

Weight Control and Affect Regulation Expectancies Mediate Fear of Weight Gain and General Distress Effects on Nicotine Dependence in both Smokers and Vapers

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Introduction

Background

- Smokers weigh on average less than non-smokers and often report that fear of gaining weight is a barrier to their desire to quit smoking. Some smokers report they would switch to e-cigarettes if the latter would also help them to control their weight (Cepeda-Benito, 2020).
- Depression and anxiety are well known smoking risk factors, and also perceived barriers to smoking cessation, as smokers report using tobacco to regulate their affect (Reynoso et al., 2005).
- Vapers also report vaping to regulate their mood (Giedgowd, 2018) and lose weight (Morean & Wedell, 2017).

Hypotheses

- We predicted that weight control and affect regulation nicotine expectancies would respectively mediate assumed positive relationships between fear of weight gain and symptoms of psychological distress with nicotine dependence in both smokers and vapers.

Methods

Participants

Smoker (N = 531)	Vaper (N = 421)
<ul style="list-style-type: none"> 43% Women 65.8% White, 29.9% Black 31.8% Hispanic $M_{age} = 37.55, SD_{age} = 10.91$ 	<ul style="list-style-type: none"> 51% Women 73.2% White, 18.5% Black 21.6% Hispanic $M_{age} = 35.37, SD_{age} = 10.56$

- Recruited via Amazon's MTurk
 - Criteria: 18+ years old, live in United States, 95% HIT acceptance rate
 - Second wave: above criteria & women only
- 2,921 potential participants directed to Qualtrics Screener
 - Smoker Criteria: 100 cigarettes in lifetime, smoked in past 30-days
 - Vaper Criteria: Own vape device, vape nicotine, vaped in past 30-days

Measures

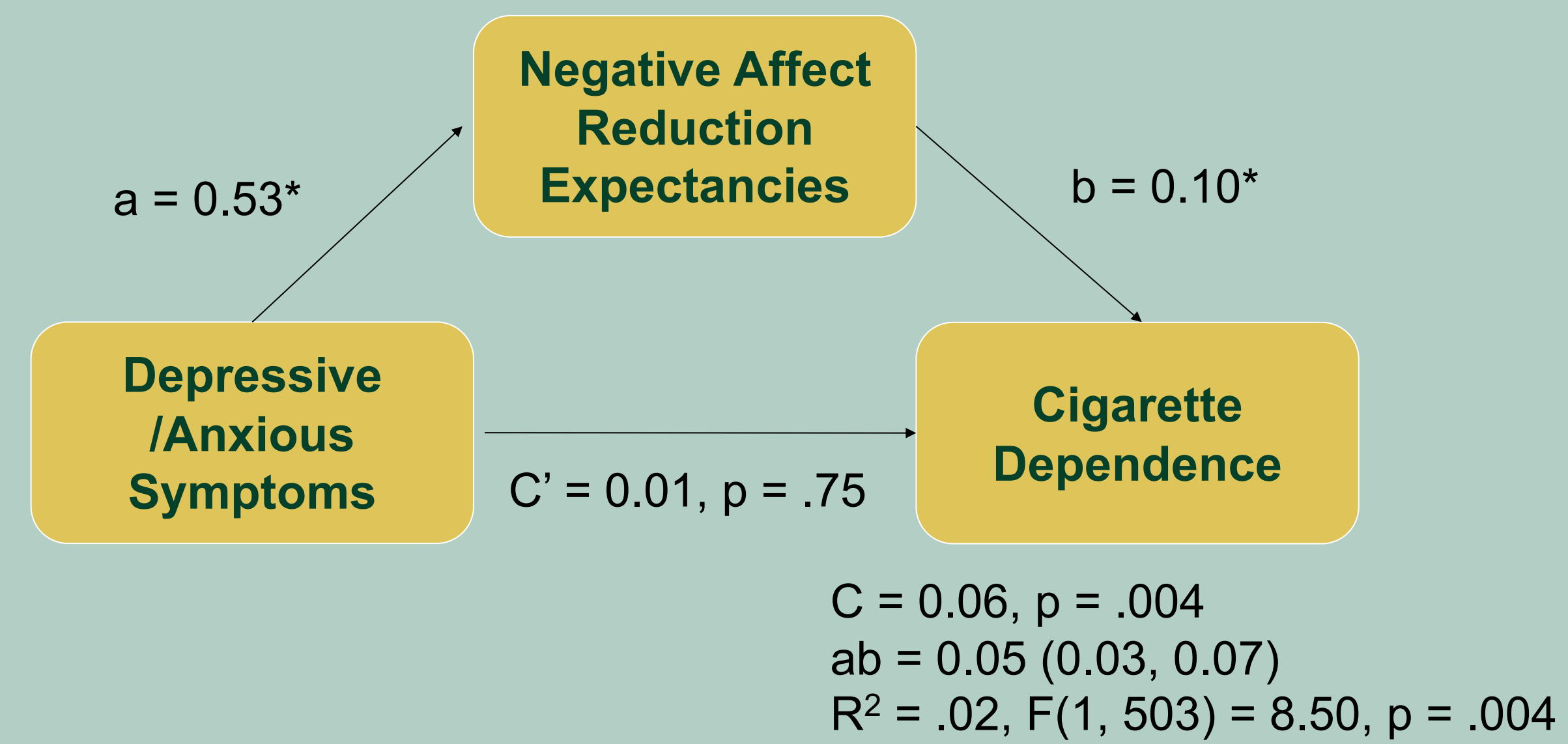
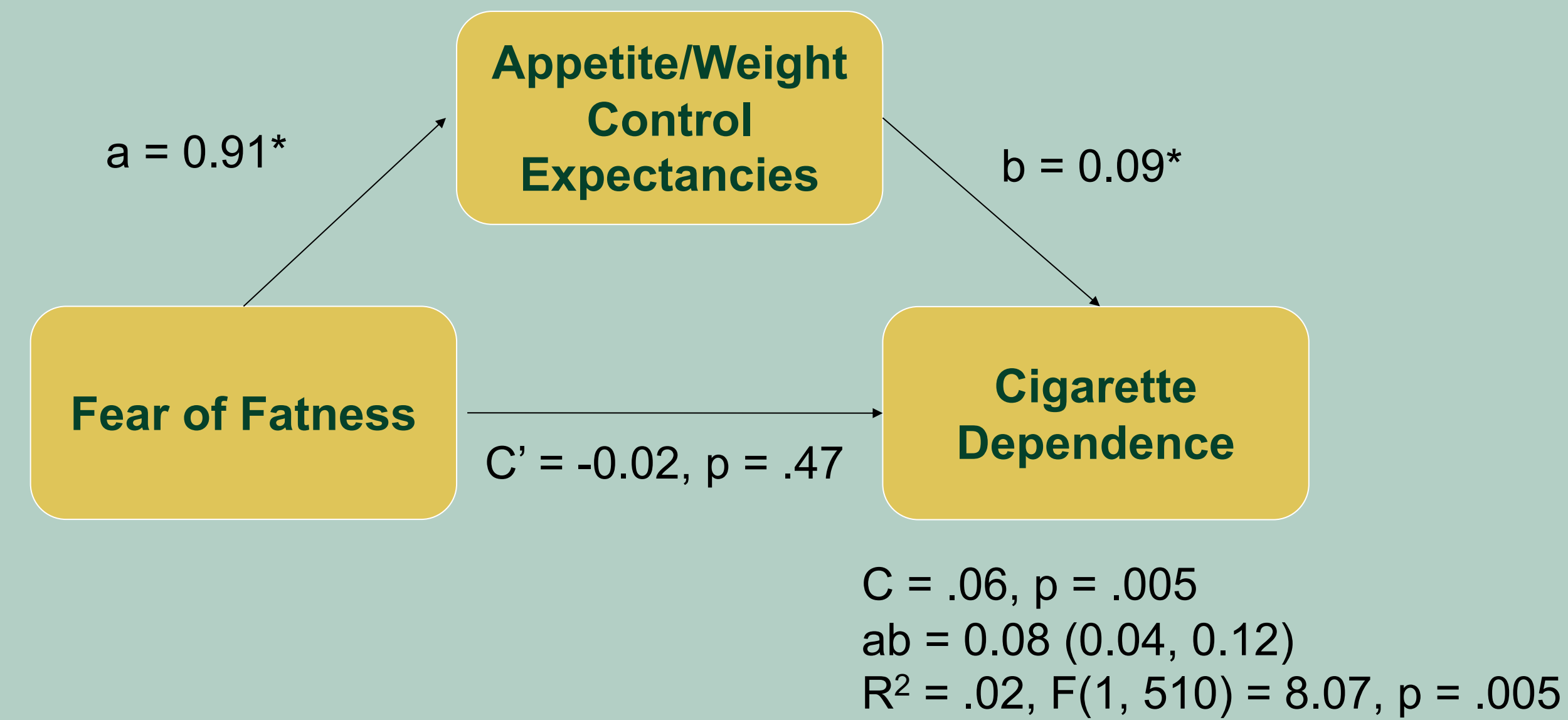
- Smoking History (10 items for smokers, 6 items for vapers)
- Vaping History (6 items for smokers, 23 items for vapers)
- Readiness and Motivation to Quit
- Penn State [E-]Cigarette Dependence Index
- Goldfarb Fear of Fat Scale
- Smoking [Vaping] Consequences Questionnaire – Adult
- Depression and Anxiety Scales of the Symptom Checklist – 90
- Instructional Manipulation Check
- Body Image Acceptance and Action Questionnaire
- Social Desirability Response Set
- Assessment of Smoking or Vaping Habits due to Food Cravings (6 items)

References

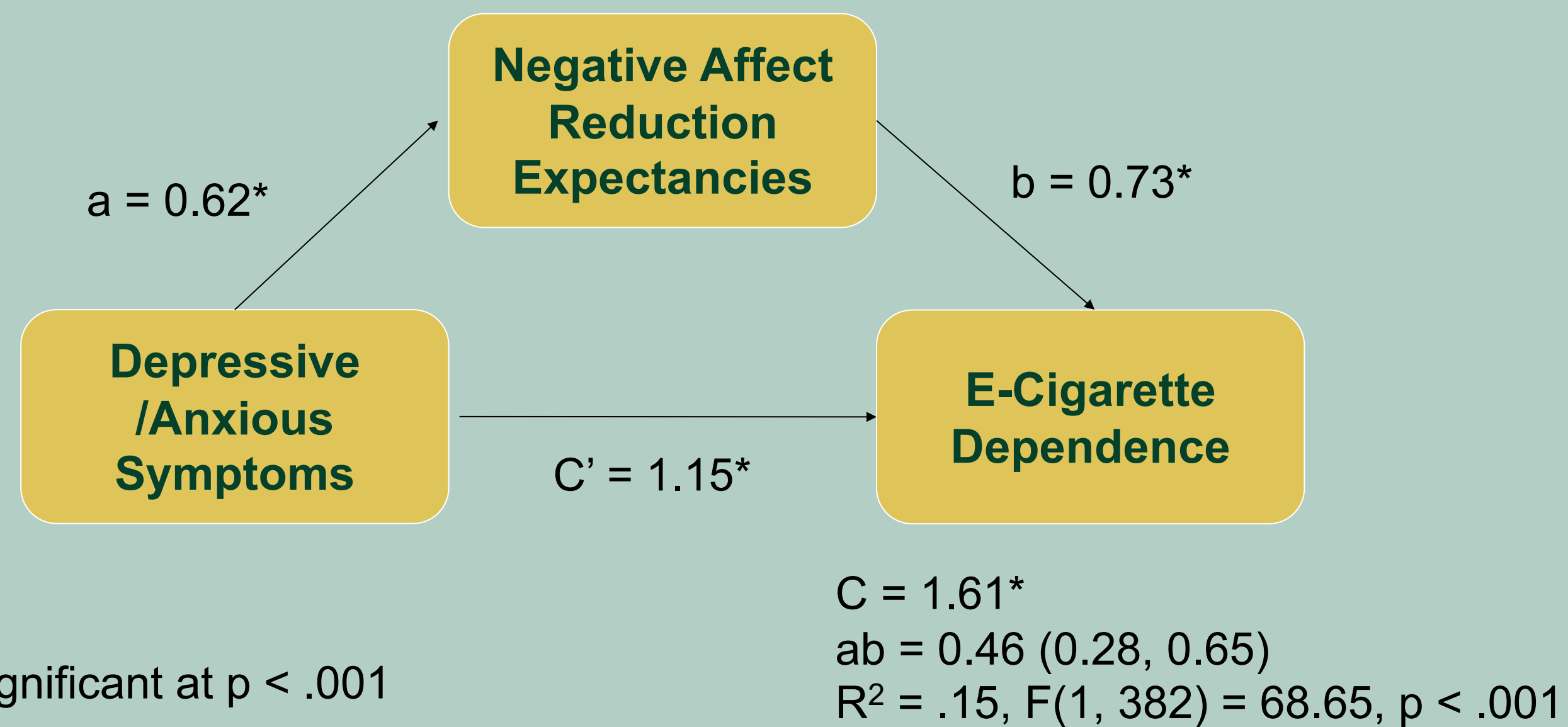
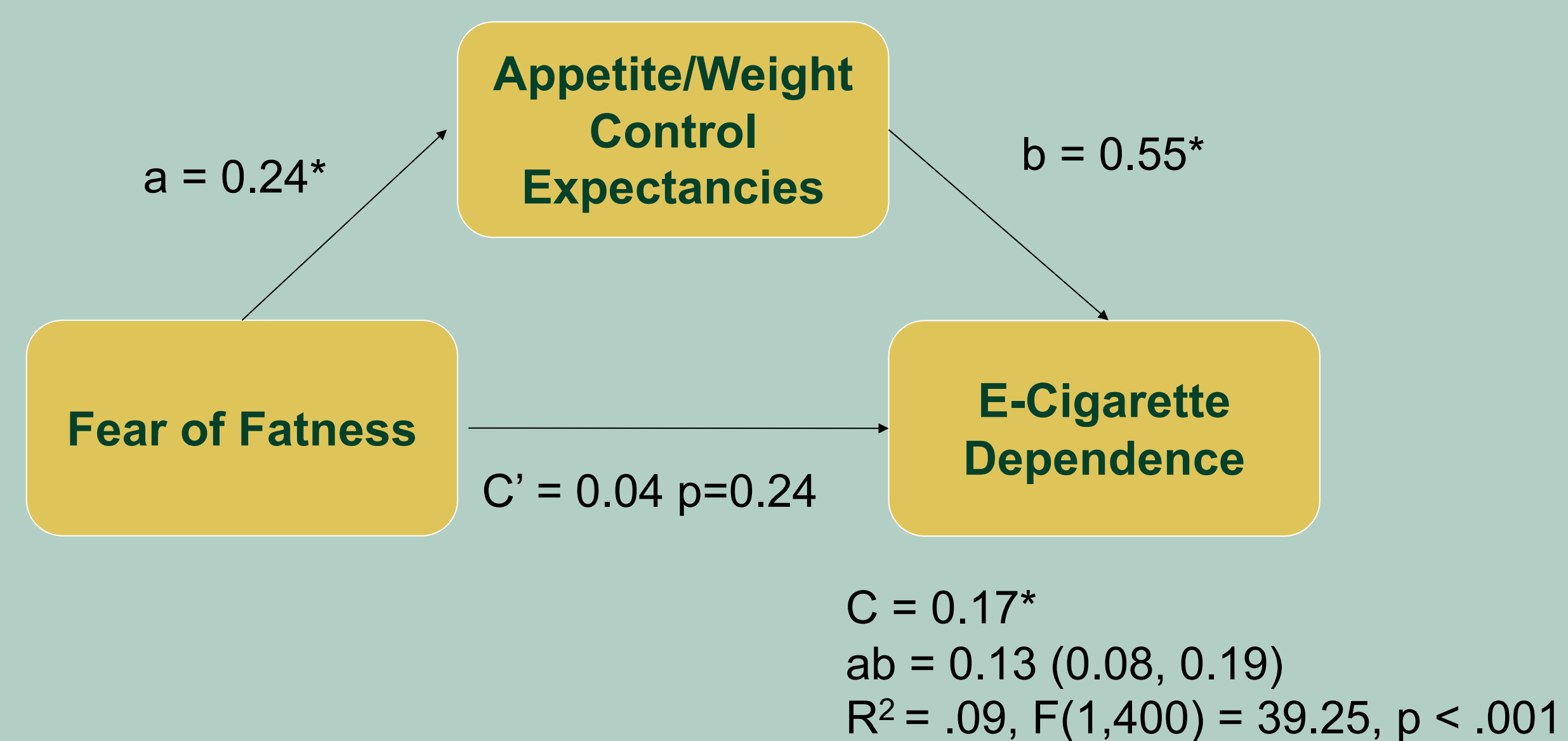
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Models & Results

Smokers



Vapers



*significant at $p < .001$

Descriptive Results

Scale	Vapers		Smokers	
	Men	Women	Men	Women
(E-)Cigarette Dependence	9.32 (4.11)	7.73 (4.59)	10.02 (3.76)	10.23 (4.20)
Fear of Fatness	24.73 (7.64)	23.47 (7.74)	27.28 (7.45)	21.87 (7.47)
Body Image Inflexibility	45.69 (19.77)	38.87 (18.71)	52.43 (19.32)	36.73 (18.99)
Depression/Anxiety Symptoms	2.52 (1.17)	2.14 (.98)	3.07 (1.17)	4.91 (2.14)
Weight Control Expectancies	4.73 (2.75)	3.87 (2.80)	5.64 (2.36)	3.91 (2.74)
Negative Affect Reduction Expectancies	6.14 (1.96)	5.37 (2.14)	6.38 (1.67)	6.32 (2.03)

Weight Control Expectancies

- Appetite and weight control expectancies were a significant mediator of the relationship between fear of gaining weight and nicotine dependence in both vapers and smokers.
- Weight control expectancies fully mediated the relationship between fear of gaining weight and nicotine dependence in both vapers and smokers, although the model explained substantively explained more of the variance in nicotine dependence among vapers (9%) than smokers (2%),

Affect Regulation Expectancies

- Negative affect reduction expectancies were a significant mediator of the relationship between fear of gaining weight and nicotine dependence in both vapers and smokers.
- Negative affect reduction expectancies fully mediated the relationship between Depressive/Anxious symptoms and cigarette dependence in smokers, and partially in vapers. Nonetheless, the model explained more variance among vapers (15%) than smokers (2%)

Conclusions & Limitations

- Our results were congruent with the hypotheses that smoking and vaping expectancies mediate the relationship between weight concerns and distress with nicotine dependence.
- The variance explained by the models, particularly for smokers, were very modest.
- Our data are cross-sectional, which precludes assessing cause-effect relationships.

Acknowledgement

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