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., 2008). Therefore, more research attention to gender-specific predictors of depressant use is warranted.

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 (Lynam et al., 2006; Whiteside et al., 2005), and has been demonstrated to be invariant 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

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Method

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** (Lynam et al., 2006; Whiteside & Lynam, 2001)
  - **Negative Urgency (NU)**
    Tendency to act rashly during negative emotion
  - **Positive Urgency (PU)**
    Tendency to act rashly during positive emotion
  - **Sensation Seeking (SS)**
    Tendency to pursue exciting activities
  - **Lack of Planning (LPlan)**
    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®?"

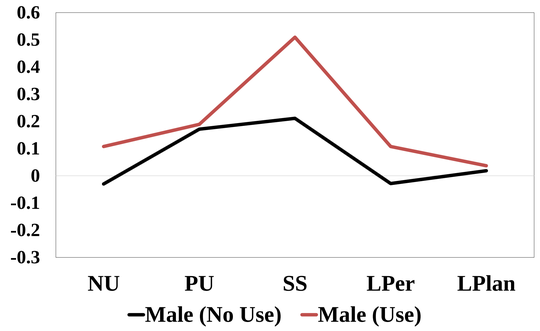
ANALYTIC PROCEDURE

- Chi-Square Tests
  - Examine prevalence of use by gender
- Hierarchical Linear Modeling
  - Examine 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

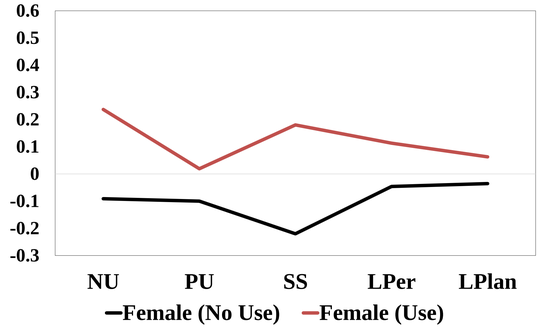
Results

- No gender differences in rates of depressant use
  - Depressants: χ^2 = .01, p = .92
    - Sedatives: χ^2 = .04, p = .83
    - Tranquilizers: χ^2 = .77, p = .38
    - Painkillers: χ^2 = 1.63, p = .20

Standardized UPPS-P Mean Plots for Males



Standardized UPPS-P Mean Plots for Females



Note. UPPS-P profiles for depressant users versus non-users. Although the three-way interaction between gender, impulsivity facet and depressant use was non-significant, (F = .25, p = .91), we proceeded to examine results of planned comparisons.

Effect Sizes for Depressant Use by Impulsivity Facet

	NU	PU	SS	LPer	LPlan
Males	0.13	0.02	**0.33**	0.14	0.02
Females	**0.35**	0.12	**0.42**	0.16	0.10

Note. Bolded effect sizes indicate significant mean comparisons, such that these facets were significantly higher among users versus non-users.

Discussion

- Results support previous work indicating the closing of the gender gap with regard to depressant use (Hall et al., 2010; Tetrault 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 Conrod 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

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