

Do angry women choose alcohol?

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Abstract

- Womens alcohol treatment, usually includes anger management.
- Studies show strong association between anger and drinking.
- This study examines the effects of anger provocation on younger women.
- The women were split into two conditions.
- A female confederate was annoying and condescending for 8 minutes.
- After manipulation, all participants could choose between "beer" and Ginger Ale.
- The provocation condition consumed more "beer".
- There were no difference between groups for Ginger Ale consumption.

A large red speech bubble graphic with a white outline, pointing downwards. The word "Introduction" is written in white text inside the bubble.

Introduction

- Examination of the associative relationship between anger and women's choice to drink alcohol.
- Women's alcohol treatment incorporates anger management as a priority problem to work on in order to facilitate the alcohol treatment and reduce the likelihood of relapse.
- Anger- often functions as the antecedent stimulus which motivates alcohol consumption or a drinking relapse.

Introduction Continued

- Other antecedent stimulus triggers between anger and the choice to drink alcohol for women
- 1. Trait anger
- 2. Angry rumination
- 3. Attempt to relieve negative emotional states
- 4. Frustration due to environmental circumstances
- 5. Inability to retaliate against provocation- thus led to drinking in attempt to alleviate unrelieved anger or hostility.
- 6. Social interactions with someone who has a condescending and insulting attitude.
- 7. Frustrating task which often results in a high rate of failure coupled with a reinforced time limit for completion of the task

Introduction Continued

- **Experiment conducted to assess the relationship between women's choice to drink when angered.**
- Alcohol consumption - is the chosen coping strategy
- Men and women angered by different scenarios thus manipulation of anger in experiments varies based off gender.
- Men- angered by aggressive attitudes
- *Note- often aggressive people cause others to feel anxious or fearful as opposed to angry (most likely more women, or individuals with biological predispositions)
- Women- angered by insulting and condescending attitudes of others.
- **Purpose Of The Study-** examine the effect of specific provocations on women and their subsequent alcohol drinking behaviors.

Method

- **Participants**

- 30 women took part in the research
- 2 women were excluded

- **Materials**

- Quantity-Frequency Index
 - Self-report drinking or any past drinking problems
- Multiple Affect Adjective Checklist Revised (MAACL-R)
 - List of 130 adjectives to describe emotions
 - Four main scores: hostility, anxiety, depression, and positive affect
- Likert-Type Feeling Thermometer
 - Rate current emotions on a 7-point scale (1 being "not at all" and 7 being "extremely")
 - Based on 5 emotions: calm, angry, content, happy, and anxious
- Alcohol Expectancy Questionnaire (AEQ)
 - Six subscales: global positive changes, sexual enhancement, social and physical pleasure, social assertiveness, relaxation, and arousal/aggression

Method Cont'd

■ **Recruitment**

- Advertisements (local newspapers) and flyers (on campus)
- \$250.00 draw at the completion of the study
- Requirements:
 - 21 or older
 - Must be in good health
 - No drugs and alcohol 24 hours prior
 - No tobacco 30 minutes prior
- Self-report and breathalyzer test

*7 female undergraduate psychology majors assisted as confederates

*This study was supervised by a Graduate Research Coordinator

Procedure

Initial data collection

- When the participant arrived at the laboratory, a confederate also arrived under the guise that she was a “second subject.”
- Each participant (and the confederate, acting like a participant) completed a demographic inventory, the QFI, and the baseline MAACL-R and “Feeling Thermometer. All entering participants had a blood alcohol concentration of zero

Anger provocation manipulation

- Participants were assigned randomly to one of two experimental conditions: Provocation (n= 15) or No Provocation (n= 15)
- Both participant and confederate a list of anagrams to solve, and a strict time limit of 8 min in which to solve them.
- Anger was induced through frustration (using unsolvable anagrams for the participant) and by requiring the confederate, through a carefully scripted protocol, to be both annoying and condescending during the anagram task.
- In contrast, participants in the No Provocation condition had a list of relatively simple anagrams and the confederate quietly took the entire 8 min to solve her list while maintaining a neutral demeanor.
- Participants and confederates in both conditions then completed a 2nd MAACL-R and the Feeling Thermometer.

Procedure

Drinking behavior

- **Drinking following provocation was assessed within the guise of a separate experiment. Participants were told that they would now be subjects in a “second” experiment**
- **Experimenter 2, then gave four chilled beverages in opaque plastic cups to the participant and confederate. Two were labeled beer and two were labeled ginger ale; however, the “beer” was, in reality, non-alcoholic beer. Participants and confederates had 20 min to rate each beverage according to a list of gustatory adjectives. After finishing they were welcome to “finish any or all of the beverages you would like.”**
- **After 20mins the cups were collected and taken to the observation room, the Research Coordinator measured the remainder of each participant's beverages (in ml) and calculated how much the participant had consumed of each. During this time, participants and confederates completed their Alcohol Expectancy Questionnaires.**

Debriefing

- **The purpose of debriefing was 1) to assess the effectiveness of the deceptions; 2) to address and mollify any lingering emotional distress felt by the participants; and 3) to help the participant understand the importance of the research and enlist her as a “research partner” in helping to preserve the integrity of the experiment.**

Results

Verification of anger provocation

- Ratings were subjected to independent sample t-test

-MAACL-R $t(14.26) = 3.54, p < .003$

-Feeling Thermometer $t(16.75) = 2.77, p < .02$

- After the anagrams test

MAACL-R

-Provocation Condition: $M = 3.14, SD = 2.88$ (**Higher Hostility Scores**)

-Non-Provocation Condition: $M = .36, SD = .63$

Feeling Thermometer

-Provocation Condition: $M = 3.07, SD = 1.98$ (**Higher Anger Scores**)

-Non-Provocation Condition: $M = 1.50, SD = .76$

* Analyses of the remaining MAACL-R scales and the Feeling Thermometer scales did not detect any significant differences between groups.

Results Continued

Beverage Consumption

- **“Beer”**

- Provocation Condition: M= 170.0 ml, SD=81.34

- Non-Provocation Condition: M= 120.07 ml, SD=78.38

- **Ginger Ale**

- Provocation Condition: M=181.79 ml, SD= 112.36

- Non-Provocation Condition: M=199.5 ml, SD= 151.71

Results Continued

Univariate analysis of covariance

- Fixed Factor= Condition

Dependent Variable= Amount of “beer”

Covariates= Pre-manipulation of Anger Feeling Thermometer and MAACL-R

-Findings: Those in Provocation condition consumed more placebo beer.
 $p < .05$

- Fixed Factor= Condition

Dependent Variable= Ginger Ale Consumption

Covariates= Pre-manipulation of Anger Feeling Thermometer and MAACL-R

-Findings: There was no significant difference between the two conditions.
 $p > .05$

- Associations between expectancies and drinking were assessed.

-There was a significant positive correlation between assertiveness and “beer” consumed for the Provocation group. (More they believed alcohol would make them more assertive, the more they drank)

-There was no correlation found between relaxation expectancies and placebo beer drinking for either group

Discussion Summary

- The findings in this study show that the Provocation protocol was successful in increasing anger and hostility. Participants that were exposed to the Provocation protocol drank more non-alcoholic beer than the control group.
- There were no group differences in the amount of ginger ale consumed. Therefore, it appears that the more women expected alcohol to increase assertiveness, the more they drank. This appears to happen only when provoked, indicating an explanation for their decision to drink.

Discussion continued

- Anger provocation method significantly increased women's ratings of anger, controlling for anxiety, depression or positive affect on the MAACL-R, or of anxiety, calm, contentment and happiness on the feeling thermometers.
- These findings suggest that gender-specific manipulation would be valuable in studying women's drinking behavior.
- Finding group differences in “beer” consumption as a function of anger provocation provides clear experimental evidence of anger as a determinant of alcohol consumption.
- These findings support the value of the current practice of including an anger management protocol as a routine part of women's alcohol treatment programs (e.g. González-Prendes, 2008).

Discussion Continued

- Specific association between expectation and “beer” consumption.
 - Suggests that women expected alcohol consumption to make them more assertive and chose alcohol. Which suggests that alcohol is expected to be a coping mechanism. *These are associations only
 - Conversely, anger (tension) reduction expectancies did not seem to be associated with drinking under these circumstances. Additional research would be needed.
 - In the future, women's anger management treatment protocols might be tailored to reflect the strength of her association between drinking and assertiveness.

- Limitations
 - 1. The use of non-alcoholic “beer” rather than an alcoholic beverage. Participants did not in fact, consume any alcohol, but they had the intention to do so.
 - 2. Hypotheses about these associations were tentative and, additionally, were not given a “fair test” primarily because they were assessed after the taste task was over, so “drinking” might have affected the participants' responses. (more replication experiments needed; more participants needed to increase power)
 - 3. Recruitment
 - 4. The specific mechanism or mechanisms leading to the participant's anger and subsequent beverage consumption are unclear.

Future Directions

- Future replications should focus on re-examining whether "alcohol" consumption is specific to anger.
- How robust are these findings with a larger, more diverse sample?
- Do other provocations of anger lead to subsequent drinking?
- Further, replications should also assess if this finding of an alcohol/anger relationship is specific to women, as opposed to men.
- Gender-specific anger provocations may be necessary to induce anger and further work will be necessary in this area.
- Alcohol expectations, some of which may be gender-specific, may also play a role in the relationship. *does the person consider alcohol a coping mechanism?
- Research involving the actual effects of alcohol on self-reported anger would be beneficial in understanding this relationship.
- In the future we would have to see what the actual effects would be if the women consumed alcohol.

References

Morrison, P.M., et al., Do angry women choose alcohol? *Addictive Behaviors* (2012),
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