisol responses to acute mental stress in men also associated with disorders like type 2 diabetes, central obesity and hypertension whose pathogenesis is increased by chronic cortisol excess?

Breakout Session 1

Methodology Session: Overview of Add Health for New Data Users

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

Presenter: Felicia LeClere, Interuniversity Consortium for Political and Social Research

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 users. 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: Adolescent Sexual Behaviors

Moderator: Evelyn Kappeler, Office of Population Affairs, Office of the Secretary

Effects of Father Closeness on Son's Sexual Behaviors

Eva C. Haldane, Columbia University

Ronald B. Mincy, coauthor

Although many studies have shown that living with two biological parents reduces risk-taking behavior among children, recent studies have shown that non-resident fathers are much more likely to maintain contact with their children than the conventional wisdom would have predicted. Nevertheless, evidence is mixed on the effects of involvement of non-resident fathers on child well-being. One reason for these mixed results is that frequency of contact, the most frequently employed measure, may be a poor proxy for the mechanism through which non-resident fathers affect child well being. Alternative measures, such as the degree of closeness between fathers and sons have been proposed, but few nationally representative surveys include such measures. Fortunately Add Health is an exception. This study will examine if living with a biological father during adolescence is a protective factor against young adult sons' sexual risk behavior and if feeling close to their resident or non-resident father during adolescence has similar effects on sons' sexual risk behavior as adolescence. We will use temporal ordering and propensity scores to control for reverse causality and selection. Our outcome measures include number of sexual partners, sex with multiple partners at the same time, unprotected sex and sex under the influence (alcohol, marijuana or other illicit drugs).

***Mediating Effects of Expected Maternal Reactions on the Relationship between Mother-Daughter Closeness and Daughters' Sexual Activity***

Amanda Berger, University of Maryland at College Park

By identifying the factors that contribute to teenagers' motivation to avoid risky sexual behavior, it may be possible to identify predictors of sexual initiation and sex-related risks, including transmission of disease and teen pregnancy. Adolescents' decisions to initiate sexual activity or to have sex without contraception can be considered from examining the perceived benefits and risks of these decisions. Using longitudinal data from Wave I and II of The National Longitudinal Study of Adolescent Health survey, analyses explore whether adolescent girls' decisions to have sex or to risk getting pregnant is influenced by the closeness of their relationship with their mothers, and whether this relationship is affected by the degree to which they think their mothers would be upset or embarrassed if they had sex or got pregnant. It is hypothesized that mother-daughter closeness may have both direct and indirect effects on the daughter's initiation of sex and contraceptive use, as mediated by the daughter's perception of maternal reactions to sexual activity or pregnancy. That is, it is hypothesized that the latter relationship is mediated by whether adolescent girls think their mothers would be upset if they had sex or if their family would be embarrassed if they got pregnant.

A Longitudinal Examination of Maternal and Neighborhood Influences on Adolescent Risky Sexual Behaviors and STI Diagnosis

Atika Khurana, Ohio State University

Anastasia Snyder, Elizabeth Cooksey, Suzanne Bartle-Haring, and Stephen Gavazzi, coauthors

Past research has identified numerous individual and contextual risk factors to be associated with adolescent risky sexual behaviors and related outcomes. However, the mechanisms by which these contexts interact with each other to influence adolescent sexual behaviors are not very well known. In the present study, an ecological approach was used to examine independent and combined effects of maternal and neighborhood influences on adolescent risky sexual behaviors and STI diagnosis, using data from Wave I and Wave III of the National Longitudinal Study of Adolescent Health (Add Health). Findings suggest that higher frequency of maternal sexual communication can moderate the negative impact of neighborhood disadvantage on adolescents' probability of having multiple (≥ 6) sexual partners, specifically among white youth. While maternal sexual communication can play a critical role in reducing adolescents' risk of having multiple sexual partners, its effect is determined in part by adolescents' perceptions of maternal disapproving attitudes, especially among racial minority youth and male adolescents. Furthermore, maternal variables are likely to have a significant protective influence on adolescent risky sexual behaviors only when occurring prior to adolescent sexual debut.

Non-HIV STI Risk among Sexual Minorities: Examining the Intersection between Identity and Behavior

Bethany G. Everett, University of Colorado at Boulder

Several recent publications have called for a critical reflection of the use of the terms "MSM" (men who have sex with men) and "WSW" (women who have sex with women) in the public health literature. While sexual behaviors are critical for understanding the transmission of sexually transmitted infections (STI) risk, sexual relationships do not occur in a social vacuum, rather they occur between persons with a variety of interacting social identities that may influence STI risk. Using the Add Health data, I focus on the intersection between opposite and same/both-sex sexual relationships and sexual orientation identities. I find that the continued use of the terms MSM and WSW obscure important differences in STI risk across different identities for both men and women. Preliminary findings suggest that STI risk is concentrated among straight or bisexual identified women who report same-sex sexual relationships, whereas among males, elevated STI risk is concentrated among gay identified men. I also explore the mediating impact of several psychosocial and behavioral risk factors.



Paper Session: Educational Success and Attainment

Moderator: Lois Tully, National Institute of Nursing Research

Genetic and Environmental Influences on Educational Attainment of Young Adults

Francois Nielsen, University of North Carolina at Chapel Hill

J. Micah Roos, coauthor

We use the OpenMx SEM program to estimate ACE models for the roles of genetic and environmental influences on tertiary educational attainment measured as college completion (dichotomous expression of an underlying continuous liability) and years of education (treated as continuous outcome). We use data in Wave IV of Add Health on 4,472 members of sibling pairs of five types: MZ twins, DZ twins, full siblings, half siblings, and nonrelated siblings. Many cognitive and educational outcomes show increasing role of genes (heritability) and disappearing effect of shared environment by late adolescence. We hypothesize that shared environment effects may endure into early adulthood for tertiary educational attainment, as it involves financial expenses more strongly affected by family resources than more purely cognitive outcomes. This conjecture is suggested by findings that college attendance is one outcome still affected by family income, after cognitive and academic characteristics of individuals are controlled. We estimate the ACE models from the raw data controlling for sex and age. At the conference we will present preferred models and estimates of heritability and of shared and unshared environment variance components for both outcome measures.

The Influence of Accuracy in Self-Knowledge on Educational and Health Outcomes

Lisa M. Yarnell, University of Texas at Austin

Toni Falbo, coauthor

The purpose of our research is to determine if accuracy in self-knowledge affects health and educational outcomes. Using Wave III data, we developed an index of accuracy, which compared self-views of intelligence to actual performance on tests of intelligence. We found that 22% had perfectly accurate self-knowledge, 19% slightly underestimated, and 29% strongly overestimated their intelligence. We also found that the best-educated mothers had children with the most accurate self-knowledge, while the least educated mothers had children with the largest overestimation. We found that those who were perfectly accurate or slightly underestimating reported the best health, while those who greatly overestimated reported the worst health and the greatest depression at Wave IV. The highest educational attainment was found among those who slightly underestimated their intelligence, while those who strongly overestimated had the lowest educational attainment to date at Wave IV. These results support predictions based on the value of accurate self-knowledge. In the near future we plan to examine whether accuracy in self-knowledge influences the prevalence of obesity and overweight status at Wave IV.

Using Contexts and Socioeconomic Status to Explain Racial and Gender Differences in Adolescent Attachment to School

Constance A. Lindsay, Northwestern University

This paper explores the ways in which various contexts influence adolescent attachment to school, and the ways in which attachment to school may vary by race or gender, and interactions of the two. Attachment is defined as the extent to which adolescents feel connected to their school communities (Johnson, Crosnoe, & Elder, 2001). The present study focuses on two specific domains of the local ecology that adolescents are situated in: neighborhood characteristics and parenting strategies. This study attempts to answer the following questions: Do white, Hispanic, and African American adolescents differ in their levels of attachment to school? Do boys and girls differ in the levels of attachment to school? Does controlling for neighborhood characteristics and parenting eradicate any observed differences? Do



differences in school attachment in adolescence have implications for early adulthood outcomes? The study links Wave I characteristics with Wave IV education and labor market outcomes. Preliminary results indicate that there are differences in the level of attachment that vary according to gender and race, and that these differences are related to education and labor market outcomes.

Why Whites and the Rich Have Less Need for Education

William Mangino, Hofstra University

This study shows that privileged people rely less on education to assure the next generation's status. Because advantaged groups have opportunities that are not accessible to others, a disproportionate number of privileged people turn away from academics thanks to their rich social and cultural capitals. The "aspiring classes" are more reliant on education because they lack such informal opportunities. Using an educational transitions methodology with Add Health and AHAA, the hypothesis is tested in two ways. First, when other attributes associated with educational attainment are controlled—like the test score gap, family structure, peer influence, and neighborhood effects—people of color (African-Americans, Hispanics, Asians) are more likely to complete high school and to go to college relative to whites. A second analysis shows that the relationship between family income and education is curvilinear. As income increases through the middle classes, the pursuit of education increases as economic barriers are removed. But among families with the highest annual incomes, whose next generation's status is undoubtedly assured, there are marked decreases in rates of educational attainment.

Parenting Practices, Non-Cognitive Skills, and Academic Success

Lara Tavares, Bocconi University, Milan, Italy

In this paper we analyze what parents do (as opposed to who they are) as a determinant of their offspring's educational attainment. In doing so, we explore parenting as a source of economic (dis)advantage. We also look at the influence of parenting on the development of the children's non-cognitive skills (NCS) in early and middle adolescence. By looking at parenting practices as a form of parental investment, we also explore the ways through which parenting affects children outcomes. We use the in-home (Waves I, II and III), the parents' and School Administrator's questionnaires, and the graduation and education files. Educational attainment is measured by the highest educational qualification. The measure of NCS used (attitude towards learning) was constructed using insights from the five-factor model of personality. The estimates of a two stage model of skill formation show that when attitude towards learning increases by one s.d. the probability of not graduating from high school drops to less than one-half and the probability of having a Bachelor's degree or attending college more than doubles. There is also a statistically significant association between parenting and both educational attainment and the NCS formation.

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 disseminated data in ways that are consistent with results of reliability and validity studies embedded in Wave IV.



Paper Session: Friendship Networks

Moderator: Linda Weglicki, National Institute of Nursing Research

Is It “All in the Family”? The Role of Neighborhoods in the Relationship between Family Structure and Friendship Groups

Jennifer Turchi, University of Iowa

Mary Noonan, coauthor

Previous research finds that parents influence the types of friends their adolescents include in their networks, even after controlling for adolescents own characteristics and behaviors (Knoester et al. 2006). Family structure is one variable that is strongly associated with adolescents' friendship networks. Research shows that, compared to adolescents from two-parent households, those who live in single-father households have less conventional friends (Turchi 2010). These differences are partially explained by variation in parenting practices across family structure. Using Wave I Add Health and neighborhood contextual data, I extend this work by exploring whether variation in neighborhood quality explains the remaining differences. Neighborhood quality is likely an important explanatory variable since single-parent families live in lower quality neighborhoods (Broman et al. 2008), and neighborhood quality is associated with important childhood outcomes (Harding 2009). This research tests if neighborhood characteristics help explain why adolescents in single-father homes have less conventional friends, compared to those in intact families. Single-father families are more prevalent, yet we still know very little about the consequences of growing up in single-father homes.

Educational Attitudes: Impacts of Interracial Friendship Integration

Brett Lehman, Louisiana State University

This study focuses on high school students' self-rating of their intelligence compared to peers and their expectations for attending college considering the influence of the racial diversity of a student's friendship group. These variables come from responses to Sections 9 (self efficacy) and 38 (expectations) within the in-school survey. I will also utilize data from the friend-nominations as a measure of one's friendship group. The theoretical background of the study acknowledges educational inequality between various racial groups that have advantages and disadvantages in society. It is emphasized that these inequalities arise from larger social inequalities rather than personal deficiencies of members of these groups. The main hypothesis for the present study is that these inequalities for blacks and Hispanics are less likely to exist when the students are members of a racially integrated friendship group where they are more likely to be exposed to a plurality of attitudes concerning the importance of intelligence and college. This relationship will be measured through multivariate regression analyses.

Mexican-Americans in U.S. Schools

Mikhail Pyatigorsky, Boston University

This paper analyzes the impact of 1st and 2nd generation immigrants from Mexico, the largest immigrant group in the US, on both native schoolchildren and the Mexican-Americans themselves. My contributions to the literature are twofold. First, I use self-reported friendship data to show that Mexican-Americans have strongly assortative networks that span grade levels. A number of studies have used intra-school grade-level variations in peer characteristics to identify peer effects, relying on the assumption that classmates are the relevant peer group. My findings demonstrate that, in the case of Mexican-American adolescents, this assumption is invalid. Second, contrary to what we might expect given previous results on immigration, I find little evidence of between- or within-group negative effects of Mexican-American students. My results suggest that having Mexican-American classmates is not significantly correlated with natives' college attendance, or with variables such as engagement in risky behavior, delinquency, or sexual activity. There is also no statistically significant effect of having Mexican-American friends on Mexican-Americans' own long-term academic outcomes.

**Segregation in Social Networks: A Structural Approach***Angelo Mele, University of Illinois at Urbana-Champaign*

I develop a dynamic heterogeneous agents model of strategic network formation, where a matching technology and preferences for same-type individuals drive the dynamics of friendship. The model converges to a unique stationary distribution that is structurally estimated using Markov Chain Monte Carlo methods and stochastic approximation techniques. I use data from the restricted version of Add Health, a representative survey of US high schools containing detailed data on the actual friendship network of each student. Results show that the tendency to create links to individuals of the same racial group is pervasive. However, I find that a certain degree of heterogeneity in mutual and indirect friends increases utility of the agents. I use the model to simulate policies whose goal is to increase the degree of interracial contact. I simulate a busing program that transports minority students to a school where the majority is white. The simulations show that these policies decrease students' welfare in the new stationary equilibrium.

Paper Session: Mental Health and Suicide

Moderator: Wendy Nilson, Office of Behavior and Social Sciences Research

Does Family Structure Alter the Effects of Adolescent Parent-Child and Sibling Relationship Quality on Young Adults' Mental Health?*Bethany K. Wexler, University of California at Los Angeles*

The present study investigates the effects of parent-child and sibling relationships, and parental differential treatment on adolescent and young adults' mental health. Previous literature on adolescent mental health has investigated each of these factors independently, but neglected to explore the link between all three and take into account adolescents living in different family environments (intact vs. non-intact families). The current study will use the National Longitudinal Study of Adolescent Health sibling pairs and family relationship data in Wave I and Wave III. The study will evaluate whether perceived parental differential treatment alters sibling relationship and parent-child relationship quality effects on adolescent and young adults' mental health, and whether family structure affects the association between parent-adolescent relationship quality, adolescent sibling quality, and mental health in young adulthood. Ordinary least squares regression and sibling fixed effects models will be used to analyze family relationship data and determine the effects on young adults' mental health.

Gender and Racial/Ethnic Differences in the Longitudinal Association between Obesity and Depressive Symptoms*Frank Bandiera, University of Miami**Sharon Christ, Elizabeth Goodman, David Lee, Shi Huang, and Lora Fleming, coauthors*

This study assessed gender and racial/ethnic differences in the longitudinal association between obesity and depressive symptoms. Prospective cohort design from the National Longitudinal Study on Adolescent Health (Add Health) from Waves I-IV was used. Obesity (kg/m^2) and depressive symptoms as measured by a shortened 9-item Center for Epidemiologic Studies Depression scale were the main variables in this study. Structural Equation Modeling was used to test a bi-directional association between obesity and depressive symptoms over time. Among females followed over their adolescence, obesity predicted depressive symptoms for non-Hispanics and Hispanics; while depressive symptoms predicted obesity for non-Hispanic Blacks. Among males, there were no significant associations between obesity and depressive symptoms for non-Hispanic Whites and non-Hispanic Blacks; however, depressive symptoms predicted obesity among Hispanics. Results from this study support a bi-directional association between obesity and depressive symptoms, which differed by gender and race/ethnicity subpopulations.



Testing for Peer Effects in Adolescent Suicide Ideations: An Instrumental Variables/Fixed-Effects Approach

Jeremy C. Green, Yale University

Much social science research has examined the possibility of peer effects in adolescent suicide ideations. Yet peer effects are notoriously difficult to measure due to the reflection problem. This paper attempts to address the reflection problem by adapting new empirical models from the literature on peer effects in tobacco consumption to the problem of suicide ideation. Wave I of the Add Health data will be used to estimate the model. The peer group will be defined as the grade within the school, school fixed-effects will be used to control for environmental influences that may simultaneously effect multiple individuals within the peer groups, and the percent of family members in the individual's peer group who have attempted suicide ("Have any of your family tried to kill themselves during the past 12 months?") will be used as an instrument for the endogenous measure of the peer group's suicide ideations ("During the past 12 months, did you ever seriously think about committing suicide?", "During the past 12 months, how many times did you actually attempt suicide?", and "Did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?"), thus providing a potential solution to the reflection problem.

PTSD and Its Proxies in Veterans' Lives: Insights from Add Health Wave IV

Lin (Victor) Wang, University of North Carolina at Chapel Hill

Glen H. Elder, Jr., coauthor

In the study of war-related psychological trauma, a diagnosis-based measure is likely to underestimate the number of military personnel who suffer from post-traumatic stress symptoms, owing to the stigma of mental disorder. We propose the use of additional measures such as depressive symptoms, anxiety, and sleep disorders – proxies of post-traumatic stress symptoms as suggested by previous studies – to broaden the understanding of psychological wounds caused by exposure to combat. Similar to previous findings, our preliminary analysis has shown that greater combat exposure, such as more time spent in a combat zone and engaging the enemy in a firefight, being wounded/injured, and exposure to death, are associated with an increased risk of being diagnosed with PTSD. A college education, enlisted high school friends, and a stable romantic relationship lower the risk of this diagnosis. These factors will be used to predict depressive symptoms, anxiety, and sleep disorders to determine their suitability as supplement for PTSD diagnosis.

Breakout Session 3

Methodology Session: Add Health Relationship 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: Substance Use**

Moderator: Bethany Deeds, National Institute on Drug Abuse

Dangerous Liaisons? Dating and Drinking Diffusion in Adolescent Peer Networks

Derek Kreager, Pennsylvania State University

Dana Haynie, coauthor

Consistent with social learning expectations, recent research finds a positive correlation between an adolescent's own problem behavior and the behavior of his or her romantic partner. However, prior studies often neglect issues of partner selection and the broader peer context within which teenage dating occurs. In this study, we draw on Granovetter's classic concept of weak ties to argue that adolescent dating partners become network bridges connecting daters to new peer contexts that promote behavioral change. Using data from Add Health's in-school and Wave II surveys for 466 romantic couples, we estimate Actor-Partner Interdependence Models to identify effects of partners' friends' drinking on an adolescent's own future drinking frequency and binge drinking. Findings support our hypothesis and suggest that a partner's friends' drinking behaviors have independent effects on future drinking. Moreover, this effect is larger than the impact of one's own peers and is generally immune to the effects of selection. Romantic relationships are thus important mechanisms explaining changes in peer contexts and the social influence of indirect network ties.

Do Peers Lead Adolescents to Alcohol Drinking, or Does Drinking Lead to Friendships?

Myong-Hyun Go, Pardee RAND Graduate School

Michael Pollard, Harold Green, and Michael Kennedy, coauthors

Adolescent alcohol misuse is a major public health concern, with consequences including driving intoxicated and suicidal orientations. Current estimates suggest that 41% of adolescents have consumed alcohol by 8th grade and nearly 75% have tried by 12th grade. While it is well established that peer relationships are associated with adolescent drinking, it is still not well understood what the nature of these relationships is. This is especially acute when it comes to the direction of this relationship: does the peer association lead to drinking, or is it the other way? We analyze the association between adolescent drinking and peer relationships by using the degrees of separation between the peers as an instrument to disentangle the relationship between the two. That is, as the peer gets farther away (closer) from the focal adolescent, the weaker (stronger) his/her influence becomes. Based on this insight we classify new friendships of each focal adolescent in terms of social distance when the two were disconnected in the previous wave. Strong statistical association between alcohol use initiation and new drinking peers with varying degrees of social distance would provide inference on the direction of the causal relationship. We use the Add Health Wave I and Wave II data.

Friendship Networks and Trajectories of Binge Drinking

Michael S. Pollard, RAND Corporation

Harold D. Green, David Kennedy, and Myong-Hyun Go, coauthors

This study examines how friendship networks in adolescence are linked to binge drinking (BD) trajectories into young adulthood using Wave I to Wave III and network data from the saturated school samples. We test whether number of self-reported drinking friends is linked to longitudinal BD. We add to the literature by further examining whether an individual's structural position (group member, liaison or isolate) in friendship networks is linked to longitudinal BD. Trajectories of BD episodes per month are first modeled on the entire longitudinal Add Health sample using semi-parametric longitudinal mixture models. Individuals are assigned to trajectory groups based on posterior probabilities of membership. Multinomial logit models of trajectory group membership are then estimated, and include information on self-reported



number of drinking friends as well as a range of controls. Friendship network structural characteristics at Wave I for the saturated schools are modeled using NEGOPY. Network structure information is added to the models to investigate the association between structural position and alcohol use. Preliminary results identify six BD trajectories and indicate that exposure to drinking peers is positively associated with increasing and steady high bingeing.

Association of Job Status and Risky Behaviors in Multi-Race Adolescents

Hannah Jackson, University of Georgia

Joshua Rutsohn, coauthor

Multi-race adolescents are at an increased risk for engaging in risky behaviors. Previous research indicates that multiracial adolescents are more likely to engage in substance and illicit drug use compared to white and single race minority counterparts. Studies show that job status and income affect the purchase and use of alcohol and drugs in the adolescent population. We hypothesize that there are differences between multi-race adolescents with jobs and their engagement in risky behaviors compared to their single race counterparts. This study will examine whether multi-race adolescents with a job are at a greater risk of engaging in risky behaviors such as tobacco use, illicit drug use and alcohol consumption compared to single race adolescents with jobs. Indicators of current behavior will be assessed using 30 day use response variables. We plan to conduct a factorial MANOVA analysis on Add Health Waves I, II and III while controlling for mediating factors: gender and socioeconomic status. Data will be analyzed using STATA 11.0.

Work Characteristics and Smoking

Sharon L. Christ, University of North Carolina at Chapel Hill

Lora E. Fleming, coauthor

This research uses four waves of the Add Health to determine whether work characteristics affect smoking experimentation (ever tried smoking), smoking status (smoked at least one day in the past 30 days), and heavy smoking status (smoked 20 out of the last 30 days). Data are pooled over 34,000 person-by-time observations and age is treated as a moderator to determine whether work characteristics such as work status and hours worked affect smoking differentially across adolescence and early adulthood. Other work characteristics evaluated are age at first job, type of first job, and age at first full-time job. Models control for basic demographics. Aggregating across ages 11 to 35, working increases the odds of smoking by 28% and each additional work hour per week decreases the odds of smoking by 1.4%. Starting a first job and a first full-time job at a later age decreases the odds of smoking by 5% and 13%, respectively. Comparable effects exist for heavy smoking. Work status and hours worked have the opposite effect on experimentation. An important characteristic for all outcomes is the type of first job, with those starting work in the foodservice sector (38%) more likely to experiment (OR=1.4), smoke (OR=1.3), and smoke heavily (OR=1.2).



Paper Session: Labor Market and Economic Success

Moderator: Francisco Sy, National Center on Minority Health and Health Disparities

Youth Leaving Poverty: How Social Capital Helps and Hampers

Robert L. Hawkins, New York University

Katherine Maurer, Sarah Wilda, and Courtney Davis, coauthors

This study examines the role that social capital plays in helping or hampering young people's route out of poverty and into economic sustainability. We will focus on four hypotheses: 1) There are direct and indirect effects of social capital on the economic sustainability of low-income youth as they grow into adults; 2) Bonding social capital operates as a deterrent to economic sustainability; 3) There is a strong correlation between bridging social capital and the future economic status of low-income youth; and 4) Social capital operates differently for poor and non-poor youth. This study will include data from all four waves of Add Health and will include youth whose families were low-income (up to 200% above the poverty level) when first interviewed. Given the exploratory nature of this study, we will first identify social network variables to create social capital scales based on theory through factor analysis. Further exploration will include a recursive path analysis to uncover much of the complexity of the relationship between social capital and economic sustainability and by demonstrating how social capital may function as a direct or indirect function of economic sustainability.

One Adult Who Is Crazy About You: Can Natural Mentoring Relationships Increase Assets Among Young Adults With and Without Foster Care Experience?

Johanna Greeson, University of North Carolina at Chapel Hill

Lynn Usher and Michael Grinstein-Weiss, coauthors

During emerging adulthood, most youth receive family support to help them weather the difficulties associated with transitioning to independence. When foster youth emancipate, they confront the challenges associated with emerging adulthood, and are at risk of having to transition without family support. Many are in danger of failing to be self-sufficient. Caring adults who offer social support are normative for adolescent development and protective for at-risk youth. Natural mentoring can cultivate such relationships. This study examines the association between natural mentor relationship characteristics, and physical and liquid assets during the emerging adulthood period in a normative sample of young adults and those identified as former foster youth. Data from Wave III of Add Health are used. Path models were estimated using robust maximum likelihood. Like a parent, role model and guidance/advice, were associated with assets for both groups. This study contributes to the evidence-base for natural mentoring, highlighting the value of understanding natural mentor roles for intervention development. The focus on assets is a novel approach to investigate the benefits of natural mentoring to the healthy development of youth.

Predicting Subjective Success in Early Adulthood through Socioeconomic Resources, Success Expectations, and Objective Attainment

Caitlin S. Faas, Virginia Polytechnic Institute and State University

Christine E. Kaestle and Mark J. Benson, coauthors

Subjective feelings of success predict numerous positive health outcomes (Adler et al., 2000). Understanding what influences subjective success and how it may be different for specific populations is important for developing interventions. This study examines the linkages among socioeconomic resources, success expectations, objective attainment, and subjective success using structural equation modeling. The latent construct of socioeconomic resources includes the indicators of family income, parent education, and parent occupational status from Wave I. The latent construct of parent-adolescent



expectations combines the indicators of both parent and adolescent expectations about the future from Wave I. Objective attainment includes the indicators of educational attainment, personal earnings, and current living arrangement from Wave IV. Subjective success is assessed using the Subjective SES Scale, current job satisfaction, and job alignment with goals from Wave IV. Subjective success may also be different by gender, age, and ethnicity and this population allows for testing these different groups. This study contributes to the field by examining the factors that predict subjective success and its relation to objective attainment.



Friday, July 23, 2010

Breakout Session 4

Methodology Session: Add Health Geographic Data

Presenter: Mariaelisa Graff, University of North Carolina at Chapel Hill

This session will provide an overview of Add Health research based on environmental data compiled for the Obesity and Environment project. This session will focus on three related topics:

1. Obesity and environment research and findings
2. Database development process
3. Overview of environment data

Paper Session: Overweight, Obesity, and Body Image

Moderator: Charlotte Pratt, National Heart, Lung, and Blood Institute

Body Image Distortion and Onset of Weight Loss Behaviors among Non-Overweight Girls

Janet Liechty, University of Illinois at Urbana-Champaign

The relationship between body image distortion (BID) and onset of three types of weight loss behavior among non-overweight girls in the U.S. was examined. Data were from Add Health and included 5,173 non-overweight (BMI < 85th percentile) adolescent females aged 11-19 who completed Wave I and II. Actual and perceived weight statuses were compared to assess BID. Logistic regression was used to predict onset of three types of weight loss behaviors at Wave II from BID at Wave I, adjusting for Wave I weight loss behaviors and background factors. At Wave I, 85% of non-overweight girls engaged in weight control behaviors; and 29% displayed BID (i.e., overestimation of weight status). When compared to girls without BID, those with BID at Wave I had 4.3 times higher odds of onset of extreme weight loss behavior (e.g., vomiting, laxatives, diet pills) (OR = 4.5, CI= 2.44, 7.42) and 2.3 times higher odds of onset of dieting to control weight (OR = 2.30, CI= 1.72, 3.06) a year later. Girls who practiced extreme weight loss had 10.7 times greater odds of continuing unsafe practices one year later than girls who did not (OR = 10.67, CI = 4.27, 26.63). BID was unrelated to exercise for weight control. BID predicts onset of unsafe but not safe weight loss behavior. Implications are discussed.

Racial Differences in the Influence of Female Adolescents' Body Size on Dating and Sex

Ali Mir, University of Toledo

Frank Heiland, CUNY Baruch College, coauthor

This paper investigates the effect of body size, measured by a person's Body Mass Index (BMI) and obesity status, on dating and sexual experiences of white (non-Hispanic) and African American (non-Hispanic) female adolescents. Using data from the National Longitudinal Survey of Adolescent Health, we estimate the effects of BMI and obesity on the probability of having had sex, being in a romantic relationship, and other important romantic and sexual experiences. We find that obese white teenage girls are up to 17% less likely to have been in a romantic relationship in the past 18 months compared to their non-obese counterparts. In addition, obese white girls are less likely to ever have had sex (intercourse) or to ever have been intimate. Body size is unrelated to the relationship practices and behaviors among girls with experience. Similar effects are found using BMI. There are no systematic differences in relationship experiences and sexual behaviors between obese and non-obese black girls. The estimated relationships are robust to common environmental influences at the school-level and to the inclusion of proxies for low



self-esteem and attitudes towards sex. Instrumental variables estimates and estimates from models with lagged weight status also confirm the overall patterns. Using interviewer-assessments and accounting for interviewer fixed effects, we show that the relationships are mediated by the physical attractiveness of the respondent. Auxiliary evidence confirms that the beauty penalty associated with high BMI and obesity is significantly greater for white girls than for black girls. We discuss these findings in the context of the literatures on socio-cultural body size norms and obesity penalties.

Exposure to Obesity and Weight Gain among Adolescents

Muzhe Yang, Lehigh University

In a treatment-effect framework using Add Health data, we investigate whether adolescents gain weight when increasingly exposed to obesity in their social networks. In this paper, we have assembled a set of empirical evidence that supports an effect of increased exposure to obesity on weight gain within a social network. Based on Wave I and Wave II of the Add Health surveys, we find that adolescents who experience an increase in the number of obese friends over a one to two-year period subsequently can gain more weight, approximately 0.8-0.9 BMI, relative to a control group for whom there is no change in the number of obese friends over time. That increase in BMI corresponds to approximately 5 to 6 pounds for an adolescent with an average height of 5.5-5.6 feet. Specifically, the effect on weight gain of an increased exposure to obesity seems to exist mostly among those who are neither obese nor overweight at the beginning (in Wave I). Our study also provides evidence to support that the increased exposure to obesity causes weight gain through social ties rather than geographic proximity. Our study suggests that it may be an uphill battle against the obesity epidemic. Policies focused on the prevention of obesity probably should receive a high priority.

The Health of Immigrant Adolescents and the Transition to Adulthood

Carolyn Zambrano, University of California, Irvine

A substantial body of research in the field of immigration focuses on health and the so-called “immigrant health paradox.” If there is a benefit associated with being an immigrant, will this apply to adolescents who were immigrants, the children of immigrants, and later generations? If this benefit exists, will it endure as adolescents transition to adulthood? Using two waves of data from Add Health, I examine the differences in health outcomes among immigrants (1.5 generation), children of immigrants (2nd generation), and native-born adolescents of the same ethnicity with native-born parents (“3rd generation and beyond”). Health outcomes are measured by self-reported health and body mass index. I find that first generation Hispanic adolescents do indeed have higher health outcomes at Wave II; I also find that second generation Hispanic adolescents are more likely to report poor health at Wave II, but third generation Hispanic adolescents are more likely to report poor health at Wave III. At the aggregate level, Hispanic respondents are at a higher risk of being overweight or obese at Wave III, while Asians are less likely to be overweight or obese. Future research should examine behaviors such as physical activity and diet and how these change as adolescents mature.



Paper Session: Contraceptive Use, Pregnancy, and Childbearing

Moderator: Evelyn Kappeler, Office of Population Affairs

Health Care Access in the Transition from Adolescence to Adulthood and Implications for Contraception and Unintended Pregnancy

Jillian T. Henderson, University of California, San Francisco

Corinne H. Rocca and Cynthia C. Harper, coauthors

The most effective means of contraception are available only by prescription, making access to healthcare critical for adolescents and young women. In young adulthood, health insurance coverage is low and unique barriers to health care access are present; at the same time, risk of unintended pregnancy is highest. Variation in fertility and life trajectories in early adulthood are shaped by social factors and disparities in access to resources, including health care. Few studies have investigated the independent contribution of healthcare access for the prevention of pregnancy using longitudinal data and adjusting for contextual factors for women in the transition from adolescence to adulthood. Analysis of data from Wave II and Wave III will be used to examine how the timing of reproductive health services relative to coitarche and first pregnancy contribute to the use of effective contraception; a causal attributable risk approach will be used to assess the contribution of health care access. Sociodemographic and behavioral risk factors correlated with unintended pregnancy will be adjusted for to assess the contribution of health care factors. Results will have implications for improving health care delivery for young women.

Relationship Violence and Contraceptive Use among Young Adults in Dating Relationships

Nicole R. Steward, Child Trends

Jennifer Manlove, coauthor

This study uses Wave III of Add Health to explore how individual and partner violence, as well as “sexual insistence” within relationships are associated with condom and contraceptive use at most recent intercourse. We measure relationship violence over the prior year, violence severity, and the party responsible for committing the violent acts (the respondent, their partner or mutual). Additionally, we examine whether the respondent and/or their partner ever insisted on or made their partner have unwanted sex. Analyses of approximately 3,000 young adults in dating relationships find that one-quarter experienced relationship violence and 11 percent reported sexual insistence. Preliminary logistic regression analyses find that couple-level violence is associated with reduced condom use and overall contraceptive use, net of controls. Both respondent- and mutual-driven couple violence are associated with lower odds of condom use. More severe violence, measured by slapping, hitting or kicking, was also associated with reduced odds of both condom use and overall contraceptive use. Separate models indicate that sexual insistence, especially partner-level insistence, is associated with decreased condom use. Patterns of association were similar for males and females.

Parental Expectations and the Timing of Childbearing among Latino Adolescents

Christine Tucker, University of North Carolina at Chapel Hill

Krista M. Perreira and Carolyn Tucker Halpern, coauthors

Few studies have examined parenting practices in Latino families and how they relate to pregnancy prevention. Using Add Health data, we examine whether parental expectations influence adolescent pregnancy for Latinos (n=2,665) in comparison to non-Latino Whites (n=8,926) and African Americans (n=3,363). Guided by status attainment theory, we use survival analysis to test our hypothesis that high parental college expectations are associated with a lower likelihood of teenage pregnancy and lead to



childbearing later in the life cycle. We use data on male and female respondents' first pregnancy collected in the Wave IV pregnancy history. Data on parental expectations for their children's schooling and selected covariates were collected at Wave I. To examine the contribution of parental expectations when other parenting strategies are employed, we evaluate interactions between other strategies and parental expectations. Additionally we examine how findings are modified by individual, family, and community contexts including gender, age, race/ethnicity, adolescent ability, parents' highest educational attainment, family structure, and parental nativity, percent poverty, rural, urban or suburban, and racial composition.

Add Health, the “Next Generation”: Longitudinal Substance Abuse Effects on Infant Outcomes of Add Health Mothers

Monica Gaughan, University of Georgia
Angela Fertig, coauthor

Thousands of babies have now been born to Add Health women, providing an exciting opportunity to extend the use of these data. We specify trajectories of substance use to understand how their dynamics contribute to poor birth outcomes. We measure birth outcomes using gestational age and birth weight, which are known to be affected by alcohol and tobacco use during pregnancy. We hypothesize that the largest direct effect on pregnancy outcomes will be through exposure to maternal prenatal smoking and drinking. Controlling for these proximal direct effects, we hypothesize that the mothers' substance use trajectories over the life course prior to pregnancy will partially mediate the relationship. We use all four in-home waves to specify substance use trajectories, and to identify infants. We plan to estimate a series of multilevel models, using a probit model for dichotomous birth outcomes and a linear model for continuous outcomes. In Wave III, we have determined that 12% of infants had low birth weight, and 9% were preterm births. Eighteen percent of infants were exposed to cigarettes during gestation and 4% of infants were exposed to alcohol during gestation. At a minimum, we will demonstrate the analytic opportunities presented by the “next generation.”

Breakout Session 5

Methodology Session: Add Health Genetic Data

Presenter: Andrew Smolen, 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: Intimate Partnerships

Moderator: Erica Spotts, National Institute on Aging

Why Do Intimate Partners Disagree About Violence in their Relationship?

HarmoniJoie Noel, University of Nebraska- Lincoln

Using a sample of 1,269 dating, cohabitating, and married young adult couples from the Romantic Partners Add Health data, this study explores the causes of disagreement in reports of intimate partner violence. Disagreement occurs when one partner reports physical violence in their relationship but the other partner does not. Errors or breakdowns in how respondents go through the process of answering survey questions may help explain disagreement about partner violence. I created proxies for errors in the question response process and I found that several of them were related to disagreement about partner violence. For example, consistent with my hypotheses I found that men and women who were more committed to their relationship were more likely to underreport perpetration. It is likely that people who are more invested in their relationship may have more to lose if it were to end; therefore, they underreport perpetration for fear of it jeopardizing the stability of their relationship. By identifying and understanding the causes of disagreement the goal of this study is to help survey methodologists and partner violence researchers work towards reducing or accounting for disagreement in order to improve the accuracy and reliability of estimates for intimate partner violence.

Couple Relationship Quality: The Role of Parental Support, Self-Acceptance, and Emotional Stability

Laura Eubanks Gambrel, Virginia Polytechnic Institute and State University

Utilizing structural equation modeling, this research project will examine the relationship between adolescent-parent relationships and young adult relationship satisfaction, with self-acceptance and empathy as mediators of this relationship. A full structural model will be developed that determines the goodness of fit of a model using the Add Health dataset of Wave I variables related to adolescent perceptions of their relationships with their parents and their self-reported level of self-acceptance and how this relates to Wave IV variables of empathy and relationship satisfaction for those in current romantic relationships. The results of this analysis conducted on LISREL, including the measurement model, the significant paths, and resulting goodness of fit of the model will be reported in this presentation. Overall, this research will contribute to understanding the mechanisms of how parent-adolescent relationships relate to later couple and family formation in young adults. It will also add longitudinal results to the current cross-sectional literature on self-acceptance which is demonstrating the positive correlations of this variable to relationship satisfaction.

Gender Differences in Response to Economic Hardship among Young Couples

Amy Lucas, University of North Carolina at Chapel Hill

Jessica Halliday Hardie, coauthor

How do young, cohabiting and married men and women assess relationship quality differently, and how do economic circumstances affect their assessments? Previous research demonstrates that economic difficulties can strain relationship quality for married couples, but little is known about how economic strain differently impacts perceived relationship quality by gender and relationship type. To answer these questions, we estimate random-effects regression models using cohabiting and married couple samples from Add Health. We use five outcome measures of relationship quality: degree of love, satisfaction, assessment of which partner is getting the better deal, degree to which a partner alters his/her behavior to accommodate partner, and degree of violent conflict. Economic variables of interest include earnings, family financial support, government assistance, economic hardship, and educational attainment. We find



that economic hardship is a particularly important predictor of conflict for women and men in both cohabiting and marital unions and that the relationship between economic hardship and conflict differs by gender. Married females report committing more acts of violent conflict against their partners in response to economic stress than do their male partners.

First Union Formation and Change in Body Mass Index: Variations by Union Type, Race/Ethnicity, and Socioeconomic Status

Rhiannon A. D'Souza, Ohio State University

Using Wave III and Wave IV of Add Health, I plan to examine variations in the relationship between first union formation and change in BMI. Specific research questions will examine 1) whether the relationship between transition into first union and change in BMI is moderated by the type of union one transitions into (i.e. marriage versus cohabitation); 2) whether the relationship between transition into first union and change in BMI is moderated by baseline SES; 3) whether the relationship between transition into first union and change in BMI differs by race/ethnicity; and 4) whether any racial/ethnic differences in the relationship between transition into first union and change in BMI are explained by baseline SES. To examine these research questions, I will utilize change score models with interaction terms to test potential moderators. Union type will include categories for single (never cohabited or married), cohabiting, married (no prior cohabitation), and married (with prior cohabitation). Baseline SES will be operationalized with four indicators measured prior to the union: total household income, educational attainment, employment status, and home ownership. Race/ethnicity will include categories for non-Hispanic white, non-Hispanic black, non-Hispanic Asian, and Hispanic.

Paper Session: Parental Incarceration: Long Term Impacts

Moderator: Lisa Begg, Office of Research on Women's Health

Moderator: Rosalyn Lee, U.S. Centers for Disease Control and Prevention

Parental Incarceration and Children's Educational Aspirations

Unique Shaw, Bowling Green State University

Raymond Swisher, coauthor

The recent literature has increased its focus on children of prisoners. Few studies have examined how it impacts children's educational values. This study explores the implications of parental incarceration for children's educational aspirations. Estimates suggest that men who have not attended college have increased risks of imprisonment and that the cumulative risk of imprisonment is 3 to 4 times greater for high school dropouts than for high school graduates (Pettit and Western 2004). Research on educational outcomes has shown that one of the most consistent predictors of children's educational attainment is their parent's level of educational attainment (Spera et al. 2008). This research focuses on respondents from Wave IV of Add Health, who report having a parent in prison for any length of time. Using educational expectations and desired level of education variables, I hypothesize that children of incarcerated parents will have lower levels of educational aspirations. Despite the reality that many people see education as a source of mobility, many lack the resources to obtain desired levels of education. Considering that incarceration is highly stratified by race and education, this study will analyze potential differences across racial and ethnic subgroups.



Parental Incarceration and Adult Criminal Justice Involvement among a Nationally Representative Sample of Young Adults

*Michael Roettger, Bowling Green State University
Raymond Swisher, coauthor*

In the last four decades, incarceration rates have increased by over 600% in the U.S. Accompanying this increase has been a dramatic rise in the number of Americans who report a parent who has served time in jail or prison. Due to lack of nationally representative data, almost no studies have examined the relationship between parental imprisonment and adult criminal justice involvement in the contemporary U.S. Using data from Wave IV interviews of the National Longitudinal Study of Adolescent Health, this study examine how mother or father's imprisonment is associated with adult arrest and incarceration. Using event history analysis, we examine the degree to which these associations are moderated and/or mediated by associated factors, including family socioeconomic status, timing of parent's incarceration, low self-control, and respondent's educational attainment. Our results provide some of the first evidence that parental incarceration is a major risk factor for one's own arrest and incarceration.

Adult-Onset Offending: A Test of Interactional Theory of Delinquency

Xiaojin Chen, Tulane University

Previous research has identified a group of people who refrain from delinquent behavior during childhood and adolescence but begin offending during adulthood. The prevalence of this group in the population, and developmental risk and protective factors that contribute to the delay in these individuals' offending, however, is far from clear. For example, leading developmental and life-course theories such as Moffitt's account of adult-onset delinquency and Thornberry and Krohn's interactional theory of delinquency make very different predictions about the prevalence and causes of adult-onset offending. Using a national longitudinal data (Add Health), this study tested the two competing theories. The results provided mixed support for both theories.

Breakout Session 6

Paper Session: Methodological Issues in Analyzing Add Health Data

Moderator: Melanie Brown, Office of Population Affairs

Investigation of Ways for Handling Sampling Weights for Multilevel Model Analyses Using Add Health Data

Tianji Cai, University of North Carolina at Chapel Hill

This paper investigated how sampling weights were implemented in multilevel model analyses using Add Health data. Two classes of methods were discussed, one was based on the design-based approach, and another was based on the model-based approach. In particular, this study illustrated how the so-called sample distribution approach can be implemented using Add Health data. Both cross-sectional and longitudinal examples were presented. For design-based method, this study implemented two estimators; one was estimated by Probability Weighted Iterative Generalized Least Square (PWIGLS) proposed by Pfeiffermann et al. (1998) using Stata (GLLAMM) and Mplus; and another was based on Multilevel Pseudo Maximum Likelihood (MPML) proposed by Rabe-Hesketh and Skrondal (2006) and Aspraouhov (2006) using LISREL, and MLwiN. For model-based method, the estimator that proposed by Pfeiffermann, Moura, and Silva (2006) was implemented using WINBUGS and SAS (MCMC).

**Non-Response in Wave IV of the Add Health Study***Naomi Brownstein, University of North Carolina at Chapel Hill**William Kalsbeek, Joyce Tabor, Pamela Entzel, and Eric Daza, coauthors*

Non-response is a potential threat to the accuracy of estimates obtained from sample surveys and can be particularly difficult to avoid in longitudinal studies. The objective of this analysis was to investigate non-response and consequent bias in estimates for Wave IV of Add Health. The Survey Research Unit at the University of North Carolina at Chapel Hill previously analyzed the non-response rates for the first three waves of Add Health. As shown in Chantala, Kalsbeek and Andraca, 2005, the total bias in Waves I, II, and III for 13 measures of health and risk behaviors rarely exceed 1%, which is small relative to the 20% to 80% prevalence rates for most of these measures. The results are similar for Wave IV.

Constructing Reliable Multi-Item Scales: Wave I Prediction and Wave IV Outcomes*Mark Benson, Virginia Polytechnic Institute and State University**Caitlin Faas and Christine Kaestle, coauthors*

Multi-item scales hold particular value in assessing the complex contextual variables in adolescents' lives. Using a systematic procedure, we identified 30 underlying multi-item scales from Wave I for use in predicting Wave IV outcomes. Stage 1 centered on descriptive analyses of conceptually similar items; stage 2 produced results from a series of principal components factor analyses; and stage 3 used confirmatory factor analysis (CFA) and structural equation modeling to identify correlated errors and patterns across scales. The study procedures yielded 30 multi-item scales from Wave I based on parent, youth, or interviewer reports. Alphas exceeded .80 for 9 scales and surpassed .70 for 26 scales. The 30 scales included measures of: family processes (7), peer relations (2), school performance (4), neighborhood quality (2); internal processes (5), physical well-being (2), sexuality (4), externalizing behavior (4), and social impression (1). The full presentation provides a detailed handout on the conceptual underpinnings for each scale, the syntax for scale construction, internal consistency estimates, results from CFA, and findings illustrating links between Wave I scales and Wave IV outcomes.

Paper Session: Violence and Delinquency

Moderator: Bethany Deeds, National Institute on Drug Abuse

Connection between Adolescent's Exposure to Community Violence and Future Civic Engagement Behaviors*Wan-Yi Chen, Syracuse University**Jennifer Propp and Yookyong Lee, coauthors*

The study investigates: 1) the potential association between exposure to violence and adolescents' involvement with volunteer activities, and 2) if a positive parent-child relationship would promote adolescents' civic engagement beyond the influence of such experience. Using 3 waves of data from Add Health, weighted logistic regression analyses predicting volunteer activities were estimated. Study results showed that exposure to community violence decreased the likelihood for adolescent to participate in volunteer or community services. This study reveals that positive parent-child relationship would increase the likelihood for adolescents' civic engagement; there is no significant buffering effect from positive parent-child relationship against violence exposure on adolescent civic engagement. These findings suggest that interventions to reduce violence and youth victimization in the community are another key aspect to foster social capital within a community. Findings from this study have practical implications in promoting adolescents' civic engagement. We should reduce risk factors in the community so that we can develop adolescents' pro-social behaviors.



Academic Difficulties and Internalizing Versus Externalizing Problems: Who Gets What and Why?

Lin (Victor) Wang, University of North Carolina at Chapel Hill

Studies have repeatedly shown that stress from academic difficulties can lead to emotional/internalizing problems or behavioral/externalizing problems among adolescents. However, it is unclear why some are at greater risk for emotional problems (such as depressive symptoms) while others are more prone to behavioral problems (such as delinquency). This paper proposes that personal coping resources, particularly self-esteem and locus of control, moderate adolescents' response to stressors such as academic difficulties and channel them towards either emotional or behavioral problems. Using data from the National Longitudinal Study of Adolescent Health, this study found 1) higher self-esteem and an internal locus of control generally protect adolescents from both emotional and behavioral problems; 2) adolescent boys and girls with higher self-esteem are likely to have more behavioral problems and emotional problems; 3) adolescent girls with an internal locus of control tend to have emotional problems rather than behavioral problems.

Gender Differences, Social Bonds, and Delinquent Behavior

Alana Van Gundy, Miami University

The focus of this study is to examine the relationship between parental attachment and delinquent behavior, with a particular focus on gender and criminality. The three hypotheses being tested are 1) parental attachment at Wave I is related to involvement in delinquency at Wave II, 2) individuals that report attachment to their parents are less likely to engage in serious delinquency than those who are less attached, and 3) attachment to parents is a more powerful predictor for female delinquency than male delinquency. Wave I and Wave II data will be utilized for this study. Key independent variables include scales for attachment to father, mother, delinquent peers, school, commitment, and involvement. Control variables will include traditional demographic variables such as age, race, household size, female/male headed household, education level of parents and income. The dependent variables are measured independently and also by composite scales of non-serious delinquency, serious delinquency, and total delinquency. The findings of the regression analyses evidence the importance of parental attachment when examining delinquent behavior and calls to light some important gender differences in the relationship between social bonds and delinquent behavior.

A Multi-level Model of Religiosity, Gene Candidates, and Antisocial Behavior

Jason Freeman, University of North Carolina at Chapel Hill

Mike Shanahan, coauthor

This paper examines interactive patterns involving religiosity at the individual and contextual level and candidate genes in the prediction of delinquency and number of sexual partners in adolescents. Three-level hierarchical linear modeling (HLM) techniques are used to examine these interactive patterns by accounting for variation in the association between gene candidates and delinquency as well as gene candidates and number of sexual partners across sibling pair types (monozygotic twins; dizygotic twins and non-twin full siblings) and counties. All independent variables (barring the gene candidates) are taken from Waves I and II of the Add Health dataset with the gene candidates taken from the Wave III genetic subsample. Four hypotheses are tested in this paper, they are: 1) the association between genetic factors and deviant behavior are *lower* for religious individuals compared to non-religious individuals; 2) the association between genetic factors and deviant behaviors are *lower* within environments characterized by strong religious norms compared to environments with weaker or non-existent religious norms; 3) the association between genetic variants and deviant behavior will be *lowest* among individuals who display high levels of individual religiosity within environments characterized by strong religious norms; and 4) the effect of gene variants on deviance are *lower* for females compared to males and *differ significantly*



between Whites and African Americans. Analyses reveal that religiosity at the individual and contextual level reduces the association between genetic variants and deviance both independently and interactively and that these effects differ across racial and gender groups.

Paper Session: School Environment and Policies

Moderator: Irene Dankwa-Mullan, National Center on Minority Health and Health Disparities

Effects of In-School Physical Activity on Body Mass Index, School Performance, and Educational Attainment

Amanda Exner Staiano, Georgetown University

U.S. adolescents face high obesity rates and inferior academic performance compared to international peers. Increasing physical activity via in-school physical education may improve health status, concentration, memory, and general academic performance. Yet little is known about the impact of varying levels of in-school physical activity on academic outcomes. This study analyzes Wave I to Wave III, employing a quasi-experimental design using linear regression analyses to compare no, moderate, and high levels of in-school physical activity (P.E.) on academic and health outcomes. Preliminary results indicate that students with moderate to high levels of P.E. reported fewer in-class attention problems and higher educational attainment than students with no P.E. Additionally, students who had moderate levels of P.E. had lower body mass index than students with no P.E. There was a negative effect of P.E. on academic achievement as measured by grade point average, and there was no effect of P.E. on cognitive performance as measured by a standardized verbal test. Connecting P.E. to academic achievement could validate the need for policies requiring in-school physical activity, which would not only improve health status but potentially improve academic performance of U.S. youth.

Childhood Sporting Activities and Adult Labour-Market Outcomes

Charlotte Cabane, Université de Paris Panthéon-Sorbonne, Paris, France

Andrew Clark, coauthor

It is known that non-cognitive skills (NCS) are an important determinant of success in life. However, their returns are not simple to measure and, as a result, only relatively few studies have dealt with this empirical question. We consider sports participation while at school as one way of improving or signalling the individual's NCS endowment. We use four waves of Add Health data to see how sports participation by schoolchildren translates into labour-market success. We specifically test the hypotheses that participation in different types of sports at school leads to, ceteris paribus, very different types of jobs and labour-market insertion in general when adult. We consider four different indicators of labour-market success: managerial responsibilities; the freedom to make important decisions in one's job; the place that the current job holds in the individual's career plan; and physical work conditions. We take seriously the issue of endogeneity of sporting activities (whereby, for example, richer students may have better access to sporting facilities, and better opportunities on the labour market) in order to tease out a causal relationship between childhood sporting activity and adult labour market success. As such, we contribute to the literature on the returns to NCS.



High School Mathematics and Science Curriculum and School Locale: Influences on Future Occupation

*Paul G. Wilner II, State University of New York – University at Albany
Kathryn Schiller, coauthor*

This study determines the influence high school curriculum has on future occupation in science technology engineering and mathematics (STEM) fields and how this influence may vary according to school urbanicity. We hypothesize that certain mathematics topics and levels of complexity are more conducive to persistence in STEM fields and the impact of these topics vary according to school urbanicity. To test this hypothesis, this study looks beyond the courses a student takes and looks into the complexity of topics contained in each individual course. This provides a fine grained approach for total educational experience. We use Add Health curriculum data and Wave IV occupation variables to determine whether students with a complex curriculum in mathematics and science tend to secure jobs in STEM fields. Controlling upon demographics and student ability, a two level hierarchical linear model will map out which specific mathematics and science topics have the most influential effect on future occupation. This model will shed light on the impacts of curricular differences at different levels of urbanicity. It may also provide evidence that students are forced out of STEM fields as early as high school, and what mathematics and science topics serve as gatekeepers for STEM fields.

Suspending Society's Obligations: Adolescent School Outcomes and Risk Behaviors under Differing School Discipline Policies

Janet Rosenbaum, Johns Hopkins University

The 1994 federal Gun-Free Schools Act required schools to suspend students who possess weapons or drugs, irrespective of circumstance. Currently, over 9% of males and 4.5% of females in US high schools are suspended each year (NCES 2009). While the black-white achievement gap has narrowed, it has increased in school suspension. Add Health is uniquely suitable for studying this policy change. This study, the first of three, will focus on students at schools that suspend/expel for non-violent offenses such as smoking and drinking in school, using the Add Health school administrator reports. Using propensity matching methods, we compare Wave II through Wave IV outcomes of students suspended at Wave I with students not suspended at Wave I that are otherwise similar on pre-suspension characteristics measured on the in-school survey, such as math and English class grades, extracurricular involvement, truancy, fighting, smoking and alcohol use, school connectedness, parents' education, expectations for the future, self-efficacy, and depression score. The study tests the hypothesis that students suspended at schools with harsh disciplinary policies would have worse outcomes due to secondary deviance than students who are not suspended but have similar pre-suspension characteristics.

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