



# Effects of Impulsivity and Perceived Poverty on Binge Drinking Behavior in At-Risk Adolescents



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## Introduction

Impulsivity's connection to adolescent alcohol use has historically been an interest of clinical psychologists. Impulsivity has been related to both normative and problematic alcohol use (Bates & Labouvie, 1995; Wood, Cochran, Pfefferbaum, & Arnekley, 1995); however, there have been mixed findings when it comes to the nature of this relationship (Coskunpinar, Dir, & Cyders, 2013). More specifically, studies have found that the UPPS-P model of impulsivity is more strongly associated with alcohol use when it is in conjunction with other individual stressors (Whiteside & Lynam, 2009).

Considering the research surrounding poverty as a risk factor for alcohol consumption in adolescents (Cerdá, Diez-Roux, Tchetgen, Gordon-Larsen, & Kiefe, 2010), the current study's aim was to explore associations among impulsivity and perceived childhood poverty on binge drinking in a sample of at-risk adolescents who reported engaging in risky drinking behavior. It was hypothesized that impulsivity alone would predict high frequency binge drinking; however, adding perceived poverty would significantly improve the model.

## Methods

### Sample

- 62 at-risk adolescents solicited from a military-style residential program in the southeastern U.S.
- 71.2% male, average age of 16.86 (SD = 0.71)
- 78.1% Caucasian, 13.7% African-American, 4.1% Multiracial, and 4.1% Other.
- 17.9% of the sample reported being high frequency binge drinkers – binge drinking more than once a week.

### Procedure

- Part of a larger data collection at residential facility
- Computerized administration of the following measures:
  - Impulsivity: UPPS-P (Whiteside & Lynam, 2001)
  - Alcohol Use: Youth Risk Behavior Surveillance Survey (YRBS; CDC, 2015)
  - Perceived Poverty: Adolescent Perceptions of Family Hardship & Financial Hardship Experiences (Conger, Conger, Matthews, & Elder Jr., 1999)

## Results

### Data Analysis Procedure

- A multinomial logistic regression was used to assess associations of impulsivity and perceived poverty with frequency of binge drinking.
- A two-block method was used to evaluate the additive predictive power of perceived poverty to impulsivity subscales on low (less than once a month), moderate (less than once a week), and high (more than once a week or everyday) frequency binge drinking.

Table 1  
Logistic Regression Results of UPPS-P Impulsivity Subscales and Childhood Perceived Poverty's Relationship to Binge Drinking

Predictor Variable	Low Frequency Binge Drinkers (N = 23)			Moderate Frequency Binge Drinkers (N = 16)			High Frequency Binge Drinkers (N = 16)		
	B	SE B	β	B	SE B	β	B	SE B	β
1 Negative Urgency	.007	.006	1.01	.001	.008	1.00	-.003	.009	.997
Lack of Premeditation	.312	.648	1.37	1.26	.715	3.51	-.356	.669	.701
Lack of Perseverance	-.146	.838	.864	-.137	.918	.872	.527	.999	1.69
Sensation Seeking	-.139	.741	.870	.019	.830	1.02	1.83	1.07	6.24
Positive Urgency	-.278	.397	.758	.086	.494	1.09	.667	.469	1.95
2 Negative Urgency	.008	.006	1.01	.001	.008	1.00	-.008	.010	.992
Lack of Premeditation	.232	.657	1.26	1.22	.719	3.37	-.296	.725	.744
Lack of Perseverance	-.064	.853	.938	-.056	.936	.946	.313	1.05	1.37
Sensation Seeking	-.333	.765	.717	-.064	.840	.938	<b>2.90*</b>	1.27	18.2
Positive Urgency	-.302	.399	.740	.066	.495	1.07	.717	.502	2.05
Perceived Poverty	-.054	.050	3.29	-.033	.055	.968	<b>.218**</b>	.076	1.24

Note: \* = p < .05 significance, \*\* = p < .01 significance

### Logistic Regression Results

- Overall, sensation seeking impulsivity and perceived poverty significantly predicted high-frequency binge drinking, but remained non-significant for low ( $\chi^2(6, N = 62) = 3.258, p = .776$ ) and moderate ( $\chi^2(6, N = 62) = 5.008, p = .543$ ) frequency binge drinkers.
- For high frequency binge drinkers, the model was significant in both block one ( $\chi^2(5, N = 62) = 12.060, p = .034$ ) and block two ( $\chi^2(6, N = 62) = 17.407, p = .008$ )
- R<sup>2</sup> increased from block one (R<sup>2</sup> = .18) to block two (R<sup>2</sup> = .21) indicating that the inclusion of perceived poverty with impulsivity improved the model explaining 21% of the variance in binge drinking behaviors
- Impulsivity overall was a significant predictor for high frequency binge drinkers; however individual subscales remained insignificant.
- When perceived poverty was added to the model, perceived poverty and sensation seeking significantly predicted high frequency binge drinking

## Discussion

Results from this study indicate that sensation seeking impulsivity and perceived poverty are factors worth considering when predicting high frequency binge drinking in at-risk adolescents. More specifically, sensation seeking could be an especially salient facet of impulsivity in adolescents who perceive their families to be poor. These results are consistent with previous literature suggesting that alcohol use is more strongly related with impulsivity in conjunction with other risk factors rather than impulsivity alone (Whiteside & Lynam, 2009). This suggests a multi-focused approach to potential interventions.

Findings also indicate that perceived poverty might have behavioral consequences, which broadens our understanding of the consequences related to perceived poverty. Perceptions of familial poverty has been shown to predict internalizing problems such as depressive symptoms (Conger et al., 1999; Conger & Conger, 2002); however examination of externalizing problems has not been well represented in the literature. Therefore, these findings suggest perceived poverty and its relationship to substance use in adolescents is something worth exploring in future research.

## Implications

- Impulsivity in conjunction with stressors such as perceived poverty increases the risk of adolescents engaging in risky alcohol consumption.
- Adolescents with relatively higher sensation seeking impulsivity might be at increased risk for high frequency binge drinking if they are also experiencing poverty.
- Findings indicate interventions targeted at reducing sensation seeking impulsivity in adolescents who perceive their families to be poor could be beneficial for reducing problematic drinking behaviors in at risk adolescents.
- Future research is needed to explore perceived poverty and its relationship to externalizing behaviors in adolescents.