PAA 2005 Abstract Submission
Extended Abstract

The Effects of Sociodemographic Characteristics, Risky Behavior, and Prior Depression on Psychological Well-Being in Young Adulthood

Introduction and Background

This paper attempts to delineate how psychological well-being of young adults depends on contemporaneous social position as well as on the characteristics of families of origin and psychological well-being during adolescence. Depression in adolescence may be especially important in determining levels of depression experienced in young adulthood. Depression may increase as a person transitions from adolescence to adulthood (Allgood-Merten, Lewinsohn, & Hops, 1990), although depression may again begin to decrease in young adulthood (Mirowsky & Ross, 1992). Moreover, depression in adolescence prophesies depression in young adulthood. Levels of depression differ by gender, with women experiencing higher levels of depression than men. Low levels of socioeconomic status, family disruption, and living in "bad" neighborhoods may contribute to psychological distress. Engagement in risky behaviors during adolescence, such as sex at an early age, delinquency, and alcohol and drug use may also be linked to psychological distress.

The paper has several goals. We will investigate the intergenerational transmission of depression through parental socioeconomic and family characteristics. We will explore the extent to which there are direct effects of parental socioeconomic and family characteristics on the psychological well-being of young adults. In addition, we will investigate the extent to which behaviors and psychological well-being in adolescence affect psychological well-being in young adulthood.

This paper is part of an ongoing effort to model depression and its antecedents and corollaries using the National Longitudinal Study of Adolescent Health (Add Health). The longitudinal nature of the data allows us not only to control for, but also assess, the effects of prior depression on contemporaneous depression. Moreover, it allows assessment of the remaining direct effects of parental and behavioral characteristics from adolescence on depression in young adulthood. We have been working with the Add Health data for several years, have access to both Waves I and III, and have already done extensive cleaning of the data.

We hypothesize that the experience of depression as a young adult is a function of both current sociodemographic characteristics and sociodemographic characteristics during adolescence, depressive symptoms during adolescence, and engagement in risky behaviors during adolescence. The sociodemographic characteristics we will investigate are gender, age, race/ethnicity, education and school enrollment status, current income and employment status, parental income, education, and welfare status, family structure, and relationship status. The risky behaviors we will examine include age at first sex, birth control and condom use at last sex, cigarette and tobacco use, alcohol and drug use, delinquency, and suicide.

Data

The data come from Waves I and III of the National Longitudinal Study of Adolescent Health (Add Health), collected in 1995 and 2001-2002, respectively. The original sample is a school-based sample of adolescents in grades 7 through 12, from all high schools in the United States. These consisted of 80 high schools and 54 feeder schools (middle schools where the students eventually attend one of the 80 high schools), for a total of 134 schools. Initially, a nationally representative primary sample of 12,105 adolescents was selected via probability sampling. There were also supplemental probability oversamples of well-educated African Americans, Chinese, Cubans, and Puerto Ricans, two big high schools and 14 small schools (saturation samples), and disabled students.

The sample size at Wave I is 20,745. The information we use at Wave I comes from self-reports from in-school survey and in-home surveys of adolescents, from an in-home parental survey, and from a collection of tract-level data from the 1990 Census. All respondents at Wave I were eligible for re-interview at Wave III. There was a 73 percent follow-up rate at Wave III, with a final sample size of 15,197. The information we use at Wave III comes from young adults' self-reports.

Depression is measured at Waves I and III using a modified version of the 20-item Center for Epidemiologic Studies-Depression Scale (CES-D). The Wave I survey includes 19 of the 20 original items. In previous work, we arrived at an adapted 7-item scale based on analysis of construct validity, face validity, and reliability. The Wave III survey includes only 9 of the original 20 items. More information on how we intend to deal with this is included in the "Analytic Strategy" below.

Analytic Strategy

Our primary goal is to examine the extent to which adolescent behaviors and psychological well-being and parental characteristics directly affect depression in young adulthood. In past work, we have taken a latent variable approach to modeling depression. In the current work, we similarly estimate a multilevel item-response model of depression in young adulthood that takes into account the possible correlation between depression at Wave I and the disturbance at Wave III. The lowest level of observation is the item-individual, with items being nested within individuals. This approach is different from a DSM-clinical approach because we do not claim that individuals are "depressed" based on the items. We are not concerned with a threshold that separates those who are depressed from those who are not. Rather, we allow respondents to vary on a scale that indexes feelings of depression. Let Y_i^* be the underlying depression dimension tapped by the *ith* item. For the *mth* ordered category on the *ith* item for the *jth* individual

(1) $$Y_{ij} = m \quad \text{if } \tau_{m-1} < Y_{ij}^* \leq \tau_m ,$$

for m = 1,2,3,4. The τ_m are thresholds and these could be different for each item. We restrict the thresholds to be equal across items. Using ordinal logistic regression, we are able to estimate two components simultaneously: the thresholds and regression coefficients. This is a probability model. We are modeling

(2) $$\Pr(Y_{ij} = m) = \Pr(\tau_{m-1} < Y_{ij}^* \leq \tau_m).$$

The item specific model is

(3) $$Y_{ij}^* = Y_j^* + \alpha_i + \varepsilon_{ij},$$

where the α_i are fixed constants that describe location shift (mean changes) across items in depression. The item-specific model says that the different latent variables all correspond to a single, global latent variable. We can reparameterize the equation to

(4) $$Y_{ij}^* = \beta_{0j} + \sum_{i=2}^{i=n} \beta_i D_{ij} + \varepsilon_{ij},$$

where $D_{ij} = 1$ if the response is to the *ith* item and zero otherwise and ε is assumed to be logistic, with known, fixed variance. The notation assumes that each row in the data corresponds to an item within individual. The equation we will estimate is

(5) $$Y_{ij}^* = \eta_0 + \sum_{i=2}^{i=n} \beta_i D_{ij} + \sum_{q=1}^{q=Q} \eta_q X_{jq} + \varepsilon_{ij} + u_{0j},$$

where D_{ij} are the depression items at Wave III and X_{jq} is a vector of individual-level covariates that includes the sociodemographic characteristics, depression at Wave I, and risky behavior at Wave I.

In prior work with the depression items at Wave I, we settled on a core of 7 items of the 19 that were included in the survey based on investigations of construct validity, face validity, and reliability. We intend to repeat this process with the depression items available in the Wave III data, because it is unclear that the CES-D items perform identically for young adults and adolescents. We also repeat this process because only 9 of the 19 items available at Wave I are included at Wave III. More importantly, however, we reinvestigate the "grouping" of the items because it may be different during adolescence than it is in early adulthood.

Our previous work using the Add Health data suggests little contribution of clustering at the census tract level to adolescent psychological well-being. Nonetheless, we can investigate the possibility that depression in young adulthood is affected by the clustered sample design at Wave I if warranted. We can also investigate the contribution of census tract characteristics experienced in adolescence, such as tract-level median family income or racial dispersion. Unfortunately, we do not have comparable neighborhood measures in young adulthood.

References

Allgood-Merten, B., Lewinsohn, P.M., and Hops, H. 1990. Sex Differences and Adolescent Depression. *Journal of Abnormal Psychology, 99*: 55-63.

Mirowksy, J. and Ross, C.E. 1992. Age and Depression. *Journal of Health and Social Behavior, 33(3):* 187-205.