

1-1-2012

The Effects of Adolescent Heavy Drinking on the Timing and Stability of Cohabitation and Marriage

Lela Rankin Williams
Arizona State University

Laura Wray-Lake
Claremont Graduate University

Eric Loken
Pennsylvania State University - Main Campus

Jennifer L. Maggs
Pennsylvania State University - Main Campus

Recommended Citation

Williams, L. R., Wray-Lake, L., Loken, E., & Maggs, J. L. (2012). The effects of adolescent heavy drinking on the timing and stability of cohabitation and marriage. *Families in Society*, 93(3), 181-188. doi:10.1606/1044-3894.4216

This Article is brought to you for free and open access by the CGU Faculty Scholarship at Scholarship @ Claremont. It has been accepted for inclusion in CGU Faculty Publications and Research by an authorized administrator of Scholarship @ Claremont. For more information, please contact scholarship@cuc.claremont.edu.

The Effects of Adolescent Heavy Drinking on the Timing and Stability of Cohabitation and Marriage

Lela Rankin Williams, Laura Wray-Lake, Eric Loken, & Jennifer L. Maggs

Based on prospective British Cohort Study data, adolescent alcohol use predicted the timing and stability of committed partnerships between 16 and 34 years ($n = 3278$; 59% female). Propensity score methods balanced age 16 heavy drinkers (32%) and nonheavy drinkers on a range of relevant risk factors assessed in infancy and childhood. Adolescent heavy drinking predicted having ever cohabited, earlier transitions into cohabiting and marital relationships, more breakups, and an increased likelihood of divorce. Gender and social class moderated these relationships; heavy-drinking working-class males were especially likely to cohabit and to experience early entry into cohabitation and marriage. Implications for practitioners focus on the benefits of reducing adolescent heavy drinking and precocious transitions to committed partnerships.

IMPLICATIONS FOR PRACTICE

- Heavy drinking in adolescence may impact timing, likelihood, and stability of intimate partnerships in adulthood.
- Programs that are based in marriage-strengthening activities are encouraged to include substance use risk reduction components.

A widely held yet rarely empirically tested belief is that alcohol use in adolescence negatively impacts adult social and interpersonal development, including cohabiting and marital relationships, separation, and divorce. This question has high relevance given the lack of contemporary research and recent interest in encouraging marriage through public policy (Kuznicki, 2011). Healthy marriages have benefits for parents and children (Amato, 2000). Yet, there is little empirical evidence to link adolescent alcohol use with later partnerships. Partnerships have typically been examined as a predictor (Kairouz & Greenfield, 2007; Leonard & Homish, 2008) or as a concurrent correlate (Fischer et al., 2005; Roos, Lahelma, & Rahkonen, 2006) of alcohol use. The present study attempts to bridge this gap by examining the role of adolescent alcohol use in predicting the type, timing, and stability of adult committed romantic partnerships using propensity score methods to balance for childhood selection effects (e.g., early puberty and behavioral problems).

Developmental Role of Heavy Drinking

Adolescent substance users are more likely to choose cohabiting relationships in adulthood than nonusers (Kandel, Davies, Karus, & Yamaguchi, 1986). Compared to marital relationships, cohabiting relationships are accompanied by less commitment and stability, which, according to self-derogation theory, is favored by early

users because they lack conventionality and attachment to traditional adult social roles (Newcomb & Jack, 1995). Early drug use is also associated with earlier entry into partnerships (e.g., marriage; Newcomb, 1986) and early partnerships have greater risk of divorce (Kandel et al., 1986; Newcomb, 1986, 1994). Premature involvement in substance use may truncate opportunities to develop the hard (e.g., educational qualifications) and soft (e.g., negotiation, perspective taking) skills to succeed in adult roles (e.g., Newcomb, 1987). Consistent with this skills-deficit perspective, substance use in adolescence has been associated with later negative and poor-quality romantic relationships (e.g., Maggs, Frome, Eccles, & Barber, 1997).

The majority of work predicting early transitions into adult roles has not distinguished type of substance used, yet there is evidence that this matters (e.g., for early marriage, see Martino, Collins, & Ellickson, 2004). The National Institute on Alcohol Abuse and Alcoholism (2009) has identified unique developmental, health, and policy implications of alcohol use and misuse that differentiates it from other drug use. Alcohol has unique positive properties, such as decreased loneliness and enhanced positive self-feelings (Newcomb & Bentler, 1988). Adolescent drinkers may have increased opportunities to meet potential partners (e.g., socializing at pubs or parties) and experience diminished social inhibitions (e.g., physiological effects and social facilitating expectancies; Leonard & Homish, 2008), yet there is little reason to expect that alcohol would enhance the quality of relationships over time. Instead, according to psychosocial dysfunction theory, alcohol may be used to avoid normal engagement and stressful interactions, which are necessary for developing relationship skills (Newcomb, 1987). In summary, prior theoretical and empirical work suggests that adolescent heavy alcohol users may be more likely to choose cohabitation and transition earlier into committed partnerships, but have decreased stability.

Moderation Effects: Gender and Social Class

Establishing a committed romantic partnership in adulthood is an important developmental goal for both males and females, and adolescent substance use interferes with these goals across gender (Newcomb, 1994; Newcomb & Jack, 1995). Because of gender differences in the metabolism of alcohol, rates of heavy drinking, timing of transitions to marriage, and expectations for romantic relationships (Kuntsche, Knibbe, & Gmel, 2009; Morr Serewicz & Gale, 2008), all analyses in the present article were conducted separately by gender. Although prior research has established mean-level gender differences, the complexity of these patterns make a priori hypotheses difficult.

Children from lower socioeconomic status (SES) backgrounds are at risk for poorer academic, social, and psychological outcomes across the life-span (Galobardes, Lynch, & Davey Smith, 2004). There are only weak or inconsistent direct associations between parents' SES and offspring's alcohol use later in life (Wiles et al., 2007). However, heavy drinking in adolescence may impact transitions into adult partnerships differently by social background. For example, individuals with fewer financial, personal, and educational resources may be less equipped to deal with the challenges of transitioning into adult social roles when coupled with early heavy drinking (Osgood, Ruth, Eccles, Jacobs, & Barber, 2005). The dual processes by which a risk factor exacerbates harm have been referred to as "double jeopardy" in poverty research (Brooks-Gunn, Klebanov, Liawm, & Duncan, 1995).

Present Study

The potential for confounds of preexisting differences among substance users and nonusers remains in longitudinal designs. Heavy drinking in adolescence and later difficulties in relationship functioning may be correlated simply because they are both manifestations of a common underlying cause. That is, the same proclivity for being a heavy drinker may propel a person toward earlier entry into committed relationships and toward difficulties within those relationships (Grzywacz & Marks, 2000). Rarely have preexisting differences between heavy drinkers and nonheavy drinkers been considered (Collins, Ellickson, & Klein, 2007; Homish & Leonard, 2007). We use propensity score methods (Rosenbaum & Rubin, 1983), which have been increasingly applied in the social sciences, to balance heavy and nonheavy-drinking adolescents on a wide variety of childhood factors (e.g., parental characteristics, family structure, and early puberty; Niemela et al., 2006) that are theoretically and empirically associated with both heavy drinking and relationship outcomes. This method enhances our ability to account for selection effects in the absence of an experimental design.

The present study uses longitudinal data from the British Cohort Study 1970 (BCS70) because of its (a) large nationally representative sample, including a broad range of social class backgrounds; (b) rich set of childhood covariates assessed prior to the measurement of adolescent heavy drinking; and (c) detailed relationship histories regarding the timing of cohabiting and marital relationships, as well as separations and divorce, from ages 16 to 34. Britain and the United States are comparable as they share a dominant culture of binge drinking, greater rates of use and abuse among men (Kuntsche et al., 2009), similar ages of alcohol initiation despite differences in legal purchase ages (Chen & Kandel, 1995; Vega et al., 2002), and high costs to society resulting from alcohol-related harm (Cabinet Office, 2004; Harwood, 2000). We hypothesized that compared to a balanced comparison group of nonheavy drinkers, adolescent heavy drinkers would show a greater likelihood of (a) ever cohabiting, (b) transitioning earlier into cohabitation, (c) transitioning earlier into marriage, (d) having a greater number of cohabiting or marital breakups, and (e) divorcing. Further, we explored these associations across gender and social class.

Method

Sample and Procedure

The BCS70 is an ongoing longitudinal study of all individuals who were born in Britain (94% European) in one week in 1970 ($N = 17,198$; Butler, Golding, & Howlett, 1985; Shepherd, 1997; Ferri, Bynner, & Wadsworth, 2003). Data at ages 5, 10, 16, 26, 30, and 34 include multiple sources (e.g., parents, teachers, and self-report) and methods matched to participants' developmental level. Analyses include complete data on heavy drinking at age 16 ($n = 6009$),¹ early childhood predictors ($n = 3327$), and heterosexual relationship histories (same-sex relationships were reported by only 1.6% of participants; Steele, Kallis, & Joshi, 2006) for a final sample of 3,278 participants (59% female). Analysis on individuals with missing data suggested a lack of bias in complete case analysis (analyses are available upon request).

Measures

Romantic relationship histories. Every cohabiting and marital relationship was reported on since age 16 (or the prior wave), including date of entry and exit (in years and months) and reason for termination. Continuous relationship histories across ages 16 to 34 were used to compute nine dependent variables. Cohabitation: *ever cohabited from age 16 to 34* (75% yes), *age of entry into first cohabiting*

¹ The sample size was partially reduced during the age 16 follow-up because a national teachers' union strike resulted in no school-based data for 5,325 participants (Goodman & Butler, 1996). Data lost for this reason are unassociated with any measured characteristics of the cohort members or their families, though not completely missing at random.

relationship ($M = 23.73$ years, $SD = 3.82$), and ever cohabited by age 21 (20%). Marriage: ever married from age 16 to 34 (55%), age of entry into first marriage ($M = 25.43$ years, $SD = 3.59$), and ever married by age 21 (6.0%). Legal age of marriage is 16 in the United Kingdom (<http://www.nationalarchives.gov.uk>); 20 cases where a younger age was reported were recoded to 16. Remained single continuously through age 34 (11.6%) included neither cohabiting nor marrying by age 34. Relationship dissolutions: number of breakups (the end of a cohabiting or marital relationship not due to death; $M = .46$, $SD = .70$, range = 0 to 5), and ever divorced (12.2% of the 221 ever married participants).

Adolescent heavy drinking. At age 16, participants responded to whether they drank more than four drinks in

a row in the past two weeks (32.4%). This is comparable to U.S. rates of 36.8% for 10th graders' heavy drinking in 1986 (Johnston, O'Malley, & Bachman, 2002). This type of quantity measure is a reliable and valid standard measure of risky drinking in adolescence (Smith, McCarthy, & Goldman, 1995); heavy episodic drinking is associated with acute and chronic (e.g., injury or neurocognitive) consequences (Brown et al., 2008).

Social class. The Registrar General's Social Class measure reflects the status of current or most recent job and associated education, prestige, and lifestyle, consistent with social class in Britain. Fathers' social class at age 16 (mother's social class if father's was unavailable, father's at prior wave if mother's was unavailable, etc.) was di-

TABLE 1. Comparison of Age 16 Heavy Drinkers and Nonheavy Drinkers Before and After Propensity Matching on Childhood and Adolescent Predictors, Males and Females

| | Males | | | Females | | |
|----------------------------------|--------------------|------------------------|----------------------|--------------------|------------------------|----------------------|
| | Heavy ^a | Nonheavy | | Heavy ^c | Nonheavy | |
| | | Unmatched ^b | Matched ^a | | Unmatched ^d | Matched ^c |
| Combined across waves | | | | | | |
| Parents' smoking (P) | 0.78 | 0.71** | 0.77 | 0.81 | 0.73*** | 0.82 |
| Biological parents separated (P) | 0.21 | 0.17 | 0.19 | 0.23 | 0.21 | 0.22 |
| Middle class (P) | 0.51 | 0.49 | 0.50 | 0.46 | 0.47 | 0.46 |
| Academic test scores (S) | 0.41 | 0.23*** | 0.38 | 0.12 | 0.10 | 0.12 |
| Birth | | | | | | |
| Mother smoked in pregnancy (P) | 0.41 | 0.39 | 0.40 | 0.44 | 0.39* | 0.44 |
| Birth weight in ounces (M) | 122.01 | 119.36* | 122.59 | 116.82 | 115.13 [†] | 117.26 |
| Age 10 | | | | | | |
| Evidence of early puberty (M) | 0.06 | 0.05 | 0.05 | 0.31 | 0.25** | 0.31 |
| Attention problems (T) | 15.80 | 15.89 | 15.92 | 13.19 | 13.09 | 13.18 |
| Poor coordination (T) | 8.63 | 9.54* | 8.38 | 7.44 | 7.97* | 7.41 |
| Speech problems (T) | 15.72 | 16.86* | 15.80 | 12.78 | 13.09 | 12.68 |
| Low social competence (T) | 16.90 | 18.18** | 16.81 | 16.39 | 17.71*** | 16.57 |
| Internalizing problems (T) | 11.92 | 13.24** | 11.68 | 13.19 | 13.69 | 13.28 |
| Externalizing problems (T) | 10.90 | 10.69 | 10.79 | 9.52 | 8.73** | 9.48 |
| Free school lunch (T) | 0.10 | 0.10 | 0.08 | 0.10 | 0.10 | 0.09 |
| Internalizing problems (P) | 75.11 | 72.94* | 75.02 | 73.98 | 72.78 | 73.61 |
| Externalizing problems (P) | 81.62 | 82.02 | 81.42 | 83.55 | 84.25 | 83.43 |
| Family activities (P) | 2.50 | 2.48 | 2.50 | 2.50 | 2.53 [†] | 2.48 |
| Anyone home after school (P) | 0.94 | 0.96 | 0.94 | 0.93 | 0.94 | 0.93 |
| Math ability (C) | 1.68 | 1.63 [†] | 1.69 | 1.62 | 1.55** | 1.60 |
| Low peer self-esteem (C) | 0.59 | 0.62 | 0.59 | 0.72 | 0.71 | 0.72 |
| Prefer to be on your own (C) | 0.60 | 0.68* | 0.60 | 0.63 | 0.67 | 0.62 |
| Ever tried cigarettes (C) | 0.15 | 0.13 | 0.15 | 0.10 | 0.07* | 0.10 |
| How many friends smoked (C) | 0.21 | 0.18 | 0.21 | 0.12 | 0.10 | 0.12 |
| Smoking can damage health (C) | 2.89 | 2.92 [†] | 2.89 | 2.91 | 2.88 [†] | 2.91 |

Note. Data from analyses with ever-married participants. Type of report: (P) = parent; (S) = school; (M) = medical; (T) = teacher; (C) = cohort member. ^a ($n = 495$); ^b ($n = 828$); ^c ($n = 604$); ^d ($n = 1351$). [†] $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

chotomized into middle class (professional, 7.2%; managerial/technical, 27.8%; and skilled nonmanual, 12.1%) and working class (skilled manual, 38.2%; partly skilled manual, 11.3%; and unskilled, 3.3%).

Childhood risk factors for heavy drinking. A range of risk factors for heavy drinking (at birth, 5 years, and 10 years) were selected based on past theoretical and empirical work (Hawkins, Catalano, & Miller, 1992; see Table 1). Variables collected at age 16 were excluded to prevent inadvertently controlling for covariates caused by heavy drinking (for a complete description of the BCS70 and psychometric properties of these variables, see Simmonds, Fuller, Lessof, & Foundouli, 2007).

Data Analysis

Propensity score analyses were used to create matched comparison groups of heavy and nonheavy drinkers within gender (Rosenbaum & Rubin, 1983). The “psmatch2” command in STATA[®] (Leuven & Sianesi, 2003) was used to estimate each individual’s predicted propensity of heavy drinking at age 16 as a function of childhood risk factors for heavy drinking. One-to-one matching of cases without replacement created matched comparison groups using propensity scores (Rosenbaum & Rubin, 1983). This strategy matches pairs of cases with near-identical estimated *propensities* for having been a heavy drinker, in

TABLE 2. *Estimated Effect of Heavy Drinking on Relationship Outcomes by Gender*

| | Males | | | | | Females | | | | |
|--------------------------------------|--------------------|-----------------------|-----------------|-------------------|----------|--------------------|-----------------------|-----------------|-------------------|----------|
| | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> |
| Cohabitation | | | | | | | | | | |
| Ever by age 34 ^d | 0.82 | 0.69 | 0.03 | 4.80*** | 990 | 0.83 | 0.79 | 0.02 | 1.92 [†] | 1208 |
| Age of entry (years) | 24.18 | 24.80 | 0.27 | -2.32* | 790 | 22.81 | 23.43 | 0.24 | -2.57** | 972 |
| By age 21 ^d | 0.19 | 0.12 | 0.02 | 3.15** | 996 | 0.30 | 0.23 | 0.03 | 20.52* | 1172 |
| Marriage | | | | | | | | | | |
| Ever by age 34 ^d | 0.52 | 0.48 | 0.03 | 1.08 | 990 | 0.58 | 0.59 | 0.03 | -0.70 | 1208 |
| Age of entry (years) | 25.95 | 26.59 | 0.29 | -2.20* | 510 | 24.64 | 25.04 | 0.27 | -1.48 | 694 |
| By age 21 ^d | 0.04 | 0.01 | 0.01 | 2.54* | 990 | 0.10 | 0.07 | 0.02 | 1.66 | 1208 |
| Remained single ^d | 0.09 | 0.16 | 0.02 | -3.34*** | 990 | 0.07 | 0.08 | 0.02 | -0.97 | 1210 |
| Relationship dissolutions | | | | | | | | | | |
| Number of breakups | 0.46 | 0.37 | 0.04 | 1.95 [†] | 898 | 0.55 | 0.39 | 0.04 | 3.70*** | 1126 |
| Ever divorced by age 34 ^d | 0.09 | 0.06 | 0.02 | 1.19 | 510 | 0.10 | 0.08 | 0.02 | 1.06 | 694 |

Note. Means and sample sizes from matched samples are shown. ^a Heavy drinkers (4 or more drinks in a row in last 2 weeks at age 16); ^b nonheavy drinkers (not 4 or more drinks in a row in last 2 weeks at age 16); ^c SE = difference between heavy and nonheavy drinkers; ^d proportions. [†]*p* < .10; **p* < .05; ***p* < .01; ****p* < .001.

TABLE 3. *Estimated Effect of Heavy Drinking on Males’ Relationship Outcomes by Social Class*

| | Middle-class males | | | | | Working-class males | | | | |
|--------------------------------------|--------------------|-----------------------|-----------------|-------------------|----------|---------------------|-----------------------|-----------------|--------------------|----------|
| | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> |
| Cohabitation | | | | | | | | | | |
| Ever by age 34 ^d | 0.80 | 0.74 | 0.04 | 1.68 [†] | 506 | 0.85 | 0.67 | 0.04 | 4.66*** | 484 |
| Age of entry (years) | 24.67 | 25.30 | 0.38 | -1.63 | 390 | 23.69 | 24.52 | 0.38 | -2.17* | 400 |
| By age 21 ^d | 0.13 | 0.12 | 0.03 | 0.27 | 492 | 0.25 | 0.11 | 0.03 | 3.87*** | 474 |
| Marriage | | | | | | | | | | |
| Ever by age 34 ^d | 0.55 | 0.45 | 0.04 | 2.14* | 506 | 0.48 | 0.50 | 0.05 | -0.45 | 484 |
| Age of entry (years) | 26.52 | 26.34 | 0.36 | 0.50 | 276 | 25.28 | 26.12 | 0.44 | -1.92 [†] | 234 |
| By age 21 ^d | 0.01 | 0.01 | 0.01 | 0.45 | 506 | 0.07 | 0.01 | 0.02 | 3.22** | 484 |
| Remained single ^d | 0.10 | 0.13 | 0.03 | -0.97 | 506 | 0.08 | 0.20 | 0.03 | -3.71*** | 484 |
| Relationship dissolutions | | | | | | | | | | |
| Number of breakups | 0.41 | 0.36 | 0.06 | 0.80 | 454 | 0.50 | 0.41 | 0.06 | 1.49 | 444 |
| Ever divorced by age 34 ^d | 0.03 | 0.04 | 0.02 | -0.64 | 276 | 0.15 | 0.08 | 0.04 | 1.85 [†] | 234 |

Note. Means and sample sizes from matched samples are shown. ^a Heavy drinkers (4 or more drinks in a row in last 2 weeks at age 16); ^b nonheavy drinkers (not 4 or more drinks in a row in last 2 weeks at age 16); ^c SE = difference between heavy and nonheavy drinkers; ^d proportions. [†]*p* < .10; **p* < .05; ***p* < .01; ****p* < .001.

which one case in each pair was a heavy drinker and one was not. The reduced sample sizes in subsequent analyses reflect one-to-one matching of heavy drinkers (treatment group, $n = 1049$) to nonheavy drinkers. We tested our hypotheses by comparing mean differences. Age 16 heavy drinking by social class was examined by conducting similar analyses separately for middle- and working-class males and females.

Results

Prior to balancing across heavy drinking status, there were a number of significant or trend-level childhood correlates of heavy drinking at age 16 for males and females (see Table 1). The matching procedure resulted in comparison groups with less bias because we controlled for selection effects into heavy drinking (based on the variables we accounted for).

Partnership Type and Timing: Cohabitation and Marriage

Using the matched samples, heavy-drinking males were more likely to ever cohabit by age 34 (82%) than nonheavy-drinking males (69%; see Table 2). For females, the difference was marginally significant (83% vs. 79%). Across both genders, heavy drinkers entered into cohabiting relationships earlier than nonheavy drinkers (males: $M = 24.2$ vs. 24.8 years; females: $M = 22.8$ vs. 23.4 years) and were more likely to cohabit by age 21 (males: 19% vs. 12%; females: 30% vs. 23%). Heavy-drinking males entered into marriage earlier than non-heavy-drinking males ($M = 26.0$ vs. 26.6 years). Similarly, heavy drinking males were more likely to be married by age 21 compared to nonheavy-drinking males (4% vs. 1%). Females showed no differences in age of

entry into marriage or the likelihood of marriage by age 21, as a function of adolescent heavy drinking.

Relationship Stability: Breakups and Divorce

A greater number of dissolutions of cohabiting and marital relationships from ages 16 to 34 were reported by heavy-drinking males ($M = 0.46$ breakups) and females ($M = 0.55$) compared to their nonheavy-drinking counterparts ($M = 0.37$ and $M = 0.39$, for males and females, respectively), although the effect for males was marginal. There were no differences among ever married males or females in the likelihood of divorce (i.e., marriage-only breakups) as a function of heavy drinking in adolescence. Heavy-drinking males, but not females, were less likely to remain single (i.e., more likely to have entered into at least one cohabiting or marital relationship) across the study period compared to nonheavy-drinking males (9% vs. 16%).

Differences by Social Class

Males. Heavy drinking in adolescence predicted more relationship outcomes, and at greater magnitudes, for males from working-class backgrounds than for males from middle-class backgrounds (see Table 3). Among working-class males, adolescent heavy drinkers were more likely to experience at least one cohabiting relationship (85% of heavy drinkers vs. 67% of nonheavy drinkers), cohabit at an earlier age (23.7 vs. 24.5 years), cohabit by age 21 (25% vs. 11%), and marry by age 21 (7% vs. 1%), and they were less likely to remain single across the study period (8% vs. 20%). That is, compared to adolescent heavy drinkers, nonheavy drinkers from working-class backgrounds delayed entry into cohabiting and marital relationships by almost one year. Further, compared to nonheavy drinkers, heavy drinkers from working-class

TABLE 4. Estimated Effect of Heavy Drinking on Females' Relationship Outcomes by Social Class

| | Middle-class females | | | | | Working-class females | | | | |
|--------------------------------------|----------------------|-----------------------|-----------------|----------|----------|-----------------------|-----------------------|-----------------|----------|----------|
| | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> | Heavy ^a | Nonheavy ^b | SE ^c | <i>t</i> | <i>n</i> |
| Cohabitation | | | | | | | | | | |
| Ever by age 34 ^d | 0.82 | 0.78 | 0.03 | 1.28 | 556 | 0.84 | 0.76 | 0.03 | 2.85** | 652 |
| Age of entry (years) | 23.16 | 24.00 | 0.35 | -2.38* | 444 | 22.52 | 23.30 | 0.32 | -2.46* | 528 |
| By age 21 ^d | 0.26 | 0.18 | 0.04 | 2.09* | 542 | 0.34 | 0.22 | 0.04 | 3.22** | 630 |
| Marriage | | | | | | | | | | |
| Ever by age 34 ^d | 0.58 | 0.62 | 0.04 | -1.04 | 556 | 0.57 | 0.65 | 0.04 | -2.01* | 652 |
| Age of entry (years) | 25.04 | 25.33 | 0.40 | -0.73 | 322 | 24.30 | 24.81 | 0.37 | -1.38 | 372 |
| By age 21 ^d | 0.07 | 0.04 | 0.02 | 1.29 | 556 | 0.12 | 0.11 | 0.03 | 0.49 | 652 |
| Remained single ^d | 0.07 | 0.09 | 0.02 | -1.09 | 558 | 0.07 | 0.06 | 0.02 | 0.47 | 652 |
| Relationship dissolutions | | | | | | | | | | |
| Number of breakups | 0.60 | 0.44 | 0.07 | 2.38* | 520 | 0.50 | 0.40 | 0.06 | 1.82† | 606 |
| Ever divorced by age 34 ^d | 0.13 | 0.08 | 0.03 | 1.45 | 322 | 0.08 | 0.07 | 0.03 | 0.41 | 372 |

Note. Means and sample sizes from matched samples are shown. ^a Heavy drinkers (4 or more drinks in a row in last 2 weeks at age 16); ^b nonheavy drinkers (not 4 or more drinks in a row in last 2 weeks at age 16); ^c SE = difference between heavy and nonheavy drinkers; ^d proportions.

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

backgrounds had twice the likelihood of divorcing (15% vs. 8%; although this effect had marginal significance).

On the other hand, the effects of adolescent heavy drinking on relationship outcomes were minimal for males from middle-class backgrounds. Heavy-drinking males from middle-class, but not working-class, families were more likely to marry by age 34 (55%) than nonheavy drinkers (45%). The effect on ever cohabiting among middle-class males was marginal (80% of heavy drinkers vs. 74% of nonheavy drinkers).

Females. Among females, three effects of heavy drinking were consistent across social class: age of cohabitation, early cohabitation, and number of breakups (see Table 4). Heavy-drinking females from both middle-class (23.2 years for heavy drinkers vs. 24.0 years for nonheavy drinkers) and working-class (22.5 years vs. 23.3 years) backgrounds tended to cohabit at earlier ages than their nonheavy-drinking counterparts. Heavy-drinking females were more likely than nonheavy-drinking females to cohabit by age 21 (middle class: 26% vs. 18%; working class: 34% vs. 22%). Heavy-drinking females reported more breakups of committed relationships than nonheavy-drinking females, which varied significantly among middle-class females (0.60 vs. 0.44 breakups) but only marginally so among working-class females (0.50 vs. 0.40 breakups). In addition, among working-class females, heavy drinkers were more likely than nonheavy drinkers to have ever cohabited (84% vs. 76%) and, unexpectedly, were less likely to have ever been married (57% vs. 65%); these effects were in the same direction but were not significant for middle-class females.

Discussion

Adolescents who reported heavy drinking at age 16 were more likely, over the next 18 years of their lives, to cohabit and to transition at younger ages into committed romantic relationships, yet they were also less likely to maintain stability within those relationships. Building on seminal early research documenting relational consequences of substance use (Kandel et al., 1986; Newcomb, 1986), our careful analysis of a long-term, longitudinal birth cohort through age 34 provides contemporary empirical evidence that after balancing across a wide range of family and individual childhood predictors, adolescents who reported a recent heavy-drinking episode at age 16 experienced earlier entry into committed romantic relationships and less stability of these relationships into their mid-30s. Supporting previous theoretical arguments, earlier heavy alcohol use forecasted earlier transitions and greater dissolutions of committed relationships. Further, heavy drinking in adolescence predicted at least one type of relationship outcome for each gender by social class group and predicted a greater likelihood of cohabiting across all groups. These outcomes were independent

of a wide range of potential rival common causes, or selection effects, as measured by childhood risk factors for heavy drinking, although conclusions are limited by the childhood risk factors that were available.

Adolescent heavy drinkers had an increased likelihood of experiencing less stable committed partnerships, as evidenced through the increased dissolution of cohabiting and marital bonds through age 34 (e.g., Newcomb, 1986, 1994). Pseudomaturity theory proposes that adolescent substance users transition into adult roles at younger ages than their peers, without having had the time to develop the skills to be successful in these roles (Newcomb, 1987). Consistent with self-derogation theory, adolescent heavy drinkers may be more likely to cohabit because they are less likely to conform to traditional social roles. Additional explanations may lie in the physiological effects of the drug itself. Alcohol is typically consumed in social settings to reduce social inhibitions, potentially facilitating immediate interactions with potential romantic partners but not the skills to maintain stability within those relationships.

Committed relationships were impacted by heavy drinking in adolescence for both males and females (e.g., Newcomb, 1994; Newcomb & Jack, 1995). Adolescent heavy-drinking males and females were more likely to cohabit at an earlier age and to experience more relationship dissolutions. Interestingly, male and female adolescent heavy drinkers were more similar than male and female nonheavy drinkers (e.g., similar rates of ever cohabiting, ever marrying, and remaining single). However, a few distinct patterns emerged by gender, such that heavy drinking males, but not females, were more likely to marry earlier.

Adolescents from working-class families may be more vulnerable to the deleterious effects of adolescent heavy alcohol use because they have fewer personal, family, and social resources available to deal with the challenges of transitioning into adult social roles (Osgood et al., 2005). We found that heavy-drinking adolescent males and females from working-class families were more likely to cohabit, to cohabit at an earlier age, and to marry by age 21. Working-class adolescents are less likely to obtain higher education credentials and to earn higher wages in adulthood, which may make relationships more challenging.

Limitations

A few limitations are important to note. First, a national teacher strike during data collection at age 16 reduced the number of participants at that critical age point. Second, heavy drinking was assessed at only one time point in adolescence and by a single-item self-report measure. Third, as with any covariance adjustment, propensity score methods are limited by unmeasured covariates (e.g., parents' alcohol use was not assessed). Finally, we did not evaluate the quality of committed partnerships or whether a particular breakup represented a positive or negative outcome.

- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, *112*, 64–105.
- Hill, K. G., White, H. R., Chung, I.-J., Hawkins, J. D., & Catalano, R. F. (2000). Early adult outcomes of adolescent binge drinking: Person- and variable-centered analyses of binge drinking trajectories. *Alcoholism: Clinical and Experimental Research*, *24*, 892–901.
- Homish, G. G., & Leonard, K. E. (2007). The drinking partnership and marital satisfaction: The longitudinal influence of discrepant drinking. *Journal of Consulting and Clinical Psychology*, *75*, 43–51.
- Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2002). *Monitoring the future: National survey results on drug use, 1975–2001. Vol. II: College students and adults ages 19–40* (NIH Publication No. 02–5107). Bethesda, MD: National Institute on Drug Abuse.
- Kairouz, S., & Greenfield, T. K. (2007). A comparative multi-level analysis of contextual drinking in American and Canadian adults. *Addiction*, *102*, 71–80.
- Kandel, D. B., Davies, M., Karus, D., & Yamaguchi, K. (1986). The consequences in young adulthood of adolescent drug involvement. *Archives of General Psychiatry*, *43*, 746–754.
- Kuntsche, S., Knibbe, R. A., & Gmel, G. (2009). Social roles and alcohol consumption: A study of 10 industrialised countries. *Social Science and Medicine*, *68*, 1263–1270.
- Kuznicki, J. (2011). Marriage against the state toward a new view of civil marriage. *Policy Analysis*, (671), 1–16.
- Leonard, K. E., & Homish, G. G. (2008). Predictors of heavy drinking and drinking problems over the first 4 years of marriage. *Psychology of Addictive Behaviors*, *22*, 25–35.
- Leuven, E., & Sianesi, B. (2003). *PSMATCH2: Stata module to perform full Mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing*. Statistical Software Components S432001, Boston College Department of Economics, revised 28 Dec 2006, Boston, MA.
- Maggs, J. L., Frome, P. M., Eccles, J. S., & Barber, B. L. (1997). Psychosocial resources, adolescent risk behaviour and young adult adjustment: Is risk taking more dangerous for some than others? *Journal of Adolescence*, *20*, 103–119.
- Martino, S. C., Collins, R. L., & Ellickson, P. L. (2004). Substance use and early marriage. *Journal of Marriage and the Family*, *66*, 244–257.
- Morr Serewicz, M. C., & Gale, E. (2008). First-date scripts: Gender roles, context, and relationship. *Sex Roles*, *58*, 149–164.
- Muthen, B. O., & Muthen, L. K. (2000). The development of heavy drinking and alcohol-related problems from ages 18 to 37 in a U. S. national sample. *Journal of Studies on Alcohol*, *61*, 290–300.
- National Institute on Alcohol Abuse and Alcoholism. (2009). *NIAAA strategic plan: Alcohol use across the lifespan*. A publication of the U.S. Department of Health and Human Services and the National Institutes of Health. Retrieved from <http://www.niaaa.nih.gov/about-niaaa/our-work/strategic-plan>
- Newcomb, M. D. (1986). Cohabitation, marriage, and divorce among adolescents and young adults. *Journal of Social and Personal Relationships*, *3*, 473–494.
- Newcomb, M. D. (1987). Consequences of teenage drug use: The transition from adolescence to young adulthood. *Drugs and Society*, *1*, 25–60.
- Newcomb, M. D. (1994). Drug use and intimate relationships among women and men: Separating specific from general effects in prospective data using structural equation models. *Journal of Consulting and Clinical Psychology*, *62*, 463–476.
- Newcomb, M. D., & Bentler, P. M. (1988). Impact of adolescent drug use and social support on problems of young adults: A longitudinal study. *Journal of Abnormal Psychology*, *97*, 64–75.
- Newcomb, M. D., & Jack, L. (1995). Drug use, agency, and communality: Causes and consequences among adults. *Psychology of Addictive Behaviors*, *9*, 67–82.
- Niemela, S., Sourander, A., Poikolainen, K., Helenius, H., Sillanmaki, L., Parkkola, K.,...Moilanen, I. (2006). Childhood predictors of drunkenness in late adolescence among males: A 10-year population-based follow-up study. *Addiction*, *101*, 512–521.
- Osgood, D. W., Ruth, G., Eccles, J. S., Jacobs, J., E., & Barber, B. L. (2005). Six paths to adulthood: Fast starters, parents without careers, educated partners, educated singles, working singles, and slow starters. In R. A. J. Settersten, F. F. J. Furstenberg, & R. G. Rumbaut (Eds.), *On the frontier of adulthood: Theory, research, and public policy* (pp. 591). Chicago, IL: University of Chicago Press.
- Roos, E., Lahelma, E., & Rahkonen, O. (2006). Work-family conflicts and drinking behaviours among employed men and women. *Drug and Alcohol Dependence*, *83*, 49–56.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, *70*, 41–55.
- Shepherd, P. (1997). Survey and response. In J. Bynner, E. Ferri & P. Shepherd (Eds.), *Twenty-something in the 1990s: Getting on, getting by, getting nowhere* (pp. 129–136). Hampshire, UK: Ashgate.
- Simmonds, N., Fuller, E., Lessof, C., & Foundouli, V. (2007). 1970 British Cohort Study: 2004–2005 Survey technical report. Retrieved from http://search.ioe.ac.uk/search?q=1970+British+Cohort+Study%3A+2004%E2%80%932005+Survey+technical+report&site=CLS_New&client=CLS_New&output=xml_no_dtd&proxystylesheet=CLS_New&proxyreload=1
- Smith, G. T., McCarthy, D. M., & Goldman, M. S. (1995). Self-reported drinking and alcohol-related problems among early adolescents: Dimensionality and validity over 24 months. *Journal of Studies on Alcohol*, *56*, 383–394.
- Steele, F., Kallis, C., & Joshi, H. (2006). The formation and outcomes of cohabiting and marital partnerships in early adulthood: The role of previous partner experience. *Journal of the Royal Statistical Society, Series A*, *4*, 759–779.
- Vega, W. A., Aguilar-Gaxiola, S., Andrade, L., Bijl, R., Borges, G., & Caraveo-Anduaga, J. J. (2002). Prevalence and age of onset for drug use in seven international sites: Results from the International Consortium of Psychiatric Epidemiology. *Drug and Alcohol Dependence*, *68*, 285–297.
- Wiles, N. J., Lingford-Hughes, A., Daniel, J., Hickman, M., Farrell, M., Macleod, J.,...Lewis, G. (2007). Socio-economic status in childhood and later alcohol use: A systematic review. *Addiction*, *102*, 1546–1563.

Lela Rankin Williams, assistant professor, School of Social Work, Arizona State University; **Laura Wray-Lake**, assistant professor, Psychology, School of Behavioral and Organizational Sciences, Claremont Graduate University; **Eric Loken**, research associate professor, and **Jennifer L. Maggs**, professor, Department of Human Development and Family Studies, Pennsylvania State University. Correspondence: lrw@asu.edu; School of Social Work, Arizona State University, Phoenix, AZ 85004.

Authors' note. This research was supported by National Institute of Alcohol Abuse and Alcoholism grants AA015535 and AA019696 to J. Maggs. We are grateful to The Centre for Longitudinal Studies, Institute of Education for the use of these data and to the UK Data Archive and Economic and Social Data Service for making them available. However, they bear no responsibility for the analysis or interpretation of these data.

Manuscript received: February 14, 2011
 Revised: June 3, 2011
 Accepted: July 11, 2011
 Disposition editor: Sondra J. Fogel