



Thinking (or Not) and Drinking: Need for Cognition and Alcohol Use

B. E. Blanchard, A. K. Littlefield, & A. K. Stevens
Department of Psychological Sciences, Texas Tech University



Introduction

- Alcohol use is prevalent among college students, many of whom suffer alcohol-related consequences (Johnston, O'Malley, Bachman, & Schulenberg, 2011). Alcohol use has many potential negative consequences for college students, and much research has focused on individual differences which can predict levels of alcohol use.
- One difference that has received little attention is need for cognition (NFC), the extent to which an individual enjoys engaging in effortful cognitive processing (Caccioppo & Petty, 1982).
- NFC has been found to be a moderator of attitude-behavior relations, including amplifying the relation between alcohol expectancies and alcohol use (Hittner, 2004); specifically, the expectancy-alcohol use relation was stronger with those higher in NFC compared to those lower in NFC, though these relations differed as a function of expectancy type and level of alcohol consumption. Clinically, those higher in NFC showed stronger reductions in alcohol use/heavy drinking following a brief motivational intervention (Capone & Wood, 2009).
- To our knowledge, only one study to date has examined the effect of NFC on alcohol use and found that higher NFC scores were associated with lower alcohol consumption for females only (Hittner, 2004). However, this findings has yet to be replicated.

CURRENT STUDY

- Thus, the aim of the current study was to replicate and expand upon Hittner's (2004) work on NFC and alcohol use. Specifically, we explored the relation between NFC and alcohol-related variables (i.e., alcohol intoxication, perceived alcohol use status, alcohol-related problems,) among college students, and whether these relations differed as a function of gender.

Method

PARTICIPANTS

- Undergraduates from a southwestern university
- ($N = 717$; 66% female; 68% White; 26% Hispanic)

MATERIALS

- American Drug & Alcohol Survey (Oetting et al., 1984)
 - Self-perceived alcohol use status (Non-user/very light/light/moderate/heavy/very heavy)
 - Past-month intoxication (Yes v. No)
 - 15 alcohol-related consequences (e.g., passing out, damaging a friendship, etc.)
 - Alcohol use versus abstainer status ("Have you ever had alcohol to drink – more than a few sips?")
- Need for Cognition Scale (Caccioppo & Petty, 1982)
 - 34 items; 9-point Likert-type scale
 - Disagree very strongly (-4) to Agree very strongly (4)

PROCEDURE

- Students signed up to participate using the university's research system. Students were provided with a link to a battery of assessments in Qualtrics.

ANALYTIC PROCEDURE

- Exploratory data analyses indicated that NFC was normally distributed. Very heavy drinking was infrequently endorsed ($n = 7$), so this category was combined with heavy drinking.
- Results of a t -test indicated that NFC significantly differed among males and females ($t = 3.68, p < .0001$). NFC was standardized for ease of interpretation.
- A logistic regression models were used to test whether NFC scores predicted past-month intoxication and alcohol-related problems. Abstainers ($n = 130$) were excluded in analyses.
- NFC was then used to predict alcohol use status among the full sample (i.e., non-user, very light, light, moderate, and heavy/very heavy) using an ordinal logistic regression.

Results

DESCRIPTIVE STATISTICS

Past-month intoxication

- Among the full sample, 493 (69%) endorsed past-month intoxication, whereas 485 (87%) of the alcohol users endorsed this.

Alcohol-related problems

- Among alcohol users, 156 (28%) endorsed experiencing more than 3 types of alcohol-related problems.

Self-perceived alcohol use status (full sample)

- Nonuser: 161 (22%)
- Very Light: 124 (17%)
- Light: 163 (23%)
- Moderate: 238 (33%)
- Heavy/Very Heavy: 31 (5%)

PAST-MONTH INTOXICATION

Predictor	β	SE β	χ^2	p	Odds Ratio
NFC	-.34	.13	6.78	.009	0.71
Gender	-.12	.23	.25	.61	0.89
NFCxGender	.51	.24	4.73	.03	1.67

Note. β = standardized logit; χ^2 = Wald chi-square. Abstainers removed ($n = 130$). Gender coded male = 1, female = 0. For males, NFC was nonsignificant, $\beta = -.1738, p = .38$. Likelihood Ratio Test $\chi^2 = 5.76, p = .12$. Similar results found using full sample.

ALCOHOL-RELATED PROBLEMS

Predictor	β	SE β	χ^2	p	Odds Ratio
NFC	-.37	.13	7.90	.005	0.69
Gender	.80	.20	15.42	.001	2.25
NFCxGender	.13	.21	.38	.54	1.14

Note. β = standardized logit; χ^2 = Wald chi-square. Abstainers removed ($n = 130$). Gender coded male = 1, female = 0. For males, NFC was nonsignificant, $\beta = -.25, p = .13$. Likelihood Ratio Test $\chi^2 = 22.53, p < .0001$.

SELF-PERCEIVED ALCOHOL USE STATUS

Predictor	β	SE β	χ^2	p	Odds Ratio
NFC	-.19	.08	5.54	.02	0.83
Gender	.17	.14	1.42	.23	1.19
NFCxGender	.35	.15	5.88	.02	1.42

Note. β = standardized logit; χ^2 = Wald chi-square; NFC was not significant for males, $\beta = .16, p = .19; N = 716$. Test for proportional odds assumption $p = .06$; Likelihood Ratio Test $\chi^2 = 9.50, p = .02$

Discussion

- Our results indicating that greater need for cognition is negatively associated with past-month intoxication and self-perceived alcohol use status is consistent with Hittner's (2004) finding that higher NFC scores were associated with less alcohol consumption for females.
- Extending this area are our findings that alcohol-related problems and self-perceived alcohol use status were significantly associated with alcohol-related outcomes for females only. One potential explanation for this is that among males, problematic drinking is associated with positive expectancies (Cooper et al., 1992), thus males higher in NFC may not experience the protective effects of high NFC.
- These findings has important clinical implications. For example, including cognitive strategies in brief alcohol interventions for females may increase success rates.
- Future research should focus on mechanisms through which NFC reduces alcohol use and related consequences for females. One possibility is that NFC moderates the relation between protective behavioral strategy use and alcohol-related problems, as females are more likely to engage in protective behavioral strategy use (Haines, 2006).

Select References

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TEXAS TECH UNIVERSITY

Department of Psychological Sciences

Correspondence regarding this work should be addressed to Brittany Blanchard at brittany.blanchard@ttu.edu.