Do Angry Women Choose Alcohol?

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Introduction

- Study conducted by Pamela Morrison under the supervision of Dr. Nora E. Noel and Dr. Richard L. Ogle
- What role does anger play in female alcohol consumption?
- Research has shown correlations between trait anger and alcohol consumption in women (Grover & Thomas, 1993; Lee, Mendes-de-Leon, & Markides, 1988; Leibsohn, Oetting, & Deffenbacher, 1994), as well as associations between women's drinking and risky driving (Lonczak, Neighbors, and Donovan, 2007).
- Anger management component to alcohol treatment programs
- Lack of controlled laboratory studies makes it difficult to determine the connection between anger and alcohol
- Previous studies often included female and male participants
  - Anger provocation is different in women than in men (Biaggio, 1989; Harris, 1993).
- Morrison, et al.’s study focused on “female-specific anger provocation” and its effect on alcohol consumption
Methods

Participants

- 30 women
  - Most caucasian and full/part time college students.
  - Age range 21-30
  - Recruited through advertisements in the newspaper and flyers
  - 2 participants were not included in the study: 1 had a history of alcohol abuse and 1 knew there was a confederate in the study

Materials

- Quantity-Frequency Index
  - Self-reported drinking during the previous 90 days
- Multiple Affect Adjective Checklist
  - 130 adjectives describing emotions and participants checked off items on how they currently felt
- 7-Point Feeling Thermometer
  - Participants rated themselves 1-7 scale on five emotions: calm, angry, contented, happy and anxious

Initial Data Collection

- 7 female confederates
- 2 Experimenters
  - Participants and confederate arrived to the laboratory together. The experimenter sat them across from each other in a small room with a one-way window. Each participant, including the confederate, completed the following tests. All participants had a blood alcohol concentration of zero.
Experiment 1: Anger Provocation Manipulation

Set-up

- $n=14$ participants in provoked including an annoying confederate, and $n=14$ non-provoked participants.

How did they provoke participants?

- Motivating participants with $250 for each correct anagram
- Provoked group by using unsolvable anagrams, a strict time limit of 8 mins, and ticking of a kitchen timer.

Confederate

- Added to frustration by finishing in 4 mins, condescendingly stating it. Asking “will you ever finish.” Avoiding name calling and profanity. While distracting participants with tapping noises.

Response to aggression

- Stating they had finished the anagram when they had not.
- Visible frustration of flushed complexion and clenched jaws.

In contrast, participants in non-provocation

- Had simple anagrams (most of them finished)
- No distracting timer
- No deliberate distractions from confederate.
Experiment 2: Drinking Behavior

- Participants were told that they were being involved in a second experiment in which the experimenters were assessing women’s taste perception of different beverages.
- The participants were given 4 chilled cups, with two labeled as “ginger ale” and the other two labeled as “beer,” but the beer was actually non-alcoholic beer.

Motivators

- Experimenter told the participants that if they finished rating the beverages before the 20 minutes were up, they could finish “any or all of the beverages they would like.”

Debriefing

- All participants were surprised that they were given non-alcoholic beer!
- The confederates apologized for their behavior and the experimenters ensured that the participants were in a good place emotionally before they left.
- They did do the $250 drawing in the end, as they promised.
- It is important to note that debriefing was required because deception was used in this experiment.
Results

- Verify that the provocation led to anger
- Rated the participants on a feeling thermometer. (MAACL-R) following the anagram task
- Participants in the provocation condition reported higher hostility scores $M=3.14$ and $SD=2.88$
- Non-Provocation condition $M=.36$ and $SD=.63$
- Provocation participants had a higher feeling thermometer of anger score $M=3.07$ and $SD=1.98$
- Non-Provocation conditions had an anger score with $M=1.50$ and $SD=.76$
- No other emotions were detected to differ between groups
Results

- Second part of the experiments results was where they measured the amount of beer and ginger ale that was consumed.
- They analyzed it to assess participants choice of intent to consume alcohol.
- Measured in mL
- They recorded both the beer and ginger ale.
- Results Participants in provocation condition consumed on average a M= 170.0 mL of placebo beer
- 181.79 of ginger ale
- Non-provocation group consumed a mean of 120.07 mL of placebo beer
- 199.5 mL of ginger ale
Discussion

The hypothesis was that women exposed to provocation would consume more placebo beer!

- AND… the results were significant $F (1,22) = 4.61$ p<.05
- Those in the provocation condition consumed more placebo beer than those in the non-provocation condition.
- They consumed a similar amount of ginger ale
- No difference in ginger ale consummation was found between groups.
- Although both groups drank more ginger ale than beer
Discussion (Part 2)

In the questionnaire expectancies and drinking, they conducted correlations between assertiveness expectancies, relaxation expectancies and the amount of placebo beer consumed!

- No significant correlation in the non-provocation group
- In the provocation group they found a significant correlation between assertiveness and beer consumed
- So, the more women believe alcohol will make them assertive the more they will drink
Discussion Part 3

To Summarize

- The finding did indicate that provocation was successful in increasing anger and hostility without affecting any other emotions significantly.
- There was a significant group difference in consumption of non-alcoholic beer as a function of anger.
- Participants chose to drink more when they were provoked.
- Women did drink more to increase their assertiveness (may be the explanation for their choice to drink).

Final Conclusion: This experiment is evidence of anger as a determinant of alcohol consumption in women.
Limitations and Future Experiments

Limitations of this experiment

- Consumed non-alcoholic beer
- Demographics were fairly limited.
- Majority were caucasian, never been married, and they were UNCW students

Future Studies

- Larger more diverse sample
- Assess if alcohol/anger is specific to women as opposed to men
- Test the actual effects of alcohol on self-reported anger: Would it induce more positive emotions or could alcohol have an indirect effect on anger?