The Moderating Effect of Gender on the Impulsivity-Depressant Use Relation

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Introduction

DEPRESSANT USE
- Three of the four most frequently abused prescription types (i.e., tranquilizers, sedatives, opioids, and stimulants) are central nervous system depressants.
- Approximately 1.7 million young adults reported using depressants in 2014 alone (SAMHSA, 2015).
- Depressant use is associated with a host of negative consequences, ranging from academic impairment (Arria et al., 2008) to unintended overdose (Jann et al., 2014).

GENDER
- Gender gap in depressant use is narrowing, with females exceeding male rates of use in some samples (Hall et al., 2010; Kokkevi et al., 2014).

IMPULSIVITY
- Though previous work indicates a link between depressant use and traits related to “impulsivity” (Mclarnon et al., 2011), research findings are mixed (see Arria et al., 2008; cf. Marino et al., 2013).
- Measures which aim to capture multiple facets of impulsivity, such as the UPPS-P, may help clarify the relation between impulsive traits and depressant use. The UPPS-P has accrued evidence supporting its construct validity (Lyam et al., 2006; Whiteside et al., 2005), and has been demonstrated to be invariable across gender (Cyders, 2013).

CURRENT STUDY
Aims of the current study were twofold:
1. To determine whether gender differences exist in prevalence of depressant use among college students
2. To examine whether depressant-impulsivity facet relations are moderated by gender

PARTICIPANTS
- Participants (N = 778; ages 18-25)
  - 72% female; 74% White; 22% Hispanic
  - Participants completed a battery of self-report measures via an online survey.

MATERIALS
- UPPS-P (Lyam et al., 2006, Whiteside & Lyam, 2003)
  - Negative Urgency (NU): Tendency to act rashly during negative emotion
  - Positive Urgency (PU): Tendency to act rashly during positive emotion
  - Persistence (SS): Likelihood of remaining on task
  - Lack of Premeditation (LPer): Tendency to act without careful thinking
  - Lack of Perseverance (LPer): Inability to remain on task
- Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-IV; Grant et al., 2001)
- Sedatives: “Have you ever used sedatives, for example, sleeping pills, barbiturates, Seconal®, Quaaludes, or Chloral Hydrate?”
- Tranquilizers: “Have you ever used tranquilizers or anti-anxiety drugs, for example, Valium®, Librium®, or muscle relaxants?”
- Painkillers: “Have you ever used painkillers, for example, Codeine, Darvon®, Percodan®, Oxycontin®, Dilaudid®, Demerol®, Celebrex®, or Vioxx®?”

ANALYTIC PROCEDURE
- Chi-Square Tests
- Examined prevalence of use by gender
- Hierarchical Linear Modeling
- Examined impulsivity facets related to use by gender
- SAS PROC MIXED (SAS Institute; Singer, 1998)
- Unstructured variance matrix
- Restricted maximum likelihood (REML)
- UPPS-P scores standardized

Results
- No gender differences in rates of depressant use
  - Depressants: \( \chi^2 = 0.01, p = .92 \)
  - Sedatives: \( \chi^2 = .04, p = .83 \)
  - Tranquilizers: \( \chi^2 = .77, p = .38 \)
  - Painkillers: \( \chi^2 = 1.63, p = .20 \)

Discussion
- Results support previous work indicating the closing of the gender gap with regard to depressant use (Hall et al., 2010; Tetrad et al., 2008).
- Indeed, prevalence rates were equivalent between males and females across all types of depressant substances assessed in the current study.
- Given that the gender gap in deaths attributed to depressant overdose is also narrowing (CDC, 2015), more research on gender-specific predictors of depressant use and misuse is needed.
- In the current study, sensation seeking significantly distinguished between users and non-users of depressants across gender, whereas only negative urgency was predictive of use for females. Based on these findings, personality-targeted interventions (see Conrad et al., 2010) which focus on sensation seeking may be beneficial for males and females in treatment for depressant misuse; moreover, females may benefit from emotion regulation skills training.
- Limitations of the current study include exclusive use of self-report measures and a homogeneous sample (i.e., White females). Although the three-way interaction between gender, impulsivity, and depressant use was not significant, problems can occur “when researchers rely too heavily on the results of omnibus tests of hypotheses” (Tomarken & Waller, p. 579). Our approach to examining gender-specific differences is in line with the Institute of Medicine’s recommendations and American Statistical Association’s charge to move into a “post p < 0.05 era” (Wasserstein & Lazar, 2016).

Select References