

Impulsivity and Smoking Motives among Individuals who Smoke Cigarettes and are Obese or Overweight

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Overview

This study aimed to investigate the relationship between impulsivity and smoking motives in a sample of individuals with overweight or obesity who smoke cigarettes ($N=69$).

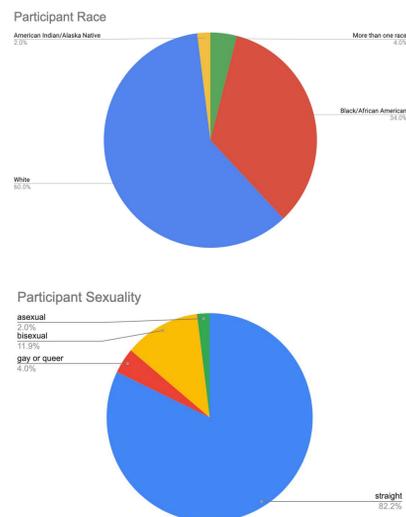
Background

- Tobacco use and obesity are two major public health concerns that pose serious risks to an individual's health and well-being.
- Many adults in the United States who smoke cigarettes are overweight or obese.
- Increased impulsivity is associated with both obesity and smoking.
- Smoking and eating behaviors influence each other in many ways.



Participants

- Participants who reported smoking cigarettes and met criteria for overweight/obesity were recruited nationally using online ads for a multiple health behavior change intervention study targeting smoking and weight
- Participants:
 - Female (84%)
 - Non-Hispanic/Latino (94%)
 - average body mass index (BMI) = 35.6 (SD=8.6)
 - average age = 49.5 (SD=11.7)
 - average years of education = 14.2 (SD=2.3)
 - 50% had a pre-tax household income of < \$40,000/year



Methods

- Participants completed initial screening for study eligibility criteria
- Those interested completed an orientation session followed by a baseline assessment session (all via Zoom)
- Participants completed demographic questionnaires
- Their weight was measured using an electronic at-home scale (mailed)
- Participants completed self-report questionnaires including:

Wisconsin Inventory of Smoking Dependence Motives (WISDM-37): Measures tobacco dependence motives

	1	2	3	4	5	6	7
1. I often smoke without thinking about it.	1	2	3	4	5	6	7
2. Cigarettes control me.	1	2	3	4	5	6	7
3. I usually want to smoke right after I wake up.	1	2	3	4	5	6	7
4. It's hard to ignore an urge to smoke.	1	2	3	4	5	6	7
5. The flavor of a cigarette is pleasing.	1	2	3	4	5	6	7
6. I frequently smoke to keep my mind focused.	1	2	3	4	5	6	7
7. I rely upon smoking to control my hunger and eating.	1	2	3	4	5	6	7
8. My life is full of reminders to smoke.	1	2	3	4	5	6	7

Monetary Choice Questionnaire (MCQ-27): Measures delay discounting (tendency to prefer smaller, immediate rewards over larger, delayed rewards)

Please check the amount you would prefer in the following questions.

- Would you rather have: \$54 Today Or, \$55 in 117 Days?
- Would you rather have: \$55 Today Or, \$75 in 61 Days?
- Would you rather have: \$19 Today Or, \$25 in 53 Days?

Brief Self-Control Survey (BSCS): Measures operational aspects of self-control such as overriding distraction

	Not at all (1)	(2)	(3)	(4)	Very much (5)
1. I am good at resisting temptation.	<input type="checkbox"/>				
2. I have a hard time breaking bad habits.	<input type="checkbox"/>				
3. I am lazy.	<input type="checkbox"/>				

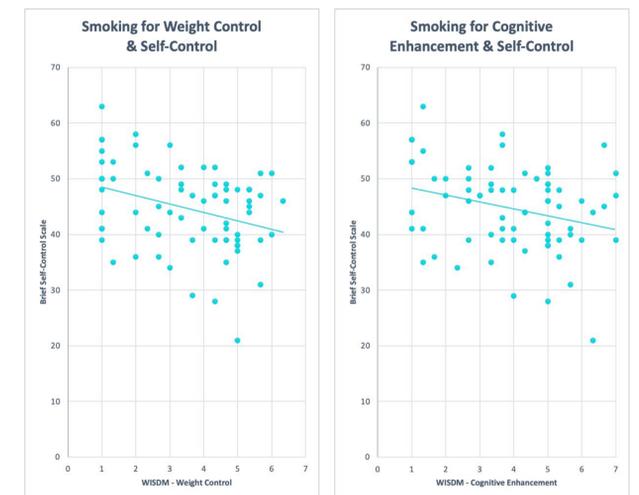
Results

- Cross-sectional associations between baseline variables were assessed using correlational analyses
- The tendency to prefer smaller, immediate rewards over larger, delayed rewards was not associated with any smoking motives



Results

- Lower levels of self-control on the Brief Self Control Scale were associated with:
 - Greater **weight control motives** for smoking (e.g, relying on cigarettes to keep from overeating and to control hunger and appetite) $r = -.31$ ($p < .01$)
 - Greater **cognitive enhancement motives** for smoking (e.g., smoking to help keep one's mind focused and to think better), $r = -.25$ ($p = .02$)



Conclusions

- Individuals with greater self-regulatory deficits may come to rely on cigarettes as a way to help them control their weight, appetite, eating, and attention.
- These results point to the potential benefits of interventions that help individuals enhance self-regulatory skills to reduce their reliance on cigarettes as a way to focus and prevent overeating
- Limitations:** The use of cross-sectional data prevents causal relationships from being established, and does not provide information about changes over time.
- Future directions:** A longitudinal study could be used to analyze the effects of self control and delay discounting as mediating factors on the effectiveness of interventions targeting smoking and weight. It may also be beneficial to test other reduced-harm alternatives that may fulfill the motivations of weight control and cognitive enhancement in order to mitigate the synergistic effects of smoking and obesity on public health.