



WHO IS RESPONSIBLE?

Risk Factors for Heavy Episodic Drinking in Adolescent Girls in Ireland: A Cross-Sectional Secondary Analysis of Planet Youth Study in North Dublin, Cavan, and Monaghan Regions

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INTRODUCTION

Heavy Episodic Drinking (HED) or Binge Drinking refers to consuming alcohol in a single episode that results in a blood alcohol concentration level of 0.8g/dL(1).

In 2016, Ireland ranked **third** globally for HED among adolescent girls (61%), and fourth for adolescent boys (59%) (2). An estimated **90%** of adolescents have tried alcohol at least once by the age of 17 in Ireland in 2019 (3).

HED has both short and long-term health consequences ranging from impaired brain development to **200** different illnesses, injuries, and deaths (4, 5), where females are at **higher risk** due to smaller body masses and oestrogen hormones (6, 7).

Adolescents with poor parental supervision were thrice more likely to consume alcohol. Positive parental attitudes towards alcohol use strongly influence HED in adolescents especially when combined with peer pressure to drink (8).

Adolescent girls who consume alcohol demonstrate a strong selection of peers with heavy alcohol consumption (9). Associating with peers who engage in HED can increase the incidence of HED surpassing genetic and parental factors (9, 10).

Women with one episode of Adverse Childhood Event (ACE) were 1.36 times more likely to engage in HED (11). Internalising disorders including depression, anxiety, and stress vulnerability, are twice as likely to be seen in girls than boys (12, 13).

METHODOLOGY

The study design is a **cross-sectional secondary analysis** of the **Planet Youth** data to explore the relationship between different risk factors and HED.

Environmental risk factors associated with alcohol consumption and HED in adolescents selected for this study can be categorised as:

Parental Influence - Parental alcohol use, getting alcohol from parents, perceived parental reactions to drinking

Peer influences - Alcohol use in best friends and peers, getting alcohol from peers, and peer pressure to drink

Adverse Childhood Events (or Negative Life Events), and Mental Health Difficulties.

Research Objectives

- 1) To Investigate the relationship between identified risk factors and HED in adolescent girls using Planet Youth Data, by developing a regression model.
- 2) To test the significance of identified risk factors in adolescent boys by developing a regression model and identifying any gender-specific risk factors.

Sample descriptives were performed followed by chi-square tests and Pearson's 'r' correlation. Univariate logistic regression was conducted to ascertain the relationship between each independent variable and HED. **Binary logistic regression** was used to develop final regression models with all identified independent variables in both adolescent girls and boys.

RESULTS

In the **final regression model for girls**, perceived financial status was not statistically significant.

Parental alcohol use exhibited no statistical significance for HED (p =0.07). Perceived parental reactions to HED (aOR=2.144, 95% CI =1.538-2.988) and getting alcohol from parents/carers (aOR=2.464, 95%CI =1.764-3.443) were associated with engaging in HED (p=0.00), with a similar odd of 2.1 times and 2.4 times respectively.

Peer pressure to drink to be a part of a peer group was not associated with HED (p=0.808) in girls. There were 9.5 times the odds of engaging in HED when most of the peers consumed alcohol (aOR=9.50, 95% CI= 4.381-20.631). Getting alcohol from peers increased the odds of HED by 5.4 times (aOR=5.40, 95% CI= 3.670-7.962).

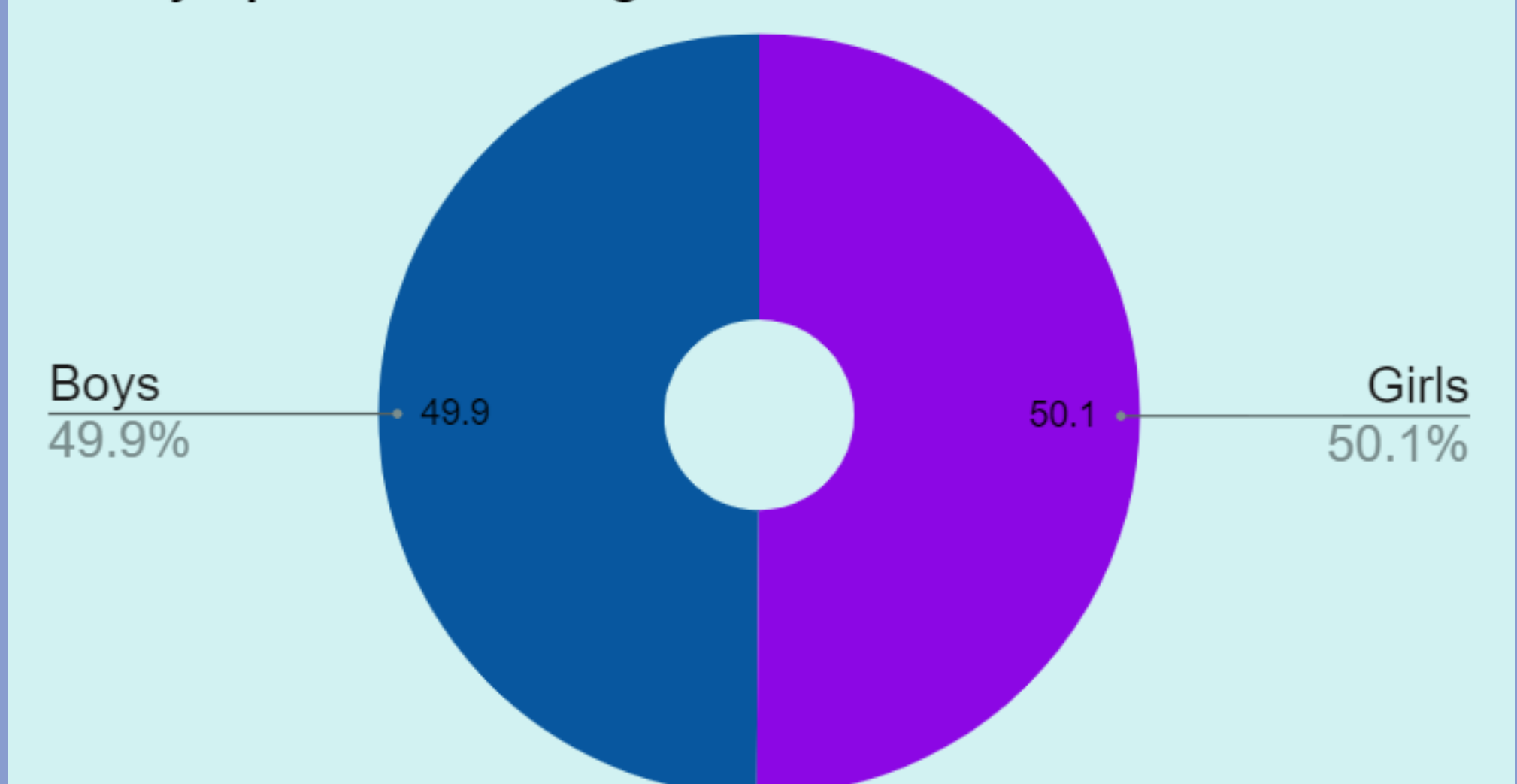
Experiencing 4-10 NLEs increased the odds of HED by 2 times (aOR=2.04, 95% CI= .994-4.200) while experiencing more than 10 events increased the odds of HED by 3.5 times (aOR=3.55, 95% CI= 1.406-8.965).

Symptoms of anxiety and symptoms of depressed mood were not associated with HED in adolescent girls.

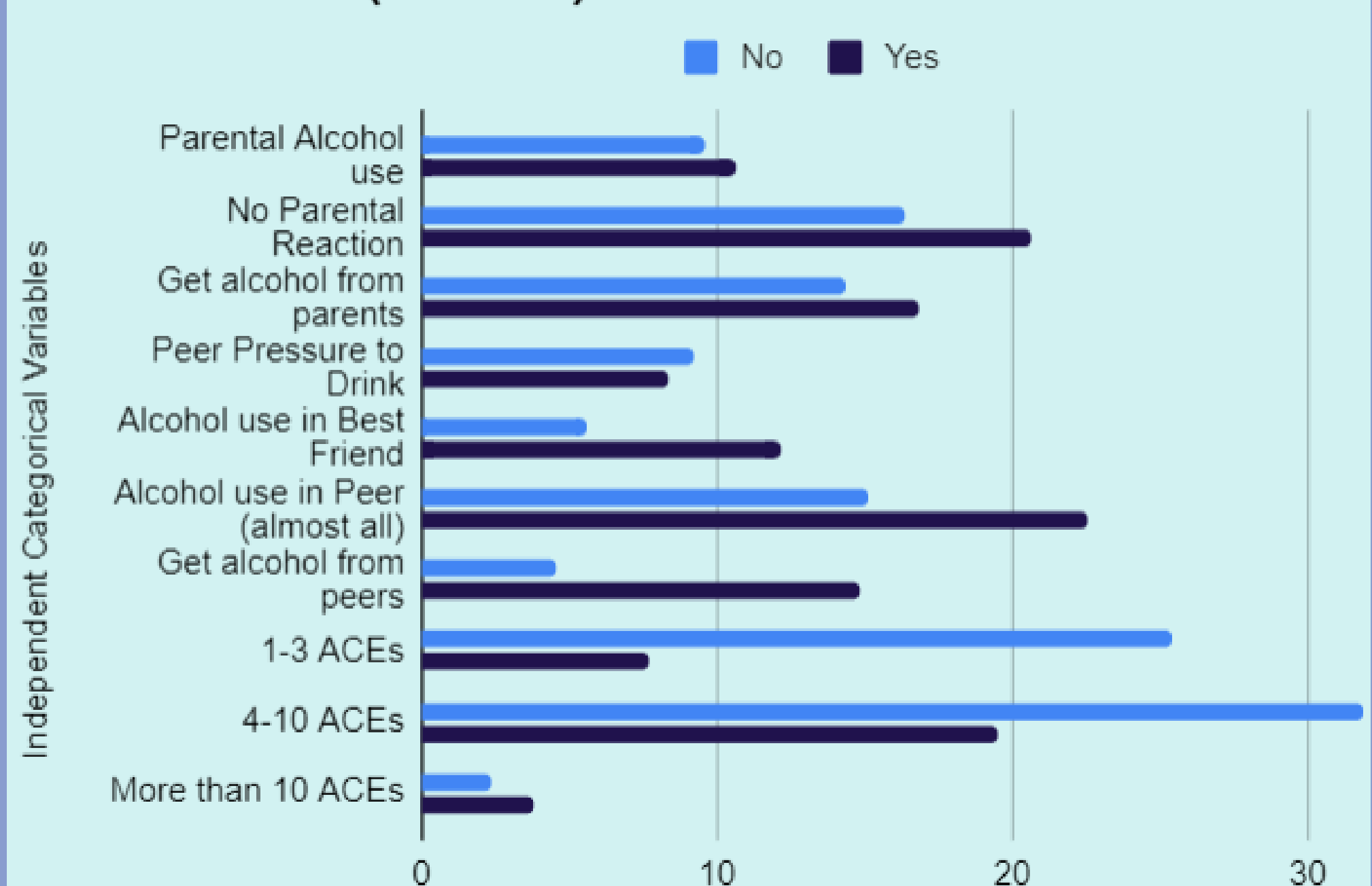
In the **final regression model for boys**, participants who identified as similar to others in terms of financial status were at 1.6 times the odds of engaging in HED. Getting alcohol from parents increased the odds of HED by 3 times. Alcohol use in some peers and alcohol use in almost all peers were statistically significant and increased the odds of HED by 3.3 times and 11.7 times respectively.

The odds of HED increased by 7.3 times when boys got alcohol from peers.

Heavy Episodic Drinking



HED in Girls (Yes/No)



DISCUSSION

28.5% of the study participants reported engaging in HED with almost equal numbers between boys (49.9%) and girls (50.1%) indicating the narrowing gender gap in HED in Ireland (2, 3). Age groups 16 and 15 years were statistically significant for HED (or binge drinking) in adolescent girls compared to boys, highlighting the need for early intervention in girls.

Girls who reported receiving alcohol from their parents had twice the odds of HED underscoring the need for interventions at a family level including parental education and rule-setting. Alcohol use among most peers increased the odds of HED which aligns with the misperceived norms model, suggesting that adolescent substance behaviours mirror perceptions of peer alcohol use (14, 15)

The Normalisation Thesis suggests that as underage drinking becomes destigmatised and socially normative practice, more adolescents will engage in alcohol use (16). The findings from this study indicate that obtaining alcohol from parents and peers, positive parental attitudes towards alcohol, and increased alcohol use in peers may contribute to the normalisation of alcohol use and subsequent increase in the incidence of HED.

*References available on request.