

Psychosocial Outcomes of Weight Stigma among College Students

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Importance and Significance

- Obesity is epidemic in the United States
- Obesity is associated with medical and psychosocial consequences
- As the prevalence of overweight and obesity increases so will the prevalence of weight stigma

Review of Literature

- Overweight individuals experience bias, discrimination, and victimization across all aspects of life (Puhl & Brownell, 2001).
- Myers & Rosen (1999) found the more stigmatization experienced by the overweight the more psychological distress.
- Weight-related teasing is associated with negative psychosocial well-being.

Hypotheses

- H₁: Weight-related variables are positively related to depressive symptoms.
- H₂: Weight-related variables are negatively related to body satisfaction.
- H₃: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and depressive symptoms.
- H₄: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and body dissatisfaction.
- H₅: Measures of weight stigma will show evidence of mediation between weight status and self-esteem.

Design and Sample

- Non-experimental exploratory correlational study using web-based survey methods.
- Sample drawn from 15,156 undergraduate students at USF Tampa campus.
- Approximately 716 participants were needed for 80% power to detect a medium effect size defined as a change in R² of 5%.

Sample Demographics

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| <ul style="list-style-type: none"> □ Sample size <ul style="list-style-type: none"> ■ N =955 □ Age <ul style="list-style-type: none"> ■ M =19.67 □ Gender <ul style="list-style-type: none"> ■ Females 82% ■ Males 18% | <ul style="list-style-type: none"> □ Race/ethnicity <ul style="list-style-type: none"> ■ Whites 76% ■ Nonwhites 24% □ Class <ul style="list-style-type: none"> ■ Juniors 32% ■ Sophomores 30% □ Weight status <ul style="list-style-type: none"> ■ BMI M =24.35 ■ BMI ≥ 25 = 33% ■ Overweight/obese 29% |
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Note: N= sample, M= mean

Measures

Predictor Variables	Mediators	Moderators	Dependent Variables
Weight Status: •Perceived weight •BMI	Self-esteem: •SES •SSES	Perceived control	PHQ-9
		MSPSS	CDRS
Weight Stigma: •LES •POTS •GBS	Weight Stigma: •LES •POTS •GBS	Self-esteem: •SES •SSES	

Note: Body Mass Index (BMI), Life Experiences Scale (LES), Perception of Teasing Scale (POTS), Gatehouse Bullying Scale (GBS), Rosenberg Self-esteem Scale (SES), State Self-esteem Scale (SSES), Physician Health Questionnaire-9 (PHQ-9), Contour Drawing Rating Scale (CDRS), Multidimensional Scale of Perceived Social Support (MSPSS)

Methods

- Correlational analysis using Pearson's correlation for hypotheses one and two
- Meditational analysis using multiple regression according to the Baron and Kenny Method (1986) for hypotheses three through five

H₁: Weight-related variables are positively related to depressive symptoms.

Variables	Depressive Symptoms
Body Mass Index	.20**
Perceived Weight	.21**
Bullying	.28**
Discrimination	.43**
Teasing	.35**

** p < .01

H₂: Weight-related variables are negatively related to body satisfaction.

Variables	Body Dissatisfaction
Body Mass Index	.52**
Perceived Weight	.59**
Bullying	.14**
Discrimination	.14**
Teasing	.42**

**p<.01

H₃: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and depressive symptoms.

- State Self-esteem predicting depressive symptoms for perceived weight
 - In the presence of perceived weight low self-esteem is associated with more depressive symptoms. As self-esteem increase depressive symptoms decrease.

H₃: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and depressive symptoms.

- State self-esteem predicting depressive symptoms for teasing
 - Self-esteem has a strong effect on depressive symptoms. Self-esteem strongly mediates the relationship between teasing and depressive symptoms. As self-esteem increases the prevalence of depressive symptoms decrease.

H₃: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and depressive symptoms.

- Trait self-esteem predicting depressive symptoms for discrimination
 - In the presence of discrimination low self-esteem is associated with more depressive symptoms. As self-esteem increases depressive symptoms decrease.

H₄: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and body dissatisfaction.

- State Self-esteem predicting body dissatisfaction for perceived weight
 - In the presence of perceived weight low self-esteem is associated with more body dissatisfaction. As self-esteem increases body dissatisfaction decreases

H₄: Measures of self-esteem (trait and state) will mediate the relationship between weight-related variables and body dissatisfaction.

- State self-esteem predicting body dissatisfaction for teasing
 - The relationship between teasing and body dissatisfaction is fairly strong as well as the indirect effect of self-esteem on body dissatisfaction in the presence of teasing.

H₅: Measures of weight stigma will show evidence of mediation between weight status and self-esteem.

- Teasing predicting state and trait self-esteem for perceived weight
 - In the presence of perceived weight greater teasing is associated with low self-esteem. As teasing increases self-esteem decreases
 - There is a small direct and indirect effect of perceived weight on self-esteem. Although there is a stronger direct relationship between teasing and weight.

Direct Effects

- Teasing
 - Moderate direct relationship with outcomes
- Discrimination
 - Moderate direct relationship with depressive symptoms
- Weight
 - Actual and perceived have a strong direct relationship with body dissatisfaction

Mediation Effects

- Self-esteem strong mediator
 - State self-esteem
- Teasing a significant mediator

Summary

- College students experience the same amount of weight stigma
- Psychosocial consequences are real
- Preserve psychosocial health

References

- Wyatt, S. B., Winters, K. P., & Dubbert, P. M. (2006). Overweight and obesity: Prevalence, consequences, and causes of a growing public health problem. *American Journal of Medical Sciences*, 331(4), 166-174.
- Fonseca, H., & Gasper de Matos, M. (2005). Perception of overweight and obesity among Portuguese adolescents: an overview of associated factors. *European Journal of Public Health*, 15(3), 323-328.
- Eremis, S., Cetin, N., Tamar, M., Bukusoglu, N., Akdeniz, F., & Goksen, D. (2004). Is obesity a risk factor for psychopathology among adolescents? *Pediatrics International*, 46(3), 296-301.
- Miller, C. T., & Downey, K. T. (1999). A meta-analysis of heavyweight and self-esteem. *Personality and Social Psychology Review*, 3(1), 68-84.

References

- Vaidya, V. (2006). Psychosocial aspects of obesity. *Advances in Psychosomatic Medicine*, 27, 73-85.
- Stunkard, A. J. & Sorensen, T. I. (1993). Obesity and socioeconomic status: a complex relation. *New England Journal of Medicine*, 329, 1036-1037.
- Puhl, R. & Brownell, K. D. (2001). Bias, discrimination, and obesity. *Obesity Research*, 9(12), 788-805.

References

- Myers, A. & Rosen, J.C. (1999). Obesity stigmatization and coping: Relation to mental health symptoms, body image, and self-esteem. *International Journal of Obesity*, 23, 221-230.
- Eisenberg, M. E., Neumark-Sztainer, D., & Story, M. (2003). Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatrics & Adolescent Medicine*, 157, 733-738.
- Neumark-Sztainer, D., Falkner, N., Story, M., Perry, C. Hannan, P. J., & Mulert, S. (2002a). Weight-teasing among adolescents: correlations with weight status and disordered eating behaviors. *International Journal of Obesity*, 26, 123-131.