Parental Attitudes and Young Adult Alcohol Use: Evidence from the Raising Healthy Children Cohort

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Background: According to the 2023 National Survey on Drug Use and Health, 16.9 million young adults ages 18 to 25 reported drinking alcohol in the past month. Furthermore, 15.1% of these young adults also met the criteria for past-year alcohol use disorder (AUD). AUD can be defined as excessive alcohol use that causes symptoms affecting the body, thoughts, and behavior, with the key behavior of continuing to drink alcohol despite experiencing negative side effects. There has been a wide variety of research on family alcohol environment and alcohol use. Tael-Öeren et al. explored this topic in 2019, finding an increased risk of alcohol use in adolescents with less restrictive parental attitudes towards alcohol. These prior findings can drive our research question: how does parental response to alcohol use in youth relate to alcohol use in early adulthood?

Methods: This project utilizes the Raising Healthy Children cohort study, which was conducted by Dr. Jennifer A. Bailey at the University of Washington from 2004-2011. 1,040 individuals were recruited from 10 schools in a suburban school district in the Northwest United States. Students were recruited in 1993, when they were in the first or second grade, and data was collected from 2004-2011 when participants were 18, 21, and 24. 494 out of the 1,040 individuals consented to having their data archived. To answer our research question, we are focused on expected parental response to alcohol use at age 18 as our treatment or exposure, and lifetime AUD at age 24 as our outcome. For the exposure, 182 individuals indicated punishment in response to alcohol use, and 247 indicated no punishment. For our outcome, there are 149 participants with a lifetime AUD, and 332 participants without.

To estimate the causal effect between exposure and outcome, we used a propensity score model and a series of matching (1:1 greedy, caliper) and weighting (ATT) techniques to obtain odds ratio estimates. Techniques were compared using Love plots and Rubin's Rules. This model included 5 categorical covariates: max per capita household income, max parent education, race, sex, and ever received free/reduced lunch grades 1-5. Sensitivity analyses using Rosenbaum's Γ were conducted to assess model robustness to unmeasured confounding. 417 individuals with complete information on the exposure and outcome were included in this analysis, and missing covariates were produced by a single imputation model.

Results: Caliper matching within 0.2 and with replacement appeared to be the best at achieving covariate balance. This method yielded an odds ratio of 0.31 (95% CI: 0.22, 0.44), which suggests that a subject that expected parental punishment in response to alcohol use had 69% lower odds of alcohol abuse disorder at age 24, compared to a subject that did not expect parental punishment. The double robust model, which used linear propensity score and ATT weighting, also sufficiently balanced covariates. However, this method yielded an odds ratio of 0.45 (95% CI: 0.27, 0.74).

Conclusions: These results suggests that there may be lower odds for alcohol abuse in young adults who expect parental punishment in response to alcohol use, compared to young adults who do not. All techniques used reinforced this conclusion, with each estimate as well as the

95% CI falling below zero. This aligns with conclusions from previous research. There is reasonable evidence that relaxed attitudes around alcohol use in the home may be associated with increased risk of AUD. However, we cannot prove causal effect based on this evidence alone. These findings can inform and drive future exploration around family alcohol environment and young adult alcohol use.