



# REPOSITORIO DIGITAL UNIVERSITARIO (RDU-UNC)

## Socioeconomic inequalities in alcohol consumption in Argentina: comparative analysis 2009-2013

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### ELSA 2016 COHORT: ASSOCIATION BETWEEN EARLY ALCOHOL, TOBACCO, OR MARIJUANA USE AND SUBSTANCE USE IN ARGENTINEAN COLLEGE FRESHMEN.

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Earlier alcohol, tobacco, or marijuana consumption is associated with a greater risk of developing drug-related problems, including substance use disorders. Some authors have postulated that this risk is substance-specific (i.e., early alcohol use leads to alcohol- but not marijuana-related problems). Other authors have suggested a broader effect, in which the initiation of use of any substance (e.g., alcohol or tobacco) heightens the risk of using these and other psychoactive substances. The present study examined, in a large sample (n = 4083; 40.1% men; mean age =  $19.39 \pm 2.18$  years) of Argentinean college freshmen, the association between age of onset (early, late) of alcohol, tobacco, and marijuana use and different indicators of substance use. Participants completed a survey that measured age of onset of alcohol, tobacco and marijuana use and different indicators of use (for each substance). The effect of age of first use on substance use was analyzed separately for each substance using the  $\chi^2$  test or Student's t-test for nominal and continuous dependent variables, respectively. These analyses were conducted in the subsample that had reported lifetime use of each substance. Results: Overall, results showed that the onset of alcohol use preceded the use of tobacco, which, in turn, preceded the use of marijuana. We identified substance-specific associations: early use of alcohol, tobacco, and marijuana was associated with a higher likelihood of consuming each of these substances. Despite this, an early drinking onset was significantly associated with a greater occurrence of all indicators of tobacco and marijuana use. Moreover, the effect sizes of the associations between early drinking onset and subsequent use of all three substances were larger than the effect of early tobacco or marihuana use on subsequent use of these substances. Discussion: Altogether, our findings suggested that alcohol was the entry-point substance for the majority of the participants and a broader effect of alcohol initiation that heightens the risk of consuming alcohol and using other substances. The findings suggest that programs directed toward delaying the onset of alcohol use may be particularly useful among these individuals.

#### SOCIOECONOMIC INEQUALITIES IN ALCOHOL CONSUMPTION IN ARGENTINA: COMPARATIVE ANALYSIS 2009–2013

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Research on socioeconomic inequalities in alcohol use has been a topic of increasing concern but not sufficiently understood. Traditionally, research about social inequalities in health suggests that individuals with lower socioeconomic status (SES) have poorer health than those who belong to higher socioeconomic groups (Dalstra, 2006). In regard to alcohol consumption there is sufficient evidence that is concentrated among more

favored individuals. Although lower socioeconomic groups exhibit higher rates of abstinence, heavy drinking is more prevalent among these individuals (Bloomfield et. Al, 2006). Low and middle income countries might present different patterns than developed countries. There is some evidence from Brazil showing that higher socioeconomic status is strongly associated with high risk drinking (Almeida-Filho, 2005). In Chile no socioeconomic gradient was found in heavy episodic drinking (HED), whereas heavy volume drinking is concentrated among higher SES individuals (Peña et al, 2017). There is a lack of enough evidence about SES inequalities in alcohol consumption in Argentina. The present study analyses SES inequalities in alcohol consumption and harmful use of alcohol in Argentina. Using data from National Survey of Risk Factors, waves 2009 and 2013, concentration indices (CI) are calculated for monthly prevalence and HED. The monthly prevalence shows a strong socioeconomic gradient, since the highest income quintile concentrates the biggest proportion of consumers in both periods. It is noticeable that the proportion of consumers in the lowest quintile is significantly higher in 2013 than in 2009. The CI for the total sample in both waves are statistically significant and greater than zero, showing that monthly prevalence is concentrated in higher SES individuals. This result indicates that alcohol is a "normal good", since its consumption grows with the per capita household income level. In regard with HED, it increased throughout all age groups and income levels, between the two waves. The highest HED prevalence is found in the 18-34 aged group. In spite the CI for HED for the total sample in both waves are pro-poor, CI for subsamples reveal a different pattern of inequality in 2013 respect 2009: HED is pro-rich among young people aged 18-34 living in larger cities, while CI is still pro-poor for the rest. This result contrasts with Peña et al. 2017, and suggest the convenience of targeted alcohol interventions.

#### ASSESMENT OF COGNITIVE EFFECTS OF BINGE DRINKING AT ADOLESCENCE AND ADULHOOD IN RATS

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Binge drinking is a widespread behavior. A recent study reported that close to 60% of a sample of college students from Argentina consumed 4-5 drinks in 2 ≤ hours. These consumption patterns can yield short-and long-term negative consequences, including cognitive alterations. We study the effects of binge ethanol exposure during adolescence (postnatal days 30 to 60, PDs 30-60) or young adulthood (PDs 70-100) on anxiety response, exploration of novel environments and short-term memory. Specifically, we exposed adolescent or adult rats to self-administered (concentration: 8-10%) ethanol during the first two hours of the dark cycle, every other day for four weeks; or the rats were given only handling (control group) or were administered ethanol (i.p.) at doses that matched those ingested by the rats in the self-administration group. The rats were then tested in the light-dark box test (LDB), in an open field (OF) test and in a novel object recognition (NOR) test. The results indicated greater anxiety response in the LDB in male adolescent, but not in male adult, rats given binge or i.p. ethanol, relative to non-exposed controls. Adolescent, but not adult, rats exposed to self-administered binge ethanol exhibited heightened motor habituation during the open field assessment and more time spent interacting with the objects introduced in the arena during the NOR test. Level of short-term recognition memory, however, was similar across age, sex and history of ethanol