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The Associations of Financial Stress and Parenting Support Factors with Alcohol Behaviors During Young Adulthood

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Abstract

This study examined concurrent and prospective associations of financial stress (financial strain, lack of financial access, public assistance) and parenting support factors (relationship quality, living at home, financial support) with young adults' alcohol behaviors (alcohol use, heavy drinking, and problematic drinking) over a 5-year period. Analyses of National Longitudinal Study of Adolescent Health (Add Health) data (N = 7,159) showed that, over the study period, alcohol use and heavy drinking declined while problematic drinking increased. In addition, living at home and parental relationship quality were associated with fewer concurrent and prospective alcohol behaviors whereas financial strain and parents' financial support were associated with more alcohol behaviors. The implications for minimizing alcohol misuse in young adults amid uncertain economic conditions are discussed.

Keywords

Young adults; Parenting relations; Parental support; Financial strain; Financial stress; Alcohol behaviors

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Introduction

Young adulthood is conceptualized as a transition period during which accepting responsibility for oneself, making independent decisions, and achieving financial independence from parents hold distinct value (Tanner et al. 2008).[1] For many young adults in the US, the period from adolescence to adult self-sufficiency is increasing. Compared to previous generations, fewer young adults are able to establish independent households (Hallquist et al. 2011) and many young adults continue to rely on their parents for both financial and emotional support (Schoeni and Ross 2005). Moreover, since the start of the recession (December 2007 to July 2012) the percentage of unemployed young adults aged 25–29 increased 58 % with an even higher increase of 70 % for young adults aged 20–24 (Bureau of Labor Statistics 2012). These changes place increased financial demands on young people as they seek independence to separate from their families. During this transition, financial stress and economic uncertainty may be particularly disruptive (Stein et al. 2012; Worthy et al. 2010). Financial stress may precipitate poorer adult outcomes, including increased risk of alcohol misuse. The quality of parenting support available during this period, however, may facilitate more positive adult outcomes. Thus, a successful transition to adult roles and responsibilities occurs within two theoretically important developmental contexts—financial and parental.

Financial stress, that is, the extent to which individuals perceive that their financial demands exceed their ability to meet those demands (Lazarus and Folkman 1984), is associated with alcohol misuse among adults (Peirce et al. 1996; Shaw et al. 2011). Financial stress is also a strong predictor of alcohol misuse among adolescents and young adults. For example, Conger et al. (1994), using independent cross-sectional data from 228 7th grade adolescents, a near-age older sibling, and both parents, found that financial stress was associated with more hostile and inconsistent parenting, which, in turn, predicted adolescent alcohol misuse. Since adolescent alcohol behaviors set the stage for adult alcohol misuse including alcohol dependence (Merline et al. 2008) and diminished occupational attainment (Sloan et al. 2009), it is important to understand the contextual factors that contribute to responsible—or problematic—alcohol behaviors. Moreover, because young adulthood is a time of increasing personal responsibility across several life domains (e.g., occupational, educational, relational, residential), it may be especially important to examine the etiology of problematic drinking during this complex transition period.

In light of the potential impact of changing and uncertain economic conditions on young adults' ability to successfully transition to adult roles and responsibilities, this study explored the associations of financial stress and parenting support with three alcohol behaviors (alcohol involvement, heavy drinking, and problematic drinking). Although previous literature has identified adolescent risk factors (e.g., family history, early alcohol use, age, gender) associated with young adults' alcohol use and misuse (Windle and Zucker 2010), many of these studies were drawn from small or convenience samples (e.g., college students). Thus, this study relied on longitudinal data from the National Longitudinal Study

[1]This study uses the term ''young adulthood'' to refer to the gradual shift from adolescent dependence to adult self-sufficiency during the third decade of life rather than to a specific age range.

of Adolescent Health (Add Health) to concurrently and prospectively examine these associations with alcohol outcomes in a nationally representative sample of young adults collected at two time-points, 5-years apart.

Financial Stress and Alcohol Behaviors

Recessions significantly increase the prevalence of heavy drinking, particularly among whites, males, and adults (Dee 2001). While alcohol consumption overall may decrease during recessions due to less purchasing power, heavy drinking particularly may be stress-induced and emerge as a way to cope with financial stress (e.g., Rice and Van Arsdale 2010). Among college students, research provides direct support for the association between financial stress and alcohol behaviors. For instance, in a national study of alcohol use among American college students, Adams and Moore (2007) found that students with higher debt were more likely to be involved in problematic drinking associated with risky behaviors such as driving under the influence. Similarly, Nelson et al. (2008) found that financial stress from credit card debt was associated with greater incidence of risky alcohol behaviors, including heavy drinking, among college students. Although financial stress is generally associated with negative outcomes, it is possible that the associations differ by the type of financial stress experienced (Serido et al. 2004). For instance, financial stress due to short-term financial demands (e.g., bills due before payday) may exert different pressure than ongoing financial hardship (e.g., public assistance). This study examines the associations of multiple types of financial stress with young adult alcohol behaviors.

Parenting Support and Alcohol Behaviors

Whereas financial stress may increase alcohol behaviors among young adults, it is possible that parenting support factors may reduce incidence of alcohol behaviors. Parental processes, including positive parental control (monitoring, expectations, and knowledge) and parental support (praise, encouragement, and affection), have been found to be directly protective against adolescent alcohol use (Barnes et al. 2006). Studies on parental processes and alcohol behaviors among college students show that parents continue to play an important role. For instance, Padilla-Walker et al. (2008) examined associations between parental knowledge about their offspring's peers and risky behaviors as well as parent-adolescent relationships and risky behaviors while in college. With data collected from 200 students from four colleges across the US and their parents, the findings showed that parental knowledge was associated with fewer risk behaviors, including alcohol use and heavy drinking. In another study, Turisi and Ray (2010) assessed the role of parenting on the drinking behaviors of college students at a private west coast college and found that students' perceptions of involved parenting (high monitoring, disapproval of drinking-related behaviors, and accessibility to parents), both prior to college and in the transition to college, were associated with less alcohol misuse. Similarly, Fairlie et al. (2012) found support for sustained protective effects of higher parental monitoring and lower parental permissiveness (e.g., upper limit on number of drinks) compared to peer influence on college students' alcohol behaviors.

The Associations Between Financial Stress and Parenting Support

There is some evidence that parenting support reduces financial stress among young adults. In one study examining credit card debt among college students, those whose parents were involved in the acquisition of a credit card had significantly lower credit card balances compared to students who acquired credit cards on their own (Palmer et al. 2001). In addition, positive parenting has been linked to more responsible financial behaviors and decreased debt among college students (Jorgenson and Savla 2010). There is also evidence that college students who talked with their parents about financial matters practiced more responsible financial behaviors (Kim et al. 2011; Shim et al. 2010) and experienced higher levels of financial, psychological, and subjective well-being (Serido et al. 2010).

While parental closeness and contact may decrease during the transition to adulthood, parenting continues in the form of emotional and financial support (Schoeni and Ross 2005). This study considered if the type of parenting support received made a difference in young adult alcohol behaviors, particularly for young adults experiencing more financial stress. There is some support that for young adults who are experiencing economic difficulties, tangible financial assistance, more than perceptions of support from significant others (i.e., trusted confidants or friends with whom to relax), may offset the relationship between financial stress and alcohol use (Peirce et al. 1996). No one can doubt that families with more resources are better able to provide tangible support to their young adult children. However, unpacking the impact of financial stress from other demographic factors (e.g., gender, ethnicity, social class) may be particularly important for understanding how family processes contribute to alcohol behaviors during young adulthood (Castro and Coe 2007).

The Present Study

Based on the review of the literature on the associations of financial stress and parenting support with offspring behaviors, it is expected that financial stress will be associated with higher concurrent levels of alcohol behaviors in young adults whereas parenting support factors will be associated with lower concurrent levels of young adult alcohol behaviors. The present study also investigated if these associations differed in systematic ways. Specifically, this study examined potential variations in these associations by conceptualizing each construct in multiple ways: financial stress as current financial strain, economic disadvantage, and economic hardship; parenting support as emotional support, tangible support, and financial support; and alcohol behaviors as alcohol use, heavy drinking, and problematic drinking. The present study also considered the potential long term effect of these associations through prospective analyses of financial stress and parenting support with offspring alcohol behaviors 5-years later.

The study relied on data from a nationally representative sample of young adults to test the conceptualized associations to address three gaps in the literature. First, the study simultaneously considered the separate effects of financial stress and parenting support factors on young adults' alcohol behaviors by regressing concurrent alcohol behaviors on both financial stress and parenting support factors while accounting for previously established antecedents of negative alcohol behaviors (e.g., sociodemographic factors). This approach afforded the opportunity to identify the independent effects of each factor on

concurrent levels of alcohol use and alcohol behaviors. Second, the study relied on longitudinal data collected at two points in time (i.e., 5 years apart) during young adulthood to regress subsequent alcohol behaviors on previous levels of financial stress and parenting support factors. In this sense, the study examined the potential lingering effects of financial stress and parenting support factors on subsequent levels of alcohol behaviors. Finally, the study assessed increases in alcohol behaviors 5 years later, regressing subsequent alcohol behaviors on previous levels of financial stress and parenting support factors while controlling for previous levels of alcohol behaviors.

Accounting for Systematic Associations among Predictors and Alcohol Behaviors

There is evidence of systematic associations between age (Merline et al. 2008), gender and race/ethnicity (Trim et al. 2010), and incidence of alcohol use and abuse. In order to focus on the specific contributions of young adults' financial stress and parenting support to young adults' alcohol behaviors, the study controls for these factors in all analyses. In addition, the analyses controlled for factors with known associations to alcohol behaviors among adolescents and young adults, including: economic disadvantage during adolescence (Conger et al. 1994; Mulia et al. 2008), college enrollment (Blanco et al. 2008), marital status (Jones 2002; Merline et al. 2008), sexual identity (McCabe et al. 2010), and religiosity (Steinman et al. 2008).

Method

Design

This study relied on data from the National Longitudinal Study of Adolescent Health (referred to as Add Health), the most comprehensive prospective study following adolescents into young adulthood in the US. The sampling frame of the Add Health study included all high schools in the US, as well as their largest feeder schools. At wave 1, more than 20,000 adolescents in grades 7–12 were participants in the in-home survey (Harris et al. 2008). Portions of the interview, including information on risk behaviors, were collected through the use of Audio-CASI (audio computer-aided self-interview). Respondents listened to questions through earphones, and their responses were recorded on a laptop computer. This method has been demonstrated to reduce the potential for interviewer or parental influence on the responses of adolescents, strengthening the validity of the sensitive data considered in these analyses (Turner et al. 1998).

Four waves of data have been collected to date. Participants were first interviewed at wave 1 in 1994–1995. In 1996, participants were re-interviewed at wave 2 of the study. Wave 3 data collection occurred 5 years later, in 2001–2002 when the participants were 18–26 years old; wave 4 was conducted in 2008–2009 when participants were ages 24–32. The data for the present study focused on young adulthood (waves 3–4), while controlling for adolescent sociodemographic factors (wave 1). In this study, wave 3 will be referred to as Time 1 (T1), the first data collection time point and wave 4 will be referred to as Time 2 (T2), the second data collection time point 5 years later.

Sample

The total analytic sample for the analyses reported here includes 7,159 young adults who participated at both T1 and T2 and had valid sample weights (for detailed information about the sample design and weight calculations see Chantala 2006). On average, the participants in the study were of legal age to obtain and consume alcohol (M = 21.95, SD = 1.71). White participants (56 %) were the largest ethnic group in the sample, and thus used as the reference group in study analyses. The majority of the participants (90 %) reported being exclusively heterosexual. Thirty-five percent of the sample was currently enrolled in college and the majority was unmarried (76.8 %). On average, the participants considered themselves moderately religious (M = 5.96, SD = 3.04, possible range 0–12). Parents' educational attainment during participants' adolescence indicates high school completion on average (M = 13.97, SD = 2.87, possible range 8–19). Reported parental use of alcohol was low (M = 1.97, SD = 1.17, possible range 1–6). A full description of the unweighted sample at wave 3 is presented in Table 1.

Measures

Alcohol use, heavy drinking, and problematic drinking—The study assessed three measures of alcohol behaviors collected at both T1 and T2. *Alcohol use* was assessed by summing the responses to two questions: During the past 12 months, on how many days did you drink alcohol? (0 = never, 6 = every day or almost every day), Think of all the times you have had a drink during the past 12 months. How many drinks did you usually have each time? A 'drink' is a glass of wine, a can of beer, a wine cooler, a shot glass of liquor, or a mixed drink (range = 0–12 at T1 and T2). *Heavy drinking* was assessed by summing the responses to two questions: Over the past 12 months, on how many days did you drink five or more drinks in a row? Over the past 12 months, on how many days have you gotten drunk or 'very, very high' on alcohol? (0 = never, 6 = every day or almost every day) (range = 0–6 at T1 and T2). *Problematic drinking*, referring to occasions when alcohol use interfered with daily routines or relationships, was assessed by summing the responses to two questions: During the past 12 months, how often did you have problems at school or work because you had been drinking? During the past 12 months, how often did you have problems with your friends because of your drinking? (0 = never; 1 = 1 time, 2 = more than 1 time) (T1 range = 0–4; T2 range = 0–2).

Financial Stress—Three measures assessed participants' financial stress at T1. Consistent with the approach followed by other researchers (e.g., Prawitz et al. 2013), two index measures were constructed, summing dichotomous responses (0 = no; 1 = yes) to a series of questions: *Financial strain*, assessed participants' inability to meet current financial obligations, as an index of three questions: In the past 12 months, was there a time when [you were/your household was]: Without telephone service for any reason? Did not pay the full amount of the rent or mortgage because you did not have enough money? Did not pay the full amount of gas, electricity, or oil bill because you did not have enough money? (T1 range = 0–3). *Lack of financial access*, construed as an indicator of economic disadvantage (Johnson and Sherraden 2007) assessed participants' access to mainstream financial systems (banked vs. unbanked status), as an index of three questions: Do you have a checking account? Do you have a credit card? Do you have a savings account? The index was

reversed so that higher values indicated less access to financial services (i.e., economic disadvantage) (T1 range = 0–2). The third measure, *Public assistance*, assessing financial hardship, was measured by a single item (Mack et al. 2007): Have you ever received any public assistance or welfare payments other than food stamps? (1 = yes; 0 = no).

Parenting Support Factors—The study relied on three T1 measures to assess parenting support factors with young adult offspring. The first single item measure, *Living at home*, designated participants who co-resided with their parents (1 = yes; 0 = no), and is construed as tangible support (i.e., reduces or eliminates young adults' housing expenses). The second measure, *Relationship with parents* (adapted from Caldwell et al. 2006), construed as emotional support, represented the mean of three statements about relationship quality with mothers and fathers: You enjoy doing things with your mother/father, Most of the time he/she is warm and loving toward you (1 = strongly disagree; 5 = strongly agree), How close do you feel to your mother/father (1 = not close at all; 5 = extremely close). Coefficient alpha for the scale was 0.84. The third measure, *Financial support*, representing financial support received from parents, was measured by participants' response to a single question: Please give an estimate of this financial help in the past 12 months. Include money given directly to you and the cost of significant items bought for you by your mother/ father (1 = less than $200; 4 = $1,000 or more). Since initial analyses indicated a curvilinear association between financial support and alcohol outcomes, *Financial support* was squared and included in the analyses.

Control Variables—Regression analyses controlled for the following measures collected from the parents during the baseline study (wave 1 when participants were adolescents): *parental education* as a proxy for social class (Grzywacz et al. 2004), a continuous measure for the parent reporting the highest number of years of education completed); frequency of *parents' alcohol use* (1 = never to 6 = nearly every day); *parental receipt of public assistance* as a proxy for economic hardship (1 = yes; 0 = no).

Regression analyses also controlled for the following measures collected at wave 3: participants' *age* (continuous—in months); *gender* (0 = male; 1 = female); *ethnicity/race* (coded as separate dichotomous variables (1 = member of racial/ethnic minority; 0 = nonmember) for each of the following: Hispanic/Latino ethnicity, White (reference group), Black, Native American, and Asian); *sexual identity* (0 = exclusively heterosexual; 1 = non-exclusive sexuality; 2 = exclusively homosexual); *college* (0 = not enrolled; 1 = enrolled); *married* (0 = not married; 1 = married); *religiosity*/spirituality (continuous, range 0–12 where 12 = strong religiosity).

Plan of Analysis

Initial analyses included descriptive and correlational analyses using SAS 9.2 to examine the relations of financial stress (financial strain, public assistance, and lack of financial access) and parenting support factors (living at home, relationship with parents, and financial support) in association with the three alcohol behaviors (alcohol use, heavy drinking, problematic drinking) at both T1(concurrently) and T2 (prospectively). Subsequent regression analyses to more closely examine the associations were estimated using SAS 9.2

to test for separate effects of financial stress and parenting support factors on each of the three alcohol behaviors, while controlling for sociodemographic characteristics and previously identified predictors of alcohol behaviors. These analyses employed PROC SURVEY REG to account for the complex sample design of the Add Health survey (the sample was stratified by region and participants were clustered in schools). The first regression equation estimated the concurrent influence (T1) of parenting support factors and financial stress on levels of alcohol behaviors. The second regression equation estimated the association of T1 parenting support factors and T1 financial stress on prospective (T2) levels of alcohol behaviors. The third and final regression estimated the association of T1 parenting support factors and T1 financial stress in predicting increases in young adult alcohol behaviors at T2 (i.e., controlling for T1 levels of alcohol behaviors).

Results

Intercorrelations and Descriptive Analyses of Variables

The results of the initial analyses appear in Table 2. Mean level values in this nationally representative sample showed that alcohol use, heavy drinking, and problematic drinking were relatively low at both time points. Consistent with other national data (Johnston et al. 2011), alcohol use and heavy drinking declined at T2 (paired $t(7,770) = 9.46$, $p < 0.0001$ and paired $t(7,754) = 6.94$, $p < 0.0001$, respectively). The incidence of problematic drinking, however, increased between the two time points (paired $t(7,761) = -17.28$, $p < 0.0001$). On average, financial stress at T1 was generally low: low financial strain (M = 0.34, SD = 0.69, possible range 0–3) and limited lack of financial access (M = 1.95, SD = 1.07, possible range 0–3), with 9 % reporting receipt of public assistance. On average, participants reported positive relationships with parents (M = 4.43, SD = 0.63, possible range 1–5), moderately-low financial support (M = 1.38, SD = 1.57, possible range 1–4), and 30 % lived with their parents.

The associations between financial strain and public assistance with alcohol behaviors were consistent at both T1 and T2: 1) higher financial strain was associated with higher levels of heavy drinking ($r = 0.05$, $p < 0.001$ at T1; $r = 0.03$, $p < 0.01$ at T2) and problematic drinking ($r = 0.08$, $p < 0.001$ at T1; $r = 0.07$, $p < 0.001$ at T2), and 2) public assistance was associated with lower levels of alcohol use ($r = -0.06$, $p < 0.001$ at both time points), heavy drinking ($r = -0.09$, $p < 0.001$ at T1; $r = -0.06$, $p < 0.001$ at T2), and problematic drinking ($r = -0.04$, $p < 0.001$ at both time points). The associations of lack of financial access, however, differed at each time point: Higher lack of financial access was associated with lower levels of alcohol use ($r = -0.03$, $p < 0.01$), and heavy drinking ($r = -0.04$, $p < 0.01$) at T1 but no significant association at T2, and higher lack of financial access was associated with lower levels of problematic drinking ($r = -0.04$, $p < 0.01$) at T2 but no significant association at T1.

At T1, living at home and more positive relationships with parents were associated with lower levels of all three alcohol behaviors: alcohol use ($r = -0.03$, $p < 0.01$ and $r = -0.03$, $p < 0.01$ respectively), heavy drinking ($r = -0.05$,<0.001 and $r = -0.04$, $p < 0.01$ respectively), and problematic drinking ($r = -0.03$, $p < 0.01$ and $r = -0.07$, $p < 0.001$ respectively), whereas higher parental financial support was associated with higher levels of all three

alcohol behaviors ($r = 0.06$, $p < 0.001$; $r = 0.11$, $p < 0.001$; $r = 0.07$, $p < 0.001$ respectively). Although the strength of the associations differed at T2, the pattern of the associations remained the same. Specifically, more positive relationships with parents and living at home at T1 were associated with lower levels of T2 alcohol behaviors whereas higher parental financial support at T1 was associated with higher levels of T2 alcohol behaviors.

Financial Stress, Parenting Support Factors, and Alcohol Behaviors

The results of the regression analyses appear in Table 3. In general, alcohol behaviors were lower among females, older participants, non-white participants, married participants, and those who were more religious. Parents' self-reports of their own alcohol use during offspring adolescence were positively associated with both concurrent and prospective levels of each measure of alcohol behavior, as well as greater increases in alcohol use and heavy drinking. Parents' education level was positively associated with concurrent levels of all three alcohol behaviors, prospective levels of heavy drinking and problematic drinking, as well as increases in problematic drinking. Parental receipt of public assistance during participants' adolescence was associated with a small but significant decrease in T2 problematic drinking.

Regarding financial stress and alcohol behaviors, financial strain appeared to have the strongest associations. Financial strain at T1 was significantly associated with higher concurrent levels of alcohol use (b = 0.22, $p < 0.001$), heavy drinking (b = 0.15, $p < 0.001$), and problematic drinking (b = 0.06, $p < 0.001$) as well as higher prospective levels of and increases in problematic drinking (b = 0.06, $p < 0.001$ and b = 0.04, $p < 0.05$ respectively). In contrast, public assistance was negatively associated with concurrent levels of heavy drinking (b = −0.15, $p < 0.05$) and problematic drinking (b = −0.04, $p < 0.05$).

Regarding the association of parenting support factors with alcohol use and heavy drinking, the overall direction of effects showed that living at home at T1 was associated with lower concurrent and prospective levels of alcohol use (b = −0.23, $p < 0.01$ and b = −0.23, $p < 0.01$ respectively), heavy drinking (b = −0.17, $p < 0.001$ and b = −0.14, $p < 0.01$ respectively), and problematic drinking (b = −0.04, $p < 0.01$ and b = −0.06, $p < 0.01$ respectively) as well as decreased alcohol use 5 years later (b = −0.15, $p < 0.01$). The opposite pattern occurred for parents' financial support; specifically, higher parents' financial support was associated with higher concurrent and prospective levels of alcohol use (b = 0.10, $p < 0.05$ and b = 0.11, $p < 0.001$ respectively) and heavy drinking (b = 0.08, $p < 0.001$ and b = 0.06, $p < 0.01$ respectively), as well as increased alcohol use 5 years later (b = 0.08, $p < 0.05$). Finally, positive relationship with parents at T1 was associated with lower concurrent and prospective levels of problematic drinking (b = −0.04, $p < 0.01$ and b = −0.06, $p < 0.001$ respectively), as well as a decrease in problematic drinking 5-years later (b = − 0.05, $p < 0.01$).

The associations between parenting support factors and problematic drinking revealed different patterns. Living at home and positive relationships with parents at T1 were associated with lower levels of problematic drinking both concurrently and prospectively, as well as decreased incidence of problematic drinking 5 years later. The association with parents' financial support however, was significant only in relation to higher concurrent

levels of problematic drinking. In sum, parenting support factors that included interaction with parents (i.e., relationship quality and living at home) were associated with fewer alcohol behaviors, both concurrently and prospectively. In contrast, the effects of financial support alone were negative and short term.

Discussion

Despite a known association between financial instability and alcohol-related problems (Conger et al. 1994; Peirce et al. 1996; Shaw et al. 2011), the research examining the correlates or predictors of alcohol behaviors during young adulthood is surprisingly limited. To address this gap in the literature, this study documents alcohol behaviors and patterns of change over the course of 5 years using data from a nationally representative sample of young adults. In addition to confirming prior research on well-established predictors of alcohol behaviors (prior alcohol behavior, parents' alcohol behavior, gender, marriage, and religiosity), this study provides empirical support that while alcohol use and heavy drinking decline during young adulthood, for a portion of the population problematic drinking increases, or emerges during this period. The study also shows that, after accounting for well-documented predictors of alcohol use, both financial stress and parenting support factors are independently and directly associated with patterns of alcohol use, heavy drinking, and problematic drinking.

Regarding parenting support factors, living at home and positive parenting relations are associated with fewer alcohol behaviors concurrently and 5 years later whereas parents' financial support is associated with more alcohol behaviors, both concurrently and prospectively. Financial strain during the transition to adulthood has a negative short and long term effect on alcohol behaviors. A discussion of the association of parenting support factors and financial strain with alcohol behaviors in young adulthood follows.

Financial Stress During Young Adulthood

Young adults are expected to assume greater responsibility for financial obligations as they seek to establish independent households. Yet there is limited research examining how young adults cope with increasing financial demands as they assume adult roles and increased responsibilities. To our knowledge, this is the first study to systematically examine the link between financial stress and alcohol behaviors during this developmental period. Financial stress was operationalized in three different ways: financial strain (i.e., the inability to meet current financial obligations); receipt of public assistance to get by; and lack of access to financial services. Using this approach provides evidence for different associations between finances and alcohol behaviors. Financial strain may be the catalyst for associations with higher concurrent alcohol behavior, suggesting that some young adults may turn to alcohol as a means of coping with financial stress. This interpretation is consistent with results from Perkins' (1999) study showing that drinking to reduce general stress is a common motivation among both undergraduate and graduate students. Butler et al. (2010) found a positive association between tension-reducing expectancies and drinking behaviors in a daily diary study of college students.

Although the Great Recession may be over, the negative financial effects continue, as many young adults struggle to find meaningful employment (Bureau of Labor Statistics 2012). Continuing and widespread uncertainty in the labor market and the impact on the economic conditions of young adults is not confined to the United States. Worldwide, 75 million young people (ages 15–24) from both developed and developing countries are facing conditions of unemployment or underemployment (International Labor Office 2012, p. 9). Therefore, helping young adults successfully cope with finance-related stress is an important topic for future prevention research. The findings from the present study suggest that effective interventions include adaptive strategies for coping with financial demands as a way to minimize alcohol use as a self-regulating response to the emotional distress associated with financial strain (Butler et al. 2010).

Given that poverty is a long-term risk factor for severe alcohol problems (Mulia et al. 2008), the lack of association between public assistance and prospective alcohol behaviors was unexpected. One possible explanation for the lack of association may be that transitioning to adulthood for those living in poverty, as evidenced by receipt of public assistance, may constrain one's ability to engage in excessive drinking behaviors, at least in the short term. That is, young adults with some resources may choose to spend money on alcohol, whereas young adults who lack resources may not have enough money to make that choice. In this sense, some young adults may be vulnerable to alcohol behaviors because they have just enough financial resources to spend some money on alcohol, yet experience enough constraints to feel financial strain. The nonsignificant associations between lack of financial access and alcohol behaviors, in conjunction with study findings on financial strain and public assistance may also suggest that young adults acclimate to their financial circumstances. If unexpected financial demands arise, and signal a change in financial circumstances, perhaps it is the change in circumstances rather than lack of or access to financial resources, that is a risk factor for indulging in risky alcohol behaviors. This is an area for further study.

Shifting Parenting Relations

During the transition to adulthood, young adults assume more behavioral independence yet continue to rely on parents for tangible and emotional support (Schoeni and Ross 2005); it is a period of shifting and renegotiating relations with parents (see also Tanner 2006). Living with parents early in this transition is associated with lower levels of alcohol use, heavy drinking, and problematic drinking both concurrently and 5 years later, as well as decreased alcohol use and problematic drinking 5 years later. These associations might be explained by arguments about social control or opportunity. On one hand, inter-generational family living arrangements may exert social control over alcohol use, especially during the period of life when alcohol behaviors become normative (both legally and socially). Or there may simply be fewer opportunities for drinking for young adults who live at home with parents, whether due to family social control (e.g., Sampson and Laub 1990, 2005) or to a lack of access to peer-based cultures of drinking (Vicary et al. 2000).

The results for parents' financial support are provocative: As parents give more money, young adults engage in more alcohol use, heavy drinking, and problematic drinking. Further,

financial support from parents during young adulthood is associated with higher levels of alcohol use and heavy drinking 5 years later, as well increased alcohol use. Given the age of the sample (18 and older) and the number in college (35 %) during the first (T1) data collection, this finding may be an indication of a culture of drinking among young middle class adults whose parents provide spendable income. One may speculate that parents of young adults, compared to parents of adolescents, may not be aware of their children's alcohol behaviors (Bhatt 2011), or how they use the financial support provided by parents. Future research should explore the degree to which parents give their children money and the form in which it is given (e.g., cash vs. paying for health insurance), as they head toward independence, and the related implications for alcohol and other risk behaviors.

Finally, this study contributes to the sparse literature documenting a significant association between young adults' relationships with parents and subsequent problem drinking behaviors. What is most notable is the lasting effect specific to problematic drinking. The significant association of parent-young adult relationship quality and problematic drinking is evident 5 years later. Other research shows that positive relationships with parents also help young adults learn to cope with financial demands more effectively (Serido et al. 2010) and thus may discourage the use of alcohol as a coping strategy. Alcohol problems that have origins in adolescence and those that emerge in the late 20 s may be markers of lifetime substance abuse (Merline et al. 2008; Sloan et al. 2011); as such, this finding is noteworthy and should provoke additional research on the importance of parent-offspring relationships during young adulthood.

Strengths and Limitations

Although the results of the present study are relevant for understanding the associations among young adults' financial stress, parenting support factors, and alcohol behaviors, the findings must be interpreted in the context of its limitations. First, the lingering effect of young adults' financial stress, parenting factors, and prospective alcohol behaviors may be attributable to other factors. One possibility is that higher levels of financial stress at T2 accounted for the association. Supplemental analyses, comparing levels of financial strain at T1 and T2, however, showed that levels of financial strain declined during the study period (paired $t(7,752) = -3.17$, $p < 0.01$)). It is also possible that the timing of T2 data collection for the study (2008–2009) did not capture the full impact of the Great Recession on levels of financial strain, including rising unemployment rates among young adults. In addition, because the study is limited to measures available in the Add Health dataset, some measures of financial stress that might be particularly relevant today, such as educational loan debt, mortgage debt, or foreclosure could not be examined.

A second limitation is the constrained response options in the dataset. Thus, while key measures of financial circumstances and family relations are available, the variables may not fully capture the construct as it is conceptualized. Finally, although financial circumstances are reported by the respondent, they reflect the financial circumstances of the entire household. Although it would be helpful to distinguish the financial circumstances of the respondent separate from other household members, to better isolate the effects of parental financial support, the data do not permit this distinction. Nevertheless, the data are unique in

a number of ways: They are prospective and include reports by parents from many years earlier about their own public assistance, education, and alcohol use. These factors provide an empirical basis for predictive associations, and additional confidence in the associations between young adult financial circumstances, parenting support factors, and alcohol behaviors.

The few studies that have considered the associations between financial circumstances and alcohol behaviors have relied on cross-sectional, retrospective data that may conflate financial stress and alcohol problems (e.g., Pierce et al. 1996). In contrast, the use of the Add Health study provides a prospective examination of alcohol behaviors as well as changes in alcohol behaviors over a 5 year period. The results suggest several potential predictors of alcohol behaviors that may be promising for intervention among young adults, as well as provide important insights for further study. In addition, this is the first study to simultaneously consider two salient developmental contexts, financial stress and continued parenting during young adulthood as risk factors for alcohol use and problems. Support for the role of these contextual factors, in facilitating or impeding a successful transition to adult self-sufficiency during the third decade of life, merits additional research.

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Table 1

Sample characteristics (N = 7,159)

	M **(SD) or count (percentage)**
Age (Wave 3)	21.95 (1.71)
18–20 years	1,648 (23.0 %)
21–25 years	5,131 (71.7 %)
26–27 years	380 (5.3 %)
Gender (Wave 3)	
Male	3,421 (47.8 %)
Female	3,738 (52.2 %)
Ethnicity (Wave 3)	
White	4,010 (56.0 %)
Black	1,501 (21.0 %)
Asian	404 (5.6 %)
Indian	63 (0.8 %)
Latino	1,117 (15.6 %)
Other	64 (0.9 %)
Sexual identity (Wave 3)	0.11 (0.34)
Exclusively heterosexual (0)	6,442 (90.0 %)
Non-exclusive sexuality (1)	653 (9.1 %)
Exclusively homosexual (2)	64 (0.9 %)
College enrollment (Wave 3)	
Yes	2,511 (35.1 %)
No	4,648 (64.9 %)
Marital status (Wave 3)	
Married	1,664 (23.2 %)
Not married	5,495 (76.8 %)
Religiosity/spirituality (Wave 3)	
Ranges 0 (low) to 12 (high)	5.96 (3.04)
Parental education (Wave 1)	
Ranges 8 (low) to 19 (high)	13.97 (2.87)
Parents' alcohol use (Wave 1)	
Ranges 1 (never) to 6 (nearly every day)	1.97 (1.17)
Parental receipt of public assistance (Wave 1)	
Ranges 0 (no) to 1 (yes)	0.08 (0.27)

Percentages may not add up to 100 % due to rounding

Table 2

Means, standard deviations, and intercorrelations

	M (SD)	1	2	3	4	5	6	7	8	9	10	11
(1) T1_financial strain	0.34 (0.69)	–										
(2) T1_lack of financial access	1.05 (1.07)	0.22***	–									
(3) T1_public assistance	0.09 (0.28)	0.19***	0.15***	–								
(4) T1_live with parents	0.30 (0.46)	−0.13***	0.08***	−0.05***	–							
(5) T1_relationship with parents	4.43 (0.63)	−0.08***	−0.08***	−0.05***	−0.03*	–						
(6) T1_financial support from parents	1.38 (1.57)	−0.02	−0.12***	−0.06***	0.10***	0.14***	–					
(7) T1_alcohol use	2.66 (2.41)	0.04***	−0.03**	−0.06***	−0.03**	−0.03**	0.06***	–				
(8) T1_heavy drinking	1.12 (1.40)	0.05***	−0.04**	−0.09***	−0.05***	−0.04**	0.11***	0.74***	–			
(9) T1_problematic drinking	0.11 (0.40)	0.08***	0.02	−0.04***	−0.03**	−0.07***	0.07***	0.28***	0.40***	–		
(10) T2_alcohol use	2.45 (2.13)	0.00	−0.01	−0.06***	−0.01	−0.01	0.07***	0.41***	0.41***	0.19***	–	
(11) T2_heavy drinking	1.04 (1.35)	0.03**	0.01	−0.06***	−0.02	−0.02*	0.08***	0.39***	0.49***	0.24***	0.76***	–
(12) T2_problematic drinking	0.21 (0.51)	0.07***	−0.04**	−0.04***	−0.05***	−0.08***	0.05***	0.28***	0.37***	0.35***	0.33***	0.40***

T1 (Time 1, wave 3) = ages 18–26. T2 = (Time 2, wave 4) = ages 24–32

* $p < 0.05$;

* $p < 0.01$;

*** $p < 0.001$

Table 3

Young adult financial stress and parenting support factors regressed on concurrent levels, prospective levels, and prospective increases in alcohol use, heavy drinking and problematic drinking

	Alcohol use (n = 7,044)			Heavy drinking (n = 7,034)			Problematic drinking (n = 7,031)		
	T1	**T2**	**ΔT2**	**T1**	**T2**	**ΔT2**	**T1**	**T2**	**ΔT2**
T1 alcohol measure	–	–	0.30***	–	–	0.40***	–	–	0.38***
Female	−0.74***	−1.01***	−0.77***	−0. 52***	−0.57***	−0.35***	−0.06***	−0.06**	−0.03
Black	−1.45***	−0.77***	−0.35**	−0.85***	−0.47***	−0.13*	−0.08***	−0.19***	−0.16***
Asian	−0.82***	−0.35*	−0.10	−0.53***	−0.20*	0.02	−0.04	−0.16***	−0.14***
Native American	0.49	0.35	0.06	0.38	0.32	0.10	−0.05	0.12	0.13
Latino	−0.42***	−0.14	−0.04	−0.27***	−0.16**	−0.05	−0.02	−0.06**	−0.05*
Other race	−0.82**	−0.79*	−0.60*	−0.47**	−0.40*	−0.23	−0.07	−0.02	0.00
Sexual identity status	−0.03	0.12	0.14	−0.02	0.09	0.10	0.02	0.05	0.05
Parent public assistance (wave 1)	−0.26	−0.10	−0.02	−0.12	−0.07	−0.02	−0.03	−0.06	−0.06*
Parental education (wave 1)	0.48**	0.03	0.02	0.05***	0.04***	0.02	0.01**	0.02***	0.01**
Parental alcohol use (wave 1)	0.09**	0.17***	0.15***	0.10***	0.15***	0.10***	0.02*	0.02*	0.01
Religiosity	−0.09***	−0.06***	−0.04***	−0.05***	−0.04***	−0.02**	−0.01*	−0.01	−0.00
Age	0.01	−0.09***	−0.09***	0.00	−0.06***	−0.06***	−0.00	−0.01*	−0.01*
Enrolled in college	0.04	−0.05	−0.05	0.06	0.05	0.03	0.01	0.02	0.02
Married	−0.66***	−0.34***	−0.13	−0.48***	−0.20**	0.00	−0.06***	−0.14***	−0.12***
Financial strain	0.22***	0.05	−0.02	0.15***	−0.07	0.02	0.06***	0.06***	0.04*
Lack of financial access	0.03	0.03	0.02	0.01	0.05	0.04	0.01	−0.01	−0.01
Public assistance	0.03	0.03	0.02	−0.15*	−0.05	−0.00	−0.04*	−0.02	−0.00
Living with parents	−0.23**	−0.23**	−0.15*	−0.17***	−0.14**	−0.06	−0.04**	−0.06**	−0.05*
Relationship with parents	−0.10	0.00	0.03	−0.06	−0.02	0.01	−0.04**	−0.06***	−0.05**
Parents' financial support	0.10*	0.11***	0.08*	0.08***	0.06**	0.03	0.02*	0.01	0.01
Parents' financial support squared	−0.02	−0.04	−0.03	−0.00	−0.02	−0.01	−0.00	−0.01	−0.01
R^2	0.14	0.13	0.24	0.19	0.14	0.28	0.05	0.08	0.17

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	Alcohol use (*n* = 7,044)			Heavy drinking (*n* = 7,034)			Problematic drinking (*n* = 7,031)		
	T1	**T2**	**ΔT2**	**T1**	**T2**	**ΔT2**	**T1**	**T2**	**ΔT2**
F	51.45	42.98	83.40	77.23	44.02	102.04	16.65	23.46	54.19

T1 (Time 1, wave 3) = ages 18–26. T2 = (Time 2, wave 4) = ages 24–32, ΔT2 = change at T2 while controlling for T1 level. T1 alcohol measure corresponds to T2 outcome alcohol behavior (i.e., alcohol use, heavy drinking, and problematic drinking, respectively)

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$