Gutman L. M., Peck S. C., Malanchuk O., Sameroff A. J., Eccles J. S. (2017). Chapter 2 Method: Moving through adolescence: Developmental trajectories of African American and European American youth. *Monographs of the Society for Research in Child Development, 82(4*), 29-53.

CHAPTER 2: METHOD

Participants

The participants were part of the Maryland Adolescent Development in Context Study (MADICS) – a study originally designed and funded by the MacArthur Research Network on Successful Adolescent Development among Youth Living in High Risk Settings (chaired by Richard Jessor; members included Albert Bandura, James Comer, Tom Cook, Delbert Elliott, Jacquelynne Eccles, Glen Elder, Frank Furstenberg, Robert Haggerty, Beatrix Hamburg, Norman Garmezy, Arnold Sameroff, Marta Tienda, and William J. Wilson) and subsequently funded by the National Institute of Child Health and Human Development, the National Institute on Aging, the W. T. Grant Foundation, and the Spencer Foundation. This project was headed up by Jacquelynne S. Eccles and Arnold J. Sameroff.

MADICS is a longitudinal study of adolescents, their families, and their wider social contexts (e.g., schools) in Prince George's County, Maryland. Prince George's County is a geographically large county near Washington, D.C. The county is quite diverse. Areas closest to the city are more densely populated, more urban, and less affluent. Most other areas are suburban with the exception of a large rural and sparsely populated area in the southeast. The county was selected for the study because it was the premier middle class African American county in the country, and the SES distribution was as close as possible between the African American and European American sub-populations. According to the U.S. Bureau of the Census, in 1990 when

this study began, 51% of the residents in the county were African American, 43% were European American, 4% were Latino, and 4% were Asian. Median household incomes were $41,265 for African Americans and $46,822 for European Americans, with the corresponding national averages being $18,676 and $31,231. Therefore, the county represents a relatively affluent population of both African American and European American families, and its R/E income differential was less than that of the nation at large. Beginning in 1970, the county experienced considerable White flight. By 1990, 170,000 Whites had moved out of the county and were replaced by an approximately similar number of African Americans. Even so, only one of the 173 census tracts in the county had an average household income under $20,000, and none had a poverty rate of more than 30% in 1990. Nevertheless, none of the census tracks is as wealthy as can be found in adjacent counties in both Maryland and Virginia.

MADICS began as part of a larger longitudinal, evaluation study: the Study of Adolescents in Multiple Contexts (SAMC; Cook, Herman, Phillips, & Settersten, 2002). The two longitudinal studies differed slightly in their focus and method of data collection. However, because the data were collected collaboratively, extensive information is available about the adolescents and their families. The county had 25 middle schools, 23 of which participated in the study. In 1990, SAMC invited all entering seventh-grade students in 23 of the county's 25 schools to participate in their study. In 1990, 1991, and 1992, they administered questionnaires in schools to students whose parents gave their consent at the beginning of seventh-grade and at the end of the adolescents' eighth-grade. These questionnaires asked for information about the adolescents' perceptions of their families, their friends, and their own psychological attitudes and behaviors.

Of the approximately 5000 adolescents in the second SAMC cohort (1991), 1482 adolescents and their families also participated in the MADICS project. In the fall of 1991, a brief description of the study was sent home with each seventh grader in the county. This data collection coincided with the first wave of data collection on this cohort of SAMC. Families who were interested in learning more about the study were asked to sign and return a form giving the study staff permission to contact them. Of all the families, 1700 agreed to be contacted about the study. There were 1500 families randomly selected to participate based on a stratified sampling procedure designed to get proportional representations of families from each of the 23 middle schools.

MADICS participants have now been assessed at eight time points ranging from early adolescence (7th grade) through young adulthood (Waves 7 and 8 were collected when the participants were 29 to 32 years old). We focus here on four of these waves of data: Wave 1 collected in the fall 1991 when the target adolescents were in seventh grade (i.e., the first year of junior high school); Wave 3 collected in the summer and fall of 1993 when the adolescents were making the transition to high school; Wave 4 collected in 1996 when most of the adolescents were in eleventh grade; and Wave 5 collected in 1998 about one year after most of the adolescents had graduated from high school. Wave 2 was a telephone interview for parents and youth that focused mainly on their summer activities after the 7th grade. Waves 6 to 8 did not include similar family relation measures as had the earlier waves and therefore were not included in our analyses for this monograph.

In this study, only data from the African American and European American target adolescents from Wave 1 (n=1329), Wave 3 (n=948), Wave 4 (n=940), and Wave 5 (n=778) were used. The R/E composition of the families corresponded roughly to the R/E composition of the county at large; 60% African Americans, 30% European

Americans, and 10% of other R/E backgrounds. Of the 10% of "other" R/E

backgrounds, 4% identified themselves as biracial (which included African/European

American, Latino/European American, African American/Latino, and Asian/European

American), 2% identified as Latino, 1% as Asian, and 3% in some other way.

Participants from the "other" R/E groups were diverse yet too small in number to be

included in our analyses.

The African American families had slightly lower mean levels of income

(between $40,000 and $44,999 in 1990) and years of education (M = 14.16, SD = 2.44)

than the income (between $45,000 and $49,999) and years of education (M = 15.11, SD

= 2.90) of the European American families. The mean-level difference in SES (based on

a composite of standardized income, education, and occupation scores) for the

European American families (M = .23, SD = .77) and African American families (M = –.16,

SD = .82) was statistically significant, $F(1, 1325)$ = 70.93, $p < .001$. For this reason, SES

was included as a covariate. Nevertheless, it is important to note that this difference is

much smaller than national averages because of the unique characteristics of the

county.

The two R/E groups also differed in the nature of their families. The African

American youth were more likely than the European-American youth to live in single-

parent households in which the mother had never married (9% versus 1%). In contrast,

the European American youth were more likely than the African American youth to live

in a family in which the mother and father had been married to each other for their

child's entire life (68% versus 46%). Thus, we have included covariates for both of

these kinds of family compositions.

Missing Data

The longitudinal data used in MADICS can be described as a complex pattern of complete and missing data. There are two basic kinds of missing data: Data provided by participants at some waves but not at other waves (including partial data provided at any given wave), and data that are missing because participants discontinue providing data at all subsequent waves. Attrition refers only to the latter case, is difficult to estimate, and requires some corrective strategies that differ from those pertaining to other forms of missing data. As described below, despite the fact that the participants who dropped completely out of the study tended to be male and lower SES compared to those who remained in the study (n = 118 from Wave 1), we nevertheless retained a sufficient number of participants from the full range of our primary developmental outcomes to adequately address questions about the effects of gender and race/ethnicity; this continues to be one of the greatest strengths of this data set.

Defined conservatively, we retained over 70% of the original sample of 1482 participants at Waves 3 and 4. These retention percentages, when viewed in the context of our entire study, are actually 89% and 81%, respectively, as some of the participants who appeared to drop out of the study at Wave 3 or Wave 4 returned to the sample in Wave 4 or Wave 5. At Wave 5, we obtained data from 62% of the Wave 1 sample of target adolescents. To ascertain whether the adolescents who only participated at Wave 1 (n = 118) differed from the adolescents who participated in all four waves (n= 567) in terms of their demographic characteristics and Wave 1 measures, a series of crosstab analyses and t-tests were conducted. Significant differences emerged between the two groups only on gender, SES, and Wave 1 Occupational Aspirations. Proportions and means indicated that participants who remained in the study for all four waves were more likely to be female, have higher SES, and report higher occupational aspirations at Wave 1 than those who dropped out of the study after Wave 1. However,

the percentages of females and males were equally divided until Wave 5 when 57% of the sample was female.

In evaluating these patterns of attrition, it is important to keep in mind that the "effects of attrition on study conclusions in a general sense are not nearly as severe as commonly feared" (Graham, 2009, p. 567). Specifically, attrition alone tells us little about the quality of the data in question; rather, it is the specific *type* of attrition that can be problematic (Graham, 2009; Little & Rubin, 1987; Schafer & Graham, 2002). Attrition that does not vary systematically in relation to study variables is referred to as missing completely at random–this type of missingness is considered ignorable because, despite the loss of power, the retained sample is equally representative of the original sample. Attrition that is predicted by study independent variables is referred to as missing at random and is also considered ignorable as this type of missingness is easily dealt with using multiple imputation or model-based approaches to parameter estimation. Attrition that is predicted by study outcome variables is often referred to as missing not at random and is the only type of missing data that is non-ignorable. Notably, longitudinal data that include Wave 1 measures of subsequently missing outcome variables (as in our case) can be treated as missing at random (Graham, 2009).

Based on generally accepted criteria (e.g., Graham, 2009), these patterns of missing data can be described as missing at random, in that missingness is predicted by observed data; namely, adolescents' gender and family SES. One of the advantages of HLM is its ability to handle missing data (Byrk & Raudenbusch, 1992). Because multilevel models do not assume equal numbers of observations or fixed time points, respondents with missing data are not problematic (Hox, 2000). As outlined by Zaidman-Zait & Zumbo (2013), data patterns characterized as missing at random can be correctly handled in HLM using full maximum likelihood estimation. Thus, we

conducted HLM models on respondents who had data available at three or more time points, and we included the relevant variables that predicted missingness in the models.

Procedure

An in-home interview format was used in Waves 1, 3, and 4. In each family, the primary caregiver and target adolescent were interviewed and given a self-administered questionnaire to complete. As often as possible, the race/ethnicity of the interviewer was matched to the race/ethnicity of the primary caregiver. Interviewers were from the local area and were mostly women. The MADICS staff trained all interviewers in a three-day workshop. Interviewers were paid on a per-interview basis. To ensure that interviewers were following the interview protocol accurately, 15% of families were randomly selected and re-contacted by the study staff to verify that the interview had taken place, that all of the questions had been asked, and that the interviewer had behaved professionally while in the family's home. These verification calls revealed no problems with the interview staff.

The interviewer phoned the household and asked to speak with the parent identified by the school, generally the mother. After describing the study and obtaining his or her agreement to participate, the interviewer asked this adult, "Out of the people living in this household, what is the name of the person who has the most responsibility for and knows the most about (the target adolescent)?" The person named in response to this question was identified as the primary caregiver. The majority of the primary caregivers were either the mothers (86%) or fathers (7%) of the target adolescents; however, primary caregivers also included grandparents and other relatives. Although not all of the primary caregivers were parents of the target adolescents, the terms parent and primary caregiver are used interchangeably in this monograph.

Following the initial phone contact, the remainder of the interviewing process took place in the home of the family. The primary caregiver and target adolescent were asked to complete two booklets: one using a face-to-face structured interview format and one using a self-administered format. During the first portion of the interview, the adolescent completed his or her self-administered booklet in a quiet, private place, while the interviewer administered the face-to-face portion to the parent. During the second portion of the interview, the parent completed his or her self-administered booklet in a quiet, private place, while the interviewer administered the face-to-face portion to the adolescent. A card containing all relevant response scales was provided to the respondent for the face-to-face interviews. Interviewers referred respondents to this card rather than reading each response scale. Interviewers were also instructed to read all the questions exactly as written in the books and not to define words or interpret questions for the respondents. Each face-to-face interview took approximately one hour, and each self-administered booklet took approximately 30 minutes to complete. Primary caregivers and target youth were offered $20 each to participate in Waves 1, 3, and 4. For Wave 5, adolescents were mailed three self-administered booklets: a general booklet, one focused on their romantic relationships, and one on their work experience. Each booklet took approximately 65 minutes to complete. Target youth received $35 for their time.

Measures

This section provides the origin and a brief description of each construct in the domains of psychological well-being, R/E identity and discrimination, academic functioning, problem behaviors, family characteristics, and peer characteristics. Table 1 provides a full description of the scale items and their response scales, and Table 2

shows the scale characteristics including the mean, standard deviation, sample size, and alpha for each wave.

Many of the items used to construct the scales described below were modified versions of items developed for other large-scale longitudinal studies; the specific studies are mentioned below in relation to each construct. Scale construction was guided by theoretical concerns and confirmed by exploratory and confirmatory factor analyses. Rather than combining all available items into a single analysis, these analyses were conducted using subsets of items classified into domains (e.g., R/E identity, family, peers, and school). For each full scale, we used items included at every wave to create *matched scales*. For example, if the full scale for a given construct included nine items, but three of those items varied across the relevant waves, we used only the six items that were identical across all waves to create the matched scale. Consequently, all descriptive statistics and growth curve analyses reported in this monograph were based on the matched scales.

Regarding item non-response: Because we assume that all the items for a given scale are equally representative of the scale construct, we calculated scale scores for participants who had complete data on at least 66 percent of the items composing a given scale. Each item was reversed-scored, where relevant, such that higher scores correspond to the construct name. In addition, in the few cases where response scales differed across items for a given scale, response values were recoded to a common range of values (as discussed where describing the relevant construct). In order to preserve the meaning of the response values for purposes of interpreting the growth curves, no items were standardized prior to creating scale scores.

Covariates.

Gender. This was contrast-coded as a dichotomous variable (males = -.5; females = +.5).

Race/Ethnicity. This was an open-ended question asked at all of the waves so that the resulting categories are subjective self-identifications: "What is your race or ethnicity, for example Black, White, Asian, Latino or something else?" There was some shifting in identification in a very small number of cases, and they were coded at their most consistent response. Race/ethnicity was contrast-coded as a dichotomous variable (African Americans = -.5; European Americans = +.5).

Socioeconomic Status (SES). SES was a composite scale created from information provided by the primary caregiver at the 7th grade visit (Wave 1). The composite score was a mean of the following standardized scores (using the full sample): the highest level of education of either parent (0-20, with 20 being doctorate or M.D.), the highest occupational status of either parent (0-99, with doctor being 99) based on Nam & Powers (1983), and the family income based on annual income categories (1-16, with 16 being more than $75,000).

Parents' Marital Status. This was obtained from a question asking primary caregivers their current marital status (Wave 1). From this question, we derived two variables: *married, intact families* and *single, never married families*. Married, intact families included only those families who had never been separated, divorced, or widowed with both the primary and secondary caregivers (married = 1; else = 0). Single, never married families included only those families whose primary caregiver had never been married (single, never married = 1; else = 0).

Self-Esteem. This scale was based on Harter's (1985) concept of self-worth. It has been shown to have good internal consistency (i.e., measurement reliability) and

predictive and face validity in many studies (Cogburn, Chavous: & Griffin, 2011; Colarossi & Eccles, 2003; Garrett & Eccles, 2009; Goldstein, Malanchuk, Davis-Kean & Eccles, 2007; Gutman & Eccles, 2007; Ludden & Eccles 2007).

Resiliency. This scale was developed for the Philadelphia Family Management Study (Furstenberg, Cook, Eccles, Elder & Sameroff, 1999) to measure adolescents' ability to adapt to challenges and new situations. It was shown to have good predictive and face validity (Furstenberg et al., 1999) and reliability (Wong et al., 2003).

Anger. This scale was adapted from Derogatis's (1996) Symptom Check List – 90 to measure adolescents' angry feelings. It was shown to have good reliability and predictive and face validity in Derogatis (1996).

Depressive Affect. This scale was adapted from the Children's Depression Inventory (Kovacs, 1992). It has been shown to have good reliability and predictive and face validity in many studies (Cogburn et al, 2011; Colarossi & Eccles, 2003; Goldstein et al, 2011; Gutman & Eccles, 2007; Ludden & Eccles, 2007).

Eating Disorders. This scale was adapted from the Eating Disorder Inventory (EDI) for Anorexia Nervosa and Bulimia (Garner, Olmstead, and Polivy, 1983), which measures psychological and behavioral traits common in anorexia nervosa and bulimia. The EDI is not a diagnostic tool but, rather, a preliminary screening instrument. It was shown to have good reliability and predictive and face validity in many studies (e.g., Tangney, Baumeister, & Boone, 2004; Stice, 2002).

Expected Negative Life Chances. The scale was adapted from other standard life expectancy scales and expanded for this study by the PIs (Eccles and Sameroff). It has excellent face validity and very good reliability.

R/E Identity and Discrimination

R/E Importance. This scale was created for MADICS based on the work of Cross (1991) and Crocker and Luhtanen (1990) to measure the personal importance of one's race/ethnicity. For Wave 3, European American adolescents were not asked these questions; therefore, these scales were constructed only for African American adolescents in this monograph. It has good face validity as well as good reliability (Chatman, Malanchuk & Eccles, 2001; Tang, McLoyd, Hallman, 2016).

R/E Behavioral Involvement. This scale was developed for MADICS to assess adolescents' involvement in activities related to their R/E background based on open-ended interviews and the work of Cross (1991). For Wave 3, European American adolescents were not asked these questions; therefore, these scales were constructed only for African American adolescents.

Same R/E Friends. This measure was developed for MADICS, assessing adolescents' proportion of same R/E friends. It is similar to items used to assess friends' characteristics on national survey studies (Chatman et al., 2001). This measure was calculated using two questions that asked about the proportion of African American and European American friends. For European American adolescents, we used the question about their proportion of European American friends, whereas the reverse was true for African American adolescents.

Cross R/E Friends. This measure was developed for MADICS, assessing adolescents' proportion of other R/E friends. It is similar to items used to assess friends' characteristics on national survey studies (Chatman et al., 2001). This measure was calculated using two questions asking about the proportion of African American and European American friends. For African American adolescents, we used the question about their proportion of European American friends, whereas the reverse

was true for European American adolescents. We did not assess whether the adolescents had friends who were from another R/E group.

Expected R/E Discrimination. This scale was developed for MADICS to measure adolescents' expectations of discrimination affecting their educational and employment opportunities and was based on the types of items used to assess expected future discrimination in national survey studies (Eccles et al., 2006; Peck, Brodish, Malanchuk, Banerjee, & Eccles, 2014).

R/E John Henryism. This scale was developed for MADICS based on the concept of "*prolonged, high effort coping* with difficult psychosocial stressors" (James, 1994, p. 166). It has good face validity and is similar in format to these kinds of items on national survey studies (Chatman et al., 2001; Tang et al., 2016).

Perceived Parents' Worries about R/E Discrimination. This scale was developed for MADICS to assess adolescents' perceptions of their parents' worries about R/E discrimination based on open-ended interviews and the work of Cross (1991).

Academic Functioning

Grade Point Average (GPA). This was a series of questions that was asked about their school grades for that year. It is similar to questions asked on national surveys to measure GPA. Responses were then converted into a GPA.

Educational Aspirations. This was taken from the National Educational Longitudinal Study of 1988 (NELS) to measure the young person's hopes for future education.

Educational Expectations. This was taken from NELS 1988 to assess adolescents' realistic expectations for future education.

Occupational Aspirations. This measured the adolescents' hopes for their future career. Open-ended answers were coded using Nam and Powers (1983); scores ranged from 1 = "dishwasher; counter attendant" to 99 = "surgeon; physician".

Academic Importance. This scale was derived from measures developed for MSALT (Eccles et al., 1993) assessing the importance adolescents ascribed to math and other school subjects. It has excellent face validity, predictive validity, and reliability (Durik, Vida, & Eccles, 2006; Eccles & Wigfield, 1995; Simpkins, Davis-Kean, & Eccles, 2006).

Academic Self-Concept. This scale was based on scales developed for MSALT (Eccles et al., 1993) and measures adolescents' perceptions of their ability in school subjects. It has excellent face validity, predictive validity, and reliability (Archambault, Eccles, & Vida, 2010; Bouchey, Shoulberg, Jodl, & Eccles, 2010; Denissen, Zarret, & Eccles, 2007; Diemer, Marchand, McKellar, & Malanchuk, 2016; Durik et al., 2006; Eccles & Wigfield, 1995).

Positive School Identification. The construct of school identification measured students' sense of school belonging and valuing of education by using items from the Michigan Study of Adolescent Life Transitions (MSALT; Eccles et al., 1993), items from

the work of Mickelson (1990), and items from the Philadelphia Study (Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999).

Problem Behaviors

School Problems. This scale was based on the work of Elliott, Huizinga, and Menard (1989) and consisted of a count of items asking about their problems in school (Harris 2008; Wong et al., 2003).

Cigarette Use. This was derived from the Monitoring the Future studies (O'Malley, Bachman, & Johnston, 1987), asking about how often they smoked a cigarette. It has been shown to have good predictive and face validity (Gutman et al., 2011; Ludden & Eccles, 2007).

Delinquent Behaviors. This was a count of items asking about adolescents' engagement in delinquent behaviors based on the work of Elliott, Huizinga, and Menard (1989). It has been shown to have good reliability and predictive and face validity (Gutman & Eccles, 2007; Ludden & Eccles, 2007).

Alcohol Use. This was based on Monitoring the Future (O'Malley et al., 1987), asking about how often they had an alcoholic drink. It has been shown to have good predictive and face validity (Gutman et al., 2011; Ludden & Eccles, 2007).

Marijuana Use. This was based on a single item from Monitoring the Future (O'Malley et al., 1987) asking how often they smoked marijuana. It has been shown to have good predictive and face validity (Ludden & Eccles, 2007).

Family Characteristics.

Intrusive Parenting. This scale was based on ideas associated with Baumrind's (1991) parenting styles as well as the more recent work on controlling parenting by Barber (2002).

Negative Interactions with Parent. This scale was adapted from the Iowa Youth and Family Study (Conger, Ge, Elder, Lorenz, & Simons, 1994; Conger, Lorenz, Elder, Melby, Simons, & Conger, 1991) and assessed problematic parent-adolescent relationships. It has been shown to have good reliability and predictive and face validity in many studies (Eccles, Early, Fraser, Belansky & McCarthy, 1997; Gutman & Eccles, 1999; Gutman & Eccles, 2007; Gutman et al., 2011).

Strict Parenting. This scale was based on ideas associated with Baumrind's parenting styles (Baumrind, 1991), asking adolescents about their parents' discipline strategies when they break one of their parents' important rules.

Family Social Supports. This scale was from the Philadelphia Family Management Study (Furstenberg et al., 1999), assessing the adolescents' perception of the supportive nature of their family relationships. It has been shown to have good predictive and face validity (Colarossi & Eccles, 2003).

Parent-Adolescent Communication. This scale was based on MSALT (Eccles et al., 1993) and measured how often adolescents talk with their parents. It has been shown to have good predictive and face validity (Tang et al., 2016).

Positive Identification with Parent. This scale was adapted from the Iowa Youth and Family Study (Conger et al., 1994; Conger et al., 1991) assessing the closeness of the parent-adolescent relationship. It has been shown to have good reliability and predictive and face validity in many studies (Gutman & Eccles, 2007; Gutman et al., 2011; Jodl, Michael, Malanchuk, & Eccles, 2001; Risch, Jodl, & Eccles, 2004).

Peer Characteristics.

Peer Communication. This scale was developed for MSALT (Eccles et al., 1993) and assessed how often the adolescent talked with their friends. It has been shown to have good predictive and face validity (Fuligni & Eccles, 1993).

Peer Support. This scale was developed for MSALT (Eccles et al., 1993) and asked about how often they can depend on their friends for support. It has been shown to have good reliability and predictive and face validity (Colarossi & Eccles, 2000; Gutman et al., 2002).

Positive Peers. This scale was developed for MADICS and consisted of items asking how many of their friends are academically oriented. It has been shown to have good reliability and predictive and face validity in many studies (Eccles et al., 1997; Fredricks & Eccles, 2010; Garret & Eccles, 2009; Harris 2008; Ludden & Eccles, 2007).

Negative Peers. This scale was developed for MADICS and asked how many of their friends engage in delinquent behaviors. It has been shown to have good reliability and predictive and face validity in many studies (Eccles et al., 1997; Garrett & Eccles, 2009; Goldstein et al., 2007; Ludden & Eccles, 2007).

Peer Drug Norms. This scale was developed for MADICS, asking about their friends' norms concerning the use of alcohol and drugs. It has been shown to have good predictive and face validity (Eccles et al., 1997).

TABLE 1

Scale Items and Response Values According to Domain

Psychological Well-Being	
Self-esteem	
3 items	How often do you wish you were different than you are?*
	How often would you like to change lots of things about you if you could?*
	How often are you pretty sure about yourself?
Response values	1 = Almost never, 2 = Once in a while, 3 = Sometimes, 4 = Often, 5 = Almost always
Resiliency	
4 items	How often are you very good at figuring out problems and planning how to solve them?
	How often are you very good at carrying out the plans you make for solving problems?
	How often are you very good at bouncing back quickly from bad experiences?
	How often are you good at learning from your mistakes?
Response values	1 = Almost never, 2 = Once in a while, 3 = Sometimes, 4 = Often, 5 = Almost always
Anger	
3 items	During the last month (including today), how often have you felt so angry you wanted to smash or break something?
	During the last month (including today), how often have you felt you couldn't control your temper?
	During the last month (including today), how often have you felt so upset you wanted to hit or hurt someone?
Response values	1 = Almost never, 2 = Once in a while, 3 = Sometimes, 4 = Often, 5 = Almost Always
Depressive affect	
6 items	In the past two weeks, how often have you had these feelings?
	I am sad…1 = Once in a while, 2 = Many times, 3 = All the time
	I feel like…1 = Nothing will ever work out for me, 2 = I am not sure if things will work out for me, 3 = Things will work out for me O.K.*
	I am worthless…1 = All the time, 2 = Many times, 3 = Once in a while*
	I feel like…1 = I hate myself, 2 = I do not like myself, 3 = I like myself*
	I feel like crying…1 = Everyday, 2 = Many days, 3 = Once in a while*
	Things bother me…1 = All the time, 2 = Many times, 3 = Once in a while*
Eating disorders	
9 items	How often do you do the following things:
	I think about dieting.
	I feel extremely guilty after overeating.
	I am terrified of gaining weight.
	If I gain a pound, I worry that I will keep going.
	I eat when I am feeling sad or upset.
	I have gone on eating binges where I felt that I could not stop.

	I eat moderately in front of others and stuff myself when they are gone.
	I have thought of trying to vomit in order to lose weight.
	I make myself throw up after eating. (W1 only)
Response values	1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Usually, 6 = Often

Expected negative life chances

5 items	What do you think the chances are that you will…
	Have a drinking problem?
	Get in trouble with the police?
	Get involved in gang activity?
	Often skip school?
	Start having sex too young?
Response values	1 = Very low, 2 = Low, 3 = In the middle, 4 = High, 5 = Very high, 6 = Already happened

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R/E Identity and Discrimination

R/E importance

3 items	How important is your racial or ethnic background to the daily life of your family?
	How important is it for you to know about your racial or ethnic background?
	How proud are you of your racial or ethnic background?
Response values	1 = Not at all, 2 = A little, 3 = Somewhat, 4 = Very

R/E behavioral involvement

3 items	How often do you study the traditions or history of people with your racial background?
	How often do you participate in community activities with people of your racial background?
	How often do you celebrate any special days connected to your racial background?
Response values	1 = Almost never, 2 = Rarely, 3 = Occasionally, 4 = Frequently, 5 = Almost always

Same R/E friends

1 item	For African American adolescents:
	How many of the friends you spend most of your time with are black?
	For European American adolescents:
	How many of the friends you spend most of your time with are white?
Response values	1 = None of them, 2 = A few of them, 3 = About half of them, 4 = Most of them, 5 = All of them

Cross R/E friends

1 item	For African American adolescents:
	How many of the friends you spend most of your time with are white?
	For European American adolescents:
	How many of the friends you spend most of your time with are black?
Response values	1 = None of them, 2 = A few of them, 3 = About half of them, 4 = Most of them, 5 = All of them

Expected R/E discrimination

2 items	How much do you think discrimination because of your race might keep you from getting the amount of education you want?

	How much do you think discrimination because of your race might keep you from getting the job you want?
Response values	1 = Not at all, 2 = A little, 3 = Some, 4 = Quite a bit, 5 = A lot

R/E John Henryism

2 items	Because of your race, no matter how hard you work, you will always have to work harder than others to prove yourself. Because of your race, it is important that you do better than other kids at [work or] school in order to get ahead.
Response values	1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree

Parents' worries about R/E discrimination

2 items	How much do your parents worry that you will be discriminated against at school because of your race? How much do your parents worry that you will be discriminated against at work when you grow up because of your race?
Response values	1 = Not at all, 2 = A little, 3 = Some, 4 = Quite a bit, 5 = A lot

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Academic Functioning

GPA

1 item	On your semester report card last year, how many…
Response values	4 = A's did you get? 3 = B's did you get? 2 = C's did you get? 1 = D's did you get? 0 = F's did you get?

Educational aspirations

1 item	If you could do exactly what you wanted, how far would you *like* to go in school?
Response values	W1-W3: 1 = 8th grade or less, 2 = 9-11th grade, 3 = Graduate from high school, 4 = Post high school vocational or technical training, 5 = Some college, 6 = Graduate from a business college or a two-year college with associate degree, 7 = Graduate from a 4-year college, 8 = Get a master's degree or a teaching credential, 9 = Get a law degree, a Ph.D., or a medical doctor's degree. W4: 1 = 11th grade or less 2= Graduate from high school, 3 = Post high school vocational or technical training, 4 = Some college, 5 = Graduate from a business college or a two-year college with associate degree, 6 = Graduate from a 4-year college, 7 = Get a master's degree or a teaching credential, 8 = Get a law degree, a Ph.D., or a medical doctor's degree. The Wave 4 response values were recoded so that they ranged from 2 to 9 to match the values used in previous waves.

Educational expectations

1 item	We can't always do what we want most to do. How far do you think you *actually will* go in school?
Response values	W1-W3: 1 = 8th grade or less, 2 = 9-11th grade, 3 = Graduate from high school, 4 = Post high school vocational or technical training, 5 = Some college, 6 = Graduate from a business college or a two-year college with associate degree, 7 = Graduate from a 4-year college, 8 = Get a master's degree or a teaching credential, 9 = Get a law degree, a Ph.D., or a medical doctor's degree. W4: 1 = 11th grade or less 2= Graduate from high school, 3 = Post high school vocational or technical training, 4 = Some college, 5 = Graduate from a business college or a two-year college with associate degree, 6 = Graduate from a 4-year college, 7 = Get a master's

degree or a teaching credential, 8 = Get a law degree, a Ph.D., or a medical doctor's degree. The Wave 4 response values were recoded so that they ranged from 2 to 9 to match the values used in previous waves.

Occupational aspirations

1 item	If you could have any job you wanted, what kind of job would you most like to have when you are grown up?
Response values	(1 = counter attendant, dishwasher; 100 = physician, surgeon).

Academic importance

2 items	How important is Math? How important are other school subjects?
Response values	1 = Much less important to me than other things…7 = Much more important to me than other things

Academic self-concept

4 items	How well do you do in Math? 1 = Much worse than other kids…7 = Much better than other kids How well do you do in other school subjects? 1 = Much worse than other kids…7 = Much better than other kids How good are you in Math? 1 = Not good at all…7 = Very good How good are you in other school subjects? 1 = Not good at all…7 = Very good

Positive school identification

3 items	In your school, the academic program is very good. In general, you like school a lot. You would recommend to other kids that they go to your school.
Response values	1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

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Problem Behaviors

School problems

4 items	In the past year… How often have you cheated on tests or exams? How often have you skipped class without a valid excuse? How often have you been sent to the principal's office? How often have you brought alcohol or drugs to school?
Response values	0 = Never, 1 = 1-9 times, 2 = 10 or more times

Cigarette use

1 item	How many cigarettes have you smoked in the past 30 days?
Response values	1 = None, 2 = Less than 1 a day, 3 = 1-5 a day, 4 = About a half a pack a day, 5 = About a pack a day, 6 = 1 and ½ packs a day, 7 = 2 or more packs a day

Delinquent behaviors

6 items	In the past (W1 = year; W3, W4, W5 = 6 months), how often have you… Hit someone for what they said/did? Lied to your parents? Stolen from a store? Been involved in a gang fight? Damaged public or private property for fun? Stolen a motor vehicle?
Response values	0 = Never, 1 = 1-9 times, 2 = 10 or more times

Alcohol use

1 item	How often have you had an alcoholic drink in the past 30 days?

Response values	0 = None, 1 = Rarely, 2 = 2-3 times per month, 3 = Once a week, 4 = More than once a week

Marijuana use

1 item	How often have you smoked marijuana in the past 30 days?
Response values	0 = None, 1 = Rarely, 2 = 2-3 times per month, 3 = Once a week, 4 = More than once a week

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Family Characteristics

Intrusive parenting

5 items	Now, thinking about your parent, how often do the following things happen?
	Your parent is always telling you what to do and how to act.
	Your parent asks you too many questions about where you've been or what you've been doing.
	Your parent treats you more like a kid than like an adult.
	Your parent doesn't like it when you question (his/her) decisions and rules.
	Your parent thinks you have no right to get angry at (him/her).
Response values	1 = Almost never, 2 = Rarely, 3 = Occasionally, 4 = Frequently, 5 = Almost always

Negative interactions with parent

4 items	During the past month, how often did your parent...
	Hit, push, grab or shove you?
	Criticize you or your ideas?
	Put his or her needs ahead of your needs?
	Yell at you?
Response values	1 = Never, 2 = Once or twice, 3 = 3 or 4 times, 4 = A couple of times a week, 5 = Almost every day

Strict parenting

2 items	When you break one of your parent(s)' important rules, how often do they...
	Ground you?
	Take away some privilege?
Response values	W1: 1 = Almost never, 2 = Once in a while, 3 = Sometimes, 4 = Often, 5 = Almost always
	W3: 1 = Almost never, 2 = Not too often, 3 = About half the time, 4 = Fairly often, 5 = Almost every day
	W4: 1 = Almost never, 2 = Not too often, 3 = About half the time, 4 = Often, 5 = Almost always

Family social support

3 items	How often do your family members support each other?
	How often do your family members care about what happens to each other?
	How often can your family members turn to each other for support in times of crisis?
Response values	1 = Almost never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Almost always

Parent-adolescent communication

2 items	How often do the following things happen?
	You talk with your parents about your plans for the future.
	You talk to your parents about how things are going with your friends.

Response values	1 = Almost never, 2 = Less than once a month, 3 = 1-3 times a month, 4 = About once a week, 5 = A few times a week, 6 = Almost every day

Positive identification with parent

4 items	How much do you want to be like the kind of person your parent is when you are an adult?
	How often do you and your parent do things together that you enjoy?
	How much do you respect your (parent)?
	How close do you feel to your parent?
Response values	1 = Not at all, 2 = Just a little, 3 = Quite a bit, 4 = A lot

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Peer Characteristics

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Peer communication

4 items	How often do the following things happen?
	You and your friends talk about how things are going in your life.
	You talk to your friends about how things are going with your parents.
	You talk with your friends about your plans for the future.
	You talk with your friends about problems you are having in school.
Response values	1 = Almost never, 2 = Less than once a month, 3 = 1-3 times a month, 4 = About once a week, 5 = A few times a week, 6 = Almost every day

Peer support

3 items	When you have a social/personal problem at school, how often can you depend on friends to help you out?
	When you have a social/personal problem at school, how often can you depend on other students to help you out?
	When you're having trouble on schoolwork, how often do you go to your friends for help?
Response values	1 = Almost never, 2 = Not too often, 3 = About half the time, 4 = Fairly often, 5 = Almost always

Positive peers

4 items	How many of the friends you spend most of your time with…
	Plan to go to college?
	Like to discuss schoolwork/intellectual things with you?
	Think it is important to work hard on schoolwork?
	Do well in school?
Response values	1 = None of them, 2 = A few of them, 3 = About half of them, 4 = Most of them, 5 = All of them

Negative peers

4 items	How many of the friends you spend most of your time with…
	Are in youth or street gangs?
	Cheat on school tests?
	Have stolen something worth more than $50?
	Put pressure on you to use drugs?
Response values	1 = None of them, 2 = A few of them, 3 = About half of them, 4 = Most of them, 5 = All of them

Peer drug norms

2 items	How cool or uncool would your friends think you were if you…
	Drank beer, wine, or liquor?
	Used pot, marijuana, or other illegal drugs?

Response values	1 = Very uncool, 2 = Somewhat uncool, 3 = Neither cool nor uncool, 4 = Somewhat cool, 5 = Very cool

Note. *Item reversed.

TABLE 2

Scale Characteristics: Mean, SD, Sample Size and Alpha

Psychological Well-Being					
Scale Name	Wave	Mean	SD	N	Alpha
Self-Esteem	1	3.60	.95	1322	.80
	3	3.88	.90	941	.73
	4	3.82	.90	938	.75
	5	3.65	1.00	754	.77
Resiliency	1	3.60	.80	1318	.74
	3	3.83	.64	941	.68
	4	3.96	.66	912	.73
	5	3.84	.73	755	.72
Anger	1	2.24	.93	1322	.75
	3	2.34	1.08	941	.87
	4	2.17	1.02	868	.87
	5	1.93	.96	754	.87
Depressive Affect	1	Scale Doesn't Exist			
	3	1.29	.40	934	.80
	4	1.54	.28	885	.77
	5	1.29	.39	681	.82
Eating Disorders	1	Scale Doesn't Exist			
	3	1.96	1.01	921	.87
	4	1.87	.96	891	.89
	5	1.85	.96	764	.86
Expected Negative Life Chances	1	1.38	.71	1270	.71
	3	1.52	.58	930	.77
	4	1.62	.80	896	.67
	5	Scale Doesn't Exist			

R/E Identity and Discrimination					
Scale Name	**Wave**	**Mean**	**SD**	**N**	**Alpha**
R/E Importance	1	Scale Doesn't Exist			
	3	3.54	.54	615	.63
	4	3.40	.55	534	.75
	5	3.31	.67	454	.75
R/E Behavioral Involvement	1	Scale Doesn't Exist			
	3	2.90	.86	615	.67
	4	2.92	.90	506	.71
	5	2.62	.92	403	.75
Same R/E Friends	1	3.78	.91	1323	one item
	3	4.07	.87	937	one item
	4	4.06	.89	818	one item
	5	4.04	.89	684	one item
Cross R/E Friends	1	2.25	.83	1323	one item
	3	2.03	.85	938	one item
	4	1.92	.82	816	one item
	5	1.84	.80	684	one item
Expected R/E Discrimination	1	Scale Doesn't Exist			
	3	1.72	.84	941	.74
	4	1.81	.85	944	.67
	5	1.78	.90	742	.80
R/E John Henryism	1	Scale Doesn't Exist			
	3	2.18	.93	934	.83
	4	2.10	.87	812	.87
	5	2.44	.98	740	.92
Parents' Worries about R/E Discrimination	1	Scale Doesn't Exist			
	3	1.97	1.08	937	.81
	4	1.83	.95	894	.78
	5	1.67	.94	671	.85

Academic Functioning					
Scale Name	**Wave**	**Mean**	**SD**	**N**	**Alpha**
Grade Point Average (GPA)	1	3.13	.58	1177	--
	3	3.11	.63	922	--
	4	2.90	.73	816	--
	5	Scale Doesn't Exist			
Educational Aspirations	1	7.63	1.56	1323	one item
	3	7.82	1.37	942	one item
	4	6.67	1.48	848	one item
	5	Scale Doesn't Exist			
Educational Expectations	1	6.81	1.17	1318	one item
	3	7.04	1.56	941	one item
	4	5.91	1.62	846	one item
	5	Scale Doesn't Exist			
Occupational Aspirations	1	81.88	21.42	1175	one item
	3	80.92	20.33	881	one item
	4	81.02	19.10	802	one item
	5	80.07	18.22	627	one item
Academic Importance	1	5.51	1.27	1309	.81
	3	5.14	1.29	939	.81
	4	4.90	1.38	820	.79
	5	Scale Doesn't Exist			
Academic Self-Concept	1	5.36	1.07	1305	.78
	3	5.23	1.13	935	.82
	4	5.03	1.10	898	.79
	5	4.82	1.15	693	.78
Positive School Identification	1	3.48	.75	1321	.61
	3	3.30	.81	939	.64
	4	3.41	.80	816	.64
	5	Scale Doesn't Exist			

Problem Behaviors					
Scale Name	Wave	Mean	SD	N	Alpha
School Problems	1	.25	.28	1328	count
	3	.41	.37	1185	count
	4	.44	.41	948	count
	5	Scale Doesn't Exist			
Cigarette Use	1	1.12	.64	1176	one item
	3	1.22	.78	1011	one item
	4	1.59	1.16	928	one item
	5	1.74	1.33	681	one item
Delinquent Behaviors	1	1.61	.60	1194	count
	3	1.72	.70	1016	count
	4	1.42	.53	940	count
	5	1.34	.42	696	count
Alcohol Use	1	.34	.64	1020	one item
	3	.50	.86	988	one item
	4	.74	.94	939	one item
	5	1.39	1.07	691	one item
Marijuana Use	1	.60	.45	755	one item
	3	.18	.68	702	one item
	4	.62	1.20	938	one item
	5	.86	1.36	693	one item

Family Characteristics					
Scale Name	**Wave**	**Mean**	**SD**	**N**	**Alpha**
Intrusive Parenting	1	Scale Doesn't Exist			
	3	2.78	.85	941	.73
	4	2.77	.92	940	.79
	5	2.50	1.09	665	.86
Negative Interactions with Parent	1	1.89	.65	1321	.65
	3	1.77	.61	943	.61
	4	1.70	.60	942	.60
	5	1.79	.71	666	.67
Strict Parenting	1	3.06	1.17	1317	.74
	3	2.90	1.12	942	.80
	4	2.60	1.20	894	.83
	5	Scale Doesn't Exist			
Family Social Support	1	Scale Doesn't Exist			
	3	4.25	.78	942	.77
	4	4.22	.79	894	.81
	5	4.37	.77	693	.83
Parent-Adolescent Communication	1	3.75	1.32	1324	.72
	3	3.57	1.41	943	.68
	4	3.55	1.38	893	.74
	5	3.67	1.44	666	.86
Positive Identification with Parent	1	3.37	.51	1323	.67
	3	3.18	.59	943	.75
	4	3.11	.62	938	.74
	5	3.04	.66	667	.82

Peer Characteristics					
Scale Name	**Wave**	**Mean**	**SD**	**N**	**Alpha**
Peer Communication	1	Scale Doesn't Exist			
	3	3.58	1.37	942	.82
	4	3.94	1.04	863	.85
	5	3.90	1.27	689	.85
Peer Support	1	3.02	.96	1316	.73
	3	2.99	.85	942	.63
	4	3.06	.83	791	.59
	5	Scale Doesn't Exist			
Positive Peers	1	3.47	.76	1323	.68
	3	3.37	.69	939	.69
	4	3.40	.79	820	.79
	5	3.17	.99	682	.80
Negative Peers	1	1.17	.30	1323	.54
	3	1.49	.63	939	.75
	4	1.61	.59	895	.66
	5	Scale Doesn't Exist			
Peer Drug Norms	1	1.41	.78	1320	.63
	3	1.97	1.05	938	.80
	4	2.56	1.05	895	.82
	5	Scale Doesn't Exist			