

# HBS The Healthy Bodies Study



**Project:** Online Intervention to Identify Students with Untreated Symptoms of Eating Disorders and Promote Mental Health Treatment

**Winter/Spring 2015 (*pilot study*)**

## **STUDY OVERVIEW**

### **Background**

Disordered eating and body image dissatisfaction are common on college and university campuses, yet relative to other mental health problems common in student populations (e.g., depression and anxiety), considerably less is known about clinical and sub-clinical eating disorders. The Healthy Bodies Study (HBS) takes a public health approach by assessing a range of eating and body image measures at the population-level. HBS encompasses a number of related projects that seek to explore and address the prevalence and correlates of disordered eating and body image dissatisfaction and the help-seeking habits and attitudes of students with apparent need.

### **Motivation**

The undergraduate years coincide with age of onset for eating disorders (19-25 years), presenting unique opportunities for early intervention on college campuses. Unfortunately, this opportunity is largely missed. The treatment gap—the proportion of affected students not receiving treatment—is wide: 80% of students with clinically significant symptoms do not receive care. Left untreated, eating disorders typically become more severe and refractory to treatment. In response to this, the HBS team developed and implemented a 12-week online intervention to identify students with untreated symptoms of eating disorders and promote help-seeking.

## **STUDY DESIGN**

### **Study Sites**

The pilot study was conducted during the winter/spring 2015 semester on four college and university campuses. To ensure feasibility, the study was limited to four campuses while making every effort to ensure that these sites represented a diverse set of schools. The sites were: Appalachian State University, Bard College, Mercyhurst University, and University of Michigan.

### **Protection of Human Subjects**

The study was designed to protect the privacy and confidentiality of participants and was approved by the Health Sciences and Behavioral Sciences Institutional Review Board at University of Michigan and by Institutional Review Boards at all participating campuses. To further protect respondent privacy, the study was covered by a Certificate of Confidentiality from the National Institutes of Health.

### **Sampling and Data Collection**

Each participating school provided the study team with a randomly selected sample of currently enrolled undergraduate students who were at least 18 years of age at the start of the 2015 winter/spring semester. These students (*the recruitment sample*) were invited to participate in a baseline survey, which was conducted online using the Qualtrics platform. Across all study sites, the recruitment sample was comprised of 20,289 students. Students were invited and reminded to participate in the survey via email. The baseline survey took approximately 15 minutes to complete. Based on embedded skip logic, some measures were assessed only for students with certain responses to survey items. Students were able to skip any questions that made them uncomfortable, or that they simply did not wish to answer.

The baseline survey contained a screening algorithm used to identify students at risk for an eating disorder. Students who met a specific symptom threshold and were not receiving treatment (*the intervention sample, see criteria below*) were invited to participate in a 12-week online intervention designed to promote help-seeking. Students in the intervention sample received a weekly email containing information about resources for eating and body image concerns and the importance of seeking help. These students were also asked to complete 6- and 12-week online follow-up assessments. After the baseline survey, eligible students received a follow-up email with more information about the intervention. With the exception of this initial follow-up email, students will be able to opt-out of receiving the weekly emails.

## Intervention Criteria

Students were included in the intervention if they met one or more of criteria 1-4 AND all of criteria 5-7. Students were excluded from the intervention (and given a clinical referral at the end of the baseline survey) if they did not meet criterion 5 ( $BMI \leq 17$ ).

- (Criteria 1) SCOFF score  $\geq 3$  (range: 0-5)
- (Criteria 2) Weight Concerns Scale score  $\geq 59$  (range: 0-100)
- (Criteria 3) Binge eating behavior  $\geq 8$  days in past month (range: 0-28 days)
- (Criteria 4) Purging behavior  $\geq 8$  times in past month (range: continuous)
- (Criteria 5) Body mass index (BMI)  $> 17$  (range: continuous)
- (Criteria 6) No lifetime eating disorder diagnosis
- (Criteria 7) No current eating disorder counseling/therapy

## ABOUT THIS REPORT

The report provides descriptive statistics (percentages, mean values, etc.) for a set of key measures using the sample of respondents from all study sites. Results are presented in two parts: (1) baseline survey findings and (2) follow-up survey findings. Baseline survey findings are presented for the full sample of baseline respondents, including the intervention sample. Follow-up survey findings are presented only for the intervention sample. The baseline respondent sample is comprised of 4,697 students (including the intervention sample) and the intervention sample is comprised of 1,149 students (or 24.46% of baseline respondents).

## STUDY TEAM

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## BASELINE RESPONDENTS (N=4,697)

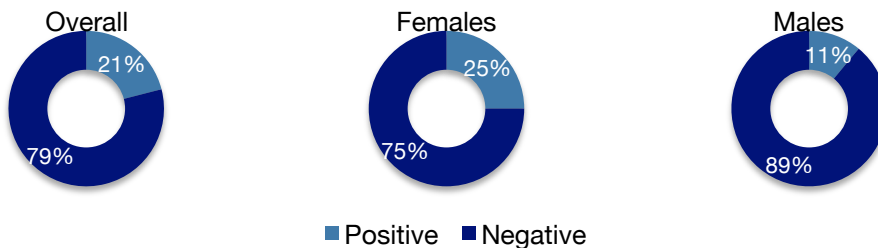
### Baseline Sample Characteristics (%)

Gender Identity	
Female	68.72
Male	29.98
Transgender	0.13
Other	1.17
Sexual Orientation	
Straight	87.32
Gay/lesbian	2.69
Bisexual	5.62
Other	4.36
Race/ethnicity	
White	75.26
African American	3.13
Latino/a	3.60
Asian	7.71
Other	10.30
Housing	
On-campus residence hall/apt	51.61
Fraternity/sorority	1.89
Off-campus	41.67
Other	4.84

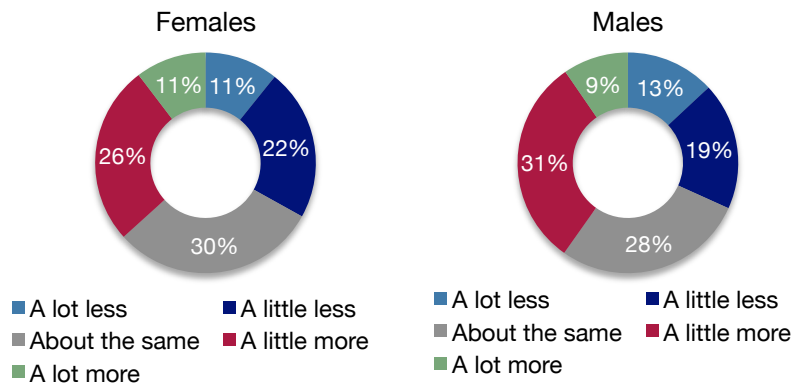
### Weight Concerns Scale (WCS) (Killen et al., 1994; Killen et al., 1996)

The WCS is a reliable and valid 5-item measure of eating attitudes and has been used to predict eating disorder risk in diverse samples, including among college students. Scores range from 0-100 with a score of  $\geq 59$  constituting a positive screen.

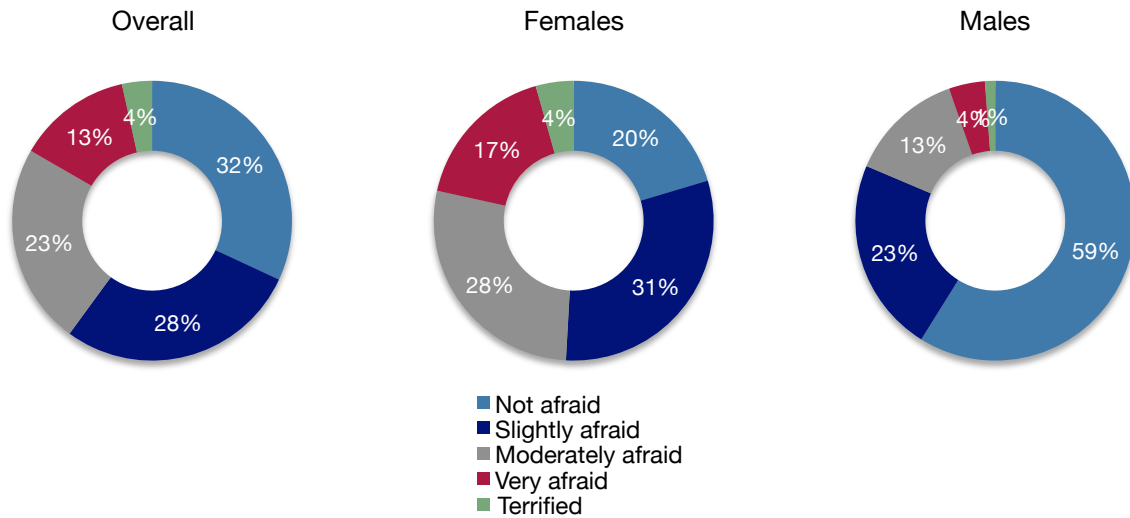
#### WCS positive (range: 0-100; $\geq 59$ =positive)



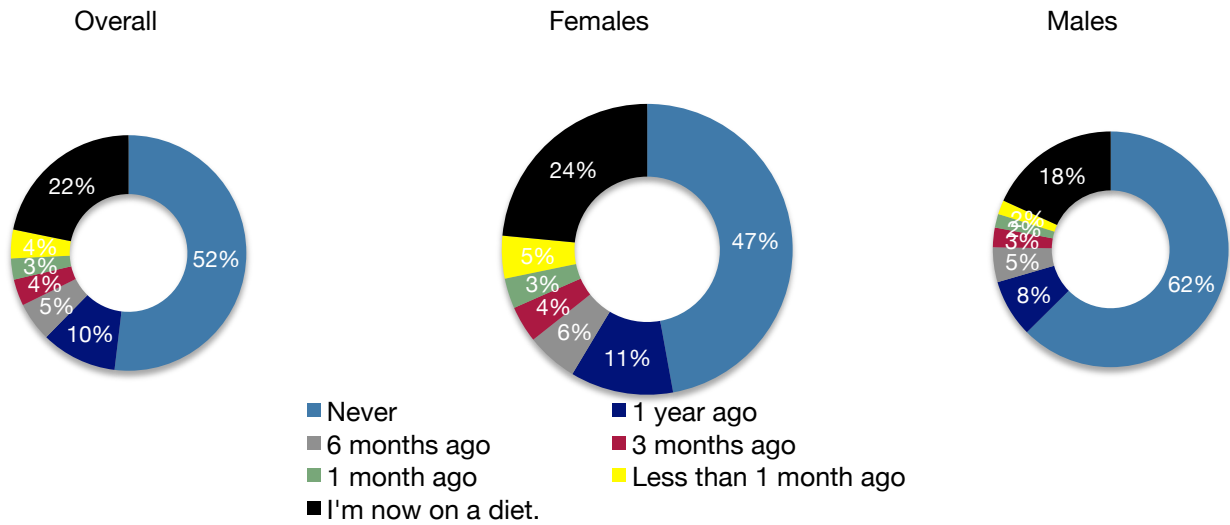
#### WCS Item #1: How much more or less do you feel you worry about your weight and body shape than other [women/men] your age?



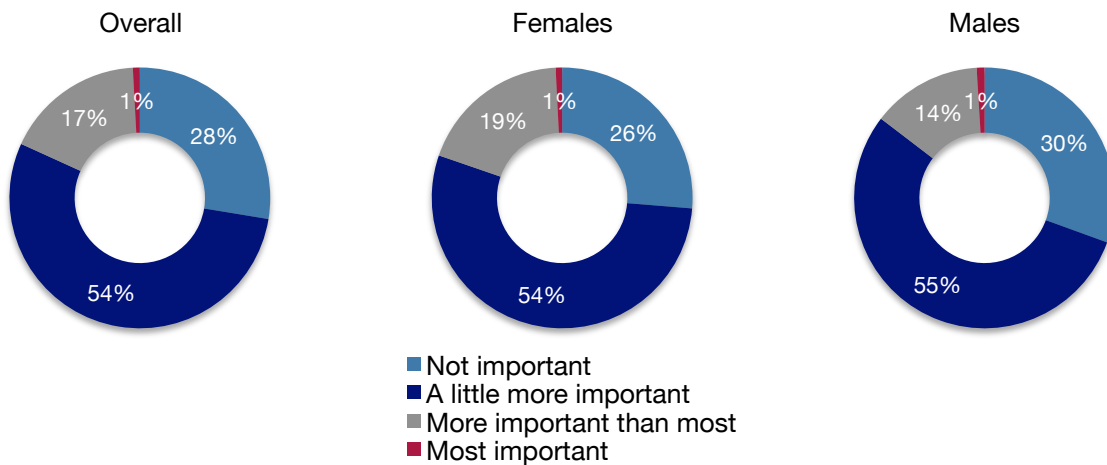
**WCS Item #2: How afraid are you of gaining 3 pounds?**



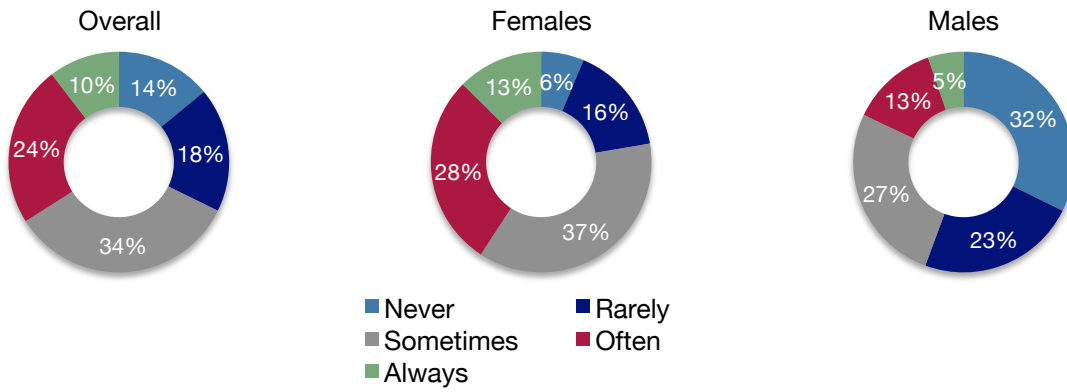
**WCS Item #3: When was the last time you went on a diet?**



**WCS Item #4: Compared to other things in your life, how important is your weight to you?**



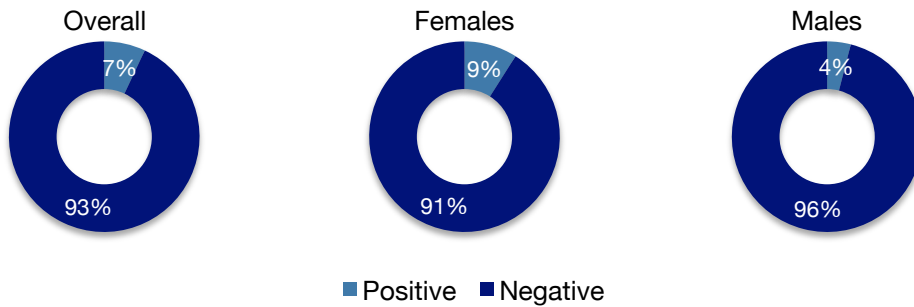
**WCS Item #5: Do you ever feel fat?**



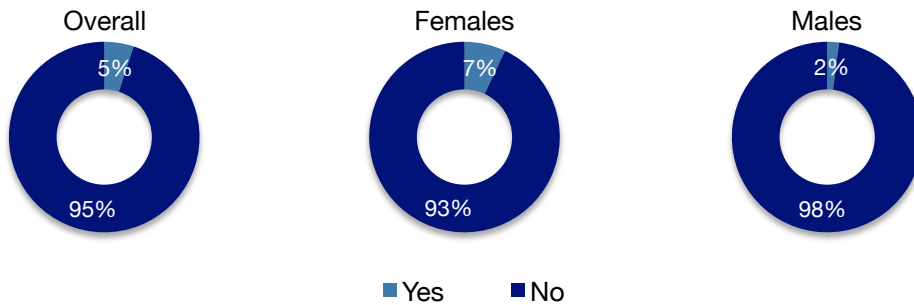
**SCOFF (Morgan, Reid, & Lacey, 1999)**

The SCOFF is an empirically validated 5-item screening tool used to detect likely eating disorder cases. Scores range from 0-5, with a score of  $\geq 2$  constituting a positive screen.

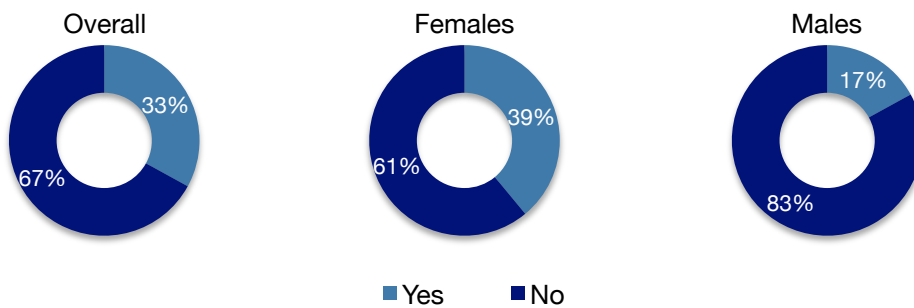
**SCOFF positive (range: 0-5;  $\geq 2$ =positive)**



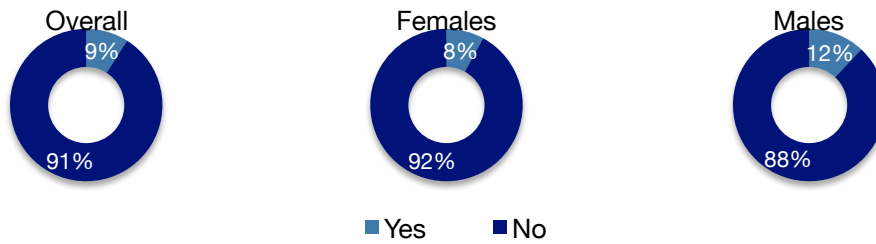
**SCOFF Item #1: Do you make yourself sick (vomit) because you feel uncomfortably full?**



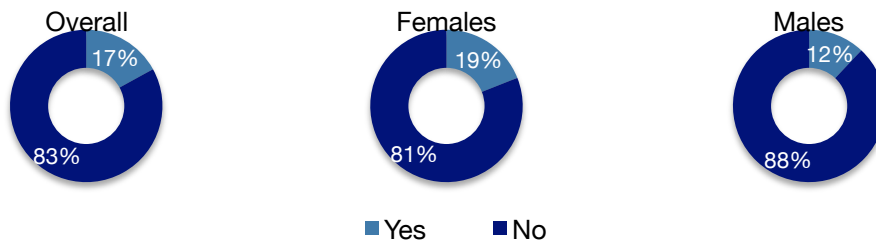
**SCOFF Item #2: Do you worry you have lost control over how much you eat?**



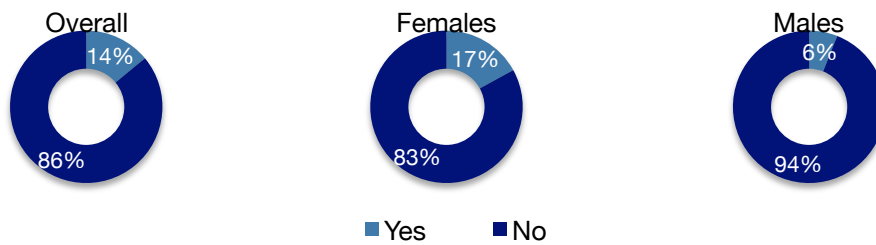
**SCOFF Item #3: Have you recently lost more than 15 pounds in a 3-month period?**



**SCOFF Item #4: Do you believe yourself to be fat when others say you are too thin?**



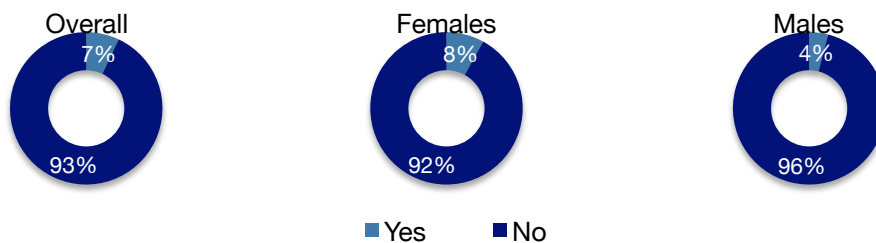
**SCOFF Item #5: Would you say that thoughts and fears about food and weight dominate your life?**



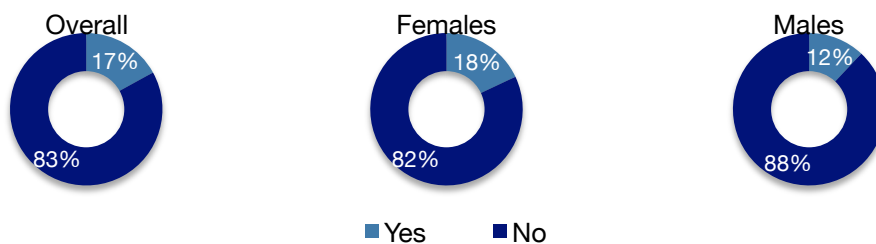
**Eating Disorder Therapy/Counseling, past year**

Students were asked the following: “Over the past 12 months, have you received counseling or therapy from a health professional (such as a psychiatrist, psychologist, therapist, social worker, nutritionist, or primary care doctor) for concerns related to your habits and attitudes about eating, exercising, and/or body shape/weight?”

**All Students**



**Students with Positive WCS and/or SCOFF Screens**



## INTERVENTION SAMPLE (STUDENTS WITH UNTREATED EATING DISORDER SYMPTOMS) (N=1,149)

### Baseline Sample Characteristics (%)

Gender Identity	
Female	74.24
Male	24.54
Transgender	0.17
Other	1.04
Sexual Orientation	
Straight	87.54
Gay/lesbian	2.35
Bisexual	5.57
Other	4.53
Race/ethnicity	
White	74.85
African American	3.31
Latino/a	4.26
Asian	6.53
Other	11.05
Housing	
On-campus residence hall/apt	52.31
Fraternity/sorority	2.44
Off-campus	39.86
Other	5.40

### Help-seeking Habits and Attitudes (baseline, 6-week follow-up, and 12-week follow-up)

The table below shows key outcomes from the 12-week intervention study (*Online Intervention to Identify Students with Untreated Symptoms of Eating Disorders and Promote Mental Health Treatment*). The data are drawn from 3 surveys (baseline (T1), 6-week follow-up (T2), and 12-week follow-up (T3)) completed by students in the intervention sample. As presented below, the primary outcomes of interest for the pilot intervention study were related to help-seeking habits and attitudes. Secondary outcomes include eating disorder symptoms.

	Overall			Females			Males		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
Eating disorder therapy/counseling, past 6 weeks	1.40	5.88	7.67	1.29	6.46	7.77	1.42	3.77	5.94
Willing to seek treatment (strongly agree/agree) <sup>T2, T3</sup>	25.00	27.23	34.18	24.73	27.79	35.73	25.62	25.71	25.77
Considered treatment, past 6 weeks <sup>T1, T2, T3</sup>	17.48	36.15	33.11	19.35	39.02	35.66	10.95	20.75	18.00
Plan to seek treatment (strongly agree/agree) <sup>T2, T3</sup>	5.42	14.58	14.33	5.31	15.35	14.78	5.34	10.58	10.42
Open to peer intervention (strongly agree/agree)	64.07	----	72.79	62.90	----	74.18	67.62	----	68.32
WCS positive	63.71	----	44.17	69.75	----	48.06	46.45	----	24.75
SCOFF positive	20.19	----	15.89	22.51	----	17.25	12.06	----	8.91

Notes: <sup>T1, T2, T3</sup>=item asked only of non-help-seekers at baseline, 6-, and 12-week follow-up; <sup>T2, T3</sup>= item asked only of non-help-seekers at 6- and 12-week follow-up.

## SUMMARY

### Baseline Respondents

Overall 21% and 7% of students screened positive on the WCS and SCOFF, respectively. 17% reported being ‘very afraid’ or ‘terrified’ of gaining 3 pounds. One-third of students worry that they have lost control of how much they eat, while 14% reported that thought and fears about food and weight dominate their lives. Among baseline respondents with positive WCS and/or SCOFF scores, 83% had not received treatment in the past year.

### Intervention Sample

Help-seeking increased from 1% at baseline to 8% at 12-week follow-up. While just 18% of the intervention sample had considered treatment at baseline, over one-third had considered treatment after 12 weeks. Also of note: eating disorder symptoms, as measured by the WCS/SCOFF, decreased over the course of the intervention.

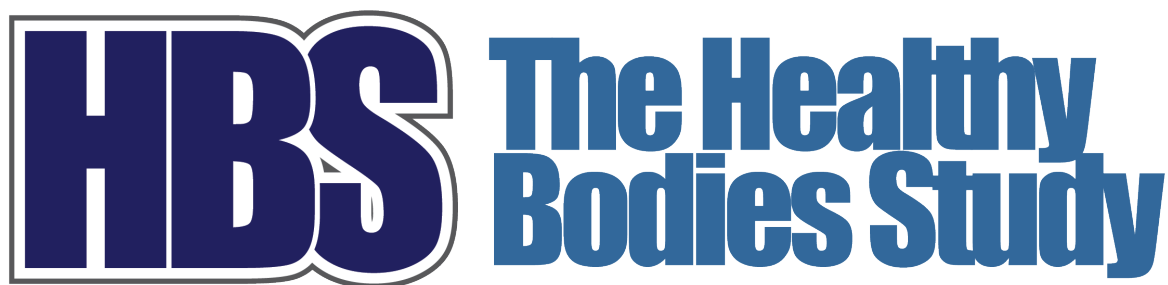


## REFERENCES

Killen et al., (1994). Pursuit of thinness and onset of eating disorder symptoms in a community sample of adolescent girls: a three-year prospective analysis. *International Journal of Eating Disorders*, 16, 227-238.

Killen et al., (1996). Weight concerns influence the development of eating disorders: a 4-year prospective study. *Journal of Consulting and Clinical Psychology*, 64(5), 936-940.

Morgan, J.F., Reid, F., & Lacey, J.H. (1999). The SCOFF questionnaire: assessment of a new screening tool for eating disorders. *BMJ*, 319(7223), 1467-1468.



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