PERCEIVED EFFECTIVENESS OF PROTECTIVE BEHAVIORAL STRATEGIES AND THE INTERSECTIONALITY BETWEEN RACE AND GENDER ON ALCOHOL OUTCOMES AMONG COLLEGE STUDENTS

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Introduction

Nearly half of U.S. college students report drinking alcohol within the last two weeks and about 44% of those students intend to get drunk. Protective behavioral strategies (PBS) are behaviors for reducing alcohol use and/or problems and are negatively associated with alcohol misuse among college students. Studies suggest PBS are used more often and more effectively by female students than male students, but examinations across race have yielded mixed findings and are often underpowered. Few studies focus on racial differences specifically between Black and White students, and far fewer investigate the intersectionality between race and gender (e.g., identifying as Black and female). Perceived effectiveness of PBS use may play a role in the efficacy of PBS use on reducing problematic alcohol outcomes. The current study examined if (1) race, (2) gender (assessed as female, male, trans*), (3) and the interaction moderate the associations between perceived effectiveness of PBS on PBS use (*a* path) and PBS use on alcohol outcomes (i.e., alcohol problems, quantity, and peak drinks; *b* path).

Method

Participants
- *N* = 521 college students
- Eligibility criteria: 18-24 years old, consumed at least one alcohol drink in the past 2 weeks
- Mean age = 19.85, *SD* = 1.65; 71.6% female; 52.5% Black, 40.3% White

Materials
Alcohol Consumption
- Daily Drinking Questionnaire (DDQ: Collins et al., 1985)
- Alcohol quantity calculated by summing the drinks listed for each day
- Peak drinks reflected greatest number of drinks consumed on a single day

Alcohol-related Problems
- Young Adult Alcohol Consequences Questionnaire (YAACQ; Read et al., 2006)
- 48 items listing alcohol problems with "*Yes*" and "*No*" response options

PBS Use
- Strategy Questionnaire (SQ; Sugarman & Carey, 2012)
- 21 items listing strategies (α = 0.93) asked from "*Never*" to "*More than 10 times*"
- Total score with the values for the three subscales (including the two adjusted subscales; Braitman et al., 2015) were summed

Perceived Effectiveness of PBS
- A modified version of the SQ (Sugarman & Carey, 2012)
- Same list of items as original (α = 0.95), but asked about effectiveness of each strategy instead
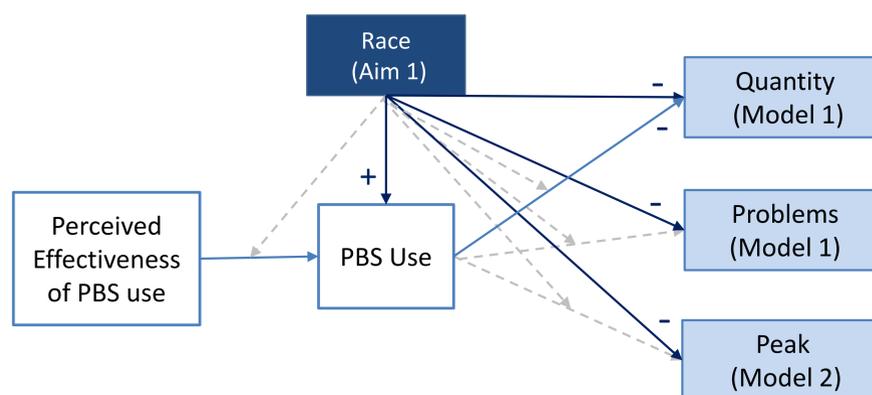- From 1 (*Not effective*) to 5 (*Very effective*)

This examination is a secondary data analysis of the pre-intervention survey data provided by participants as part of a randomized, controlled trial (Braitman et al., 2021)
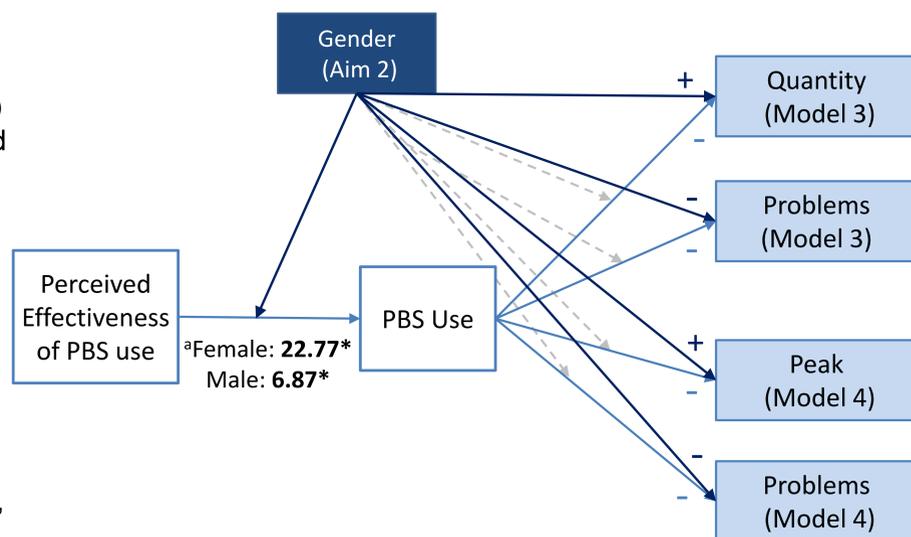
Results

Analyses
- Six moderated mediation analyses were conducted in an SEM framework using Mplus
  - Two separate models were conducted to assess alcohol outcomes (quantity & problems in one model; peak drinks & problems in another)
- Reduced sample of Black only (coded as 1) or White only (coded as 0) students used for Aim 1 (*n* = 394) as well as reported gender for Aim 3 (*n* = 393; coded 0 = female and 1 = male)
- The full sample was used for Aim 2 (*N* = 521)

Conceptual Model

Aim 1 (*Race as a moderator*):

Note. Dashed paths are nonsignificant. Direct effects were included but not pictured.
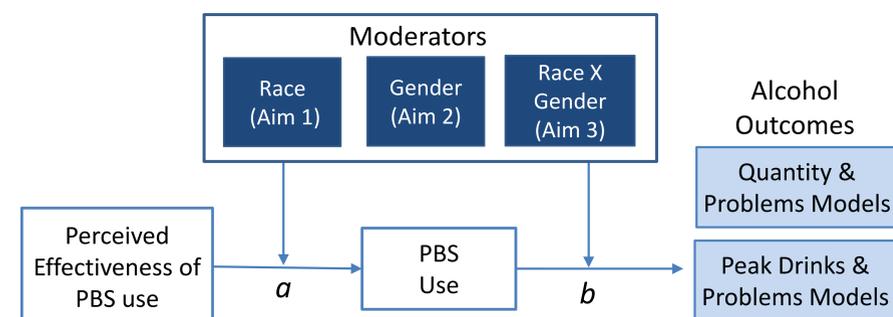
Aim 2 (Gender as a moderator):

Note. Significant *B* values reported. Dashed paths are nonsignificant. Direct effects were included but not pictured.
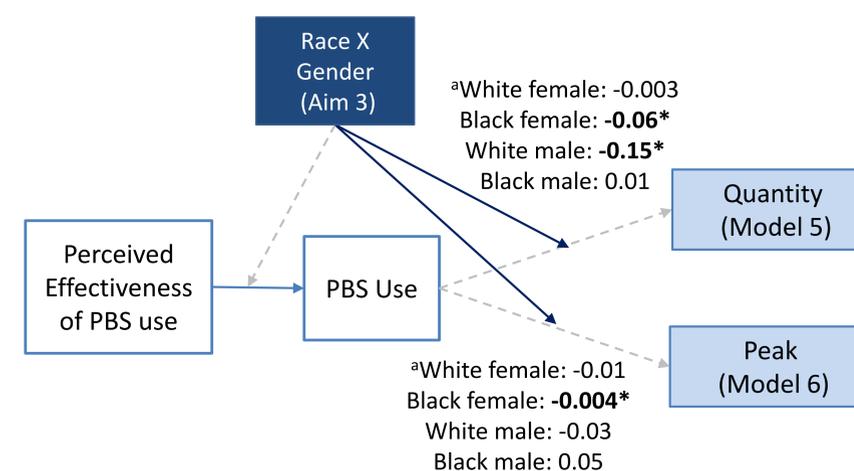[a]reference group

Significant simple indirect effects	B	p	95% BCCI
Female Perceived Eff. → PBS use → Quantity	-0.08	>.001	-0.12, -0.05
Female Perceived Eff. → PBS use → Problems	-0.08	.003	-0.13, -0.04
Female Perceived Eff. → PBS use → Peak	-0.15	.008	-0.27, -0.15
Female Perceived Eff. → PBS use → Problems	-0.03	<.001	-0.15, -0.10
Male Perceived Eff. → PBS use → Quantity	-0.02	.057	-0.05, -0.01
Male Perceived Eff. → PBS use → Problems	-0.02	.085	-0.06, -0.01
Male Perceived Eff. → PBS use → Peak	-0.05	.063	-0.12, -0.05
Male Perceived Eff. → PBS use → Problems	-0.03	.093	-0.07, -0.03

Aim 3 (Intersection between race and gender as a moderator):

[a]White female: -0.003
Black female: **-0.06***
White male: **-0.15***
Black male: 0.01

[a]White female: -0.01
Black female: **-0.004***
White male: -0.03
Black male: 0.05

Note. B values reported. Dashed paths are non-significant. Direct effects were included but not pictured.
[a]reference group

Significant simple indirect effects	B	p	95% BCCI
Black female Perceived Eff. → PBS use → Quantity	-0.06	.053	-0.14, -0.02
Black female Perceived Eff. → PBS use → Peak	-0.10	.109	-0.28, -0.01

Discussion

The present study was the first to examine the moderating role of race (i.e., White vs. Black), gender (i.e., male vs. female), and the intersection of race and gender on the sequential pathway from perceived effectiveness to PBS use to alcohol outcomes with a relatively large sample of Black-identifying students. Race was not a significant moderator, but identifying as Black was related to lower levels of quantity, peak drinks, and problems, and greater PBS use. Gender moderated the *a* path (positive association between perceived effectiveness of PBS use and PBS use) which was stronger among female students. There was a significant three-way interaction only for the *b* path between race, gender, and PBS use predicting quantity and peak drinks. There was a stronger association between more PBS use and lower consumption specifically for Black female students and White male students. Taken together, we found that having two minoritized identities or having two majority identities were the most protective intersections of identity, whereas having one minoritized and one majority identity was associated with the least protection. More attention is needed towards considering intersectionality when identifying at-risk groups and tailoring alcohol intervention efforts.

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