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Trajectories and correlates of reasons for abstaining or limiting drinking during adolescence☆

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HIGHLIGHTS

- Reasons for abstaining/limiting drinking (RALD) declined over adolescence.
- Decline in RALD was fastest among adolescents with lifetime drinking experience.
- Boys reported lower RALD than girls.
- The pace of change in RALD across time did not differ by gender.

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ABSTRACT

Introduction: Our aim was to enhance understanding of the trajectory of reasons for abstaining and limiting drinking (RALD) over the course of adolescence and how RALD levels or trajectories may differ based on lifetime experience with alcohol and/or gender.
Methods: Participants were 1023 middle school students (52% female) who completed online surveys at baseline and five follow-ups over a 3-year period, assessing lifetime sip and full drink of alcohol and RALD. Hierarchical linear models were used to estimate change over time in total RALD and RALD subscales (upbringing, performance/control). Between-person (gender and drinking status) correlates of average RALD and change in RALD over time were considered.
Results: RALD total and subscale scores significantly decreased over time (ages 10.5–16.5). Drinking experience in both milestones (sip, full drink) was found to be a significant moderator of change in RALD over time; decline was fastest among adolescents reporting lifetime experience with drinking. Boys reported lower RALD, though the pace of change in RALD across time did not differ by gender.
Conclusions: This was the first study to report prospective changes in the cognitive domain of RALD among young adolescents. That change over time in RALD is moderated by drinking experience suggests an increased risk among those with earlier drinking experience. Findings highlight the importance of considering sipping, not just consumption of a full drink, as a pivotal developmental milestone. Prevention efforts that target RALD are implicated and parent-based intervention strategies may be beneficial.

1. Introduction

Adolescence (Brown et al., 2008; Windle et al., 2008) is an important developmental period in which to study drinking, as alcohol use can presage future heavy drinking, alcohol use disorders, and other problem behavior (Blomeyer et al., 2011; Brook et al., 2010; Heron et al., 2012; Hingson, Heeren, & Winter, 2006; Mason & Spoth, 2012). Sixteen to 20% of youth report that they first consumed alcohol prior to age 13 (Eaton et al., 2012; Substance Abuse & Health Services Administration, 2012). Drinking prevalence is high even among very young adolescents, with 10%, 16%, and 29% of fourth, fifth, and sixth graders, respectively, reporting having tried more than a sip of alcohol (Donovan et al., 2004). Between eighth and twelfth grade, lifetime prevalence of alcohol use increases from 33% to 70%, and the percent of adolescents who report being drunk increases from 15% to 51% (Johnston, O'Malley, Bachman, & Schulenberg, 2012). Understanding such increases in risk behavior remains an important task.

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Cognitions related to drinking also change during adolescence, not only impacting, but also being impacted by alcohol use. For example, explicit positive cognitions regarding alcohol (i.e., expectancies) are higher, while negative cognitions are lower for students in later grades among both abstainers and drinkers (Thush & Wiers, 2007). Drinking motives also increase over time among adolescents (Cooper, 1994; Cooper et al., 2008; Schelleman-Offermans, Kuntsche, & Knibbe, 2011). A potentially important but relatively understudied cognitive factor is one's reasons for abstaining or limiting drinking (RALD; Epler, Sher, & Piasecki, 2009). The goals of the present study are to enhance understanding of the trajectory of RALD over adolescence and how RALD levels or trajectories differ based on lifetime experience with alcohol and/or gender.

1.1. Reasons for abstaining or limiting drinking (RALD)

A great deal of research on adolescent cognitions about drinking emphasizes motives for drinking (for review see Kuntsche, Knibbe, Gmel, & Engels, 2005). However, drinking motivations may be less developed for those who have limited drinking experience, making RALD more relevant for young adolescents. An understanding of factors that insulate against vs promote risky drinking is essential for effective prevention program development. The literature on RALD among younger adolescents is particularly limited, despite the fact that younger adolescence is a time period during which cognitions about alcohol use may be particularly dynamic.

Across studies, multiple domains of RALD have been proposed and observed, including personal and social motives; upbringing, religious, or moral concerns; need for self-control and performance goals; past problems; and risk of harm (Epler et al., 2009, Greenfield, Guydish, & Temple, 1989; Huang, DeJong, Towvim, & Schneider, 2009, Huang, DeJong, Schneider, & Towvim, 2011; Palfai & Ralston, 2011; Stritzke & Butt, 2001). One of the earliest measures was developed in a sample of college students (Greenfield et al., 1989) and later used among adolescents, though without examining the factor structure in this population (Chassin & Barrera, 1993). In the present study, given inconsistencies across the literature and the likelihood that RALD may differ for younger adolescents, we factor analyzed a modified version of this measure in our sample prior to running substantive analyses.

1.2. Change in RALD over time

As youth age and obtain information related to alcohol use both vicariously (via the media, observing friends and family members) and through personal experience with alcohol (Dawson, 2000), the extent to which they endorse RALD may also change. A dynamic reciprocal interplay may occur such that RALD influence actual drinking behavior while experience with drinking shapes cognitions such as RALD. One of the few examinations of RALD among adolescents was cross-sectional, demonstrating that students in higher grades report fewer non-drinking motives (Anderson, Grunwald, Bekman, Brown, & Grant, 2011). Similar results have been observed using longitudinal data among college students (Epler et al., 2009; Huang et al., 2011). To our knowledge, no study has used *longitudinal adolescent samples* to examine *within-person change over time* in endorsement rates of RALD. This is important, as between-person age/grade differences may not mirror the patterns observed in within-person trajectories of RALD over time.

1.3. Correlates of RALD

1.3.1. Gender

Research findings are mixed, with evidence for lower endorsement of RALD by males in some (Anderson et al., 2011; Bekman et al., 2011) but not all adolescent samples (Stritzke & Butt, 2001). Males also report lower RALD in general population (Bernards, Graham, Kuendig, Hettige, & Obot, 2009) and college student samples (Greenfield et al., 1989), though one study observed this to hold true only for one subscale of RALD (Epler et al., 2009). In this study, only mean levels of Loss of Control reasons (beliefs that one would become rude or obnoxious, lose control, become alcoholic, and get into trouble) were lower for males; Adverse Consequences (drinking costs too much, worry about becoming ill, and interferes with responsibilities), and Convictions (religion and friends against drinking) were not. Regarding age changes in RALD, Epler et al. (2009) also demonstrated that Loss of Control RALD decreased more quickly over time among women.

1.3.2. Alcohol consumption

Direct drinking experience may influence alcohol-related cognitions such as RALD. Other alcohol-related cognitions, such as expectancies, increase as a function of increased drinking (Smith, Goldman, Greenbaum, & Christiansen, 1995). According to self-perception theory (Bem, 1972), upon noticing that one is engaging in a behavior, an individual may conclude that he or she has a positive attitude toward that behavior. Positive attitudes may also develop if negative consequences are not experienced, or through interactions with peers who drink and in turn hold and share their own positive attitudes, or via parental permissiveness. As such, adolescents who have used alcohol, for a range of reasons, may begin to rate RALD as less important. Further, *decreases* in RALD over time may occur more quickly among those youth who have experience with drinking.

Cross-sectional research suggests that higher RALD is associated with lower rates of drinking among both adolescents (Anderson et al., 2011; Stritzke & Butt, 2001) and college students (Greenfield et al., 1989; Huang et al., 2011). However, prospective investigations are critical. While transitions in drinking patterns relate to RALD for emerging adults (Epler & Sher, 2011; Epler et al., 2009), little longitudinal research examines the ways in which alcohol use may precede RALD. Anderson, Briggs, and White (2013) examined the link between alcohol use and RALD three years later in three cohorts, ages 15, 18, and 21. Higher baseline alcohol consumption was related to lower RALD in the domains of Loss of Control and Adverse Consequences in the youngest cohort, and in the domain of Convictions for the middle cohort. The ways in which alcohol use influences RALD in younger adolescents and across less coarse age intervals is unknown.

Table 1
Bivariate correlations and RALD descriptive statistics.

	1	2	3	4	5	M%	SD
1. RALD combined						2.96	.57
2. RALD upbringing	.95**					2.69	.60
3. RALD performance/control	.92**	.75**				2.97	.62
4. Male gender	−.06	−.05	−.07*			48%	
5. Lifetime sip	−.16**	−.24**	−.04	−.07*		66%	
6. Lifetime full drink	−.35**	−.42**	−.21**	−.13**	.44**	28%	

Note: RALD scores were averaged across all waves in order to calculate descriptive statistics and correlations; gender coded as 1 = Male, 0 = Female.
* $p < .05$.
** $p < .01$.