Do Angry Women Choose Alcohol?

Morrison, Noel & Ogle

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Introduction

- 29% of relapsed alcoholics name anger as a major precipitant.
- Anger is a significant predictor of cravings for recovered alcoholics.
- There is a significant correlation between anger and alcohol consumption, particularly with women. More precisely, college women.
Introduction

- Remember that anger and aggression are not the same thing, therefore it is harder to study the trait of anger and its effects on drinking.
- A different manipulation for provoking women than men was necessary. Women are angered by condescending and discourteous attitudes.
- A female confederate displaying a discourteous attitude was used to provoke anger in this study.
Introduction

- A self-report similar a “feeling thermometer” was used to assess anger prior to drinking.
- Participants were led to believe that they were drinking real beer.
- Alcohol consumption was measured, not intentions or desire to drink.
- Subjects thought they were participating in a taste-rating task.
- Expectations of relaxation and assertiveness were also measured.
Introduction

- The experiment was conducted to see if following provocation, women who reported being angry would choose to consume more alcoholic beer over a non-alcoholic beverage than women who were not provoked.
Methods: Recruiting Participants

- Participants were recruited for the study by advertisements in the newspaper and flyers posted around campus and businesses around the campus.
- To take part in the study, participants were required to be females that were 21 in age or older. They were required to be in good mental and physical health (Not pregnant or having any current or past substance abuse problems.)
- Non beer drinkers were excluded from the study due to the fact that participants would be tasting beer during the experiment.
- Participants were also asked to abstain from drugs and alcohol 24 hours before the study and from tobacco products 30 minutes before the start of the study. To insure this breathalyzer tests and self reports were administered at the beginning of the experiment.
- The experiment was overseen by Pamela Morrison who interacted with the participants after each session, two Caucasian undergraduate females acted as researchers and seven undergraduate females between the ages of 21-31 acted as the confederates during the experiment.
Methods: Participants

- The experimenters recruited 30 females to the study.
- The mean age was 22.5 (SD=2.0, range=21-30)
- Most participants were Caucasian (n=29) and most were either part time and full time university students (n=24)
- Two participants were excluded and debriefed because one participant self reported withdrawal symptoms while the other detected what the confederate was trying to do in the experiment.
- In all there were 28 participants that were randomly assigned into one of two groups.
Methods

- Participants were given self reports on their drinking during the past 90 days and on current or past alcohol problems. The Quantity-Frequency Index was used for this.
- To assess the participants' emotions, the researchers used the Multiple Affect Adjective Checklist, which is a list of 130 adjectives that the participant checks off to describe how they are feeling at that moment.
- A 7 Point Liker-type Feeling Thermometer was also used for participants to describe how they were feeling at the moment. They were rating themselves on five emotions: calmness, anger, content, happiness, and anxiousness. This scale is simple, fast, and face valid and requires the participant to rate themselves on those emotions on a scale 1-7. This was administered twice. Once during the information gathering and right before the taste task.
- After the taste task, participants filled out a 120-item Alcohol Expectancy Questionnaire. This has six subscales: global positive changes, sexual enhancement, social and physical pleasure, social assertiveness, relaxation, and arousal and aggression.
Methods: The Experiment

- The participants were randomly assigned into two experimental conditions Provocation (n=15) or no provocation (n=15).
- The participants were told that the first study was to examine problem solving strategies and female perceptions of different situations and the second study was a taste rating task.
- The confederate acted as a second participant and both the participant and confederate were given a list of anagrams to solve and a time limit of 8 minutes for them to solve the problems.
- As an incentive, participants were told that the would gain a chance to win a $250 cash lottery at the end of the study for every anagram answered correctly.
- The experimenter left the room for the 8 minutes leaving the confederate and participant in chairs facing each other.
- Anger was induced by using unsolvable anagrams and having the confederate to be both annoying and condescending (used the same script during each experiment.)
- The confederate finished their list within the first 4 minutes of the experiment and would distract the participant with tapping noises and making comments about their progression on the list (“This is so easy!”) A kitchen timer was also used to alert them when the 8 minutes was up and would make a constant ticking sound.
- The no provocation group were given simple anagrams to solve and the confederate sat quietly and took the entire 8 minutes to finish her list.
Methods: The Experiment
Continued

- For the “Taste test” experiment both the confederate and the participant were in the same room. The confederate was asked to sit at a different table so that there would be no influence towards the participant.
- Both were given four beverages two were beer (participants were unaware that they were non alcoholic). They were also given two cups of ginger ale.
- They were told that they would have 20 minutes to complete a survey and if they finished early they could finish whatever drinks they wanted.
- After 20 minutes the experimenter came back and collected the drinks and rating sheets and their cups were measured to see how much of each beverage they consumed.
Results

- Causal relationship between anger and choice to drink alcohol
- Confirmation of anger due to provocation
  - Provocation group
    - Higher MAACL-R hostility scores
      - $M=3.14$  $SD=2.88$
      - Non-provocation group: $M=0.36$  $SD=0.63$
    - Higher Feeling Thermometer anger scores
      - $M=3.07$  $SD=1.98$
      - Non-provocation group: $M=1.50$  $SD=0.76$
  - Evaluation of remaining scales detected no significant differences between provocation and non-provocation group
    - No differences between calm, contented, happy, & anxious
Results: Beverages Consumption

- Examination of non-alcoholic beer and ginger ale in order to measure choice and intent to drink alcohol
  - Provocation group
    - Non-alcoholic (placebo) beer: $M = 170$ ml $SD = 81.34$
    - Ginger ale: $M = 181.79$ ml $SD = 112.36$
  - Non-Provocation group
    - Non-alcoholic beer: $M = 120.07$ ml $SD = 78.38$
    - Ginger ale: $M = 199.5$ ml $SD = 151.71$
Results: Beverage Consumption

- Conducted a univariate analysis of covariance
- Reasoning for using covariates?
  - Equalize groups on all forms of baseline negative affect to guarantee the accurate testing of anger manipulation
  - Fixed factor \(\rightarrow\) Condition
  - Dependent variable \(\rightarrow\) Amount of non-alcoholic beer
  - Covariates \(\rightarrow\) Pre-manipulation Anger Feeling Thermometer and MAACL-R emotion scales
Results: Beverage Consumption

- Univariate analysis showed significance
  - $F (1,22) = 4.61$  $p<.05$
  - The Provocation group drank more non-alcoholic (placebo) beer than the Non-Provocation group

- Similar analysis was conducted using the ginger ale as the dependent variable
  - Results showed no significance
  - $F (1,22) = .050$  $p>.05$

*The participants did not drink more ginger ale than placebo beer overall; no difference was found in either group*
Results: Beverage Consumption

- Examination of correlation between drinking and expectancies
- Directed bivariate correlations between assertiveness expectancies, relaxation expectancies, and amount of non-alcoholic beer that was consumed within each group
  - No relationship in the Non-Provocation group
  - In the Provocation group, there was a significant, positive correlation found between non-alcoholic beer consumed and assertiveness
    - The more these women alleged that alcohol would make them more assertive, the more these women drank
  - No significance found between relaxation and placebo beer drinking
Discussion

- Anger Provocation Manipulation

- Strong evidence that the manipulation increased ratings of anger and hostility

- Women’s ratings on all measures EXCEPT anger and hostility did not change

- Means the drinking behavior differences were caused by the provocation and anger.
Discussion

- Group Differences in Beverage Consumption
  - The women in the manipulation group consumed more alcohol than the women in the control group.
  - This determines that anger influences alcohol consumption.
- A link was found between anger levels and drinking.
- Findings support anger management courses in alcohol treatment programs which is already a common practice.
Discussion

- Expectations and “Beer” Consumptions
- Women who already believe that alcohol will make them more confident ended up drinking more when provoked.

  - This could be a coping strategy developed to make themselves stronger and more likely to strike back
- May have been goal
Discussion

- Weaknesses
  - The use of non-alcoholic beer instead of alcoholic beer means the subjects were drinking with the intention of consuming alcohol instead of the actual consumption.
  - The ratings were taken after the assessment.
  - Test subject pool was limited in diversity, may not be able to generalize the results to the public.
  - Was it the provocation or the unsolvable word problems that angered the participants the most?
Discussion

- Future experiments need to be conducted to see if the results are specific to anger.
- More diverse and larger samples need to be used
- Test men as well as women
Works Cited