

Add Health Users Conference

July 23–24, 2018

Natcher Building and Conference Center
NIH Campus, Bethesda, Maryland

ABSTRACTS

Breakout Session 1

Methodology Session 1: Overview of Add Health and Add Health Parent Study

Kathleen Mullan Harris

Director, National Longitudinal Study of Adolescent to Adult Health, University of North Carolina at Chapel Hill

V Joseph Hotz

Principal Investigator, Add Health Parent Study, Duke University

This session will provide an overview of the Add Health Study design and data and an overview of the new Add Health Parent Study design and data. This session is intended for conference participants who have never used Add Health, are thinking about using data from Add Health and/or the Add Health Parent Study, or are new to Add Health and want to learn more about its data and the Add Health Parent Study. The first half of the session will cover the Add Health design and data collection across all waves, from the In-school Administration in 1994 to the recent 2016 -2018 Wave V follow-up. The second half of the session will cover the Add Health Parent Study (AHPS) design and recent data collection in a 20-year follow-up of the parents of Add Health members last interviewed in 1995. AHPS re-interviewed a subset of Add Health parents and their current spouse or partner from 2015-2017. Both public and restricted-use versions of AHPS data will be released in the summer of 2018. This session will review the AHPS sample characteristics, content of the follow-up questionnaire, and provide illustrations of unique research opportunities to study intergenerational linkages with linked Add Health—AHPS data. The session will also present information on the how to get access to Add Health and AHPS data, including applying for restricted-use data licenses.

Paper Session 1: Race/Ethnicity and Health

A1.1 Differences in Household Income by Skin Color across the U.S. and Within the Family

Jessica Kizer, Pitzer College

Siblings differ in a variety of biological ways, including physical appearance, which National Geographic recently demonstrated when they put biracial, fraternal twin girls on the cover, one blonde, blue-eyed and light skinned and the other brunette with dark, brown eyes and skin. Although these sisters share a Jamaican father and a White, English mother, what remains to be seen is if they will be seen and treated by others as a different race. A growing body of work challenges the notion of race as a one-dimensional identity by arguing that race encompasses multiple dimensions, including how one self-identifies, how other people classify them, and phenotype, with social scientists increasingly examining how these varying aspects of race relate to people's life chances. For example, sociologists have compared how SES varies across groups based on racial identity and how they are classified by others, yet other scholars have demonstrated that family background is a crucial factor in the perpetuation of racial inequality. However, what remains to be done is a thorough investigation of how race may vary within families and whether these differences are related to siblings' life chances. I address this gap and improve upon prior studies with an underused, within-family approach using restricted-use Add Health data. I compare the relationship between skin color and adjusted household income at both the population-level and within-families using OLS. I conduct the population-level analyses using the nationally-representative sample of Asian American, Black, Latino, and Native American men and women and assess the relationship within families by analyzing the sibling sample with family fixed-effects. These within-family estimates allow me to compare siblings while holding family environment constant. I control for the interviewers' race, mother's education, nativity, marital status, and age. I find that perceived skin color is significantly associated with household income in the nationally-representative sample, with the relationship being larger for men than for women. That is, respondents with darker skin have significantly lower adjusted household income. Among siblings, I find that the relationship between complexion and household income remains significant, but that the magnitude of the relationship is smaller. Previous research shows that skin color is related to occupational prestige, thus I plan to include this in my analyses.

A1.2 Understanding the Economic Implications of Racial and Ethnic Identification in Survey Data

Nancy Haskell, University of Dayton

A number of studies consider the effects of race and ethnicity on individuals, but many fail to consider that self-reported racial and ethnic identity in survey data is potentially an endogenous choice. This paper looks at patterns of racial and ethnic reporting for high school students across two different survey environments and relative to their biological parents using Add Health data. Reports of being black and Asian are the most consistent, while Native American Indian and "other"

race are the least consistently reported. Inconsistency between students and their biological parents appears not to be the result of random measurement error. Students who report a race that neither parent reported are generally identifying in a manner consistent with their physical appearance (as noted by an interviewer). Overall, students with better-educated parents are less likely to identify as Hispanic, but they are far more likely to identify as black. These and other findings suggest the choice of racial and ethnic identification is influenced by age, cohort-effects, parental human capital, and appearance, all of which may be correlated with behavioral and economic outcomes. Using Wave III and Wave V of the Add Health survey, this paper works to identify the extent to which the chosen racial classification changes over time as well as the association between these identification choices and labor market outcomes.

A1.3 Is Race in the Eye of the Beholder?: A Longitudinal, Comprehensive Review of Measures of Racial Classification in Add Health

Savannah Larimore, University of Washington

Michael Esposito, Jane Rafferty, Margaret Hicken, Taylor Hargrove, Hedwig Lee, coauthors

Recently, health scholars have attempted to move beyond unidimensional measures of race in their analyses to look within as well as across racial and ethnic groups for meaningful sources of variation. Add Health, which includes measures of not only self-classified race, but observed race, skin tone, and reflected race, has been a commonly used data set in these endeavors. While Add Health also includes multiple measures of racial classification across waves, few studies using Add Health data consider the fluctuations in these measures within individuals across waves. Given the theoretical relationship between experiences of racial misidentification, the centrality of racial identity, experiences with racial discrimination, and health, a failure to consider the longitudinal and multidimensional nature of race may lead to incorrect estimation of effects. For example, preliminary analyses find that individuals who are otherwise race-concordant (i.e., their self-classified race and observed race are the same) in Waves I & III may be race-discordant in Wave IV. A respondent may self-classify and be observed as "White" in Wave I, self-classify and be observed as "Asian/Pacific Islander" in Wave III, and be observed as "White" in Wave IV. These individuals likely have a different set of racialized experiences than their peers who are never recorded as race-discordant in Add Health. Additionally, since self-classified race is not explicitly asked in Wave IV, rather it is assumed to remain unchanged between Waves III and IV, race-discordance in Wave IV represents a theoretically different process of racial misidentification than race-discordance in Waves I and III. As such, the goal of this analysis is two-fold: we first present a comprehensive and descriptive summary of the variations in survey design and racial classifications across waves, making specific note of how the prior likely informs the latter and implications for these variations in health research. In this summary, we will also provide a descriptive analysis of the sociodemographic and contextual characteristics of respondents who experience racial fluctuation and/or discordance across waves. Second, we outline strategies for dealing with this variation, both conceptually and methodologically, and will test the utility of these strategies for self-rated health. In doing so, we demonstrate ways that researchers can fully account for various expressions of race in Add Health.

A1.4 Adolescent Exposure to Diverse Neighborhoods and Schools: Implications for Interracial Dating, Cohabitation, and Marriage in Adulthood

Xing Zhang, Cornell University

Interracial relationships and unions signify declining racial and ethnic boundaries between groups, and have grown in prevalence since the declaration of anti-miscegenation laws as unconstitutional in 1967. Kalmijn (1998) outlined several reasons why people engage in interracial relationships and unions; these include preferences, structural opportunities, and third parties. This paper will primarily focus on structural opportunities, and examine the following question: does growing up in a geographically diverse neighborhood increase the likelihood of being in an interracial relationship at later stages of the life course? This paper seeks to address how diversity in different geographic contexts (high school and Census tracts) shapes opportunities to cross racial boundaries. This paper uses data from Waves I, III, IV, and the V pre-sample of the National Longitudinal Study of Adolescent Health (Add Health) to assess whether high school and tract diversity in adolescence are associated with the likelihood of being in an interracial relationship in Wave III, when respondents are between 18-26 years old, and in Wave IV, when respondents were between 26-34 years old. It also seeks to address whether moving to a Census tract that is more or less diverse from Waves I to III and IV is associated with an increased or decreased likelihood of being in an interracial relationship. Are individuals who grew up in more diverse contexts in adolescence more likely to be in interracial relationships when moving to a Census tract that is similarly diverse? How do these associations vary by race, ethnicity, gender, and timing of the life course? Testing hypotheses of propinquity and the contact hypothesis, preliminary results show that growing up in more racially and ethnically diverse Census tracts during

adolescence is associated with an increased likelihood of being in an interracial relationship in emerging and young adulthood. Living in a more diverse Census tract is associated with an increased likelihood of being in an interracial relationship for White men and women, Black men, and Hispanic men and women. Going to a high school that is majority White is associated with an increased likelihood of being in an interracial relationship for Black men and women, and Hispanic women.

Paper Session 2: Risky Behaviors

A2.1 Born to be Friends: Siblings and Relocation

Sarah Underwood, Saint Louis University

Using the National Longitudinal Study of Adolescent to Adult Health (Add Health) dataset, the effect of sibling relationships on relocation adaptation was investigated. Using propensity score matching, matched groups of 7,500 movers and non-movers were assessed to investigate how long-term negative outcomes of relocation were affected based on existence of siblings, sibling gender, and sibling age. Longitudinal regressions conducted suggest that while siblings overall predict decreased psychiatric stress, sibling gender and age gap significantly predict changes in delinquent behavior and substance use. The results suggest great potential for insight into how adolescents cope after relocation and who they rely on for support during a tumultuous time.

A2.2 Gambling Involvement in African American and European American Females

Manik Ahuja, Washington University in St. Louis

Renee Cunningham-Williams, Kathleen Bucholz, coauthors

Gambling among adolescents and young adults is a growing problem with potential for adverse consequences including increases in substance use (Ferentzy and Turner 2013), psychiatric disorders, and gambling problems later in life (Castren 2015). Rates of gambling among males are historically known to be higher than females, although it has become more socially acceptable among females (Heater 2006). Females, are considered an emerging population of gamblers that have been vastly understudied (Wong 2013; Heater 2006; Martins, 2008). In the current research, we examined the association of key risk and protective factors for gambling involvement including neighborhood, well-being, risky behaviors, conduct and substance use in a sample among African American and European American females. The sample was comprised of young adults (ages 18-26; Mean age=22.8) self-identifying as European American (n=5,211) or African American (n=1,891) who were selected among the larger sample of those participating in Wave III (n=15,170) of the restricted-use National Longitudinal Study of Adolescent to Adult Health (Harris 2009). For these analyses, we examined gambling correlates using logistic regression with a binary gambling involvement outcome variable: gambled in two or more categories of games, gambled within only one category or less.

Overall, in the AA cohort n=531 (28.8 %) gambled in two or more categories. After simultaneously considering all risk factors, childhood physical discipline (OR=1.41, [95% C.I. 1.11-1.81]), less happy in current neighborhood (OR=1.51, [95% C.I. 1.03-2.19]), past year weekly alcohol use (OR=1.56, [95% C.I. 1.06-2.28]), past year cannabis use (OR=1.68, [95% C.I. 1.26-2.23]), and 10 or more lifetime sexual partners (OR=1.42, [95% C.I. 1.08-1.87]) were associated with increased gambling involvement in the AA cohort. Weekly attendance of religious services (OR=0.67, [95% C.I. 0.52-0.86]) was protective and associated with a reduced risk of gambling.

In the EA cohort n=2,434 (46.7%) gambled in two or more categories. Childhood physical discipline (OR=1.07, [95% C.I. 1.02-1.34]), past-year weekly alcohol use (OR=1.64, [95% C.I. 1.43-1.89]), and current smoking (OR=1.27, [95% C.I. 1.13-1.44]) were associated with increased gambling involvement. Attendance at religious services (OR=0.53, [95% C.I. 0.45-0.62]) and less social acceptance (OR=0.72, [95% C.I. 0.53-0.98]) were protective and reduced the risk of gambling.

A2.3 Does Health Influence Risk Preference?

Sanjeev Kumar, Yale School of Public Health

In this paper, we investigate whether self-assessed health (SAH) status - a measure of health stock - influences the risk preference of an individual. Using the National Longitudinal Study of Adolescent to Adult Health (Add Health), we estimate that better health during adolescence is associated with more willingness to take risks when people are around age 30. Moreover, the experience of a reduction in their health stock between adolescence and young adulthood is even more strongly associated with willingness to take risk later in their lives - a finding that provides a novel pathway through which individual's loss aversion gets operationalized. These findings are robust to regression specifications - linear probability and generalized ordered logistic regression models - as well as to the inclusion of exogenous personal characteristics, such as

age, gender, height, and race - variables that are shown to be related to both health and various measures of risk in the existing literature. We further investigate the robustness of the main findings through the inclusion of school fixed effects, parental background, religiosity, income, education, cognitive ability. Controlling for these covariates allows us to explore the existence of a direct, independent relationship between health and risk preference. Our findings remained robust even after including two heritable measures of personality - neuroticism and conscientiousness - that could have bearing on both health and risk preference. This is the first paper that has uncovered a long-term association of health with risk-taking. These findings are quite pertinent in building a better understanding of the processes that govern deepening of the market mechanism and the processes leading to policy formation. If similar findings hold for older populations, then it potentially establishes a link between health and the future of financial markets and the pace of change in policy regimes.

A2.4 The Analysis of Gender Effects in The Co-Development of Sexual and Non-Sexual Risk-Taking Behaviors Using Add Health: Longitudinal SEM Approach

Yurino Kawashima, Southern Illinois University

Sexual risk-taking and non-sexual risk-taking, such as alcohol use, are public health issues. Although individuals often engage in both behaviors from adolescence to adulthood, these behaviors are often studied separately. Alternatively, one risk-taking behavior is used and tested as a predictor (or control variable) for another risk-taking behavior, with other theoretical predictors. However, such methods cannot show how these two behaviors co-develop, in terms of how their relationships with each other and with other theoretical variables dynamically (or reciprocally) change over time. In this study, I model the co-development of sexual and non-sexual risk-taking behaviors by taking a longitudinal SEM approach and by using the first four waves of Add Health dataset which cover adolescence to adulthood (ages from 15 to 30 approximately). I elaborate criminological and other theories and extend them to test these two risk-taking behaviors in this methodological framework. In addition, I examine the effects of gender by using multiple-group modeling. My three major research questions included, how do the two risk behaviors influence each other over time?, how protective and risk factors influence these two behaviors over time (is a factor protective or risky consistently)?, and are there any gender differences in the processes? The preliminary results using the multiple-group modeling showed that, among both males and females, sexual risk-taking and alcohol use influenced each other only in late adolescence. There was no theoretical risky or protective factor which consistently affected sexual risk-taking or alcohol use over time. While there were no gender differences in the pattern of effects of various theoretical factors in late adolescence, there were some in adulthood.

Breakout Session 2

Methodology Session 2: Overview of Ancillary Study Applications—Adding Supplemental Data to Add Health

Robert Hummer

Investigator, Add Health Wave V, University of North Carolina at Chapel Hill

Taylor Hargrove

Assistant Professor of Sociology, University of North Carolina at Chapel Hill

An Add Health ancillary study is any study that uses its own funding to achieve one (or more) of the following aims: collect new data on Add Health respondents, merge secondary data sources onto Add Health respondent files using personal identifiers (e.g., geocodes), collect new biospecimens from Add Health respondents, or use archived biospecimens collected by the Add Health study to add new variables to the study. This session has three aims. First, it will provide information on the process of developing and submitting an ancillary study proposal. Specifically, this portion of the session will discuss potential funding sources for ancillary studies, provide information on how to estimate the costs of an ancillary study, and offer tips on how to showcase the public health relevance of ancillary study variables in grant applications. Second, the session will provide an overview of some of the successful ancillary studies that have been conducted over the years that have enriched available Add Health data. Third, the session will provide an in-depth example of a current ancillary study to provide potential future ancillary study applicants with an up-to-date look at how the process works and how an ancillary study can be used to both enrich one's own research as well as enrich the Add Health study on the whole. This session is intended for conference participants who either are interested in learning more about the ancillary studies that have been added to the overall value of Add Health and for those who have ideas to write a future ancillary study proposal.

Paper Session 3: Implications of Adverse Childhood Experiences (ACEs)

A3.1 Is Parental Incarceration Associated with Risky Sexual Behavior in Young Adults?

Gianna Le, University of California, Berkeley

Julianna Deardorff, Maureen Lahiff, Kim Harley, coauthors

Objective: To estimate the associations between parental incarceration and sexual risk outcomes (early sexual onset, inconsistent condom use, and sexually transmitted infections [STIs]).

Methods: We used logistic regression to estimate associations of risk taking behaviors with parental incarceration in childhood in a sample of 3,972 young people participating in The National Longitudinal Study of Adolescent to Adult Health (Add Health).

Results: Parental incarceration increased the odds of early sexual onset (adjusted odds ratio [AOR] = 1.5, 95% confidence interval [CI] = 1.2-2.0) and STIs (AOR = 1.9, 95% CI = 1.2-3.0). Maternal incarceration was more strongly associated with early sexual onset (AOR = 4.0, 95% CI = 2.1-7.4), inconsistent condom use (AOR = 2.6, 95% CI = 1.1-6.4), and STIs (AOR = 3.5, 95% CI = 1.1-11.8) than paternal incarceration. Additionally, parental incarceration occurring before age 10 increased the odds of STIs (AOR = 2.1, 95% CI = 1.2-3.9).

Conclusions: Parental incarceration, especially maternal imprisonment, is associated with risky sexual behavior and sexually transmitted infections in young adults in the US.

Implications: This study is the first to investigate the influence of parental incarceration on the sexual health of young adults in a nationally representative sample. The high burden of sexually transmitted infections among young people warrants identification of vulnerable subgroups such as children of incarcerated parents.

A3.2 Maltreatment and Delinquency Associations across Development: Assessing Differences among Historically Understudied Groups and Potential Protective Factors

Hannah Lantos and Andra Wilkinson, Child Trends

Tyler McDaniel, Hannah Winslow, coauthors

Introduction: Maltreatment negatively affects children's well-being, oftentimes into adulthood. In 2016, 9.1 out of every 1,000 children were involved in the child welfare, with 14 percent suffering multiple types of maltreatment. In addition to other negative outcomes, youth who are maltreated are more likely to engage in delinquent behavior such as stealing or committing violence. To interrupt this link, we must understand how the relationship between maltreatment and delinquency varies longitudinally across development, which protective factors matter, and how these associations vary across subgroups.

Method: To bridge this knowledge gap, Child Trends researchers conducted new, innovative analyses to investigate the link between maltreatment and delinquency, including potential malleable protective factors, and variation by sociodemographics. Using data from Add Health (N = 10,613), we employed linear mixed effects models to estimate growth curves of nonviolent and violent offending, testing maltreatment as a predictor and five potential protective factors as moderators. For all analyses, we examined variation by sex, race/ethnicity and sexual orientation.

Results: Amid a large, nationally representative sample, 77% of respondents self-reported an experience of maltreatment and approximately one third reported at least one act of nonviolent or violent offending. The longitudinal pattern of offending varied significantly by gender (male>females) and for non-violent offending by sexual orientation (LGBQ>non-LGBQ).

Maltreatment predicted a step-wise effect on nonviolent offending and an all-or-nothing effect on violent offending. Maltreated males had significantly larger increases in predicted nonviolent delinquency (ref: females). Overall, school connection, quality maternal/paternal relationship, and neighborhood collective efficacy moderated the link between maltreatment and both types of delinquency, with little difference by sociodemographics.

Conclusion: Despite the nuances in maltreatment and offending across development, there are malleable protective factors that seem to mitigate risk at an equal rate across all sub-groups. Additional research is needed to probe how these relationships vary by type of maltreatment as well as by the timing of the maltreatment and protective factor. These results have implications for delinquency prevention both within the child welfare and juvenile justice systems and before children are engaged in either system.

A3.3 Childhood Sexual Abuse and Adult Human Capital

Laura Henkhaus, University of Southern California

A growing body of literature suggests that the consequences of childhood sexual abuse may be long-lasting and extend beyond mental health. Scientists have described neurobiological mechanisms explaining effects of chronic childhood stress on physiological and cognitive development. Extant literature shows that adults who had suffered childhood abuse had poorer physical and mental health, higher rates of adverse health behaviors, and higher rates of violence perpetration compared to adults who suffered no abuse. Yet, the literature has largely neglected to measure the potential consequences of childhood abuse on cognitive development and later-life economic wellbeing while accounting for the fact that survivors of childhood abuse more often come from lower income households. In this paper, I use the National Longitudinal Study of Adolescent to Adult Health to study human capital outcomes of survivors of childhood sexual abuse in young adulthood. I study outcomes in Wave IV: highest educational attainment as no high school degree, GED, high school diploma, or college degree; having full-time employment; and earnings. I use data from Wave I child and parent interviews to control for demographics, other adverse childhood experiences, childhood socioeconomic status, and observed and unobserved characteristics of their school environment through use of school fixed effects in regression analyses. Specifically, demographics include age, sex, and race; other adverse childhood experiences include physical abuse, emotional abuse, and parental incarceration; and childhood socioeconomic status is included as highest parental educational attainment and household income. I identify the population who reported childhood sexual abuse as those with any report of childhood sexual abuse in the Wave III or Wave IV computer-assisted self-interview sections. I address missing data with multiple imputation for variables with more than 3% of observations missing. I expect that survivors of childhood sexual abuse will have lower educational attainment and poorer labor market outcomes. Preliminary results from fully adjusted regression analyses show that childhood sexual abuse was associated with lower educational attainment, lower likelihood of full-time employment, and reduced earnings. This study highlights the importance of detection of childhood sexual abuse and quality treatment of trauma symptoms to avoid durable consequences on economic wellbeing.

A3.4 Political Consequences of Childhood Maltreatment

Kaye Usry, Elon University

The Department of Health and Human Services estimates that in 2015 alone, nearly seven hundred thousand children were abused or severely neglected in the United States. This form of early trauma, especially when perpetrated by a parent or guardian, has severe consequences for a child's development, and has been linked to numerous negative behavioral outcomes later in life. Despite this, the relevance of childhood maltreatment for an individual's worldview and political engagement has not previously been considered. Using the National Longitudinal Study of Adolescent to Adult Health (Add Health), I explore the effects of childhood maltreatment reported in Wave III, on political trust, civic engagement, and ideological attachment in Waves III and IV. I use both a multivariate regression approach, and propensity score matching, to examine the effects of childhood maltreatment. I find that when adolescents report being neglected by their parents or guardians, there are lasting, negative consequences for their willingness to trust in government, vote in elections, and be engaged members of their communities (Wave III). And, these effects appear to last into early adulthood (Wave IV). Physical and sexual abuse appear to have a more complicated relationship with political attitudes and behaviors. When adolescents report being physically abused by their parents or guardians, they have reduced political trust, but may actually be more civically and politically engaged in early adulthood. When children have experienced sexual abuse at the hands of a parent or guardian, at least in adolescence, there do not appear to be any consequences for their political attitudes or behavior. However, their awareness of this experience, and the potential consequences for their political attitudes and behaviors, may not develop until they reach adulthood.

Paper Session 4: Social Networks

A4.1 Popularity or Future Success? Friendship Network Formation for Forward-Looking Teenagers

Tian Lou, The Ohio State University

Stephen L. Ross, coauthor

Previous literature has documented that teenagers gain utility from being popular in high school and that they tend to make friends with whom have similar attributes, such as the same race/ethnicity and maternal education. Moreover, other than immediate payoffs, teenagers may also obtain long-term economic gains from friendships: high school friends may influence teenagers' future educational attainment and incomes through their academic performance during high school. This paper aims to determine which better explains teenage friendship choices: the immediate payoffs or the anticipated

long-term economic gains. We use a three-period dynamic model to include teenagers' friendship choices and outcomes in high school, as well as decisions and outcomes in college and labor market that are related to high school friendship choices. The model is estimated using Add Health data. Specifically, we utilize the friend nominations in the Wave I in-school survey to construct teenagers' friendship networks, and we use their incomes during the Wave IV survey as an approximation for the long-term economic payoffs. We find that male teenagers value their popularity during high school much more than they do the long-term economic benefits from friendships. Moreover, heterogeneity tests show that in general, African American and Hispanic students experience higher returns on both popularity and long-term economic gains from friendships than whites.

A4.2 Body Mass Index and Social Interactions from Adolescence to Adulthood

Majlinda Johxhe, Center for Research in Economics and Management, University of Luxembourg

Luisa Corrado, Roberta Distante, coauthors

This paper proposes a novel approach to address identification of social endogenous effects by generalizing the methods commonly used in standard dynamic panel data analysis to the peer effects setting. Our methodology shows how one can estimate peer effects free of the "reflection problem" in a dynamic context where individual- and group-specific unobservable effects are controlled for. We apply a dynamic linear-in-means model for analyzing the importance of social ties for body-weight-related behavior of US youth using Add Health Data. We show that the main drivers of body-weight-related behavior are habituation and imitation effects. For individuals who were normal-weight during adolescence habits seem to be slightly enforced by imitative behavior: in this instance, for any 1% increase in average BMI we expect about 0.72% increase in individual BMI, whereas the coefficient for past BMI is 0.41%. Imitation effects, instead, explain most of the variation in the Body Mass Index of individuals who were overweight and obese during adolescence, signaling the presence of a social multiplier effect: for these two groups an increase by 1% in average BMI leads, respectively, to an increase by 0.93% and 1.26% in current BMI.

A4.3 Social Networks and Educational Attainment among Adolescents Experiencing Pregnancy

Elizabeth Humberstone, Johns Hopkins University

Pregnant adolescents are a population at risk of dropout and have been found to complete fewer years of education than peers. Pregnant girls' social experience in school may be a factor in their likelihood to persist, as social integration is thought to buffer dropout risk. Pregnant teens have been found to have fewer friends than their peers; yet, the academic ramifications of these social differences have yet to be studied. This study asks whether friendship networks are associated with the relationship between adolescent pregnancy and educational attainment. Using multi-level models and propensity score matching, it specifically explores associations between high school graduation (reported in Wave 3) and friendships, friendship reciprocation and network centrality (reported in the In-School survey) reported prior to pregnancy.

Girls were categorized as 'never pregnant', 'pregnant before the In-School survey' and 'pregnant after the In-School survey' by comparing the most recent pregnancy dates reported during Wave 1 and/or Wave 2 to the date the In-School survey was administered. Wave 1 and/or 2 pregnancy dates were used since they provide pregnancy start dates (as opposed to pregnancy end dates available in Waves 3 and 4) as educational and/or social challenges related to pregnancy likely start early in a pregnancy. Wave 1 and/or Wave 2 data was used to retain participants who were seniors in Wave 1.

The study sample is limited to participants in the 'pregnant after the In-School survey' group and their propensity score matched 'never pregnant' peers. Inclusion of girls pregnant prior to the In-School survey presents possible selection bias, as the survey does not capture pregnant girls who dropped out prior to the In-school survey. The post-survey pregnant group (n=274) captures girls prior to possible pregnancy-related dropout. An indicator variable for girls reporting multiple pregnancies (n=27) was included in case multiple pregnancy dates were not adequately captured. Any girls with insufficient pregnancy date data were categorized as 'unknown pregnant' and excluded from the sample.

Overall, the study finds having more in-nomination friendships (i.e. peers who report a participant as a friend) prior to pregnancy to be associated with a reduced risk of high school dropout compared to more socially isolated pregnant teens. It additionally finds a marginally significant relationship between out-nomination friendships (i.e. friends reported by a participant) and network centrality and the association between pregnancy and dropout. This work suggests social isolation and social connections may be a factor in the educational careers of girls who become pregnant. These findings further suggest that school environment factors, such as one's social climate, may relate to educational success of pregnant teens.

A4.4 Friendship Network Cohesion and High School Graduation Outcomes

Ji Eun Park, University of Pennsylvania

Many studies find positive association between social capital and academic achievement, but few examine individuals' network positions. Using network module in the Add Health Wave I In-School Survey and transcripts data from the Adolescent Health and Academic Achievement (AHAA) study, this research takes a whole-network approach in examining the relationship between network cohesion during 9th grade and high school graduation outcomes. Propensity Score Matching is used to adjust for selection bias and assumptions underlying the causal inference are discussed. This study finds that peer network cohesion during 9th grade appears to be associated with increased likelihood of on-time high school graduation and this positive effect is moderated by different levels of cultural capital. Attachments to school as a possible mediator is also considered.

Breakout Session 3

Methodology Session 3: Add Health Genetic Data and Genome-Wide Association Study

Robbee Wedow

Graduate Student, Department of Sociology; Institute for Behavioral Genetics; Institute of Behavioral Science, University of Colorado Boulder

David Braudt

Ph.D. Student in Sociology, University of North Carolina at Chapel Hill

The National Longitudinal Study of Adolescent to Adult Health (Add Health) recently released both genotyped data and polygenic scores for approximately 10,000 participants. These new data products provide researchers with the ability to conduct biosocial analyses by combining the depth and breadth of phenotypic information contained in Add Health with genetically informed measures. This session will describe the Add Health genetic data and polygenic scores, as well as a few examples of uses of the data from recent publications. We will (1) introduce the genetic data and polygenic scores, (2) describe data access steps, and (3) highlight a few applications of the data in recent research.

Paper Session 5: Contributors to Health in the Transition to Adulthood

A5.1 Beyond Access: Predictors of Unmet Need for Health Care from Adolescence to Young Adulthood

Sarah Rutland, University of Alabama at Birmingham

Elizabeth H. Baker, coauthor

Objective: To assess the trends and predictors of unmet need (UN) for health care from adolescence to young adulthood. **Hypotheses:** 1) The likelihood of UN will increase over time as adolescents transition into adulthood 2) Racial/ethnic minorities will be more likely than whites to have UN at baseline and later waves, net of controls. **Methods:** Using data from Waves I-IV of the National Longitudinal Study of Adolescent to Adult health (Add Health) I will examine trends of unmet need over time. The analytical strategy will encompass descriptive statistics, bivariate statistics, and multivariate regression models. The method for regression models will be General Estimation Equations (GEE) and/or General Linear Mixed Models (GLMM). Controls may include gender, child of immigrant, insurance status, adolescent SES (mother's education, mother's employment status, household income at Wave I), smoking habits, drinking habits, depressive symptomatology, respondent ever attends college, respondent ever marries, respondent ever has children, and self-rated health. **Priority Populations Studied:** The study focuses on people transitioning from adolescence, starting as early as age 12, to young adulthood, continuing into age 34. Black, white, and Hispanic populations specifically will be examined. Sensitivity analyses will inform if other racial/ethnic populations can be retained in the larger analyses. **Expected Results:** This project seeks to identify trends and predictors of unmet need for health care in an understudied population at a pivotal point in the life course. **Conclusion:** Pending results of this study I will be able to conclude the trends and predicting factors of unmet need over time from adolescence to young adulthood in Waves I-IV in the Add Health study. Identifying these trends and predictors for unmet need can inform policy and support strategies for public health interventions for a population that can be difficult to reach and assist.

A5.2 Health and Political Preference: An American Tale

Sanjeev Kumar, Yale School of Public Health

Recent political events have garnered significant interest in building a better understanding of the factors that determine political preference. The United States, in particular, has engendered some interesting questions regarding its ability to effectively respond to some of its idiosyncratic political and socio-economic problems like racial inequality and the institutional complexity of the health-care system, which has given rise to sharp health disparities. Previous research has identified many correlates of political preference; however, we could find no study that has evaluated the association between self-assessed health (SAH) and ideology keeping in mind the possibility of the health being a causal factor affecting preference. Using Generalized Ordered Logistic (GOL) models, we show strong contemporaneous and intertemporal associations between SAH status during adolescence and ideology during the young adulthood. People who reported being in excellent SAH when they were around age 20 were more likely to endorse conservative political ideology when they were around age 30. Interestingly, once we account for unobservables through controlling for the lagged value of ideology (in addition to other covariates), we found that only those who experienced a negative change in their health status tend to become relatively even more conservative in comparison to their political preference when they were around age 20. Additionally, we find interesting differences across gender: while it was the negative change in health stock of men located on the left of the political spectrum that drove them to conservatism, the opposite was found to be true for women. We interpret our findings in light of an American narrative "the centrality of the idea of individual responsibility a la rugged individualism" and propose that people who transition from excellent to poorer health tend to endorse conservative ideology with more intensity.

A5.3 Parental Loss and Well-Being across the Transition from Adolescence to Adulthood

Renae Wilkinson, Baylor University

Although the death of a parent is most likely to occur when children are middle-aged, an important minority of individuals experience parental death during adolescence or young adulthood. Research investigating the effects of a parent's death in these earlier life stages shows that such "off-time" deaths are especially consequential for the mental and physical well-being of affected children. While numerous studies examine the effects of a parent's death on young children, few focus on these effects on adult children, particularly adults who experienced such an event as adolescents or younger adults; even less is known about how these effects fare over time. This study seeks to address these issues using longitudinal data spanning the adolescent to early-midlife adult stages. Utilizing Waves 1, 3, 4, and 5 (Sample 1) of Add Health, I examine the impact of a parent's death during adolescence or young adulthood on the mental and physical well-being – specifically, self-assessed health, depressive symptoms, cigarette smoking, and alcohol abuse – of bereaved children as adults. Given a typically strong life course attachment to both mothers and fathers, I expect the death of a parent will negatively impact the psychological well-being and physical health of adult children. In keeping with prior studies examining gender differences in the effects of parent loss on well-being, I expect the death of either parent to have a greater negative impact on women than men. I also expect the death of mothers will negatively affect the well-being of bereaved daughters and that the death of fathers will negatively affect the well-being of bereaved sons.

Preliminary analyses show that experiencing parental death is associated with worsened mental and physical well-being in young adulthood. Considering sex of deceased parent and bereaved child separately, mother loss lowers self-assessed health and father loss increases depressive symptoms for bereaved children, and daughters suffer worsened mental and physical well-being following parent death. When sex of both bereaved child and deceased parent are considered together, mother loss affects lowered self-assessed health and father loss is associated with increased depressive symptoms and smoking for bereaved daughters. This study's preliminary results suggest that deleterious effects of parent loss are reflected more in women's well-being reports than men's, but that these dynamics may change over time.

A5.4 Relationship between Upward Mobility and Mental Health

Julia Goodwin, University of Wisconsin-Madison

Jason Fletcher, coauthor

Previous work has found evidence for the theory of "skin-deep" resilience [1]: the upwardly mobile from disadvantaged backgrounds (measured as parent's SES, or school or neighborhood characteristics) are psychologically no different from their high SES counterparts, but fare worse in health outcomes (e.g., cardiovascular disease, diabetes).[2, 3] However, how does the relationship between mental health and mobility change with different measures of social mobility? Researchers have studied this relationship using the combination of college completion and adolescent disadvantage to model upward

mobility. This paper instead investigates the relationships between mental health and mobility in terms of changes in income and neighborhood disadvantage over the life course.

Using data from Waves I and IV of the National Longitudinal Study of Adolescent to Adult Health, I replicate earlier findings of the mental resilience of the upwardly mobility using an adolescent disadvantage index and college completion. I extend the literature by testing interactions between race and income and neighborhood social mobility. I operationalize upward mobility using income by dichotomizing household income at Wave I and Wave 4. Those whose parents had incomes in the bottom 50th percentile at Wave I and whose household income was in the top 50th percentile in Wave 4 are considered to be upwardly mobile. I created a similar mobility measure by dichotomizing a neighborhood disadvantage index: those who lived in highly disadvantaged neighborhoods in Wave I and live in less disadvantaged neighborhoods at Wave IV are considered upwardly mobile. Preliminary results show evidence that resilience spans other measures of upward mobility, including income and neighborhood disadvantage. Those who are upwardly mobile had similarly low counts of depressive symptoms compared to their downwardly mobile counterparts. This was true across all races.

References

1. Brody, G.H., et al., Resilience in Adolescence, Health, and Psychosocial Outcomes. *Pediatrics*, 2016. 138(6).
2. Chen, E., et al., Neighborhood Poverty, College Attendance, and Diverging Profiles of Substance Use and Allostatic Load in Rural African American Youth. *Clin. Psychol. Sci.*, 2015. 3(5): p. 675-685.
3. Miller, G.E., et al., Viral challenge reveals further evidence of skin-deep resilience in African Americans from disadvantaged backgrounds. *Health Psychol.*, 2016. 35(11): p. 1225-1234.

A5.5 Racial/Ethnic Differences in Smoking Trajectories from Adolescence to Mid-Adulthood

Juhee Woo, University of Colorado, Boulder

Cigarette smoking remains the leading cause of death in the United States, and racial/ethnic disparities in smoking exist. Studies find different smoking trajectories for different racial/ethnic groups, with later initiation of smoking among blacks and greater smoking cessation among whites at older ages. This study uses the most recent nationally representative data to follow U.S. adolescents for a longer period of time. Using the Add Health data (Waves I to V) and growth-curve modeling, I examine regular smoking trajectories for different racial/ethnic groups (whites, blacks, Hispanics), segregated by gender, from adolescence to mid-adulthood and identify variables that partly account for the racial/ethnic differences in smoking trajectories. Preliminary findings (descriptive statistics) suggest that while the smoking rates of whites and Hispanics increase until Wave III (ages 18 to 28) and declines thereafter, the smoking rates of blacks increase until Wave IV (ages 24 to 34) and persist (among males) or continue to rise (among females) at Wave V (ages 33 to 42). Respondents' demographic variables (e.g. age, gender, and nativity) as well as ascribed characteristics (parents' SES, parents' smoking status, and cigarette accessibility at home) are included as controls. Achieved characteristics, such as respondents' SES (personal earnings and education attainment), other substance use (alcohol, marijuana, other tobacco product), depression, and living arrangement (living with parents, spouse, or children) are used as mediators. I also explore whether the effect of achieved characteristics on smoking varies across different racial/ethnic groups, using interaction terms. I expect both ascribed and achieved characteristics will mediate the racial/ethnic differences in smoking trajectories (growth-curve analysis results will be ready later on). Findings from this study will help to determine which subpopulations in terms of race/ethnicity, gender, and age group should be targeted for public health interventions.

Paper Session 6: Childbearing and Contraception

A6.1 Contraceptive Use among Women with Prediabetes and Diabetes in a U.S. National Sample

Laura E. Britton, University of North Carolina at Chapel Hill, School of Nursing

Jon M. Hussey, Diane C. Berry, Jamie L. Crandell, Jada L. Brooks, Amy G. Bryant, coauthors

For women with pre-existing Type 1 or Type 2 diabetes mellitus, elevated blood glucose in pregnancy is associated with increased risks of fetal malformations, preterm birth, macrosomia, preeclampsia, and perinatal loss. The American Diabetes Association recommends that contraception be used until blood glucose is well-controlled, but evidence suggests that family planning services are not well-integrated into diabetes management. Using a population-based sample, we evaluated the relationship between contraceptive use and diabetes status.

This cross-sectional study used data from 5,548 sexually active, non-pregnant women ages 24-32 in the nationally representative National Longitudinal Study of Adolescent to Adult Health (Add Health) from 2007-2008. Prediabetes and diabetes were identified by A1C from blood specimens. Diagnosis was identified by self-report or anti-hyperglycemic medication use. The primary outcome was most effective contraception used in the past year: highly effective (sterilization, intrauterine device, implant, pills, patch, ring, or injectable), moderately effective (condoms, diaphragms, spermicides,

natural family planning, or withdrawal), or none. Multinomial regression models were adjusted for education, insurance, healthcare access, race/ethnicity, and body mass index. Unless otherwise indicated, women with normoglycemia were the referent, and highly effective contraceptive use was the base outcome. We tested the hypothesis that women with diabetes had greater odds of using no contraception compared to normoglycemic women.

We estimated that 20.8% of sexually active, non-pregnant women aged 24-32 had prediabetes and 5.9% had diabetes. Among women with diabetes, 28.8% used no contraception, 33.6% used moderately effective contraception, and 37.6% used highly effective contraception. Our hypothesis that women with diabetes had greater odds of using no contraception than normoglycemic women was supported (OR 1.90, 95% CI 1.25-2.87). Among women with diabetes, those who were undiagnosed had greater odds of using moderately effective contraception than those who were diagnosed (OR 3.39, 95% CI 1.44-7.96).

Use of less effective contraceptive methods was common among women with diabetes. Since this population is at elevated risk of adverse obstetrical outcomes, family planning service delivery must be improved to help women at risk of diabetes-related pregnancy complications to achieve their childbearing goals.

A6.2 Growing up in America: Children of Immigrants and Nonmarital Fertility

Maurice Anyawie, Bowling Green State University

There is a vast research on nonmarital fertility behaviors during emerging adulthood. But we know extremely little about the divergent pathways of nonmarital fertility, when considering the immigrant or generational status of young adults. Using event history models and data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), this paper extends prior sociological research by being the first to explicitly integrate family demography and immigration studies into examining the nonmarital fertility behaviors of post-1965 children of immigrants. The study draws on the classical and segmented assimilation theories to compare the differences in the risk of experiencing a nonmarital first birth between children of immigrants and children of the native born. On a whole, the study finds children of immigrants to have lower risks of experiencing a nonmarital first birth compared to children of the native-born. In addition to the role of culture, the study also tests for other predictors of children of immigrants' lower risks of nonmarital fertility. The author concludes the study with a discussion of the implications of the findings to the immigration theories.

A6.3 The Antecedents of Adolescent Fatherhood in Black Males

Olajide Noah Bamishigbin, California State University - Los Angeles

Background: Research demonstrates that adolescent fathers in the United States are disproportionately likely to be Black, but contributors to adolescent fatherhood among Black adolescents are understudied. This study's purpose was to examine individual and familial influences as predictors of becoming an adolescent father in Black adolescents. Hypotheses were that adolescent males who engage in more risky sexual behaviors, more substance use, more delinquent behavior and have lower academic competence, and who have parents with lower socioeconomic status, lower educational expectations, and more permissive attitudes toward sex are more likely to become adolescent fathers compared to adult fathers and non-father peers.

Methods: In data from the National Longitudinal Study of Adolescent to Adult Health (Add Health); adolescents completed surveys at four time points. Wave 1 and Wave 2 assessments were completed while the participants were adolescents (age 12-19). Wave 3 and Wave 4 data were collected during late adolescence to adulthood (age 18-33). In total, 537 Black adolescent males completed surveys. The sample consisted of 33 adolescent (age < 20 years) fathers, 241 men who had children as adults (> 19 years), and 263 non-father age peers who did not report having children by Wave 4.

Results: Univariate analyses demonstrated that adolescent fathers were more likely to engage in sex prior to the age of 15 than adult fathers and non-father peers. Compared to non-father peers only, adolescent fathers had lower educational aspirations and engaged in more delinquent behavior. In multivariate analyses, engaging in early sexual intercourse was the only significant predictor of adolescent fatherhood. Among familial influences, lower perceived maternal disappointment if the adolescent did not complete college was the only significant predictor of adolescent fatherhood.

Future Directions and Implications: Findings have implications for understanding why Black adolescents are more likely to become adolescent fathers and identifying adolescents at risk for becoming adolescent fathers, and the development of a school-based intervention to reduce the risk of adolescent fatherhood among at-risk adolescents.

Breakout Session 4

Methodology Session 4: Add Health Relationship and Fertility Data

Bianka Reese

Doctoral Candidate, Maternal and Child Health, University of North Carolina at Chapel Hill

This session will discuss relationship and fertility data available in Add Health Waves I to V, with a 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 and computational tips for file merging and analysis will be provided.

Paper Session 7: Crime and Delinquency

A7.1 I am Not a Crook: The Stigma of a Criminal Record

Logan Valenty, University at Buffalo

The criminal justice system has the power to legitimize a criminal record and in the process stigmatize a criminal. Drawing on self-stigma theory, this study examines the impact of a criminal record on psychological functioning using data from Waves I and III of the National Longitudinal Study of Adolescent to Adult Health. Through the use of ordinary least squares regression, this study will attempt to answer three research questions. First, do respondents with a criminal record have lower self-esteem than those without a criminal record? Second, among respondents with a criminal record, does self-esteem vary depending upon the stigma classification? The erroneous stigma consists of respondents who maintain their innocence; while, the discredited stigma consists of respondents who admit their guilt. Third, among respondents with a criminal record, does self-esteem vary depending upon parental socioeconomic status? The outcome self-esteem is measured with a four item scale ($\hat{\alpha}=0.77$). The results confirm that a criminal record negatively impacts self-esteem ($p<.01$). Also, respondents with an erroneous stigma report higher self-esteem than those with a discredited stigma ($p<.05$). Further analysis will assess the effects of a criminal record – depending upon gender, race, and parental socioeconomic status – on self-esteem.

A7.2 Adolescent Video Game Playing and Fighting over the Long Term

Michael Ward, University of Texas at Arlington

I present new evidence of the link between video game play and fighting. The estimates come from a large longitudinal data set tracking adolescents over time for various estimators. Consistent with previous research, there is a positive raw correlation between video game playing as an adolescent and the propensity to get into fights, even fights more than a decade later. However, these correlations are likely biased estimates of a causal relationship. Estimators that attempt to establish a causal link do not find this relationship. The implications are: that these results do not support policy further interventions, that researchers should exercise more care when attempting to uncover causal effects from media consumption, and that similar methodological approaches can be applied to the effects of other new communication technologies.

A7.3 A Multilevel Analysis of Long-term Consequences of Educational Security Policies

Ryan Kapa, The Ohio State University

Background: School leaders rely on various security measures, such as surveillance, school resource officers, and exclusionary discipline, to reduce violence and misbehavior. These measures to exercise control over students contribute to school safety and discipline becoming criminalized processes. Although intended to enhance learning environments, educational security policies are associated with undesirable outcomes, such as decreased sense of belonging at school, disproportionate rates of suspension and expulsion for minorities, and increased involvement with the criminal justice system. Research examining long-term consequences of educational security policies on educational attainment, occupation, and salary is lacking. This study explores the association of school security and these outcomes.

Aims: Two hypotheses explored the association of school security and these outcomes: (1) attending schools with more educational security practices is associated with lower educational attainment, lower-status occupations, and lower salary and (2) suspension or expulsion is associated with lower educational attainment, lower-status occupations, and lower salary.

Method: Data from the Wave I, II, and IV In-Home Interviews, Wave II School Administrator Questionnaire, Parental Questionnaire, and School Information Code Book were used to evaluate the association of educational security policies with education attainment, occupational prestige, and fiscal realization. Individual-level predictor variables (Waves I and II) were students' experiences with suspension and expulsion and sense of belonging at school. School-level predictor variables (Wave II School Administrator Questionnaire) were school security measures, such as surveillance and metal detectors. Outcome variables (Wave IV In-Home data) were individuals' educational attainment, current occupation, and income. The model additionally controlled for individual (demographics, grade point average) and school characteristics (location, minority enrollment, size, type). A design-based analysis incorporated proper individual and school weighting variables.

Results/Conclusion: Students' individual experiences with educational security policies were associated with decreased educational attainment, occupational prestige, and fiscal realization. School-level criminalization factors were associated with decreased educational attainment but had no significant association with occupational status or pay.

Paper Session 8: Contributors to Cardiometabolic Health in Adulthood

A8.1 The Impact of Depressive Symptoms, Alcohol Dependence, and Perceived Stress on the Relationship between Intimate Partner Violence and 30-year Cardiovascular Disease Risk among Young Adult Women: A Multiple Mediation Analysis

Elizabeth Wright, University of Pennsylvania, School of Nursing
Alexandra Hanlon, Alicia Lozano, Anne M. Teitelman, coauthors

Intimate partner violence (IPV), the physical, sexual, psychological abuse or control by a former or current intimate partner, affects almost one-third of women in the United States. IPV exposure can result in many negative outcomes including physical injury, increased stress, and depression. Currently, there is a small, but growing body of literature examining the link between IPV victimization and increased cardiovascular disease (CVD) risk among young adult women. To better prevent this negative outcome, it is imperative to understand what factors associated with IPV victimization may be increasing this risk. A secondary analysis of Wave IV of Add Health was conducted to examine possible factors mediating past year IPV exposure and 30-year CVD risk score including perceived stress, depressive symptoms, and alcohol dependence among a representative sample of young adult women in the United States. IPV was assessed using the revised Conflict Tactic Scale questions. Thirty-year CVD risk was calculated consistent with the Framingham score by clustering important risk factors such as age, gender, systolic blood pressure, use of antihypertensive medications, diabetes diagnosis, body mass index and smoking status. The mediators, perceived stress, depressive symptoms, and alcohol dependence, were calculated using Cohen's Perceived Stress Scale, Center for Epidemiologic Studies Depression (CES-D) Scale, and the Alcohol Dependence measure from the DSM-IV, respectively. Multiple mediation analyses were run to examine the possible mediating factors in the relationship between IPV and CVD risk. The mediation analyses revealed that perceived stress and depressive symptoms were partial independent mediators of the relationship between IPV and 30-year CVD risk score. In a multiple mediation model, the indirect effect of perceived stress became insignificant when depressive symptoms were introduced. The findings of this study reveal that 30-year CVD risk in the context of IPV victimization should continue to be examined among this population. The mediation models suggested the importance of stress and depression in the context of IPV and heart health. Screening for depression among women exposed to IPV should be considered as an important intervention point, not only to mitigate mental health issues, but to also help prevent the development of cardiovascular disease.

A8.2 The Association between Marijuana Use and C-reactive protein: A Longitudinal Analysis

Erin Ferguson, University of Florida
Nicole Ennis, coauthor

Introduction: Systemic inflammation is implicated in the development and progression of chronic diseases such as cancers, cardiovascular disease, and diabetes. C-reactive protein is a reliable measure of inflammation in the body. Research suggests that marijuana use, specifically cannabinoid-2 receptor activation, facilitates an anti-inflammatory response. However, few studies have investigated how marijuana use impacts physical measures of inflammation, such as C-reactive protein (CRP), and results are inconclusive. Therefore, the present study aimed to characterize the longitudinal relationship between smoking marijuana and serum C-reactive protein levels in adulthood.

Methods: The National Longitudinal Study of Adolescent to Adult Health was utilized, which includes a nationally representative sample of adolescents in grades 7-12 in the 1994-5 school year (Wave I) and five consequent follow-up interviews. This sample is comprised of respondents interviewed at Wave III and Wave IV (N=11,006). Marijuana use

during the past 30 days was assessed in Wave III and dichotomized as non-users (0) and users (1). CRP was dichotomized with a cutpoint of 5 mg/L, as prior literature indicates a CRP reading of above 5 mg/L suggests elevated inflammation and increased risk for disease. Weighted logistic regression analyses for complex samples in SPSS were used to examine the association between marijuana use at Wave III and C-reactive protein levels at Wave IV.

Results: Approximately 76.5 % and 23.5% of the sample were non-marijuana users and marijuana users respectively. Results indicate that marijuana users had a significantly greater odds of having lower CRP levels (<5 mg/L) in adulthood (AOR=1.18, 95% CI=1.01-1.38) when controlling for exercise, cigarette and alcohol use, and relevant sociodemographic characteristics in Wave 3.

Conclusions: Consistent with recent literature, these findings suggest an anti-inflammatory effect of marijuana use. Marijuana use in early adulthood was associated with lower CRP levels in later adulthood, even after controlling for relevant covariates. These results are a first step in examining the effect of marijuana use on systemic inflammation.

A8.3 Disordered Eating Behaviors among Overweight/Obese Young Adults and Future Cardiometabolic Risk in the National Longitudinal Study of Adolescent to Adult Health

Jason Nagata, University of California, San Francisco

Andrea Garber, Jennifer Tabler, Stuart Murray, Kirsten Bibbins-Domingo, coauthors

Objective: To determine the prevalence of disordered eating behaviors (DEBs) in a nationally representative sample of young adults and to identify their association with cardiometabolic risk at seven-year follow-up in an overweight/obese subsample.

Design/Methods: We used longitudinal cohort data from 14,322 young adults at baseline (Wave 3, 18-26 years old, 2001-2002) with seven-year follow-up (Wave 4, 24-32 years old, 2008) from the National Longitudinal Study of Adolescent to Adult Health. Baseline exposures were: 1) unhealthy weight control behaviors such as vomiting, fasting/skipping meals, or laxative/diuretic use to lose weight; 2) binge eating; and 3) DEBs, defined as either unhealthy weight control behaviors or binge eating. Outcomes at seven-year follow-up were BMI change and incident hyperlipidemia.

Results: Of the 14,322 young adults at baseline, 48.6% were overweight or obese. Although 20.8% of overweight/obese young adults reported DEBs, only 1.4% were diagnosed with an ED. Logistic regression analyses demonstrated that female sex (odds ratio [OR] 2.35, 95% confidence interval [CI] 1.47-3.75), identifying as homosexual or bisexual (OR 1.71, 95% CI 1.16-2.52), and higher BMI (OR 1.06, 95% CI 1.03-1.09) were associated with DEBs among young adults.

Overweight/obese young adults with DEBs had greater weight gain (7.42 vs 6.35 kg, $p=0.007$) at seven-year follow-up than those without DEBs. In regression models, DEBs were associated with greater BMI increase ($B=0.94$, $p=0.011$) and binge eating was associated with incident hyperlipidemia in males (OR 2.28, 95% CI 1.46-3.56) at seven-year follow-up, adjusting for covariates.

Conclusions: Over one fifth of overweight/obese young adults reported DEBs and were largely undiagnosed. The significantly higher risk for increased BMI and incident hyperlipidemia underscores the need to screen for DEBs in this population and provide referrals and tailored interventions as appropriate.

A8.4 Comparing the Impact of Positive Psychosocial Resources on Favorable Cardiovascular Health in Young Adulthood

Farah Qureshi, Harvard T.H. Chan School of Public Health

Scott Delaney, Laura D. Kubzansky, coauthors

Background: Prior work has found associations between positive psychosocial factors in childhood and favorable cardiovascular health (FCH) in adulthood. Most studies group diverse factors to assess cumulative impacts, but positive youth development literature suggests that internal assets (e.g. prosocial skills, positive identity) and external assets (e.g. family relationships) may exert different impacts. Therefore, this study aimed to examine whether youth internal and external assets independently and differentially predict FCH in young adulthood.

Methods: Data came from 14,798 participants in the National Longitudinal Study of Adolescent to Adult Health (Add Health). Assets were measured via self-report at Wave 1 (mean age 15.6 years). Following prior work in Add Health, 29 items were used to derive separate indices for internal and external assets (range=0-5, each). FCH was assessed at Wave 4 (mean age 29.0 years) and defined as being healthy on 5 parameters following American Heart Association recommendations: no hyperlipidemia, diabetes, or high blood pressure, healthy body mass index (BMI), and non-smoking. Parameters were derived from direct measures of cholesterol, glucose, HbA1C, blood pressure, and BMI, and self-reported relevant diagnoses, medication use, and smoking history. The outcome in all analyses was a binary measure of

FCH defined as meeting all 5 health metrics (yes/no). Standard covariates were assessed at Wave 1, and included socioeconomic factors and baseline health status.

After multiply imputing missing covariate and predictor data, adjusted associations between assets and FCH were examined using logistic regression.

Results: Total assets at Wave 1 predicted subsequent FCH (linear trend OR=1.08, $p=0.005$). When assets were disaggregated, internal assets maintained a strong association with FCH (linear trend OR=1.22, $p<0.001$), while external assets did not (linear trend OR=0.95, $p=0.3$). Findings suggest youth assets are not equally protective, but intrapersonal factors may be particularly influential. Identifying the differential impact of internal and external assets is critical to the design of effective primordial prevention efforts.

A8.5 Positive Psychological Well-being in Adolescence Predicts Favorable Cardiovascular Health in Early Adulthood

Farah Qureshi, Harvard T.H. Chan School of Public Health

Scott Delaney, Kelb Bousquet Santos, Julia Boehm, Laura D. Kubzansky, coauthors

Background: Prior work has found that positive psychological well-being (PPWB) (e.g. positive emotions, optimism) predicts a lower likelihood of developing cardiovascular disease. To date, most research has studied well-being at mid-life when cardiovascular health is already on the decline. Few studies have examined prospective relationships at earlier ages when the majority of young people are still in good health. Therefore, this study aimed to evaluate whether PPWB in adolescence predicts a greater likelihood of being in favorable cardiovascular health (FCH) among young adults.

Methods: Data are from 14,544 participants in the National Longitudinal Study of Adolescent to Adult Health. Following prior work in Add Health, adolescent PPWB was derived using items from self-report measures of psychological functioning administered at Waves 1 and 2. Responses to individual items were averaged between waves then z-scored and summed to create a continuous PPWB measure that was the primary exposure in all analyses. FCH was assessed at Wave 4 (mean age 29.0 yrs), and defined as being healthy on 5 parameters following American Heart Association recommendations: no hyperlipidemia, diabetes, or high blood pressure, healthy body mass index (BMI), and non-smoking. Parameters were derived from direct measures of cholesterol, glucose, HbA1C, blood pressure, and BMI, and self-reported relevant diagnoses, medication use, and smoking history. FCH was assessed as both a continuous score (range 0-5) and binary measure defined as meeting all 5 parameters (yes/no).

After multiply imputing missing covariate and select outcome data, we examined associations between PPWB and total FCH parameters using Poisson regression, controlling for socioeconomic factors at Wave 1, baseline health status, and parental health status. Logistic regressions tested adjusted associations with the binary FCH measure.

Results: At Wave 4, only 6% of the sample had FCH. While 64% of participants had low cholesterol, 60% no diabetes, and 64% were non-smokers, only 34% had no hypertension and 32% had a healthy BMI. Youth PPWB predicted subsequent number of FCH components at Wave 4 (RR=0.02, 95% CI=0.01, 0.03), which translated to a 13% greater likelihood of being in good health (OR=1.13, 95% CI=0.98, 1.31).

Conclusion: Our findings suggest that adolescent PPWB is health-promoting over time, and therefore may be a promising new target for the primordial prevention of cardiovascular disease.

Breakout Session 5

Methodology Session 5: Appropriate Analysis in Add Health – Correcting for Design Effects and Selecting Weights

Ping Chen

Senior Research Scientist, National Longitudinal Study of Adolescent to Adult Health, University of North Carolina at Chapel Hill

Add Health is a national longitudinal study with 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 how to apply weights to run descriptive statistics, population-average models, subpopulation analysis, and multilevel models.

Paper Session 9: Genetic Contributions to Well-Being

A9.1 The Shared Genetic Risk for Body Mass Index and Weight Loss Behaviors

Jason M. Nagata, University of California, San Francisco

Benjamin W. Domingue, Kirsten Bibbins-Domingo, Andrea K. Garber, Scott Griffiths, Stuart B. Murray, coauthors

Background: Three genetic loci have been found to be involved with both body mass index (BMI) and anorexia nervosa, however, it is unknown if genetic risk for BMI is associated with unhealthy weight control behaviors.

Objective: To determine the association between BMI genetic risk score and eating behaviors in young adults.

Study design: We used longitudinal data from the National Longitudinal Study of Adolescent to Adult Health Sibling Pairs cohort when subjects were 18-26 years old (Wave 3). Genetic risk scores included 31 single nucleotide polymorphisms identified in published genome-wide association studies for BMI. Phenotypes included self-reported: 1) weight loss goals; 2) dieting; and 3) "unhealthy weight control behaviors" such as vomiting, fasting/skipping meals, or laxative/diuretic use to lose weight.

Results: Among 745 subjects, BMI genetic risk score was associated with higher odds of trying to lose weight in females (OR 1.07, 95% CI 1.00-1.13) and males (OR 1.10, 1.01-1.20). BMI genetic risk score was associated with higher odds of dieting (OR 1.08, 1.01-1.15) and unhealthy weight control behaviors (OR 1.14, 1.05-1.24; OR 1.10, 1.02-1.21 when adjusting for BMI) in females, but not in males.

Discussion: Genetic risk for obesity was associated with a desire to lose weight in both males and females; however, it was only associated with dieting and unhealthy weight control behaviors in females. BMI genetic risk was independently associated with unhealthy weight control behaviors even when adjusting for BMI. Further understanding the genetic risk for obesity and unhealthy weight control behaviors may advance future prevention and treatment strategies.

A9.2 The Genetic and Environmental Influences on Social Mobility

Yilan Xu, University of Illinois at Urbana-Champaign

The economic and sociology literature has shown strong persistence in wealth, income, and other socioeconomic status (SES) across generations and over one's lifetime, leading to social immobility. Parental SES could be transmitted to their children and persist over children's lifetime through abilities, intelligence, temperaments, as well as the family, neighborhood, and school environments. Some of these effects are genetic, while others are environmental. In this study, I propose to empirically explore the roles of genes, environments, and their interactions in explaining social mobility, using twins and siblings from the National Longitudinal Study of Adolescent to Adult Health. The longitudinal structure of the survey allows me to observe young adults' SES in both Wave III (aged between 18 and 26 years old) and Wave IV (aged between 24 and 34 years old). Based on my previous research experience with this data set (Xu, Beller, Roberts, & Brown, 2015; Xu, Briley, Brown, & Roberts, 2017), I have constructed several measures of SES and used transition matrices to describe the SES transitions from Wave III to Wave IV. Specifically, occupation and education are translated to a Hollingshead scale. The household income is standardized, and a common factor is constructed from a vector of neighborhood characteristics. I am currently applying a univariate behavior genetic model to decompose the genetic, shared environmental, and non-shared environmental components in the variation of children's SES at Waves III and IV respectively. I will also use a bivariate behavior genetic model to quantify the share of the covariance of SES across the two waves that is due to the overlapped genetic variance. The results of the analyses are expected to reveal the genetic nature of the persistence of SES over time. The research findings will provide insights into the genetic and environmental nature of the intragenerational and intergenerational social mobility. The knowledge is expected to shed light on the design of policies that could enhance social mobility. If a disproportionate share of social mobility is genetic, then institutions such as social safety nets that offset the effects of individual differences in SES would be effective. If social mobility is largely environmental, interventions to improve the child developmental environment would be promising. The findings will also inform the different mixes of interventions that are effective for different SES groups.

A9.3 Who Makes the Grade? A Gene-Environment Analysis of the Mechanisms of Educational Attainment in the 21st Century

David Braudt, University of North Carolina at Chapel Hill

Although the role of social factors in the creation and maintenance of disparities in educational attainment has been the focus of decades of research, and nearly as much policy debate, doubt still remains as to the exact nature of the role of social-environmental factors due to a general inability to account for the association between genetic differences between individuals and educational attainment. Leveraging molecular genetic data from the National Longitudinal Study of

Adolescent to Adult Health, this study investigates the differential role of social-environment factors net of genetics on educational attainment between three levels of parental education. Through a series of polygenic score analyses, genome-wide complex trait analyses, and behavior genetic analyses the results of this study depict a robust pattern in which social-environmental factors account for an increasing proportion of the total variance in educational attainment when individuals are born into more advantaged circumstances.

A9.4 Gene Discovery and Polygenic Prediction from a 1.1-million-person GWAS of Educational Attainment

Robbee Wedow, University of Colorado Boulder, Institute of Behavioral Science

Social Science Genetic Association Consortium, coauthors

We conduct a large-scale genetic association analysis of educational attainment in a sample of ~1.1 million individuals and identify 1,271 independent genome-wide significant loci. For the loci taken together, we find evidence of heterogeneous effects across environments. The loci implicate genes involved in brain-development processes and neuron-to-neuron communication. In a separate analysis of the X chromosome, we identify 10 loci and estimate a SNP heritability of ~0.3%, lower than that expected for an autosome of similar length. A joint (multi-phenotype) analysis of educational attainment and three related cognitive phenotypes generates polygenic scores that explain 11-13% of the variance in educational attainment and 7-10% of the variance in cognitive performance in the Add Health dataset. This prediction accuracy substantially increases the utility of polygenic scores as tools in research.

Paper Session 10: Labor Market Outcomes

A10.1 Early Maturity and Young Adult Labor Market Outcomes

Chanita Holmes, Binghamton University, SUNY

Marlon Tracey, Ariel Belasen, coauthors

The literature is divided on the impact of the timing of maturity for adolescents on their adult-stage socioeconomic outcomes. Early maturing males are generally shown to have better outcomes than their later maturing peers, but no such differential exists for females. We add to the existing literature by utilizing an externally validated measure of maturity for a group of high school students from the wave 1-3 Add Health in-home data. Using Heckman selection-type techniques, results indicate that early maturing males have higher average earnings than their peers. And while we ultimately do not find an earnings differential for females we do find that early maturing females are more likely to enter the job market earlier than their peers. We also identify channels through which maturity affect earnings and find that it conveys non-cognitive skills for males that are especially rewarded by employers.

A10.2 ADHD and its Comorbid Mental Disorders: An Evaluation of their Labor Market Outcomes

Joseph Hartge, Ohio University, Department of Economics

Patricia Toledo, coauthor

Background:

Attention-deficit/hyper-activity disorder's (ADHD) prevalence rate has been increasing during the last decade. Evidence from different studies suggests that the effect of ADHD on earnings and employment could be more detrimental than other disorders such as depression or anxiety. Although it is widely known that these mental disorders can coexist with ADHD, none of these studies has considered the joint evaluation of ADHD and its comorbidities.

Objective: In this paper, we evaluate whether ADHD is a more severe disorder than three other comorbid mental disorders—learning disabilities, depression, and anxiety—regarding their effects on earnings and employment.

Methods: We use the National Longitudinal Study of Adolescent to Adult Health to estimate regression models of earnings and employment. We consider the use of the sampling weights, school fixed effects and multiple imputation of missing values. Robustness checks include a more exogenous measure of depression.

Results: On average, an individual with ADHD or depression (but not both) has around 20% lower earnings than those without any of these disorders. The earnings gap for learning disabilities is around 25%. The probability of being employed is 5 percentage points lower for an individual that has any of these disorders. Anxiety is not associated with lower earnings. Females with learning disabilities have an earnings gap that is 20 percentage points larger. The employment gap for females or African Americans with learning disabilities is 8%.

Discussion and limitations:

In contrast to existing evidence, we find that ADHD is not more serious than having learning disabilities or depression. Even though the magnitude of each employment gap is not substantial, the fact that these are comorbid disorders

indicates that their joint occurrence could be detrimental for employment. Females and African Americans with learning disabilities could face more adverse labor market outcomes.

Even though our results are robust to a more exogenous measure of depression, the potential endogeneity of the diagnosis of ADHD or anxiety could still bias the estimates. However, baseline results are also robust when individuals with an age of diagnosis equal to the year of the interview are dropped from the estimations.

A10.3 Getting Stuck or Moving Out: An Examination of Precarious Employment Trajectories and Self-Reported Health in Young Adults

Skye Allmang, University of California, Los Angeles

Since the 1970s, globalization, changes in technology, and the weakening of unions have transformed employment relations in the United States. One indication of this transformation is the recent rise in precarious employment, or "employment that is uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg, 2009, p. 2). Little is known about the effects of remaining in precarious employment over time, particularly for young people during the transition to adulthood. To fill this gap, my dissertation will examine the associations between precarious employment trajectories and health outcomes, including self-reported general health, depression, self-esteem, and behavioral health, among young adults. Overall, it is hypothesized that remaining in precarious employment over time (versus moving out of precarious employment, moving into precarious employment, or never entering it) is most likely to be associated with adverse health outcomes.

The study will utilize a longitudinal research design using restricted-use data from the National Longitudinal Study of Adolescent to Adult Health (Add Health). Wave I data will provide the demographic data for the study. Data from Wave III and Wave IV will be used in order to identify employment trajectories, and to examine the associations between employment trajectories and health outcomes.

Research Plan: Variables will be constructed to capture key concepts related to employment and health. Using latent class analysis, workers will be sorted into precarious and nonprecarious groups based on self-reported measures of job security, control over one's work schedule, annual wages, and the availability of employer-provided benefits. In addition, variables to capture health outcomes, such as depression, self-esteem, and stress, as well as health behaviors, will be created. Descriptive analyses, such as means and correlations, as well as logistic and Ordinary Least Squares (OLS) regression analyses, will be conducted.

Expected Findings: Based on the existing literature, it is hypothesized that the individuals who remained in precarious employment from Waves III to IV were more likely to have adverse health outcomes than those who were not in precarious employment in either Wave III or Wave IV, those who were in precarious employment at Wave III but moved out in Wave IV, and those who were not in precarious employment in Wave III but entered it in Wave IV.

1:00 PM Breakout Session 6

Methodology Session 6: Add Health Wave V Biological Data and Vital Events

Nancy Dole

Co-PI, Add Health Wave V Biology of Chronic Disease Emergence Project, University of North Carolina at Chapel Hill

Jon Hussey

PI, Add Health Wave V Birth Records Project, University of North Carolina at Chapel Hill

Eric Whitsel

Co-PI, Add Health Wave V Biology of Chronic Disease Emergence Project, University of North Carolina at Chapel Hill

This session will cover four areas: (1) methods used to collect Wave V biological data and specimens, including anthropometrics, cardiovascular measures, medications, and blood; (2) their monitoring and quality control their quality; (3) collection of birth records for a subset of respondents and their children; and (4) surveillance of deaths since cohort inception, including their identification, review, classification, and adjudication.

Paper Session 11: Academic Achievement

A11.1 A New Perspective on Academic Achievement: Accounting for Religiosity

Ilana Horwitz, Stanford University

Ben Domingue, coauthor

Religiosity is associated with a host of positive life outcomes, but research on religiosity and academic achievement is limited. Using survey data from Waves 1 and 4 of the National Longitudinal Study of Adolescent to Adult Health, we examine how differences in religious engagement during adolescence shape short and long term academic outcomes, including GPA and educational attainment. Based on social capital theory (Putnam 1993; Smidt 2013), we hypothesize (1) that more religiously engaged adolescents will have comparable scores on the Peabody Vocabulary Test but higher GPAs in middle and high school than religiously disengaged adolescents, even after accounting for a host of background characteristics and (2) that respondents who were religiously engaged during adolescence will have better long term educational outcomes than respondents who were not religiously engaged during adolescence. Our sample includes about 10,000 respondents aged 24–34 who completed in-home interviews at Waves I and IV and had official grades from school transcript data. Our primary outcomes of interest are high school GPA and educational attainment, as measured by years of education respondents completed by wave 4. Our key explanatory variable is religiosity in Wave I, which we construct based on answers to questions about the importance of religion, attendance of religious services, and frequency of prayer. We run a series of nested regression models that include school fixed effects and control for key background factors such as socioeconomic status, age, gender, and race. Our preliminary results confirm our hypotheses: religiously engaged respondents have the same Peabody Vocabulary Scores as those who are religiously disengaged, but the religiously engaged have higher GPAs in middle/high school. In addition, the religiously engaged have better long term educational attainment. We theorize that religiously engaged adolescents learn certain habits in their religious communities - conscientiousness and cooperation - that they successfully transfer into the school environment.

A11.2 Dynamic Treatment Effect of Parental Control on Academic Outcomes in High School

Marlon Tracey, Southern Illinois University Edwardsville

Marvin Powell, Chanita Holmes, coauthors

The literature is still divided on the directional effect of too much parental supervision on adolescent academic outcomes. Moreover, no studies have rigorously identified the magnitude of such effect. We examine the effect of parental control during high school on academic outcomes by grade and gender. And unlike existing studies, we allow for a plausible dynamic feedback relation with lagged response effect. That is, we recognize future parental control is affected by interim academic outcomes, which may also affect later academic outcomes. We employ the In-home Add Health data on high-schoolers ($n=9,000$) at wave I (1995) and wave II (1996); subsequent waves are post-high school. This allows us to estimate the total academic effect of applying parental control for two consecutive grades in high school. We use seven household rules/guidelines to indicate parental behavioral control: weekday and weekend curfews, monitoring friendships, limiting the amount and type of TV shows watched, controlling food choice, and setting guidelines on appropriate clothing. The academic outcomes are transcript GPA for math, English, science, and all subjects, as well as measures of difficulty paying attention in class and completing homework on time, and whether the student aspired to go to college. We control for school-specific fixed effects as well as a rich set of individual and family covariates, and check for sensitivity to unobservables. We expect that exerting high parental control for two successive grades in high school will significantly impact (directly and/or indirectly) academic outcomes at 10-12 grades.

A11.3 Living with One or Zero Biological Parents in Adolescence and Lifelong Attainment: A Focus on High School Graduation

Julia Arroyo, University of Florida

B. Zsembik, C. Peek, coauthors

Researchers show that living in a non-intact family during adolescence (e.g., having at least one non-resident parent) is associated with reduced educational attainment. Yet, few studies of adolescent family environments and educational attainment include adolescents who live in households with no biological parents present (e.g., those living with relatives or foster parents). To fill this gap, we conduct logistic regression analyses using Wave 1 – 5 Add Health data on high school graduation. Relative to adolescents living with two biological parents, adolescents living with no biological parents, one biological parent, or one biological parent plus parent's partner had 51%, 35%, and 31% lower odds of graduating high school. While supports and adversities related to nonresident parents and resident parent figures accounted for some of

the effect, they did not explain it. Similarly, having been suspended prior to Wave 1, having repeated a grade prior to Wave 1, having a "D" letter grade at Wave 1, and having conflict with a residential or non-residential parent were each associated with, but did not explain reduced odds of high school graduation. Going forward, we plan to conduct multi-level analyses to assess whether school-level and neighborhood-level resources explain reduced odds of graduation. We will also explore additional measures of adversities prior to living in a non-intact household, and whether these better account for deleterious educational outcomes. This includes measures available in Waves I – IV as well as retrospective measures available in Wave V, Sample 1. Including a broader group of adolescents and focusing on a key turning point, this study advances knowledge on the paths by which adolescent environments promote and inhibit lifelong attainment and well-being.

A11.4 Effects of Playing High School Football on Cognition and Mental Health in Early Adulthood: An Observational Study

Raiden Hasegawa, University of Pennsylvania

Sameer Deshpande, Jordan Weiss, Dylan Small, coauthors

More than 1 million students play high school American football annually, but many health professionals have recently questioned its safety or called for its ban. These concerns have been partially driven by reports of chronic traumatic encephalopathy (CTE), increased risks of neurodegenerative disease, and associations between concussion history and later-life cognitive impairment and depression among retired professional football players.

A recent observational study of a cohort of men who graduated from a Wisconsin high school in 1957 found no statistically significant harmful effects of playing high school football on a range of cognitive, psychological, and socio-economic outcomes measured at ages 35, 54, 65, and 72. Unfortunately, these findings may not generalize to younger populations, thanks to changes and improvements in football helmet technology and training techniques. In particular, these changes may have led to increased perceptions of safety but ultimately more dangerous styles of play, characterized by the frequent sub-concussive impacts thought to be associated with later-life neurological decline.

In this work, we replicate the methodology of that earlier matched observational study using data from the Add Health study. Since a direct comparison of football players' outcomes and non-football players' outcomes is susceptible to confounding, we first use propensity-score matching to match football players to non-football players along a range of baseline variables measured in Wave I. These include adolescent and family comorbidities, academic experience, self-reported levels of general health and physical activity, and the score on the Add Health Picture Vocabulary Test. Our two primary outcomes are the CES-D score and the scores on the word recall test administered in Wave IV. We also examine several secondary outcomes related to physical and psychological health, including suicidality. Our results can provide insight into the natural history of any potential football-related decline and dysfunction.

Paper Session 12: Socioeconomic Status

Room D

A12.1 Mentor Profiles and Economic Upward Mobility for Low-Income Youth

Grace Gowdy, Boston University

In the U.S today, a low-income child is significantly less likely to complete be upwardly mobile than their middle-class peers (Chetty et al., 2014). Yet, the impact of informal mentors is stronger for low-income children than their middle-income peers (Erickson, McDonald, & Elder, 2009). This highlights the potential of informal mentors to supersede the intergenerational persistence of poverty, and promote upward mobility for low-income youth.

Methodology: Qualitative coding & support provided. The nature of support provided by mentors will be captured through a single open-ended question asked in wave 3 of data collection, "How did [your informal mentor] help you?" These qualitative data will be coded for bridging and bonding capital. In addition to my coding of these data, a supplemental file of the Add Health dataset provides codes on social support. Both my coding of this data and the supplemental file provided by the Add Health study will be used for analysis.

Cluster Analysis: In order to differentiate mentoring relationships from each other, I will use cluster analysis to create different mentoring profiles based on the following variables: how they met, how long they have known each other, how often they are in contact with each other, and how close the young person feels to the mentor. These profiles will then be tested for their association with upward mobility for low-income youth.

Economic Mobility: Economic mobility is measured in this study as the difference in income group between wave 1 and wave 4, adjusted for inflation. The groups are (1) less than \$25,000, (2) \$25,000 to \$49,999, (3) \$50,000 to 74,999, (4) \$75,000 to \$99,999 and (5) over \$100,000.

Analysis: After creating mentoring profiles and using qualitative coding to build out support variables, I will test (1) if certain mentors can promote upward mobility more so than others and (2) if support provided by the mentor is a meaningful mediator to this association.

Significance of Study: Children born to low-income and low-educated households are less likely to be upwardly mobile than their middle-class peers. Although evidence suggests that having a mentor can help youth be upwardly mobile in adulthood, this study will offer a more robust examination of this potential. We can use information on which informal mentors are more effective in promoting economic outcomes to acknowledge important differences between mentoring relationships.

A12.2 Contextual Socioeconomic Disadvantage, Stress Process Model, and Suicide Attempts among Adolescents

Muhammed Yildiz, Louisiana State University

Emirhan Demirhan, coauthor

Contextual-level socioeconomic disadvantage was associated with various mental and behavioral health problems; however, there is a lack of research on whether and how it affects adolescent suicidal behaviors. Using data from the first two waves of National Longitudinal Study of Adolescent to Adult Health (Add Health), I examine whether contextual-level socioeconomic disadvantage is associated with suicide attempts of adolescents above and beyond the individual-level socioeconomic status, and whether this association can be explained by differential exposure to stress process mechanisms, namely (1) stressors, (2) social and psychological resources, and (3) mental/behavioral health problems. Potential gender differences were also investigated. Multilevel logistic regression models revealed that contextual socioeconomic disadvantage was significantly associated with suicide attempts of boys, above and beyond the individual/family socioeconomic status measures and other demographic controls. Mental and behavioral health problems (depression and substance use) partially mediated the relationship, but a residual effect of contextual socioeconomic disadvantage remained. Other results, implications, and limitations of the study are discussed.

A12.3 School Socioeconomic Segregation, Family Socioeconomic Status, and Violence

Nicolo P. Pinchak, The Ohio State University

Raymond R. Swisher, coauthor

Research regarding school socioeconomic desegregation suggests mixed effects. While school socioeconomic composition (SEC) has been found to be associated with increased odds of high school graduation and college attendance, evidence for "frog pond" effects suggests risks for students of low socioeconomic status (SES) backgrounds in high SEC schools. More holistic examinations of how family SES and school SEC interact are scarce, as are considerations of non-academic outcomes of school environments. Thus, drawing on insights from the school desegregation literature, the school effects literature, and the adolescent delinquency literature, this study examines the relationship between family socioeconomic status (measured as parents' education), school socioeconomic composition (measured as the proportion of youth in a high school with a college-educated parent), and violence perpetration during adolescence. To do so, we use three-level multilevel logit and count models accounting for school-, neighborhood-, and individual-level covariates. We stratify our models by low (less than high school), middle (less than college), and high (college+) levels of parental education, and classify high- and low-SEC schools as being one standard deviation above and below the mean proportion of students with a college educated parent across schools (with models always referencing the respective SEC category; e.g., low parental education respondents in low SEC schools). Where significant SEC effects are found, we further test the results using propensity score weights which account for selection into SEC category.

A12.4 Exploring the Relationship between Welfare Participation in Childhood and Depression in Young Adulthood

Shiyou Wu, Arizona State University, School of Social Work

Qi Wu, coauthor

Objective: Depression is one of the most prevalent mental health disorders among U.S. youth, and therefore, untangling the causal agents is a major public health priority. However, a growing body of research suggests that depression disproportionately affects women and those in lower socioeconomic strata. To address this economic health disparity, this study examines the relationship between participating in welfare programs during childhood (before age 18 years) experiencing depression during young adulthood.

Tuesday, July 24, 2018

Method: This study uses data from the National Longitudinal Study of Adolescent to Adult Health (N = 15,701) collected in Wave I (1993-94) and Wave IV (2008). Multiple imputation (m = 20) is used to deal with missing data. Propensity score matching is used to reduce the selection bias of the two groups (welfare recipients vs. non-recipients). The imputed and matched data are then analyzed using logistic regression (for the clinical diagnosis of depression [1= yes; 0=no]) and ordinary least square regression (for the self-reported depression score). In addition, subgroup analyses include examinations by household income levels (poor, near poor, and non-poor) and two gender groups.

Results: Overall, young adults from welfare-recipient families have significantly higher depression scores, and have no significant group differences on the diagnosed depression outcome. In addition, among welfare-recipient families, only the poor household group had significantly higher depression scores, whereas only the near-poor group had a significantly higher probability of being diagnosed with depression. With respect to gender, only adult females from welfare-recipient families had significantly higher depression scores, compared to males. Furthermore, no significant differences between female and male groups concerning diagnosed depression outcome.

Discussion: Using welfare participation as an economic marker, the subgroup analyses help to identify target populations for future intervention. This study has implications to inform welfare policymakers with policy recommendations for expanding Medicaid coverage for mental health treatment.

DELETE THIS PAGE