



The Association Between Problem Drinking Parent(s) and Age when Started Drinking



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Introduction

- Genetic heritability is a known factor of alcohol misuse, and sex is a factor as well. There is even quantitative evidence that women have higher heritability of alcohol dependence than men (Ehlers, 2010).
- There is an established literary background about the association between family history of alcoholism and drinking trajectories (Warner, Wright, Johnson, 2007).
- Little research has been done on if genetic components impact the age when drinking begins, or significantly impacts the timeframe of other drinking milestones. This extends to the individual heritable differences between parents.
- This study will look at how sex, and individual parental factors influence the age when starting to drink (ASD), age at start of drinking >once a week (ASDR), and age at heaviest drinking period (AHDP).

Research Questions

- Is having one or more problem drinking parent(s) associated with an earlier age when starting to drink?
- Is there a stronger association resulting from the mother or father being a problem drinker?
- Is having one or more problem drinking parent(s) associated with other drinking milestones (ASDR & AHDP)?

Results

Univariate

- Just over 27% of respondents reported having at least one problem drinking parent.
- The average age respondents started drinking is 18.78 years with a standard deviation of 5.42.
- 24.24% of the sample scored "yes" on FPD, and 7.186% of the sample scored "yes" on MPD.

Bivariate

- ANOVA analysis showed that respondents with at least one problem drinking parent (21%) started drinking **significantly earlier than those without problem drinking parent(s)** (79%), $F=181.7$, 1 df, $p<2e-16$. There was a significant association with ASDR and AHDP as well.
- As predicted, PDparents significantly effects the age respondents started drinking, $diff=1.22$ years (95% CI: 1.04-1.40). (See Figure 1)

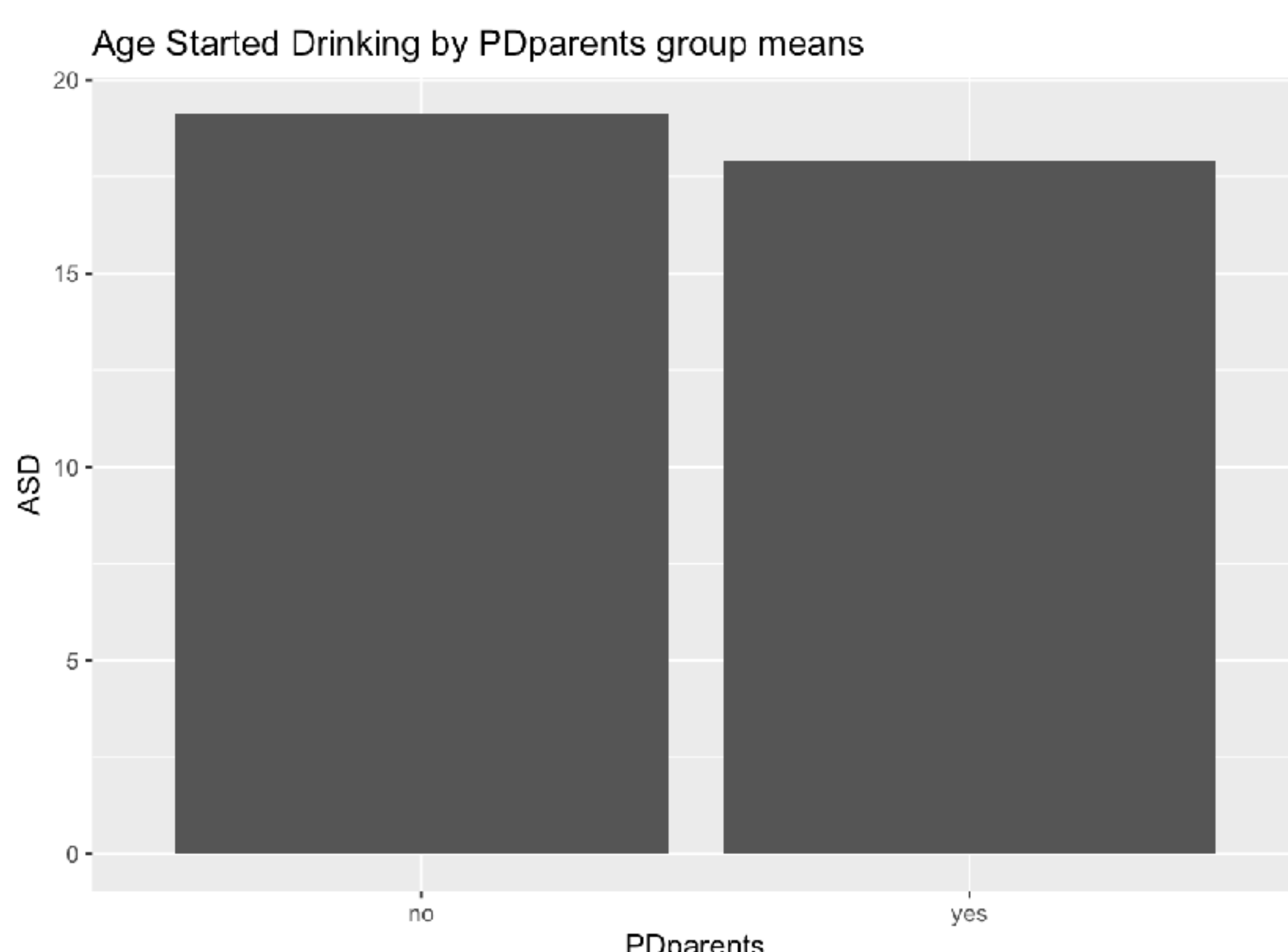


Figure 1: Bar Plot means by group: Age participants started drinking (ASD) by Problem Drinking Parents (PDparents)

Multivariate

- PDparents and sex (SEX) were significantly associated with age respondents started drinking (ASD).
- After controlling for sex, ASD was still significantly associated with PDparents, with those scoring "yes" on PDparents starting to drink about 1.38 years earlier than those who scored "no".
- After controlling for the sex of the participants, you can see a significant difference in samples. (Figure 2)

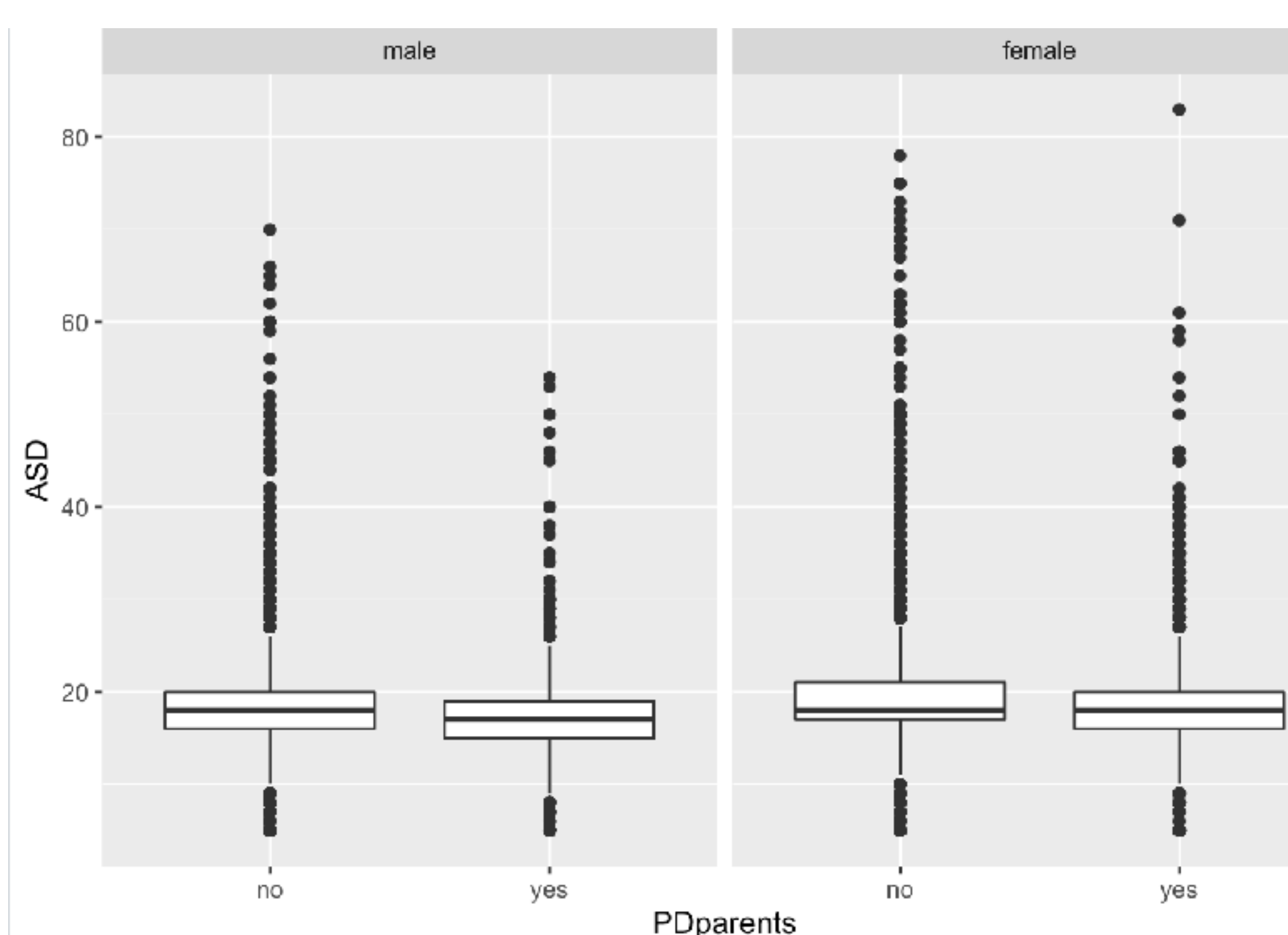


Figure 2: Box plots for age participants started drinking, separated by sex.

Multivariate (cont.)

- Sex is not a confounder, and after controlling for sex the age when starting to drink is still significantly associated with problem drinking parent(s)
- FPD, MPD, and sex (SEX) were all independently and significantly associated with ASD, ASDR, and AHDP independently.
- Whether or not the mother was a problem drinker (MPD) has more of an effect (1.44 years, SE = 0.1589) than if the father was a problem drinker (FPD) (1.11 years, SE = .09576).

Sample

- Sample Respondents (age 18+) who reported either having or not having at least one parent who is a problem drinker (n=17,979) were drawn from the first wave of the National Epidemiologic Study of Alcohol and Related Conditions (NESARC).
- NESARC is a nationally representative sample of non-institutionalized adults in the U.S.
- Participants who did not know if their parent(s) were problem drinkers were excluded from the sample (17,979 remaining sample pool)

Measures

- Problem drinking is defined as "a person who has physical or emotional problems because of drinking, problems with a spouse, family, or friends because of drinking, problems at work or school because of drinking, problems with the police because of drinking—like drunk driving, or a person who seems to spend a lot of time drinking or being hungover".
- Age Participants Started Drinking regularly (ASDR) is defined as greater than once a week.
- Father a problem drinker (FPD) and Mother a problem drinker (MPD) were scored either "yes" or "no". The variable "PDparents" was created by aggregating FPD & MPD; those who scored "yes" on either FPD and/or MPD were scored as "yes" and a "no" on both FPD and MPD was a "no" in PDparents.

Methods

Discussion

- Individuals with one or more problem drinking parent(s) start drinking (ASD) significantly earlier on average than those without problem drinking parent(s).
- Individuals with one or more problem drinking parent(s) start drinking regularly (ASDR) significantly earlier on average than those without problem drinking parent(s).
- Individuals with one or more problem drinking parent(s) have a significantly earlier on average age at heaviest drinking period (AHDP) than those without problem drinking parent(s).
- FPD, MPD, and sex were all independently and significantly associated with each ASD, ASDR, and AHDP, showing significance in lifelong drinking milestones/trajectories.
- It should be noted that many individuals who have problem drinking parent(s) or a family history of alcoholism never start drinking.
- Further research is needed to determine whether family history and/or home dynamics is more of an identifying factor for early signs of alcohol use than friends and community.

Models

- $modASD = 15.91 + FPD(no)1.11 + MPD(no)1.44 + SEX(female)1.64$
- $modASDR = 18.33 + FPD(no)1.59 + MPD(no)1.85 + SEX(female)3.03$
- $modAHDP = 23.70 + FPD(no)1.69 + MPD(no)1.99 + SEX(female)1.91$

Ehlers, C., Gizer, I., Vieten, C., Gilder, A., Gilder, D., Stouffer, G., Lau, P., & Wilhelmsen, K. (2010). Age at Regular Drinking, Clinical Course, and Heritability of Alcohol Dependence in the San Francisco Family Study: A Gender Analysis. *The American Journal on Addictions*, 19(2), 101–110. <https://doi.org/10.1111/j.1521-0391.2009.00021.x>

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