Socioeconomic Trajectories and the Mental Health Status of African American Adults

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ABSTRACT

Prior research examining the relationship between socioeconomic status (SES) and mental health among African Americans has rarely accounted for fluctuations in SES from childhood into adulthood, or how adulthood offers opportunities for upward or downward mobility. To address these gaps, we follow a sample of African Americans from Wave I to V of the National Longitudinal Study of Adolescent to Adult Health to assess how dynamic socioeconomic processes unfold across the life course and are associated with mental health outcomes in adulthood. Results demonstrate that downward mobility and persistent disadvantage were consistently associated with poor mental health in adulthood. Additionally, individuals with upward or downward mobility in adulthood reported higher levels of poor mental health than individuals with consistently high SES. Our results indicate that SES is predictive of mental health among African American adults, with the association dependent on stability and fluctuation in SES across the life course.

INTRODUCTION AND RESEARCH OBJECTIVES: Research consistently demonstrates that high socioeconomic status (SES) is related to favorable mental health among the U.S. non-Hispanic white population. Yet, research examining the linkage between SES and mental health among African Americans has yielded inconsistent results. While some studies demonstrate an association between high SES and poor mental health,[1,2] others demonstrate an association between low SES and poor mental health,[3,4] and other studies demonstrate no association between SES and mental health.[5-7] These discrepant findings may be related to static operationalization of SES and the inherently different processes of social mobility among African Americans as compared to non-Hispanic whites. By capturing SES dynamically across the life course and by accounting for SES processes that may be particularly relevant for African Americans, this exploratory study examines the association between SES and mental health among African American adults. To do so, we first develop and operationalize a comprehensive and dynamic model for SES among African Americans across the life course. Second, we examine how distinct trajectories of life course SES predict African American adults' mental health status.

DATA AND METHODS: We follow a sample of African Americans (n=369) across Waves I, III, IV and V of The National Longitudinal Study of Adolescent to Adult Health (Add Health[a]). Add Health is a longitudinal study that follows adolescents into adulthood over five waves of data collection. Wave V is a nationally representative, early release subsample of the full Wave V sample; because the Wave V data collection effort is still in the field, sample size for our final analysis will increase by roughly threefold when the full Wave V data are available in spring of 2019. Our final sample for the analyses presented below is comprised of individuals who met the following criteria: 1) self-identified as native-born, non-Hispanic African Americans at Wave I; 2) had non-zero sample weights; and 3) had valid data for all outcome measures of interest at Wave V.

We use three measures to assess adult mental health at Wave V: 1) ever been diagnosed (versus not) with depression; 2) ever been diagnosed (versus not) with anxiety; and 3) depressive symptoms (a summed continuous measure of five items,[8] each scored 0-3, from the CES-D, range 0 – 15). Higher scores on this measure indicate higher levels of depressive symptomology.

For life course SES trajectory, we used measures of education, work, and income from Waves I, III, and IV. We also incorporated measures of assets and debt from Waves III and IV.[b] Importantly, we captured SES at three distinct points of the life course (Wave I: adolescence; Wave III: young adulthood; Wave IV: adulthood). At Wave I, when respondents are in grades 7-12, we measure whether or not the respondent has a parent who graduated from college, is living in a household with a family income-to-needs ratio of 185% or more below the Federal Poverty Line, has a mother who works full time, has a father who works full time, and lives with a family currently receiving federal assistance. At Wave III, when respondents were young adults (ages 18-26), we measure whether or not the respondent is enrolled in or has graduated from a four-year college, is working full time, is living in a household with an income-to-needs ratio less than or equal to 185% of the Federal Poverty Line, currently receives federal assistance, earns income from investments, has credit card debt, has student loan debt, receives financial support from parents, and could not afford to meet basic needs. At Wave IV, when respondents are adults (ages = 24-32), we measure whether or not the respondent is enrolled in or has graduated from college, is working full time, is living in a household with an income-to-needs ratio less than or equal to 185% of the Federal Poverty Line, currently receives federal assistance, has a positive net worth, owns a house, could not afford to meet basic needs, and is providing financial support to one's parents. Measures from each wave were dichotomized and were combined using latent class analysis, as described below.

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[a] We do not use data from Wave II because the study design intentionally excluded High School Seniors from Wave I.
[b] Parental asset and debt measures were unavailable at Wave I.

Our analytic plan has three steps. First, we applied latent class analysis (LCA) to the SES measures at each wave to determine the most common profiles of African American SES in adolescence, young adulthood, and adulthood, respectively. LCA is type of structural equation modeling that classifies individuals into meaningful subpopulations based on a set of indicators. In this case, LCA grouped individuals according to the SES measures we previously described. Importantly, to maximize statistical power when conducting the LCA, we utilized the full sample of African Americans at Waves I, III, and IV of Add Health ($n = 2,056$). Using Mplus, we determined the appropriate number of latent classes that emerged among our sample of African Americans at each wave through several criteria, including a log-likelihood test, Bayesian information criteria (BIC), and sample-size-adjusted BIC (ABIC). We also evaluated the Lo-Mendell Rubin (LMR) adjusted likelihood ratio test; a significant LMR p-value suggests that the k class model fits better than the $k-1$ class model.

Once we identified SES profiles, the second step was to create trajectories of SES across the life course. To date, we have created these trajectories manually, but at the Population Association of America 2019 annual meeting, we will report results from latent transition analysis (LTA). Latent transition analysis (LTA) is an extension of latent class analysis (LCA), with a similar goal of identifying unobservable (i.e., latent) subgroups within a population. An important distinction, however, is that LTA uses longitudinal data and identifies movement among individuals through different subgroups over time. As such, LTA will allow us to more effectively model change in SES across adolescence into adulthood.

Our third analytical step will be to use logistic and Poisson regression to predict risk for depression/anxiety diagnosis and depressive symptoms at Wave 5, when respondents are ages 32 to 42, by socioeconomic trajectory. We will complete this step once we have access to the full Wave V data set. Below, we report descriptive analyses, all of which are weighted to account for differential attrition and unequal probability of selection, and to incorporate survey design features.

PRELIMINARY RESULTS: The three columns of the left side of Table 1 describe eight SES trajectories we identified across the early life course and the distribution of life course SES for the full sample of native-born non-Hispanic African Americans ($n = 2,056$). The majority of respondents fell into either the "Disadvantaged Period in Young Adulthood" trajectory (26.8%), characterized by periods of advantage, disadvantage, and advantage across Waves I, III, and IV, respectively; or the "Persistent Advantage" trajectory (26.4%) characterized by periods of advantage across Waves I, III, and IV. Just 1% of respondents fell into the "Advantaged Period in Young Adulthood" trajectory, characterized by periods of disadvantage, advantage, and disadvantage across Waves I, III, and IV. Another 10.5% of respondents fell into a "Persistent Disadvantage" trajectory, experiencing periods of disadvantage across Waves I, III, and IV. Almost 8% of respondents experienced upward mobility beginning in either young adulthood or adulthood, whereas the remaining 27% of respondents experienced downward socioeconomic mobility in either young adulthood or adulthood. Overall our sample includes a broad representation of dynamic SES experiences across the early life course, with the majority experiencing either fleeting or steady disadvantage from adolescence into adulthood.

The right side of Table 1 provides descriptive results for the association between life course SES and mental health. Statistical differences were calculated using chi-square for depression and anxiety diagnoses, and ANOVA and bivariate regression analyses for depressive symptomatology. More than half of respondents (56%) in the "Advantaged Period in Young Adulthood" trajectory reported being diagnosed with depression at some point in their lifetime. Moreover, 37% of respondents in the "Persistent Disadvantage" trajectory reported lifetime depression diagnoses. Almost 29% of those who were "Downwardly Mobile in Young Adulthood" reported lifetime depression diagnosis, as well as 25% of those who were "Upwardly Mobile in Adulthood." In contrast, none of the respondents in the "Upwardly Mobile in Young Adulthood" trajectory reported

lifetime depression diagnoses, followed by almost 11% of those in the "Disadvantaged Period in Young Adulthood" category. Fewer respondents in the "Persistent Advantage" (14.7%) and "Upwardly Mobile in Adulthood" (17.8%) trajectories reported lifetime depression diagnosis. Together, depression diagnoses were most prevalent among individuals with persistent disadvantage and those experiencing SES fluctuations characterized by downward mobility.

Patterns differ slightly for reports at Wave V of receiving an anxiety diagnosis in one's lifetime. Approximately 39% of those in the "Upwardly Mobile in Adulthood" trajectory reported lifetime Anxiety diagnosis, followed by 32% of those in the "Downwardly Mobile in Adulthood" trajectory. Approximately 31% of those in the "Persistent Disadvantage" category reported lifetime Anxiety diagnosis. Respondents in other SES trajectories seemed to fare better. Those in the "Advantaged Period in Young Adulthood" and "Upwardly Mobile in Young Adulthood" trajectories did not report anxiety diagnosis at Wave V, and almost 4% of those in the "Disadvantaged Period in Young Adulthood" trajectory reported lifetime anxiety diagnosis. Those in the "Persistent Advantage" (13.2%) and "Downwardly Mobile in Young Adulthood" (17.9%) also fared better than those in other SES trajectories. For anxiety, therefore, individuals experiencing upward or downward mobility in adulthood were most likely to report anxiety diagnoses, as did individuals who were persistently disadvantaged.

Patterns of depressive symptoms are similar to those for Anxiety Diagnoses. Those in the "Upwardly Mobile in Adulthood" trajectory reported the highest mean depressive symptoms (5.7), followed by those in the "Downwardly Mobile in Adulthood" (4.5), "Persistent Disadvantage" (4.1), and "Downwardly Mobile in Young Adulthood" (3.3) trajectories. In contrast, those in the "Disadvantaged Period in Young Adulthood" trajectory reported the lowest mean depressive symptoms (1.9), followed by those in the "Persistent Advantage" (2.1), "Advantaged Period in Young Adulthood" (2.6), and "Upwardly Mobile in Young Adulthood" (2.6) trajectories.

To summarize, African Americans who persistently faced disadvantage across the early life course reported frequent depression and anxiety diagnoses and higher levels of depressive symptoms. Additionally, fluctuations in SES across the early life course were also associated with mental health in adulthood. Specifically, individuals who experienced any downward mobility reported higher frequency of depression diagnoses, while individuals with upward or downward mobility in adulthood reported higher frequency of anxiety diagnoses and greater depressive symptoms. Our descriptive results indicate that SES and mental health are linked among African Americans. Indeed, persistently disadvantaged African Americans fare worse in adulthood. At the same time, the linkage between SES and mental health for African Americans is also likely dependent on stability and fluctuations of SES across the life course—especially during early adulthood when young people are establishing their socioeconomic futures.

NEXT STEPS AND POTENTIAL IMPACT: This study aims to advance theoretical and empirical understanding of how socioeconomic processes unfold across the life course to shape African American adults' mental health. Our next analytical step will be to utilize logistic and Poisson regression to predict risk for depression and anxiety diagnosis and depressive symptoms at Wave V, when respondents are ages 32 to 42, by socioeconomic trajectory. Importantly, we will increase our sample size and statistical power to predict adult mental health status at Wave V by including additional African American Add Health respondents in our analyses when those data become available in spring of 2019. Results should reveal sensitive points in the life course where intervening on African Americans' socioeconomic well-being could have downstream effects on adult mental health.

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Table 1. Descriptive Statistics of Life Course SES Trajectories and Adult Mental Health Status of African Americans (Add Health, Waves I, III, IV, and V)

SES Trajectory	Pattern Across Waves I, III, IV	[1]Percent of Sample	[2] Depression (Ever Diagnosed) Wave V	[2]Anxiety (Ever Diagnosed) Wave V	[2]CES-D Wave V Mean
1. Persistent Disadvantage	D, D, D	10.6 %	37.0 %	30.6 %	4.1*
2. Upwardly Mobile in Adulthood	D, D, A	5.3 %	25.0 %	39.2 %	5.7***
3. Advantaged Period in Young Adulthood	D, A, D	1.0 %	56.0 %	0.0 %	2.6
4. Upwardly Mobile in Young Adulthood	D, A, A	2.7 %	0.0 %	0.0 %	2.6
5. Downwardly Mobile in Young Adulthood	A, D, D	23.4%	28.6 %	17.9 %	3.3*
6. Disadvantaged Period in Young Adulthood	A, D, A	26.8%	10.9 %	3.7 %	1.9
7. Downwardly Mobile in Adulthood	A, A, D	3.9 %	17.8 %	32.0 %	4.5
8. Persistent Advantage	A, A, A	26.4 %	14.7 %	13.2 %	2.1
		100.0 %	$X^2 = 26.38$ $p = 0.04$	$X^2 = 34.96$ $p = 0.01$	$F = 5.70$ $p = 0.00$

Key: A = Advantaged; D = Disadvantaged; [1]n = 2,056; [2]n = 378; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; p-values derived from bivariate regressions of CES-D on trajectory with REF = "Persistent Advantage."