

The Relationship Between Weight Loss Behaviors and Cigarette Use Among College Females

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Presenter Disclosures

Eric K. Soule

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“No relationship to disclose”

Introduction

Females, Body Image, and Cigarettes

- Research has indicated that women associate cigarette use with weight control
- Additionally, women who currently smoke have fears of weight gain following smoking cessation
- Body image plays a role in initiation of smoking in adolescent females, however not as much in adolescent males



College and Body Image

- There is evidence to suggest that the college years are also an at-risk time for cigarette use among females:
 - Many females during their transition from their senior year of high school to their **first years of college report body dissatisfaction**
- These factors may contribute to further risk of cigarette use among college females

Previous Work in Outcome Expectancies of Cigarette Smoking

- Previous research by Brandon and Baker (1991) examined outcome expectancies of cigarette use among undergraduate cigarette smokers and ex-smokers

- Used factor analysis to establish cigarette outcome expectancies:
 - ▣ Negative Consequences
 - ▣ Positive Reinforcement
 - ▣ **Negative Reinforcement**
 - ▣ **Appetite-Weight Control**

Previous Work in Outcome Expectancies of Cigarette Smoking

- Brandon and Baker reported that women had higher scores on subjective expected utility for cigarette use in the **negative reinforcement (negative affect reduction)** and **appetite-weight control** factors

- This indicates college females may be at greater risk for using cigarette as a means to control weight or handle negative emotions

Purpose

- Therefore, the purpose of this study was to examine if cigarette smoking among college females is associated with negative body image and weight loss behaviors

Methods

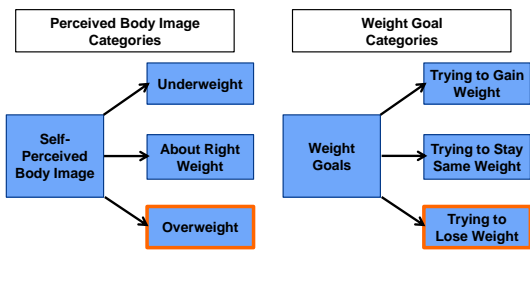
Survey

- Secondary analysis on Fall 2008 National College Health Assessment II (NCHA-II) data
- NCHA-II is a college health survey distributed to colleges in the United States that choose to participate
 - Selection of colleges is not random, however participants within colleges must be selected either randomly or administrators must attempt to select all students at the university
- The NCHA-II has been found to yield similar results as other national surveys with demonstrated generalizability

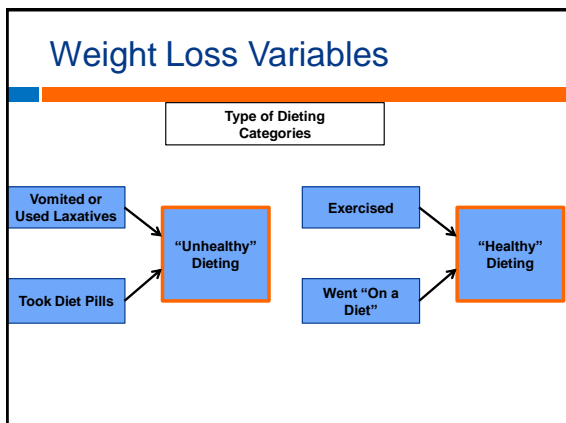
Sample

- To examine *typical* college females, we selected female participants who were:
 - Undergraduates
 - Between the ages of 18 and 23
 - Not attending postsecondary minority institutions, historically Black colleges or universities, high Hispanic enrollment colleges, or Hispanic serving institutions. (Lower cigarette use is often reported among African American college students and schools may be less representative to the national college population)
- Total sample of 12,914 college females

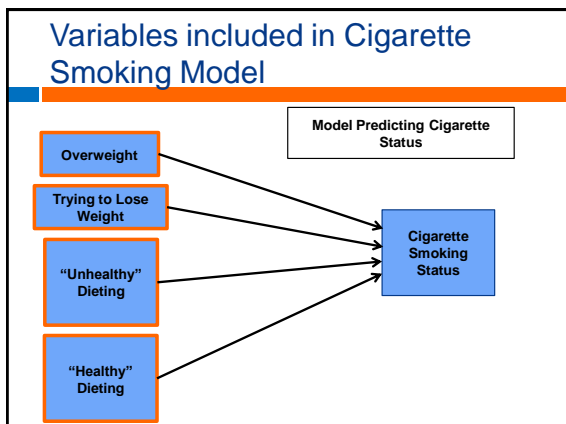
Body Image and Weight Loss Variables



Weight Loss Variables



Variables included in Cigarette Smoking Model



Data Analyses

- Frequency Analyses
- Chi-squared analyses to inform regression models
- Multiple Binary Logistic Regression analyses predicting ever and current (past 30 day) cigarette use

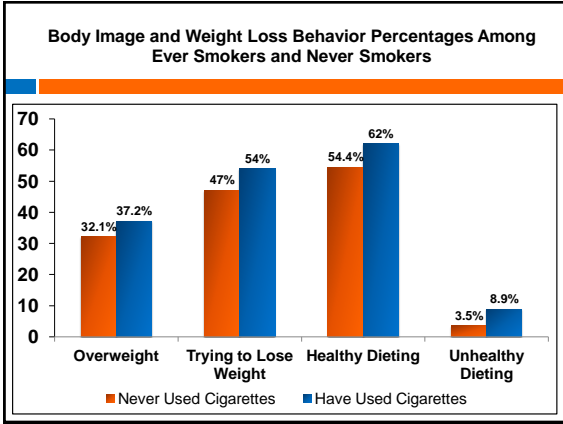
- We hypothesized that those who reported being overweight, trying to lose weight, and/or engaging in “unhealthy” weight loss behaviors would be more likely to report cigarette use

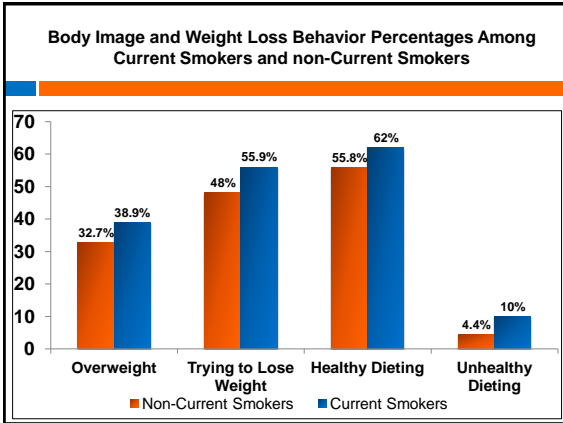
Results

Demographics

- Most (72.9%) were under the age of 21
- Race
 - White (78.1%)
 - African American (5.9%)
 - Hispanic or Latina (7.7%)
 - Asian or Pacific Islander (8.8%)
 - Biracial or multiracial (3.9%)

- **31.9% of the participants reported ever cigarette use**
- **16.1% of the participants reported current cigarette use**





Logistic Regression Analysis Predicting Ever-Cigarette Use

Predictor	B	SE	OR	95% CI	Wald statistic	p
Self-Described as Overweight	0.106	0.047	1.11	[1.01, 1.22]	5.04	.025
Trying to Lose Weight	0.059	0.054	1.06	[0.96, 1.22]	1.20	.273
Engaged in Healthy Dieting	0.167	0.050	1.18	[1.07, 1.30]	10.90	.001
Engaged in Unhealthy Dieting	0.884	0.085	2.42	[2.05, 2.86]	108.15	<.001
Race (White/non-White)	0.494	0.055	1.64	[1.47, 1.83]	79.77	<.001
Hispanic/non-Hispanic	0.265	0.084	1.30	[1.11, 1.54]	10.00	.002
Age	0.072	0.014	1.07	[1.05, 1.10]	26.44	<.001

Logistic Regression Analysis Predicting Current Cigarette Use

Predictor	B	SE	OR	95% CI	Wald statistic	p
Self-Described as Overweight	0.164	0.059	1.18	[1.05, 1.32]	7.77	.005
Trying to Lose Weight	0.159	0.069	1.17	[1.03, 1.34]	5.38	.020
Engaged in Healthy Dieting	0.040	0.065	1.04	[0.92, 1.18]	.375	.540
Engaged in Unhealthy Dieting	0.819	0.093	2.27	[1.89, 2.72]	77.09	<.001
Race (White/non-White)	0.496	0.073	1.64	[1.42, 1.89]	45.98	<.001
Hispanic/non-Hispanic	0.247	0.107	1.28	[1.04, 1.58]	5.31	.021
Age	0.054	0.018	1.06	[1.02, 1.09]	9.45	.002

Conclusions

Summary of Findings

- Females who perceived themselves as overweight were significantly more likely to be ever or current cigarette smokers compared to those who did not perceive themselves as overweight.
- Females who were trying to lose weight were significantly more likely to be current smokers compared to those who were not trying to lose weight. This was not true for ever cigarette use.
- Females who engaged in “unhealthy” weight loss behaviors had greater odds of using cigarettes (both ever and current use). This was the strongest predictor of cigarette use in both models.
- Healthy dieting behaviors also represented risk for ever cigarette use.

Summary of Findings

- It appears that all types of dieting and weight loss behaviors among college females, regardless of if they are “healthy” or “unhealthy”, are associated with an increased risk of cigarette use.
- While this study was cross-sectional in design, the fact that trying to lose weight was only significantly associated with current cigarette use may suggest that cigarette smoking is perceived as a viable weight-loss strategy among college females.

Conclusions and Future Work

- These findings indicate **self-body image and weight loss behaviors and cigarette use** are linked in a national sample of college females
- College health officials who are working to prevent cigarette use among females should consider **weight loss behaviors** and **body dissatisfaction** as risk factors when determining those at-risk for cigarette use

Thank You!

- Questions?

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