The Direction of Effects Between Depression Symptoms and Alcohol-Related Problems in College Students
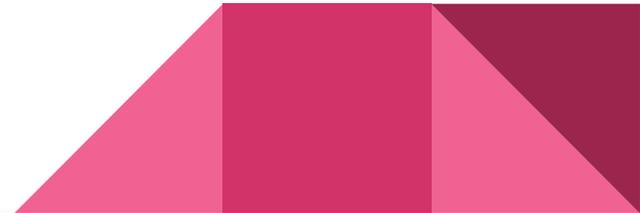
Bernard Pereda and Dr. Joanna Herres

Comorbid DS and ARPs in College Students

- ❖ Comorbid depression symptoms and alcohol-related problems are most common in the young adult population (ages 17-24) (Briere et al., 2014)
- ❖ Currently, 1 in 3 college students who drink heavily also screen positive for depression (Miller at al., 2020)
- ❖ This high prevalence of comorbid DS and ARPs is concerning considering the negative impacts these conditions can have on college students
  - ➢ Lowered academic performance (Eisenberg et al., 2009; White & Hingson, 2013)
  - ➢ Worse treatment outcomes (Merrill et al., 2014; Rohde et al., 2001)
  - ➢ Higher risk of suicide attempts (Briere et al., 2014)

The Direction of Effect between DS and ARPs

❖ These negative impacts demonstrate the importance of understanding this comorbid condition

❖ Specifically, studying the predictive and sequential relationship - or the direction of effects - between DS and ARPs would offer insight into how the conditions change and affect each other over time

❖ Studying direction of effect would help identify which individuals have a higher risk of comorbidity and who would benefit from early intervention and prevention efforts
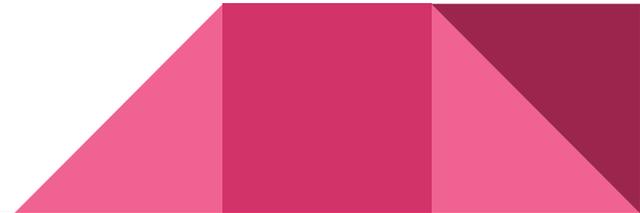
Methodological Limitations of the Literature

❖ Some prior research demonstrates a unidirectional relationship between DS and ARPs (Acuff et al., 2018; Rosenthal et al., 2018; Brière et al., 2014)
  ➢ Though findings are inconsistent regarding which condition precedes the other
❖ Much of this inconsistency may be explained by the methodological limitation of only having one follow-up after baseline assessment
  ➢ On the other hand, research that uses more frequent follow ups consistently lends support to a bidirectional model in which both directions of effect occur simultaneously and change over time (Miller et al., 2020; Honman et al., 2017)
❖ Thus, the use of frequent follow ups in examining this relationship is critical as it will help uncover how the direction of effect between DS and ARPs may change over time

Methodological Limitations of the Literature (Cont.)

❖ Most studies have failed to consider whether direction of effect differs based on students' gender identities

➢ While some research examining direction of effects has found no differences between genders (Acuff et al., 2018), results presented by Honman et al. (2017) suggest that males and females may see different directions of effect over time

❖ The role of gender in direction of effect is unclear and has yet to be examined more thoroughly

The Present Study

❖ **Study Aim:**
   ➢ The present study will test the direction of effects between DS and ARPs using longitudinal data collected at multiple time points over the academic year.
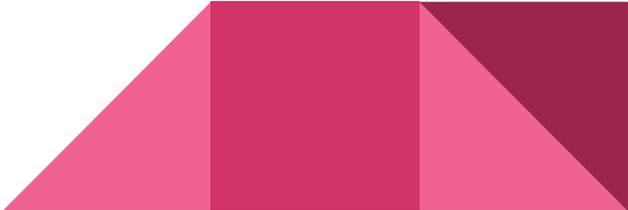
❖ **Hypotheses:**
   ➢ Hypothesis 1: The relationship between DS and ARPs will be bidirectional
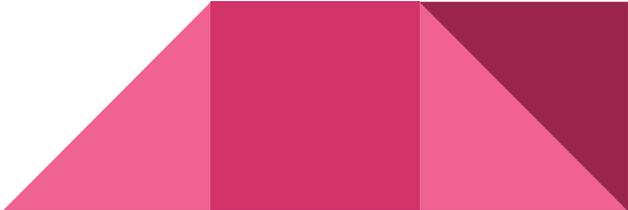   ➢ Hypothesis 2: The direction of effects will differ by gender

Methods: Participants

❖ *N* = 438 TCNJ students were recruited to participate in a larger online survey study of students' emotional well-being
❖ A random selection of 2,000 undergraduate students were recruited to participate in this online survey via email in Fall 2019
  ➢ 74% identified as white, 12.8% asian, 13.7% Hispanic/latinx, 5.7% Black/AFrican American, and 0.5% American Indian. Nearly 7% of the participants identified as multiethnic
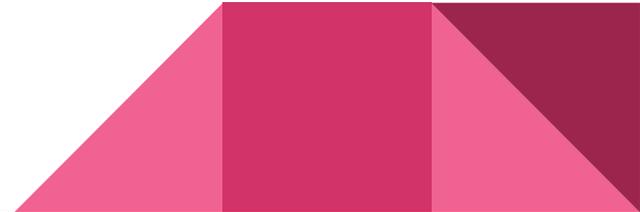 ➢ 72.3% of the sample identified as female

Methods: Procedure

❖ Students were emailed a request to participate in a Qualtrics survey

❖ Students had 2 weeks to complete the survey, which took approximately 30 minutes

❖ At the end of the initial survey, participants were directed to a separate survey where they were asked to provide their email to enter a raffle (10 $30 Amazon gift cards)

❖ Students were invited to complete the survey again at the end of Fall 2019 (n = 51), start of Spring 2020 (n = 67), and end of Spring 2020 (n = 66)
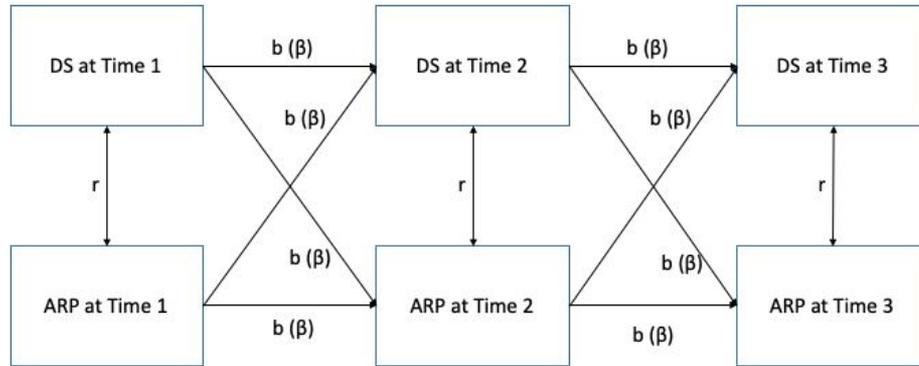
Methods: Measures

- ❖ Gender identity: Demographics
  - ➢ Participants included their demographic information which included gender identity
  - ➢ Given the small number of trans participants, gender was recorded as a dichotomous variables: 1 for male and 1 for female, regardless of whether one identified as trans- or cis-gender
- ❖ Depression Symptoms: Beck Depression Inventory (Beck et al., 1996)
  - ➢ 21 Item scale
  - ➢ Cronbach's Alpha was 0.92
- ❖ Alcohol Related Problems: Alcohol Use Disorders Identification Test (Saunders et al., 1993)
  - ➢ 10 item scale
  - ➢ Cronbach's Alpha was .79

Data Analysis

❖ MPLUS will be used to conduct the analyses

❖ Cross-lagged panel regression

    ➢ Used to examine the direction of effect between DS and ARPs across the first three time points of data collection

    ➢ Moderation analyses will be run in the regression model to examine differences in the direction of effect between gender identities

Cross-lagged Panel Model

Preliminary Results

- ❖ Currently do not have access to MPLUS
- ❖ Regression Analyses
  - ➢ The first regression revealed that AUDIT scores at time 1 did not predict BDI scores at time 2
    - ■ (t = 1.510, p = .138)
  - ➢ The second regression revealed that BDI scores at time 1 did not predict AUDIT scores at time 2
    - ■ (t = 1.067, p = .291)
- ❖ Corresponding Moderation Analyses
  - ➢ The interaction between gender identity and direction of effect was not significant in the first moderation (T= -1.7109, p = .09) or the second (T=-.2807, p = .78)
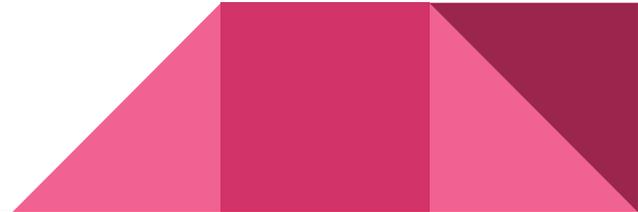
Thank You!

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