

Research Brief



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Transitioning to Adulthood:

HOW DO YOUNG ADULTS FARE AND WHAT CHARACTERISTICS ARE ASSOCIATED WITH A LOWER-RISK TRANSITION?

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OVERVIEW

Youth must navigate various developmental tasks as they transition to adulthood (Arnett, 2014). During this period of “emerging adulthood,” young people explore roles and relationships before committing to the ones they will fill as adults.

This brief seeks to identify patterns and transitions during emerging adulthood to obtain a better understanding of the likelihood that young adults will experience a lower-risk transition to adulthood. We analyzed panel data from the National Longitudinal Study of Adolescent Healthⁱ (Add Health, N=12,166), using person-centered analyses, to examine the odds of youth engaging in lower-risk patterns/trajectories, specifically, minimal problems with heavy alcohol use, illicit drug use, criminal behavior, and financial hardship. Lower-risk transitions were defined as avoiding or overcoming problems by adulthood. We found considerable variation among young adults in reaching these milestones.

KEY FINDINGS

- Young adults who are doing well in their late teens/early twenties continue to avoid difficulties in their later twenties and early thirties.
- Young adults who report moderate or multiple problems (heavy alcohol use, illicit drug use, criminal behavior, and financial hardship) in early adulthood tend to report fewer problems with these issues as they transition to adulthood.
- Certain groups of young adults fare better during the period of emerging adulthood, while others fare worse.ⁱⁱ Female and foreign-born young adults are more likely to report minimal problems and less likely to report multiple problems than males and native-born young adults; whereas Caucasians are less likely to report minimal problems and more likely to report multiple problems.

ⁱ Harris K, Halpern C, Whitsel E, et al. The National Longitudinal Study of Adolescent Health: Research Design. 2009

ⁱⁱ Differences by age and family structure emerged. To obtain information about these findings, contact author Kristin Moore.

BACKGROUND

Recent data suggest recent cohorts of young adults are more likely than previous cohorts to delay childbearing, marriage, and financial stability. Shanahan and his colleagues (2005, p. 225) note: “For many decades, scholars held that five transition markers delineated entry into adulthood: completing school, leaving home, beginning one’s career, marrying, and becoming a parent” (Shanahan, 2005).

Given these trends, a paradigm shift on the timing of adulthood and the set of developmental tasks we expect young adults in their twenties to achieve, social scientists are now characterizing the period from ages 18 to 29 as a period of “emerging adulthood.” (Cote, 2008) (Arnett, 2000). In an effort to identify developmental tasks for emerging adulthood, Roisman et al. (2004) found that social competence/friendship, academic achievement, and behavioral conduct (but not work or romantic relationships) at age 20 predicted success in all domains by age 30 (Roisman, et al., 2004). To expand this research, this brief examines the adolescent antecedents of success by age 30, defined as avoiding heavy alcohol use, illicit drug use, criminal behavior and financial hardship.

DATA AND METHODS (IN BRIEF)

This brief uses Add Health data from a cohort of adolescents who were in grades 7 to 12 at Wave I in 1994-1995.ⁱⁱⁱ The sample used for these analyses was comprised of 12,166 emerging adults who had been aged 11 to 19 at Wave I ($M = 15.6$ years, $SD = 1.7$), completed Waves I, III, and IV of the survey,^{iv} were not still attending high school at Wave III, and had no missing data on any of the demographic characteristics examined in analyses.^v Appendix A provides an overview of the sample’s background characteristics.

Because prevalence rates of substance use, alcohol use, and criminal behavior vary significantly by gender, we elected to examine males and females separately using a multiple-group latent class analysis (LCA) methods with covariates, and using multiple-group latent transition analysis (LTA) methods (a longitudinal extension of LCA) with covariates. More information about data, methods, and measures is provided in the “Data and Methods” section on page eight.^{vi}

HYPOTHESES

Based on previous research, we expected that the transition to adulthood would be relatively rocky for young adults who are male, native-born, and belong to a minority racial/ethnic group and less rocky for those who lived with both of their biological parents as adolescents.

FINDINGS

Three patterns of problems associated with a higher-risk transition to adulthood were identified, based on young adults’ reports of severe financial hardships, and engaging in marijuana use, other illicit drug use, heavy alcohol use, and/or criminal behavior – described as “groups” from here forward: (a) a minimal problems group; (b) a moderate problems group; and (c) a multiple problems group. Overall, gender differences in group membership and transition patterns were found. In addition, within each gender, socio-demographic differences between patterns of problems at each wave were found.

ⁱⁱⁱ Harris K, Halpern C, Whitsel E, et al. The National Longitudinal Study of Adolescent Health: Research Design. 2009

^{iv} Participants in 12th grade at Wave I were not interviewed at Wave II, but were re-interviewed at Wave III per the study design.

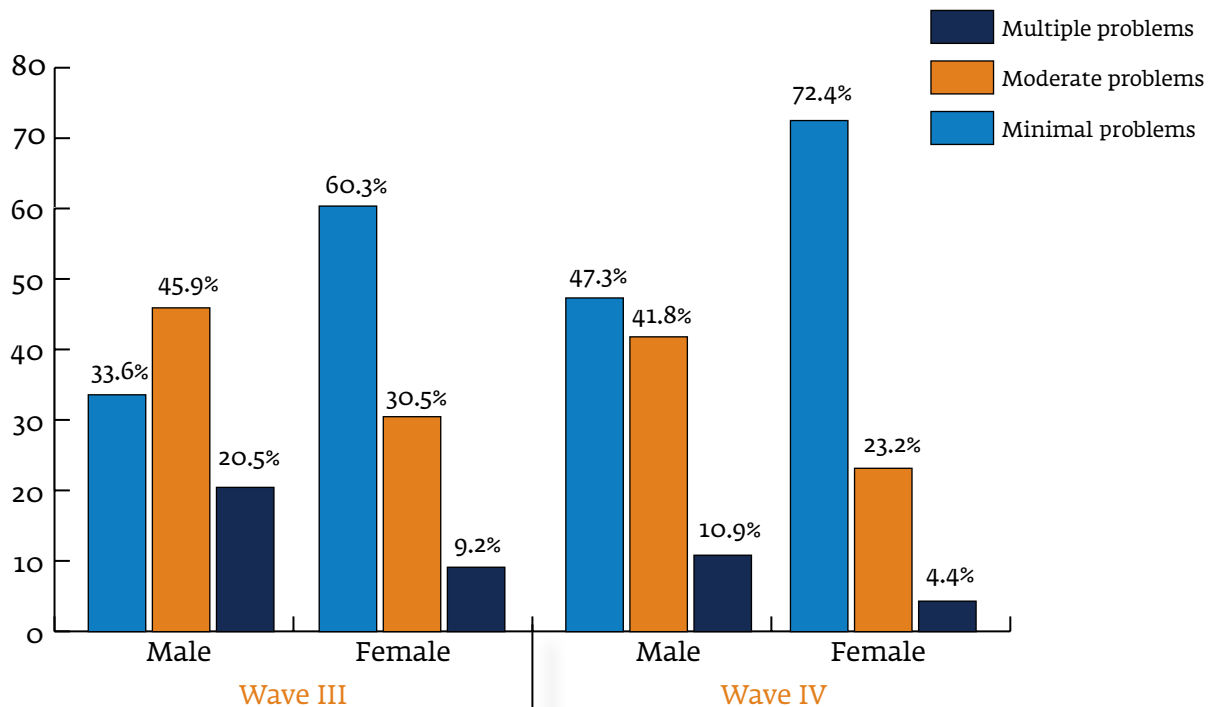
^v Only 11 respondents were excluded because of missing data; five were missing race and six were missing on nativity. Gender, family structure, and age were not missing for any participants.

^{vi} For information about model selection and fit statistics, contact author Kristin Moore.

Group (Latent Class) Membership at Waves III and IV, by Gender

Within each gender, and over and above differences in social and demographic factors, the proportion of the sample belonging to the lower-risk (minimal problems) group increased from Wave III to Wave IV, while the opposite was true for the higher risk (moderate and multiple problems). As hypothesized, compared with males, females represented a greater proportion of the group with minimal problems. By Wave IV, at ages 24-32, almost three-quarters of females (72.4%) and half of males (47.3%) were members of the minimal problems group (see Figure 1).

Figure 1: Likelihood of Latent Class Membership by Gender and Wave (adjusted proportions)



Specifically, females were:

- More likely to be assigned to the minimal problems group than males (60% of females compared with 34% of males at Wave III; and 72% of females compared with 47% of males at Wave IV);
- Less likely than males to be assigned to the moderate problems group (31% of females compared with 46% of males at Wave III; and 23% of females compared with 42% of males at Wave IV); and
- Less likely than males to belong to a multiple problems group (9% of females compared with 21% of males at Wave III; and 4% of females compared with 11% of males at Wave IV).

Socio-demographic Differences Between Groups at Wave III, by Gender

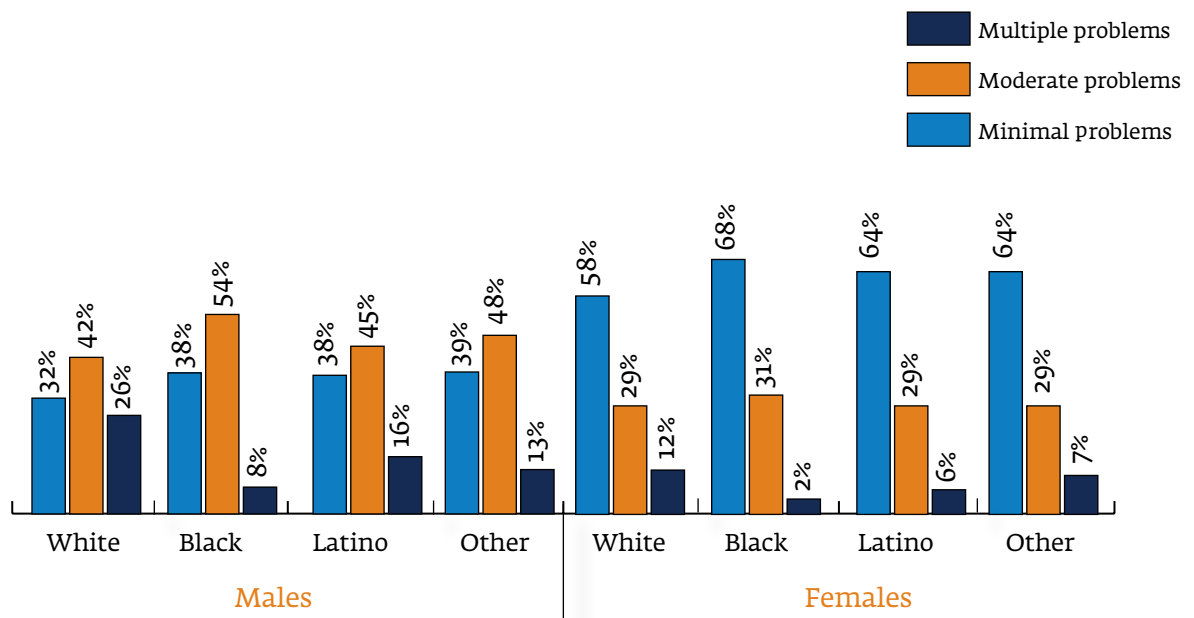
To assess whether the likelihood of group membership is affected by socio-demographic factors, we tested between-group differences for the following socio-demographic characteristics: age, race/ethnicity, nativity status, family structure. In the Appendix, the proportion of youth in each subgroup assigned to each latent class (i.e., minimal problems, moderate problems, or multiple problems) is provided: Appendix B provides Wave III findings and Appendix C provides findings for Wave IV.

Below we discuss differences by race/ethnicity and differences by nativity status, as these differences were found to be significant ($p < .05$) and most noteworthy. Adjusted proportions for each group are presented separately by gender, because of the substantial gender differences in transitions and patterns found. Because similar between-gender patterns were found at Wave IV, only Wave III differences are discussed.

Differences by Race/Ethnicity

Overall, Caucasians were least likely to fall into the minimal problems group and most likely to be assigned to the multiple problems group, compared with other racial/ethnic groups. However, the likelihood of Caucasians belonging to the minimal problems group was substantially higher among females (58%) than among males (32%). These findings are shown in Figure 2.

Figure 2: Likelihood of Will Group Membership (race/ethnicity by gender, adjusted proportions)



Among Males:

- Caucasians were least likely to be in the minimal problems group.
 - 32% of Caucasian males v. 38% of African American males, 38% of Latino males, and 39% of males identifying as another race/ethnicity.
- African American males were most likely to be in the moderate problems group.
 - 54% of African American males v. 42% of Caucasian males, 45% of Latino males, and 48% of males identifying as another race/ethnicity.
- Caucasian males were most likely to be in the multiple problems group.
 - 26% of Caucasian males v. 8% of African Americans, 16% of Latinos, and 13% of those identifying as another race/ethnicity.

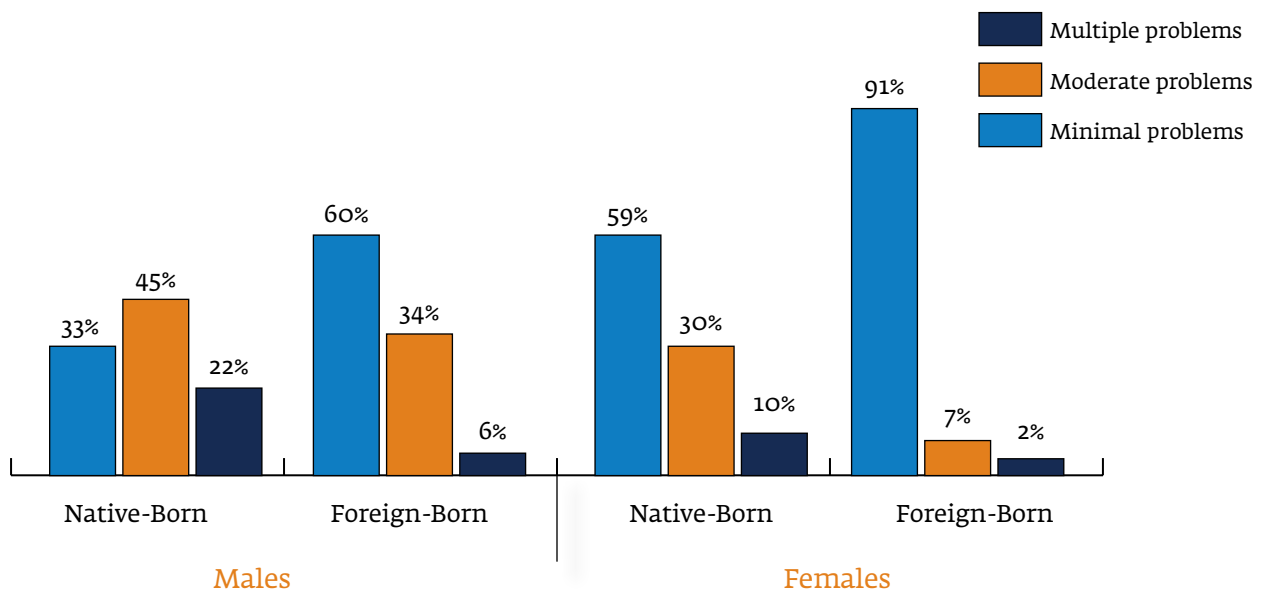
Among Females:

- Caucasian females were least likely to fall into the minimal problems group.
 - 58% of Caucasian females v. 68% of African Americans, 64% of Latinas, and 64% of those identifying as another race/ethnicity.
- Females in each racial ethnic group were equally likely to be in the moderate problems group.
 - Less than a third of females in each race/ethnicity category reported moderate problems at Wave III: 29% of Caucasians, 31% of African Americans, 29% of Latinas, and 29% of those identifying as another race/ethnicity.
- Caucasian females were most likely to be in the multiple problems group.
 - 12% of Caucasian females v. 2% of African American females, 6% of Latina females, and 7% of females identifying as another race/ethnicity.

Differences by Nativity Status

Overall, young adults born outside of the U.S. were most likely to be in the lower-risk (minimal problems) group and least likely to be in the higher-risk (multiple problems) group compared with native-born young adults. This difference is greater for males, suggesting that this factor may be even more protective for males than females.

Figure 3: Likelihood of Wave III Group Membership (nativity status by gender, adjusted proportions)



- Compared to native-born males, foreign-born males were:
 - much more likely to be in the minimal problems group (60% of foreign-born males v. 33% of native-born males);
 - less likely to be in the moderate problems group (34% of foreign-born males v. 45% of native-born males); and
 - much less likely to be in the multiple problems group (6% of foreign-born males v. 22% of native-born males).

- Compared to native-born females, foreign-born females were:
 - much more likely to fall into the minimal problems group (91% of foreign-born females v. 59% of native-born females);
 - much less likely to be in the moderate problems group (7% of foreign-born females v. 30% of native-born females); and
 - less likely to be in the multiple problems group (2% of foreign-born females v. 10% of native-born females).

Transition Patterns over Time

As noted, transitions between groups from Wave III to IV were also explored. Table 1 displays longitudinal changes and stabilities in class memberships from Wave III to Wave IV, by gender, net of socio-demographic differences and group membership at Wave III. The highlighted diagonal shows the probability that young adults remain in the same group at both waves.

Findings are generally encouraging:

- Nearly all members of the minimal problems group at Wave III remained in this group at Wave IV (99% of males and 100% of females).
- A significant proportion of those belonging to the moderate and multiple problems group at Wave III moved to a group with fewer problems by Wave IV:
 - 56% of males and 46% of females in the multiple problems group transitioned to a moderate problems group; and
 - 14% of females and 1% of males transitioned to the minimal problems group).

The proportion of those transitioning from the multiple problems group to the minimal problems group was much higher among females than among males (14% of females compared with only 1% of males). Interestingly, the proportion of those transitioning from the multiple problems group to the moderate problems group was less affected by gender (36% of females compared with 30% of males).

Table 1. Transitions in Group Membership from Wave III to Wave IV by Gender (N=12,166)

Wave IV Class						
Wave III Class	Minimal Problems		Moderate Problems		Multiple Problems	
	Male	Female	Male	Female	Male	Female
Minimal Problems	99%	100%	0%	0%	1%	0%
Moderate Problems	30%	36%	67%	62%	3%	2%
Multiple Problems	1%	14%	54%	46%	45%	40%

DISCUSSION AND IMPLICATIONS

This study found, encouragingly, that youth who begin the early stages of emerging adulthood with minimal problems are not likely to later experience greater difficulty with regard to substance use, criminal behavior, and financial hardship in their later twenties and early thirties. In addition, this study found that a significant proportion of youth experiencing difficulties in their late teens and early twenties resolve these issues as they enter their thirties.

Findings suggest that preventing problem behaviors prior to the age of 18 may result in long-term dividends. In addition, findings related to subgroup differences suggest several implications for health promotion and risk reduction efforts across the country. Gender differences suggest that male-responsive interventions and interventions targeting males during adolescence and young adulthood are needed. Also, Caucasian young adults in their late teens and early twenties who are reporting criminal behavior, substance use, and/or financial hardship might be an important group to target.

Overall, study findings suggest that many young adults ages 18-24 are in a period of flux. We know from scientific research that young adult brains are still developing until around their mid-twenties (Giedd, 2004). And, we also know that young adults are the least likely, among all age groups, to have health insurance (Callahan, 2005) and access health care services (Yu, 2008). These coinciding facts suggest a strong need to strengthen and expand existing evidence-based interventions and develop innovative ways to reach this population.

Acknowledgments

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Data and Methods

The latent transition analyses employed data from Wave III and Wave IV of The National Longitudinal Study of Adolescent Health (Add Health), a nationally representative survey of adolescents designed to measure the health and well-being of young adults. Demographic characteristics were measured at Wave I. We used PROC LCA (Methodology Center, 2013) in SAS to identify the optimal number of classes separately for Waves III and IV, and then used PROC LTA to identify transitions between classes between Waves III and IV. Further, multiple-groups LTA was used to examine differences in class membership and transition probabilities by gender, and we imposed measurement invariance across time and groups so that the meaning of each class would be the same at both time points and across groups. To generate the percentages in Appendices A and B, we ran a multiple-group LTA model with covariates that included race, family structure, age at Wave I, and nativity as covariates. From this model, we generated posterior probability assignment statistics, which identify each respondent's probability of belonging to a particular group at each wave. We then assigned each case to the group it most likely belonged, and examined differences in distributions by the demographic characteristics. This procedure follows recent recommendations from the Methodology Center at Penn State to use inclusive models when using a classify-analyze approach with LCA (Bray, Lanza, and Tan, 2012).

Measures

Serious Delinquency

Seven questions were used to assess serious delinquency at Waves III and IV. These included (a) damaged property that did not belong to you; (b) sold marijuana or other drugs; (c) broke into a house or building to steal something; (d) damaged property that did not belong to you; (e) used or threatened to use a weapon to get something; (f) stole something worth over \$50; (g) stole something worth less than \$50; and (h) took part in a group fight. The variable was coded as "1" if the respondent reported not committing any of the offenses, as "2" if the respondent answered yes to one or two offenses, and as "3" if the respondent answered yes to three or more offenses.

Heavy Alcohol Use

Heavy alcohol use was defined as binge drinking during one or more days in a week. Respondents were asked how many days they consumed five or more drinks consecutively during the past 12 months. The variable was coded as "2" if the respondent answered to drinking five or more drinks consecutively one to two days a week, three to five days a week, or everyday or almost every day; and as "1" if the respondent reported drinking five drinks or more consecutively one to two days in the past 12 months, once a month or less, two to three days a month, or not drinking five drinks or more consecutively.

Marijuana Use

Marijuana use was measured as any reports of marijuana use in the past year. In Wave III, respondents were asked whether or not they use marijuana in the past twelve months. In Wave IV, respondents were asked to indicate how many days in the past twelve months they used marijuana. This item-wording difference did not affect the meaning of the measure, as the variable was coded as "2" if they reported any marijuana use in the last year and a "1" if they did not.

Measures

Illicit Drug Use

Illicit drug use was measured as the use of any illicit drugs (aside from marijuana) in the past year. In Wave III, respondents were asked to identify whether they used cocaine, crystal meth, injection drugs, or any other illegal drugs such as LSD, PCP, ecstasy, mushrooms, inhalants, ice, heroin, steroids, or prescription medicines not prescribed. In Wave IV, respondents were asked to rate the use of their “favorite” illicit drug. This item-wording difference did not affect the meaning of this measure in the current study, since respondents received a “2” if they had used any illicit drugs in the last year and a “1” if they had not.

Financial Hardships

Five items were used to assess the degree of financial problems among young adults in our sample. These items assessed whether, in the past 12 months, there was a time when the respondent or his/her household was: (a) without telephone services; (b) did not pay the full amount of rent or mortgage because of lack of money; (c) was evicted from his/her/their urbanicity for not paying the rent or mortgage; (d) did not pay the full amount of a gas, electricity, or oil bills because of lack of money; or (e) service was turned off by the gas/electric/oil company because payments were not made. The variable was coded as “2” if the respondent experienced any of the financial problems, and as “1” if the respondent experienced none of these problems.

Appendix A: Descriptive Statistics of Analytic Sample – Overall and by Gender

Variable	Total sample		Males		Females	
	Frequency	Weighted Percent	Frequency	Weighted Percent	Frequency	Weighted Percent
Total	12,166	100%	5538	51%	6628	49%
Age at Wave I						
Aged 11-14	3509	35%	1473	33%	2036	36%
Aged 15-19	8657	65%	4065	67%	4592	64%
Race/Ethnicity						
Caucasian	6762	68%	3103	67%	3659	68%
African American	2530	15%	1033	15%	1497	17%
Latino	1886	12%	901	12%	985	11%
Another Race/Ethnicity	988	5%	501	6%	487	4%
Nativity						
Native Born	11390	96%	5152	95%	6238	96%
Foreign Born	776	4%	386	5%	390	4%
Family Structure						
Two-Biological Parent Home	6650	57%	3116	57%	3534	57%
Single Parent Home (Mother or Father)	2776	22%	1211	22%	1565	22%
Other Family Structure	2740	21%	1211	21%	1529	21%

Appendix B. Group Differences in Latent Class Membership at Wave III by Gender*

Sample Size (N)= 12,166	Minimal Problems at Wave III	Moderate Problems at Wave III	Multiple Problems at Wave III
Males			
Age at Wave I ($X^2 (2) = 76.3, p < .001$)			
Aged 11-14	26.8%	50.0%	23.3%
Aged 15-19	39.3%	43.1%	17.7%
Race/Ethnicity ($X^2 (6) = 202.5, p < .001$)			
Caucasian	32.7%	42.0%	25.3%
Black	38.9%	54.1%	7.0%
Latino	40.3%	44.4%	15.3%
Another Race/Ethnicity	42.1%	44.3%	13.6%
Nativity ($X^2 (2) = 134.4, p < .001$)			
Native Born	33.9%	46.0%	20.1%
Foreign Born	62.7%	30.3%	7.0%
Family Structure at Wave I ($X^2 (4) = 18.6, p < .001$)			
Two Biological Parents	38.2%	43.0%	18.7%
Single Parent Home	33.5%	47.9%	18.6%
Other Family Structure	32.4%	46.7%	20.9%
Females			
Age at Wave I ($X^2 (2) = 162.8, p < .001$)			
Aged 11-14	52.4%	34.7%	13.0%
Aged 15-19	67.6%	26.0%	6.4%
Race/Ethnicity ($X^2 (6) = 184.7, p < .001$)			
Caucasian	58.7%	29.2%	12.0%
Black	68.1%	30.5%	1.3%
Latino	68.2%	25.8%	6.0%
Another Race/Ethnicity	68.0%	24.4%	7.6%
Nativity ($X^2 (2) = 130.2, p < .001$)			
Native Born	61.3%	30.0%	8.7%
Foreign Born	90.0%	7.2%	2.8%
Family Structure at Wave I ($X^2 (4) = 60.9, p < .001$)			
Two Biological Parents	66.3%	24.7%	8.9%
Single Parent Home	60.6%	32.1%	7.2%
Other Family Structure	57.5%	34.2%	8.3%

*Note: The sum of the percentages in each row add up to 100%.

Appendix C. Group Differences in Latent Class Membership at Wave IV by Gender*

Sample Size (N)= 12,166	Minimal Problems at Wave IV	Moderate Problems at Wave IV	Multiple Problems at Wave IV
Males			
Age at Wave I ($X^2(2) = 64.3, p < .001$)			
Aged 11-14	43.0%	44.9%	12.1%
Aged 15-19	55.0%	36.5%	8.5%
Race/Ethnicity ($X^2(6) = 68.6, p < .001$)			
Caucasian	48.5%	39.8%	11.7%
Black	54.5%	40.7%	4.8%
Latino	54.9%	36.9%	8.2%
Another Race/Ethnicity	60.5%	32.1%	7.4%
Nativity ($X^2(2) = 93.9, p < .001$)			
Native Born	50.0%	40.1%	9.9%
Foreign Born	75.4%	21.2%	3.4%
Family Structure at Wave I ($X^2(4) = 31.5, p < .001$)			
Two Biological Parents	55.0%	36.2%	8.8%
Single Parent Home	49.1%	40.9%	10.0%
Other Family Structure	46.2%	43.3%	10.6%
Females			
Age at Wave I ($X^2(2) = 76.7, p < .001$)			
Aged 11-14	72.0%	23.1%	4.9%
Aged 15-19	81.4%	16.0%	2.7%
Race/Ethnicity ($X^2(6) = 65.6, p < .001$)			
Caucasian	75.7%	20.0%	4.6%
Black	81.9%	17.2%	1.0%
Latino	82.1%	14.9%	2.9%
Another Race/Ethnicity	81.3%	16.4%	2.3%
Nativity ($X^2(2) = 56.1, p < .001$)			
Native Born	77.5%	19.0%	3.5%
Foreign Born	93.6%	5.4%	1.0%
Family Structure at Wave I ($X^2(4) = 53.3, p < .001$)			
Two Biological Parents	81.6%	15.2%	3.1%
Single Parent Home	76.4%	19.8%	3.8%
Other Family Structure	73.3%	23.3%	3.4%

*Note: The sum of the percentages in each row add up to 100%.

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