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Financial Stress and Drinking During the Transition to Adulthood: The Role of Parental Financial Support

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Abstract

We investigated the concurrent and prospective associations between financial stress and drinking during the transition to adulthood in the United States, drawing from two distinct stress and coping perspectives as competing explanations for the direction of associations: the Transaction Model of Stress (TMS) and the Conservation of Resources (CoR) model. Because many emerging adults rely on continuing financial support from parents, we examined the role of parental support on these associations. We tested these associations using longitudinal structural equation modeling (SEM) with data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) (N=9,026) collected at two timepoints: early emerging adulthood (ages 18–26) and five years later. Consistent with CoR, financial stress reduced concurrent drinking. Furthermore, parental financial support reduced adult children's financial stress but increased drinking in early emerging adulthood. We discuss the findings in regards to facilitating the transition to adulthood.

In the United States, emerging adulthood is conceptualized as a period during which accepting responsibility for oneself, making independent decisions, and achieving financial independence from parents hold distinct value (Tanner, Arnett, & Leis, 2008). Many emerging adults are finding it difficult to achieve these goals. Since the start of the Great Recession (December 2007 to July 2012), the percentage of unemployed young adults (ages 25–29) increased 58%; 70% for those aged 20–24 (U.S. Department of Labor, 2016). Although unemployment has steadily declined since 2010 (U.S. Department of Labor, 2016), younger Americans (18–34) show more signs of financial stress compared to older (FINRA Investor Education Foundation, 2016).

In 2010, the estimated cost of alcohol abuse to the American public exceeded \$249 billion (Sacks, Gonzales, Bouchery, Tomedi & Brewer, 2015), up 13% over 2005 (CASAColumbia, 2009). Among adults, financial stress has been shown to increase the prevalence of alcohol use and problems, including binge drinking, driving under the influence, and alcohol dependence (Davalos, Fang, & French, 2012; Hsieh, Kahn, Cheng, & Curran, 1988). Yet, the empirical evidence on the direction of the association between financial stress and drinking in emerging adulthood is limited and the results are mixed: associated with more drinking (Adams & Moore, 2007; Nelson, Lust, Story, & Ehlinger, 2008) as well as less drinking (Martin et al., 2009). These studies, however, are drawn from convenience samples (i.e., college students, small clinical samples). Given high rates of drinking, the value of financial independence in emerging adulthood, and an uncertain economic climate, financial stress may be an important risk context for a successful adult transition. Thus, the present study relies on data from the National Longitudinal Study of Adolescent Health (Add Health) collected at two time-points over a five-year period during emerging adulthood to examine these associations.

Economic uncertainty has many emerging adults relying on their parents for both financial and emotional support (Fingerman, Kim, Davis, Furstenberg, Birditt & Zarit, 2015; Schoeni & Ross 2005). Given this extended period of dependence, we also consider the role of financial support from parents in understanding the association between emerging adults' financial stress and drinking (see Cleveland & Wiebe, 2003 for a review).

The goal of the present study is to examine the concurrent and prospective associations between financial stress and drinking during the transition to adulthood and the potential role of parental financial support during the transition. We draw from two distinct perspectives in the stress and coping literature to frame our examination: the Transactional Model of Stress (Lazarus, 1999; Lazarus & Folkman, 1984) and the Conservation of Resources (CoR; Hobfoll, 1989; 2001) model as competing explanations for the direction of associations between financial stress and drinking (see Figure 1). We use structural equation modeling (SEM) to test the associations analyzing longitudinal data.

Theoretical Framework

The Transactional Model of Stress (TMS; Lazarus, 1999; Lazarus & Folkman, 1984) defines stress as a relation between the individual and the environment. Specifically, stress results from a person's appraisal of a situation as taxing (primary appraisal) and exceeding one's resources to manage the situation (secondary appraisal). From this perspective, coping refers to responses taken by the individual to quell the negative emotions in response to a situation (emotion-focused coping) and/or efforts to manage the situation (problem-focused coping). Within a TMS perspective, drinking is conceptualized as a coping response to financial stress and would be associated with more drinking.

An alternative conceptualization of the stress and coping process, the Conservation of Resources (CoR; Hobfoll, 1989; 2001) model, adopts a more proactive approach to coping with stress. From a CoR perspective, individual coping is a future-oriented approach to manage individual resources to achieve future goals. Under conditions of stress, individuals

strive to conserve limited resources to prevent further resource loss (e.g., cutting costs or doing without). Because financial stability (e.g., adequate income, savings) is an important resource in the U.S. (Hobfoll, 1998; 2001), a CoR perspective would suggest that when financial demands strain existing resources (i.e., financial stress), people will strive to conserve resources. From this perspective financial stress would be associated with less drinking due to the cost involved.

Whereas TMS emphasizes appraisal of a situation as antecedent to coping, CoR emphasizes resources as a direct precursor of current coping to improve future outcomes (Schwarzer, 2001). These perspectives provide competing explanations for the direction of the association between financial stress and drinking. By testing both perspectives, we answer the following question: Do emerging adults drink more to cope with financial stress or drink less to conserve resources?

Financial Stress and Emerging Adult Drinking

Financial stress encompasses both objective criteria (e.g., debt) and subjective criteria (e.g., perceived financial demands). The extant literature provides empirical support for a positive association between financial stress and drinking among emerging adults. In a national study of alcohol use of college students, Adams and Moore (2007) found that students ($N=45,213$) with higher debt were more likely to be involved in problematic drinking (e.g., driving under the influence). Similarly, Nelson et al. (2008) found that among college students ($N=3,206$) financial stress from credit card debt was associated with greater incidence of problem drinking. In a study of high school students ($N=610$) in Northern Ireland, McKay and Cole (2011) found that a combination of higher financial self-pressure but lower peer pressure and school performance were associated with more problematic drinking. Although the culture of underage drinking in Northern Ireland differs from that in the U.S., this study suggests that the association between stress and drinking may be complex.

There is evidence to suggest that drinking during adolescence establishes a pattern of drinking in response to uncomfortable situations in emerging adulthood (Buchmann et al., 2010) and thus, current financial stress may predict later drinking. Overall, there is substantial empirical support for the TMS (Lazarus, 1998; Lazarus & Folkman, 1984), and it would seem reasonable that more financial stress is associated with more concurrent and prospective drinking.

It is possible that as emerging adults mature, both their drinking and their coping strategies may change. Longitudinal studies demonstrate that patterns of drinking, notably binge drinking, change (Chen & Kandel, 1995; Johnston, O'Malley, Bachman, & Schulenberg, 2013), accelerating in early emerging adulthood (ages 18–22) and then decelerating. At least one study found support for a CoR interpretation on the association (Hobfoll, 1989; 2001). In a random sample of over 3,000 college students, those with the lowest levels of average monthly spending money also reported the lowest levels of drinking and getting drunk (Martin et al., 2009). To our knowledge, there are no empirical studies that consider the association between financial stress and drinking over time. In the present study, we explicitly test an alternative CoR interpretation of the concurrent and prospective

associations and hypothesize that higher financial stress will be associated with lower drinking.

Although we are aware of no studies that directly test the prospective association between drinking in early emerging adulthood and later financial stress, there is evidence implicating adolescent drinking as a contributor to later relationship difficulties and work problems (Rothman, DeJong, Palfai, & Saitz, 2008; Griffin, Bang, & Botvin, 2010). In the present study we explicitly test for these prospective effects.

Parental Financial Support to Emerging Adults

Material assistance to emerging adults is common. In fact, nearly one-third of emerging adults (ages 18–34) surveyed reported receiving money from family members to make ends meet (FINRA IES, 2016). In an often cited study using 1988 data from the Panel Study of Income Dynamics, Schoeni and Ross (2005) found that parents provided approximately \$38,000 in material assistance to their grown children during the transition to adulthood (ages 18–34). Fingerman, Miller, Birditt and Zarit (2009) found that parents frequently provided both emotional and tangible support to their adult children (ages 18–34) and there is evidence that intergenerational financial transfers occur among all social classes (Fingerman et al., 2015).

Parental support may not always be helpful. For instance, using the current dataset, Johnston (2013) found that parents' financial support to emerging adult offspring was associated with higher parent-adult child relationships but also increased depressive symptoms and diminished self-esteem, particularly for those who had left school or worked full time. Other researchers found that college students in the U.S. and Germany viewed parental financial support favorably, while Asian students (i.e., in Hong Kong and Korea) viewed this support unfavorably (Fingerman, et al., 2016). In a national study of emerging adults in France (N=4,216, ages 25–49), Scodellaro, Khlal, and Jusot (2012) found that participants who had received large sums of money from parents over a one-year period were much more likely to report very good health compared to participants who received little or no financial support.

The few empirical studies that specifically examined the associations between parental financial support and emerging adult drinking provide mixed evidence. In one study, tangible support from parents reduced drinking for emerging adults experiencing economic problems (e.g., Peirce, Frone, Russell, & Cooper, 1996), whereas data from a longitudinal study (Bhatt, 2011) showed that as youth drinking increased over time, parental financial support decreased. Because a recent study using the current longitudinal dataset found that financial assistance from parents increased drinking among emerging adults both concurrently and five years later (Author, 2013), we expected that parents' financial support would be associated with increased concurrent and prospective drinking.

Present Study and Hypotheses

Drawing from two stress perspectives (see Figure 1) as competing explanations for the direction of the association between financial stress and drinking during the transition to emerging adulthood, we test the following hypotheses:

Hypothesis 1

On the basis of the TMS (Lazarus, 1991; Lazarus & Folkman, 1984) and previous empirical support (e.g., Adams & Moore, 2007; Nelson et al., 2008; McKay & Cole, 2011), higher financial stress will be concurrently associated with higher drinking in early adulthood (ages 18–26) (H1a) and higher financial stress in early adulthood will be prospectively associated with higher drinking five years later (H1b).

Alternate Hypothesis 1:

On the basis of CoR (Hobfoll, 1989; 2001) and some empirical support (Martin et al., 2009), higher financial stress will be concurrently associated with lower drinking in early adulthood (ages 18–16) and five years later (Alt. H1a) and higher financial stress in early adulthood will be prospectively associated with lower drinking five years later (Alt H1b).

Given empirical support that adolescent drinking contributes to emerging adult problems in relationship and employment domains (Buchman et al., 2010), we hypothesized that:

Hypothesis2:

Higher drinking in early emerging adulthood will be associated with higher financial stress five years later (H2).

On the basis of empirical evidence of both positive (e.g., Scodellaro et al., 2012) and negative outcomes for emerging adults receiving parental financial support (Author, 2013), we hypothesized that:

Hypothesis 3.

Higher parental financial support will be concurrently and prospectively associated with lower financial stress among emerging adults (H3a) but higher concurrent and prospective drinking (H3b).

Method

Participants

Data come from the National Longitudinal Study of Adolescent to Adult Health (Add Health). Started in 1994–95, Add Health's sampling frame included all high schools in the U.S. and their largest feeder schools, resulting in a sample of adolescents in grades 7–12 in schools that represent U.S. schools in regard to region of country, degree of urbanization, school type, race, and school size. To date, Add Health is the largest, most comprehensive longitudinal survey of adolescents that have been followed into early adulthood. Following initial data collection of high school adolescents (ages 11–18) in 1994–95, three subsequent waves of data were collected in 1996 (ages 12–20), 2001–02 (ages 18–26), and 2007–08 (ages 24–32). Given our focus on emerging adults we restricted our analyses to data from early emerging adulthood (W3) and five years later (W4).

The total analytic sample for this study included 9,026 emerging adults who participated at both W3 and W4, had valid sample weights (for detailed information about the sample

design and weight calculations, see Chantala 2006), and were between the ages of 13 and 18 at W1. More women ($n = 4,934$, 54.66%) than men ($n = 4,092$, 45.34%) were retained for analysis. On average, participants in the study were of legal age to obtain and consume alcohol ($M = 21.68$, $SD = 1.52$) at W3. The sample consisted of primarily White participants ($n = 5,082$, 56.32%) with 1,839 African Americans (20.38%), 1,380 Hispanics (15.33%), 570 Asian and Pacific Islander (6.32%), and 71 Native American (0.79%) participants.

Measures

Drinking.—We created a latent construct of drinking that included three items based on recommendations by the National Institute on Alcohol Abuse and Alcoholism (NIAAA; Dawson, 2003; Fish, Pollitt, Schulenberg, & Russell, 2017): (1) During the past 12 months, on how many days did you drink alcohol? (days drank) (2) Think of all the times you have had a drink during the past 12 months. How many drinks did you usually have each time? (number of drinks) (3) During the past 12 months, on how many days did you drink five or more drinks in a row? (binge drinking). In W4, items were identical except the language on binge drinking had been changed such that women were asked to report on four or more drinks and men were asked to report on five or more drinks, in line with international standards on binge drinking (NIAAA, 2004). Responses to questions referring to frequency of and binge drinking were rescaled to the following: 0 (*none*), 1 (*1 or 2 days*), 2 (*once a month or less*), 3 (*2 or 3 days a month*), 4 (*1 or 2 days a week*), 5 (*3 to 5 days a week*), and 6 (*every day or almost every day*). For quantity, respondents could report 0–18 drinks for each drinking episode in the past 12 months; responses above 6 drinks were truncated to 6 drinks.

Financial Stress.—Three indicators of financial stress—financial strain, financial access, and income—were created using multiple items from W3 and W4. For W3 and W4, indicators of *financial strain* included five yes/no items that indicated difficulties paying bills in the past 12 months (e.g., “Was there a time when you didn’t pay the full amount of the rent or mortgage because you didn’t have enough money?”). Appropriate items were reverse coded and a mean score created; higher scores indicated higher stress.

For W3, *financial access*, an indicator of economic advantage (Johnson & Sherraden, 2007) was created with yes/no responses to six variables demonstrating access to financial services and acquisition of assets (e.g., “Do you have a checking account?”; “Do you own/have: a car, truck or motorcycle?”). Responses for these items were also mean scored. At W4, this indicator was replaced by a financial ladder as an indicator of economic advantage (Anderson, 2017), as access variables were not available. Participants were shown a picture of a ladder and told: “think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder?” Participants could choose a number from 1–10.

To measure *income* in both time points, participants were asked: “Including all the income sources you reported above, what was your total personal income before taxes?” which was reverse coded to 1 (*\$75,000 and above*), 2 (*\$50,000–74,999*), 3 (*\$40,000–49,999*), 4

(\$30,000–39,999), 5 (\$20,000–29,999), 6 (\$15,000–19,999), 7 (\$10,000–14,999), 8 (\$0–9,999).

Parent Financial Support.—Two items were used to assess parental financial support at W3: financial support from (1) mothers and (2) fathers. An initial yes/no item asked, “Has (your mother/your father) given you any money or paid for anything significant for you during the past 12 months? Don’t include regular birthday or holiday gifts.” Participants were then asked to estimate the amount of that financial support received from each parent and these two items were used as indicators of a latent parent financial support variable. Scaling for this item ranged from 1 (*less than \$200*) to 4 (*\$1,000 or more*).

Controls.—We controlled for developmentally appropriate factors at each wave that have been shown to be related to drinking or financial strain. We controlled for race/ethnicity at W3 only because it is a time-invariant predictor (Little, 2013). At W3, we regressed employment (10 hours or more a week vs. not), college status (currently attending a two- or four-year college vs. not currently attending), and age on drinking, parental financial support, and financial stress. In addition, we regressed on parental financial support and financial stress a measure of parental economic strain, a parent-report measure of BLANK summed across four items at W1: whether parents had enough money to pay bills (reverse coded) and whether parents or someone else in the household received (1) Aid to Families with Dependent Children, (2) food stamps, and (3) a housing subsidy or public housing. At W4 we controlled for employment, marital status (currently married vs. not married), and parental status (currently living with child in the home vs. no child in the home) on drinking and financial stress. We show descriptive statistics of indicators and covariates in Table 1.

Plan of Analysis

To test for associations among the variables of interest we used longitudinal structural equation modeling (SEM) in Mplus 7.2 with maximum likelihood estimation with robust standard errors to adjust for non-normality in some indicators rather than transformation due to the cross-lagged nature of the study design (Muthen & Muthen, 2012). We applied the longitudinal sampling weight information provided by Add Health with the TYPE = COMPLEX commands in Mplus; the application of this weighting procedure allows for the generalization of results to the U.S. population by adjusting the model estimated standard errors for the probability of selection into Add Health and longitudinal attrition (Chantala 2006). In our regression models we used multiple imputation with 50 imputed datasets to deal with missingness on covariates.

Our analysis proceeded in two stages: (1) evaluation of measurement models of parental financial support at W3 and drinking and financial stress at W3 and W4 using CFA; and (2) testing correlations and links among parental financial support, drinking, and financial stress across time with longitudinal SEM.

Results

Confirmatory Factor Analysis

We conducted a confirmatory factor analysis in which all latent constructs at both time points were simultaneously modeled to obtain initial covariances and correlations between parental financial support, financial stress, and drinking. In this model, residuals of indicators were correlated across time (e.g., the residuals of W3 and W4 financial strain were correlated). Table 2 provides factor loadings, variances and covariances from confirmatory factor analysis (CFA) of the model latent variables. Model fit of the CFA was good, χ^2 (63, $N = 9,026$) = 606.46, $p < .001$; RMSEA = .03 ($SD = 0.00$), CFI = .98; TLI = .970. Most indicators loaded on the latent variables at acceptable to good values above .6, except for some indicators on financial stress. In particular, factor loadings for W3 strain and W3 income were low at just above 0.2. Though low, these indicators had strong theoretical justifications for their inclusion in the model and factor loadings were statistically significant at $p < .001$. Thus, we continued regression analyses with these latent factors.

Structural Model

Figure 2 illustrates the tested model for the sample. Overall model fit was good, $X^2 = 2578.17$, $df = 188$, $p < .001$; RMSEA = .04 ($SD = 0.00$), CFI = .93, TLI = .91. Our results (shown in Table 3) on the hypothesized concurrent association between financial stress and drinking showed full support for a COR (Hobfoll, 1989; 2001) interpretation such that higher financial stress was associated with lower drinking concurrently both in early emerging adulthood and later emerging adulthood (Alt.H1a; values in the model represent regression betas) and no support for a transactional stress interpretation (H1a). Also consistent with a COR (Hobfoll, 1989; 2001) interpretation (Alt. H1b), higher financial stress in early emerging adulthood was associated with drinking five years later, providing no support for a transactional stress interpretation (H1b). As expected, higher parental financial support was associated with lower financial stress concurrently and prospectively (H3). Further, we found that higher parental financial support was associated with higher drinking concurrently but not prospectively (H3b), providing partial support for hypothesis 3. Lastly, the higher drinking in early emerging adulthood was associated with lower financial stress five years later, opposite the hypothesized direction (H2).

Discussion

In this study, we tested whether appraisal-based coping (TMS; Lazarus, 1999; Lazarus & Folkman, 1984) or resource-based coping (CoR; Hobfoll, 1989; 2001) better explained the dynamic associations between financial stress and drinking during emerging adulthood. Our findings provide support for a resource-based explanation of the associations. We also found that financial support from parents reduced emerging adults' financial stress, but was associated with increased drinking in early emerging adulthood. We discuss the findings and the implications in the context of the current literature.

Financial Stress and Drinking

Consistent with CoR (Hobfoll, 1989; 2001), we found financial stress to be associated with less concurrent drinking, both in early emerging adulthood and five years later. We interpret these findings in a lifespan developmental context, in which different developmental tasks may become primary at different periods (Havighurst, 1972). A key marker of adult status in the U.S. is the ability to be financially self-sufficient, defined as the ability to meet one's financial obligations without relying upon financial support from others (FINRA IES, 2016). Thus, we speculate that, as emerging adults mature and assume greater personal and financial independence from parents, they become increasingly aware of the responsibilities that accompany that independence and cope with financial stress by drinking less to conserve resources. The negative prospective association between W3 financial stress and W4 drinking is also consistent with CoR (Hobfoll, 1989; 2001). However, an alternative explanation for the prospective association may be that the level of drinking declines irrespective of financial stress: as emerging adults take on more adult social roles (career, families) they have less time or opportunities to socialize (Rankin & Maggs, 2006).

Research on financial stress and drinking has generally found a positive association between the two (Johnson & Pandina, 2010), which would be more consistent with TMS (Lazarus, 1999; Lazarus & Folkman, 1984). We find no support for this interpretation. If indeed these results reflect a developmental maturity, then it would make sense that drinking as a means of coping with stress may be more common among adolescents (Armeli, Conner, Cullum, & Tennen, 2010) who have fewer options available to them.

The Role of Parental Financial Support

As emerging adults rely on parents for financial support (Fingerman et al., 2015), the kind of support that parents provide (e.g., continued health insurance coverage, cash) would seem to be an important influence on how emerging adults view that support – and how they use it. Although there is clear indication that financial stress is linked to substance use and related problems (Davalos et al., 2012), to date little research has examined how family financial support and personal financial stress together might influence drinking. Our findings provide new insight on the role that parents play in the transition to adulthood. In our sample, parental financial support reduced adult children's financial stress, but was associated with more drinking, at least among early emerging adults. Thus, parents' financial support may alleviate emerging adults' financial stress, but may make drinking more affordable.

Our findings combined with a previous Add Health study of positive associations between parents' support and stronger parent-emerging adult relationships, as well as more depression and lower self-esteem (Johnston, 2013), suggest that financial support from parents may prolong the transition to self-sufficiency for some emerging adults, with associated compromised emotional and behavioral outcomes.

Drinking as Antecedent to Financial Stress

We examined whether or not higher drinking in early emerging adulthood was associated with more financial stress five years later and found an unexpected negative prospective association. Whereas adolescent drinking contributes to relationship and employment

difficulties in emerging adulthood (Rothman et al., 2008; Griffin et al., 2010), it seems counterintuitive that drinking in early emerging adulthood is associated with less financial stress five years later. We speculate that what we observed is not a prospective association between drinking and financial stress, but perhaps the underlying access to opportunities and resources. There is typically more independence and freedom to socialize in early emerging adulthood, compared to adolescence. It is possible that access to resources affords comparatively advantaged emerging adults more opportunities to engage in more drinking, and over time, that comparative advantage manifests as access to more financial opportunities (e.g., higher income careers, fewer student loans). In one study of college students, those with the lowest levels of average monthly spending money also reported the lowest levels of drinking and getting drunk (Martin et al. 2009), suggesting that although opportunities for drinking may be readily available (i.e., college campus events), resources are still needed to participate.

Limitations, Strengths, and Future Directions

Although a strength of the Add Health data is access to longitudinal analyses of a large national U.S. sample, it also limits generalizing or interpreting the findings outside the U.S. (i.e., emerging adults must be 21 to legally consume alcohol), and to cohorts beyond those emerging adults in the early 2000s. The large sample provides power to detect small effects, and indeed the size of the effects of the associations between financial stress and drinking are small. However, the implications of even small effects for population-level health and health behaviors such as drinking warrant attention (Keyes & Galea, 2016; Rose, 2001). In addition, the measures are not standard to the fields of study examined in this research. There are subtle differences between time points in the measure of financial stress, although the stability in the measures between waves 3 and 4 gives us confidence that we are measuring the underlying construct of financial stress. Our measure of parental financial assistance is not as robust as would be ideal. As noted by Johnston (2013), due to the truncation of responses at \$1,000 or more, significant variability in the range of financial assistance is likely obscured and thus we are unable to distinguish how greater amounts of financial support may influence the associations we examined.

Nevertheless, several of our results regarding financial stress are novel, but inconsistent with existing studies. Studies typically use general measures of stress and drinking behaviors, and find that stress, broadly defined, is linked to more drinking (Esper & Furtado, 2013). Our results are specific to the domain of individual financial stress and make a unique contribution in this area. To the extent that psychological forms of stress promote drinking as a coping strategy, whereas personal financial stress leads to a conservation of resources and less drinking, future studies should explicitly and simultaneously examine multiple forms of stress that may be relevant to drinking behaviors, but in different ways. Future studies could examine local or changing economic conditions on the dynamics between personal financial stress and drinking.

Conclusion

Although the participants in the present study came of age in the aftermath of a macroeconomic recession, there remains in the U.S. widespread social and economic uncertainty. Consequently, many emerging adult households face constrained opportunities, which may contribute to increased financial stress and problem behaviors, including alcohol misuse. For these reasons, we contend that presence or absence of financial resources adds a new dimension to studies of factors that promote or undermine the transition to adulthood. This approach would broaden our understanding of these dynamic associations over time and contribute to the development of empirically-based programs and policies designed to facilitate a smoother transition to adulthood.

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Figure 1.
Hypothesized model.

Figure 2.

Tested path model. Standardized parameter estimates shown. $X^2 = 2578.17$, $df = 188$, $p < .001$, RMSEA = 0.04 (SD = 0.00), CFI = .93, TLI = .91. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 1.

Weighted Percentages, Means, and Standard Errors of Covariate and Indicator Variables

	Weighted % (se)	Mean (se)
Covariates		
W1 Parental Financial Stress		0.41 (.01)
W3 Currently Employed	72.9 (.01)	
W3 Age		21.45 (.02)
W3 College Attendance	35.4 (.01)	
W4 Currently Employed	79.6 (.01)	
W4 Currently Married	42.4 (.01)	
W4 Children in the Household	46.6 (.01)	
Black	15.3 (.01)	
Asian	11.8 (.01)	
Latino	3.4 (.00)	
American Indian	0.7 (.00)	
Parental Financial Support		
W3 Mother Contribution		2.63 (.02)
W3 Father Contribution		2.67 (.02)
Drinking Behaviors		
W3 Days Drank		3.00 (.03)
W3 Number of Drinks		2.82 (.03)
W3 Binge Drinking		2.06 (.03)
W4 Days Drank		3.13 (.03)
W4 Number of Drinks		2.50 (.03)
W4 Binge Drinking		1.98 (.03)
Financial Stress		
W3 Financial Strain		1.57 (.02)
W3 Access		3.52 (.03)
W3 Income		6.77 (.02)
W4 Financial Strain		1.52 (.02)
W4 Ladder		6.03 (.03)
W4 Income		4.72 (.03)

Table 2.
Confirmatory Factor Analysis Results with Variances and Covariances of Latent Variables

	W3 Drinking	W3 Financial Stress	W3 Parental Financial Support	W4 Drinking	W4 Financial Stress
Factor Loadings					
W3 Days Drank	.892				
W3 Number of Drinks	.843				
W3 Binge Drinking	.938				
W3 Financial Strain		.278			
W3 Access		.759			
W3 Income		.256			
W3 Mother Support			.861		
W3 Father Support			.854		
W4 Days Drank				.865	
W4 Number of Drinks				.801	
W4 Binge Drinking				.941	
W4 Financial Strain					.381
W4 Ladder					.536
W4 Income					.637
Covariances and Variances					
W3 Drinking	1.00				
W3 Financial Stress	-.18*	1.00			
W3 Parental Financial Support	.12*	-.32*	1.00		
W4 Drinking	.52*	-.14*	.11*	3.221	
W4 Financial Stress	-.22*	.67*	-.33*	-.21*	0.211

Note: Standardized factor loadings and covariances shown. Unstandardized variances shown. The latent covariances of the W3 measures were constrained to 1.00 to for scaling and model identification.
Model fit: $\chi^2 (63, N = 9026) = 606.46, p < .001$; RMSEA = .03 (SD = 0.00); CFI = .980; TLI = .972.

* $p < .001$

Table 3.

Model estimated parameters

	β	se	p	Rate of Missing	β	se	p	Rate of Missing
Wave 3 Financial Stress								
W1 Parental Financial Stress	.21	.02	.00	9.70	-.07	.02	.00	1.60
W3 Currently Employed	-.22	.02	.00	12.10	.42	.03	.00	3.00
W3 Age	-.21	.02	.00	0.90	-.11	.02	.00	2.00
W3 College Attendance	-.31	.02	.00	1.10	-.44	.02	.00	5.50
Black	.26	.02	.00	1.00	-.14	.02	.00	8.70
Asian	-.02	.01	.08	1.20	.21	.02	.00	3.10
Latino	.06	.02	.00	0.70				
American Indian	.04	.02	.04	0.80				
Wave 3 Drinking								
W3 Currently Employed	.03	.02	.08	9.90	.49	.02	.00	0.20
W3 Age	.05	.02	.02	0.10	-.05	.02	.01	1.50
W3 College Attendance	.10	.02	.00	0.50	.01	.02	.54	0.40
Black	-.25	.02	.00	0.10	.08	.01	.00	11.70
Asian	-.08	.02	.00	0.00	-.12	.01	.00	4.10
Latino	-.10	.02	.00	0.40				
American Indian	.00	.02	.81	0.00	-.07	.02	.00	0.40
Wave 3 Parental Financial Support								
W1 Parental Financial Stress	-.17	.03	.00	7.20				
W3 Currently Employed	-.02	.02	.26	7.50				
W3 Age	-.02	.02	.44	0.50				
W3 College Attendance	.25	.02	.00	1.10				
Black	-.04	.02	.07	1.00				
Asian	.01	.02	.57	0.30				
Latino	-.06	.02	.00	0.90				
American Indian	.02	.02	.45	0.10				
Wave 4 Financial Stress								
W3 Alcohol Use								
W3 Financial Stress								
W3 Parental Financial Support								
W4 Currently Employed								
W4 Currently Married								
W4 Children in the Household								
Wave 4 Drinking								
W3 Drinking								
W3 Financial Stress								
W3 Parental Financial Support								
W4 Currently Employed								
W4 Currently Married								
W4 Children in the Household								

Note. **Bolded** lines indicate statistically significant associations between study variables at $p < .05$. Rate of missing is reported as a percentage of participants whose responses are missing on each variable.