



The Role of Perceptions of Effectiveness and Importance on the Efficacy of Protective Behavioral Strategies: A Sequential Mediation Model

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INTRODUCTION

Over half of college students reported drinking in past month (SAMHSA, 2019). College alcohol use results in many adverse outcomes (e.g., Hingson et al., 2017; Presley & Pimentel, 2006). Use of protective behavioral strategies (PBS) reduces number of alcohol related problems (Martens et al., 2005). PBS use is effective in reducing alcohol consumption and related problems in college students (e.g., Arterberry et al., 2014; Braitman et al., 2015; Bravo et al., 2016). Research suggests perceived importance of PBS serves as protective factor (Ortman et al., 2020). This study aims to explore the role of perception on efficacy of PBS. **Hypothesis:** Perceived effectiveness is associated with higher perceived importance which in turn leads to more PBS use and lower consumption and problems.

METHOD

Participants

- $N = 527$ undergraduates
- 18-24 years old, Mean age = 19.90 ($SD = 1.65$)
- Consumed ≥ 1 alcoholic drink in past 2 weeks
- Baseline data from a larger alcohol intervention study

Materials

PBS-SQ (Sugarman & Carey, 2007)

- 3 subscales (21 items total): Strategies While Drinking, Alternatives to Drinking, & Selective Avoidance
- From 1 (*None*) to 12 (*More than 10 times*)

Daily Drinking Questionnaire (Collins et al., 1985)

- Typical quantity of alcohol consumed

YAACQ (Read et al., 2006)

- Assessed alcohol-related problems in past 30 days
- Total score (48 items)

Effectiveness of PBS Use (modified SQ instructions and response scale to reflect how effective they perceive each strategy to be, if they use it)

- From 1 (*Not very effective*) to 5 (*Very effective*)

Importance of PBS Use (Created by Researchers)

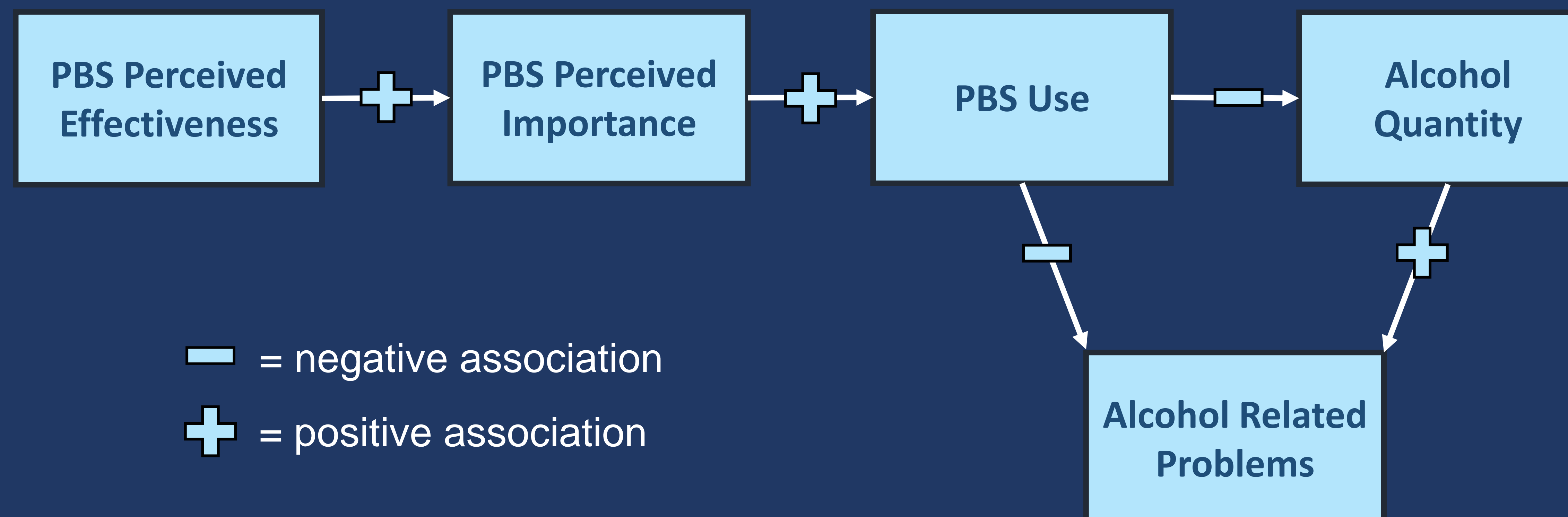
- "When drinking alcohol, I should take steps to make sure I stay in control of myself."

- From 1 (*Not at all Agree*) to 5 (*Completely Agree*)

Planned Analysis

- Analyses controlled for gender and were conducted in Mplus with maximum likelihood estimation
- A sequential mediation model with 10,000 bootstrap replications was used

Associations between perceived effectiveness of PBS and alcohol outcomes were explained by perceived importance of PBS and PBS usage



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RESULTS

- Greater perceived effectiveness of PBS predicted greater perceived importance of PBS, $\beta = 0.435$, $SE = 0.05$, $p < .001$
- Greater perceived importance of PBS predicted more PBS use, $\beta = 0.196$, $SE = 0.04$, $p < .001$
- Using more PBS predicted lower alcohol consumption, $\beta = -0.153$, $SE = 0.04$, $p < .001$
- Alcohol consumption predicted more alcohol related problems, $\beta = 0.509$, $SE = 0.04$, $p < .001$.
- Using more PBS predicted fewer alcohol-related problems, controlling for drinking, $\beta = -0.115$, $SE = 0.04$, $p = .002$

DISCUSSION

Results showed that the proposed sequential mediation model was supported. Perceptions of importance and effectiveness of PBS use play a significant role in the efficacy of PBS in college students. Alcohol interventions targeting college drinkers may benefit from emphasizing the effectiveness of PBS. This is because perceived effectiveness triggers a chain reaction leading to more favorable alcohol outcomes. Future research should validate these findings with longitudinal data. Future research should also aim to find ways to effectively convey usefulness of PBS to target populations. Findings from this study should be interpreted with caution, as it relied on cross-sectional self-report data.

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