

# INVALIDATING PRO-SUBSTANCE BELIEFS IN MARIJUANA PREVENTION: A PROOF OF CONCEPT OF THE DUAL COMMUNICATION MODEL

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# ADOLESCENT ATTITUDINAL AMBIVALENCE

- Assumptions:
  - Many adolescents are intrigued with the idea of substance misuse
    - Rebellion
    - Popularity
    - Pleasure
    - Norms, perceived peers' attitudes, etc.
  - Many of these same adolescents also are repelled by the idea of substance misuse
    - Fear of detection and attendant consequences
    - Social isolation
    - Physical harm
    - Norms, religion, etc.

# ATTITUDINAL IMPLICATIONS OF AMBIVALENCE

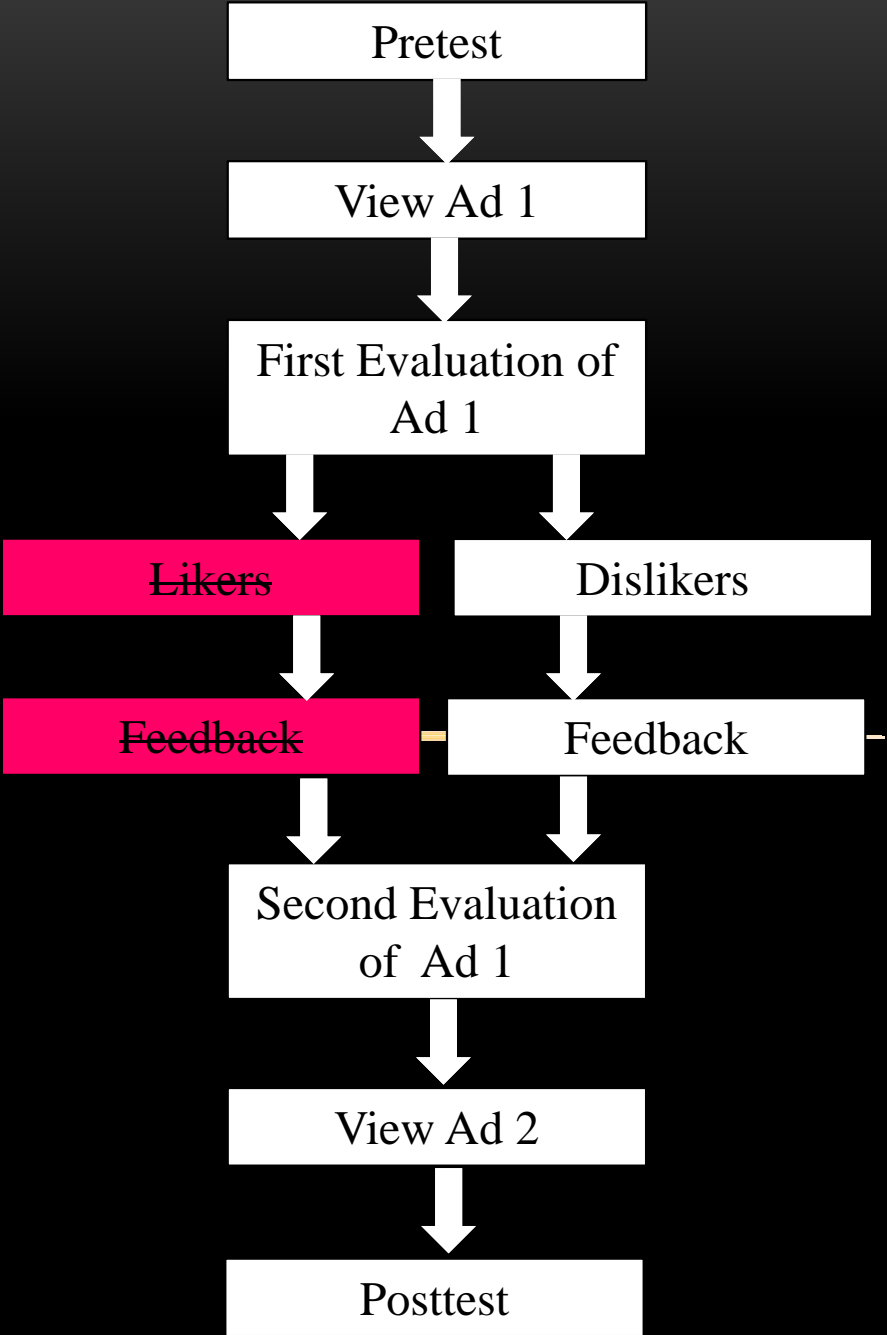
- The contradictory behavioral tendencies result in attitudes characterized by:
- Extreme instability
  - Highly variable from one time to the next
  - Not strongly defended
  - Not consistently attached to behavior
  - Easily changed

# TIPPING THE BALANCE: FROM POSITIVE ATTITUDES TO ABSTINENCE

- Theory:
  - If we could invalidate the pro-substance beliefs of the attitude, ideally all that would remain would be the anti-substance beliefs, which reinforce abstinence
  - That is, almost by process of elimination, the invalidating process would strengthen anti-substance attitudes
- Problem:
  - Can this be done?
  - If so, what is the best method of invalidating pro-substance beliefs?
- Plan:
  - Use the persuasion literature to devise a group of possible invalidators
  - Use a competitive comparison to choose the most successful tactic

# THE STUDY

- Expose large number ( $N=657$ ) middle-school children ( $\approx 12-15$  years old) to series of anti-substance videos drawn from large sample available on the internet (results not dependent on a single message)
- Choose those ( $N = 119$ ) who expressed the most negative responses to ads
  - Our earlier research has linked negative responses to higher likelihood of usage risk
    - Positive attitudes toward prevention ads were associated with lower likelihood of future usage, among users and non-users alike
  - Expose the negative participants to communications designed to invalidate their negative response
  - Choose the most effective
  - Determine if this manipulation affects responses to later anti-substance communications

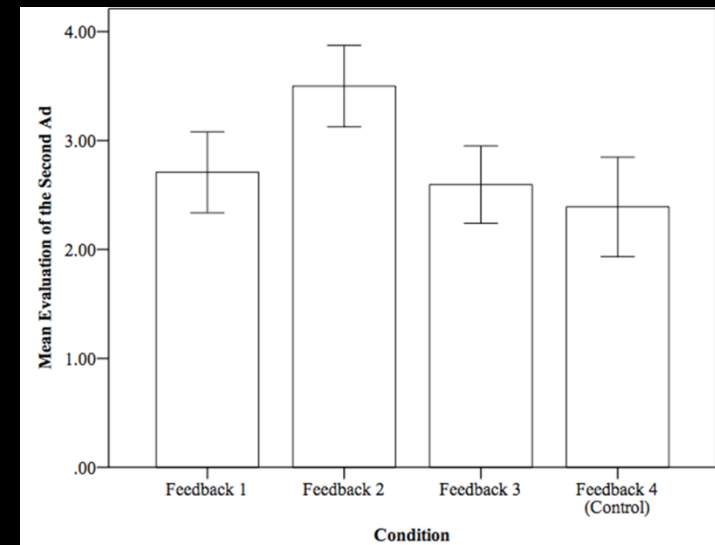


# THE STUDY, CONTINUED

- INVALIDATION: After the initial exposure to an anti-cannabis video, we randomly assigned the most negative respondents to one of four message conditions in a between-groups design:
  1. It seems you didn't like the ad. There are other people who also did not like it. Researchers have studied these people. The experts have found these people are very childish
  2. It seems... Pick on the top 3 reasons (of 10) you didn't like the ad..."Experts studied the reasons people could have for disliking the ad. They all graded the reasons you picked as childish"
  3. It seems you didn't like the ad. Please list 8 reasons why you think the ad was bad.
  4. Control (No message)
- "We are testing new question formats. Please evaluate the ad once again

# SOME RESULTS

- Participants who responded negatively to the anti-marijuana videos were significantly more ambivalent in their attitudes than those who responded positively,  $r = -.47$ ,  $p < .01$
- Analysis disclosed Feedback 2 was significantly more effective in challenging ad evaluations among the dislikers:
  - Condition 2 vs all others:  $p < .05$
  - Cond 2 vs 1:  $p < .05$
  - Cond 2 vs 3:  $p < .001$
  - Cond 2 vs 4:  $p < .05$



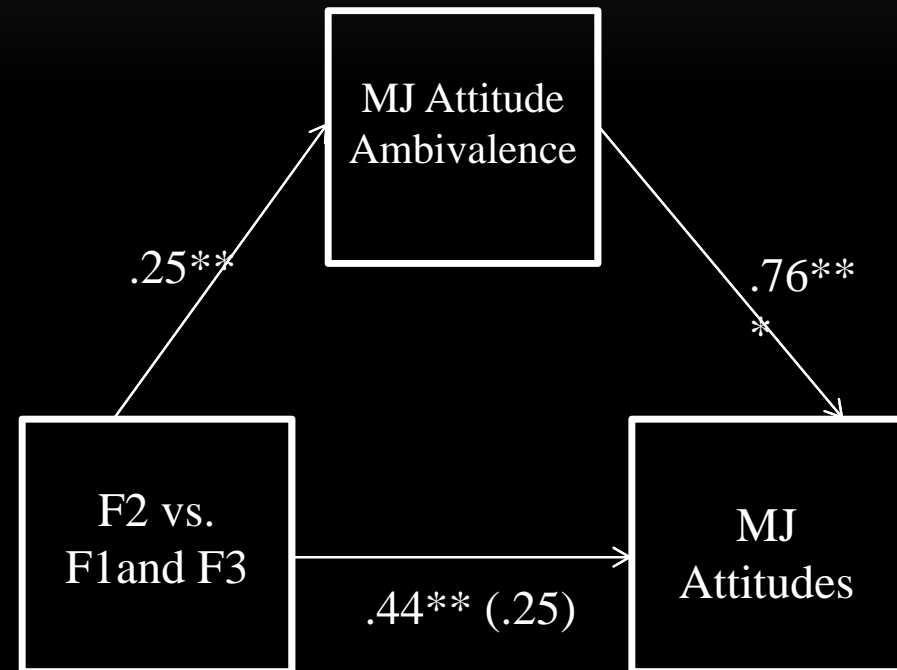


# SOME RESULTS, CONTINUED

- Did the treatment affect attitudes and usage intentions following a second communication? And, were changes effected indirectly through ambivalence?
- Questions suggest a mediation analysis, with Treatment 2 vs 1 & 3 as the independent variable (x), ambivalence as the the mediator (m), and attitude or intention as the dependent variable (y)
- Conditional process analyses used to examine the indirect effect of ambivalence on the main effect of treatment on attitudes and intentions
- Hayes' bootstrapping approach used to create empirical representation of the underlying sampling distribution of the indirect association by repeatedly resampling (1000 times) from obtained data.to create the distribution and define 95% bias corrected confidence intervals.
- The results support the expectation that the hypothesis of the indirect effect of ambivalence on both outcome variables

# MEDIATIONAL ANALYSIS: ATTITUDES

- Treatment differences operate indirectly through ambivalence on attitudes toward marijuana ( $p < .001$ ).
- Those receiving the second version of the anti-marijuana communication were significantly more antagonistic to marijuana use than the other groups.



# MEDIATIONAL ANALYSIS: INTENTIONS

- A similar finding for intentions to use marijuana. Treatment differences reflect the indirect effect of ambivalence on intentions to use ( $p < .05$ ).

