



THE WHOLE IMAGE FOR ATHLETES

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The Risk

Disordered eating behaviors and attitudes are ***prevalent*** among college athletes who may be at ***greater risk*** for developing eating disorders than college non-athletes

(Smolak et al., 2000; DiPasquale & Petrie, 2013).





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Rates of college students who were symptomatic / + screen:

Female College Athletes	Female College Non-Athletes
~25-38% (Greenleaf et al., 2009; Johnson et al., 1999)	~13.5-25% (Eisenberg et al., 2011; Renfrew, 2003)
Male College Athletes	Male College Non-Athletes
~12-38% (Johnson et al., 1999)	~3% (Eisenberg et al., 2011)



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The Impact

Profound negative impact on physical and emotional well-being, academic and sports performance, peers, and the campus community

	Consequences
Physical Health	<ul style="list-style-type: none">• Hormonal (thwart maturation, sexual dysfunction, reproductive disorders)• Cardiovascular (low pulse/bradycardia, temperature, blood pressure, cardiac arrest, electrolyte imbalance)• Female Athlete Triad (inadequate intake, menstrual irregularity)• Bone (recurrent stress fracture, osteoporosis, osteopenia)• Mouth and Throat (enamel erosion, esophageal rupture, acid reflux)• Dehydration• Death
Mental Health	<ul style="list-style-type: none">• Depression; anxiety; low self-esteem; guilt; shame; hopelessness; difficulty adjusting to college environment; suicidal ideation/attempt; avoidance of teammates
Sports Performance	<ul style="list-style-type: none">• Performance anxiety; increased recovery time; decreased concentration, strength, & performance• Widespread adoption; team reputation which impacts recruitment



Accessing the College Athlete

- Online platforms have several advantages over in-person interventions
 - ✓ Anonymity,
 - ✓ Personalization,
 - ✓ Quick and easy anytime access among a mobile generation,
 - ✓ Dissemination potential





THE PROGRAM



WIA Study Aims

To explore and evaluate WIA's preliminary

1. Effectiveness in improving body image
2. Acceptability and Feasibility





The WIA Program

- Online
- 8 modules (~15-20mins)
- 8 week = 1 quarter
- Content
 - ✓ Psychoeducation
 - ✓ Videos
 - ✓ Interactive Questions
 - ✓ Activities
 - ✓ Images
- Tailored specifically for **male and female** college athletes

Week	Module Topic
1	Welcome; Athlete Body Aesthetics
2	The Continuum
3	Short-term Repercussions
4	Long-term Repercussions
5	Team Culture Change
6	Change Body and Food Talk
7	Build and Sustain a Balanced and Sport-Focused Approach to Eating & Exercise
8	Mindfulness in Improving Body Image and Reducing Disordered Eating



[Courseware](#)[Course Info](#)[Discussion](#)[Wiki](#)[Progress](#)[Instructor](#)[Student view](#)[Welcome \(Week 1\)](#)[Welcome \(Week 1\)](#)[Athlete Body Aesthetics \(Week 1\)](#)[The Continuum \(Week 2\)](#)[Prevention and Intervention —Short-Term Repercussions \(Week 2\)](#)

Welcome to The Whole Image for Athletes!

As a D1 student athlete at Stanford University, you have the opportunity to represent your sport for one of the top institutions in the world. For many of you, this experience of a lifetime has likely provided immense physical, social, academic, and psychological benefits and opportunities. For some, however, collegiate sport and certain associated lifestyle factors may actually increase risk for developing disordered eating and poor body image. As you can imagine, living with disordered eating and poor body image significantly limits the potential benefits collegiate athletes might otherwise gain (1-2).

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SECTION MENU

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SECTION MENU



Welcome to The Whole Image for Athletes!

CORE CONTENT

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Dissonance in Action

Cognitive Dissonance Based Prevention

= Inconsistencies between behavior and beliefs will produce dissonance, and behavior change must occur to alleviate dissonance (Festinger 1957).

- Effective among various high-risk samples (Becker et al, 2006, 2008; Matusek et al., 2004) and reduced eating disorder onset compared to controls (Stice et al., 2008).





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Letter to a Frosh on Your Team

Specify the costs of body image obsession and disordered eating. Think of as many costs as you can.

Tell him/her how to avoid developing body image and disordered eating concerns.

Use any information you learned in WIA or other forums.



Education through Video

TEAM CULTURE

Prevention and Intervention-
Longer-Term Repercussions
(Week 4)

Team Culture Change
(Week 5)

Team Culture Change (Week
5)

Changing Body Talk and Food
Talk (Week 6)

Building and Sustaining a
Balanced and Sport-Focused
Approach to Eating and
Exercise (Week 7)

Mindfulness in Improving
Body Image and Reducing
Disordered Eating (Week 8)

WIA Close Out (Week 8)

College culture includes a history of teasing, often hazing. These can really impact Team Culture.

For example, have you ever experienced a teammate giving someone a hard time because he or she wasn't in peak shape?

TEASING

One Stanford athlete stated, "If you are slightly overweight, you are going to hear about it from everyone [on the team]," while another athlete remembered hearing teammates remark, "You're fat," to a teammate who wasn't in peak shape.

2:47 / 4:13

SPEED 1.0x

Education through Video

STAFF DEBUG INFO

Short Term Repercussions
(Week 3)

Prevention and Intervention-
Longer-Term Repercussions
(Week 4)

Team Culture Change
(Week 5)

Changing Body Talk and Food
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Building and Sustaining a
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WIA Close Out (Week 8)

MINDFULNESS

MINDFUL EATING EXERCISE

• One of the simplest ways to understand mindfulness and bring it's practice into your everyday life is through mindful eating. Mindful eating is taught in nearly every basic mindfulness course across the country.

- 1) SIT DOWN.**
Look at the item you're about to enjoy. Notice shape and color. Notice what you are thinking about the item.
- 2) DESCRIBE SENSATIONS.**
"I'm hungry and want to eat this now." Remember, it's important to be aware of, but not overly attached to, what you are thinking.
- 3) GO IN SLOW-MOTION.**
 - notice the smell
 - place the item in your mouth
 - focus on taste
 - notice your thoughts
 - keep attention on the food (gently bring attention back as needed)

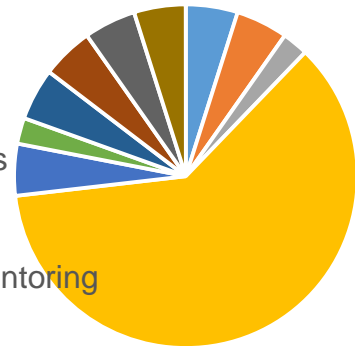
The video frame includes three word clouds on the left: 'W' (with words like SOCA, TRAINING, MINDFULNESS, etc.), 'IDEALS' (with words like IDEALS, HEALTHY, etc.), and 'EATING' (with words like EATING, FOOD, etc.). A play button is centered over the diagram. At the bottom, a video player interface shows a progress bar at 0:07 / 5:57, a speed control set to 1.0x, and volume and full-screen icons.

Education through Activities

IDENTIFYING AND PRIORITIZING YOUR VALUES

What we say expresses our values and what we value influences what we say. Think for a minute about the many things you value. The pie chart below reflects the potential distribution of values of someone with poor body image and disordered eating behaviors. If an individual's top value is body aesthetics, then much of his or her time, energy, thoughts and behaviors will likely get devoted to that value. How would this person evaluate himself or herself overall if he or she were not pleased with body aesthetic? Probably not favorably.

- Hard work/commitment
- Honesty & Integrity
- Independence
- Religion/spirituality
- Body Image
- Relationships
- Teaching/mentoring
- Balanced lifestyle
- Environmental activism
- Community Service
- Curiosity/Knowledge Building





Education and Application through Practice

Bold Move = weekly off-line assignments that fostered practice, application, and generalization of material

Bold Move Examples

1. *Cut out negative body and food talk.*
2. *Compliment teammates on performance, drive, training effort, or strength rather than body aesthetics, leanness, or muscle size.*





RESULTS



Sample Demographics

TOTAL SAMPLE n=29	
Sex	Male=8 (28%); Female=21 (72%)
Race	Asian=3 (10%); Black=2 (7%); White =24 (83%)
Sport	13 sports Cross country =2; Track and field =1; Field hockey =5; Gymnastics =5; Lacrosse =1; Lightweight crew =2; Open weight crew =1; Softball =1; Soccer =3; Swimming =3; Volleyball =1; Fencing =2; Wrestling =2
Scholarship	Yes =19 (65%); No =10 (35%)
Academic Year	Freshman =3 (10%); Sophomore =7 (24%); Junior =9 (31%); Senior =10 (35%)

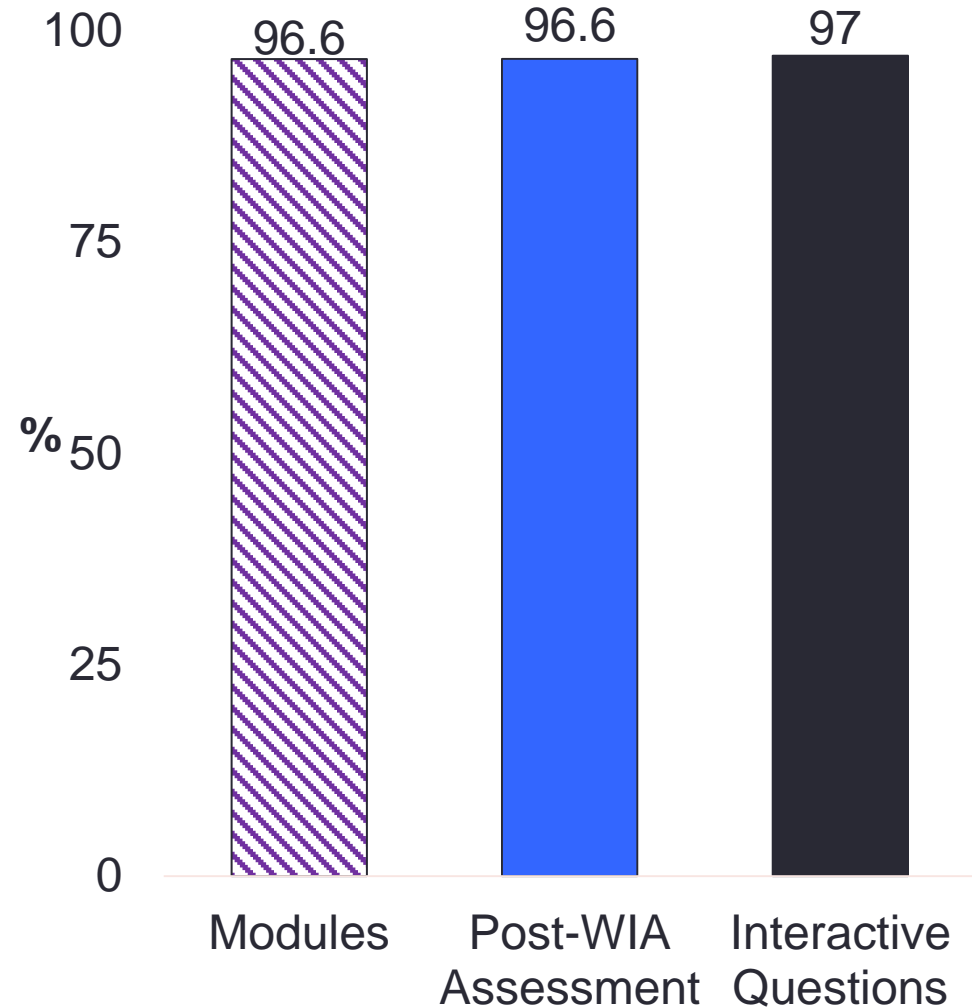


WIA Acceptability

- 89% would recommend WIA to a friend
- All 8 modules rated as at least moderately relevant or greater

WIA was highly acceptable as indicated by participant engagement

Completion Rates





WIA Preliminary Effectiveness

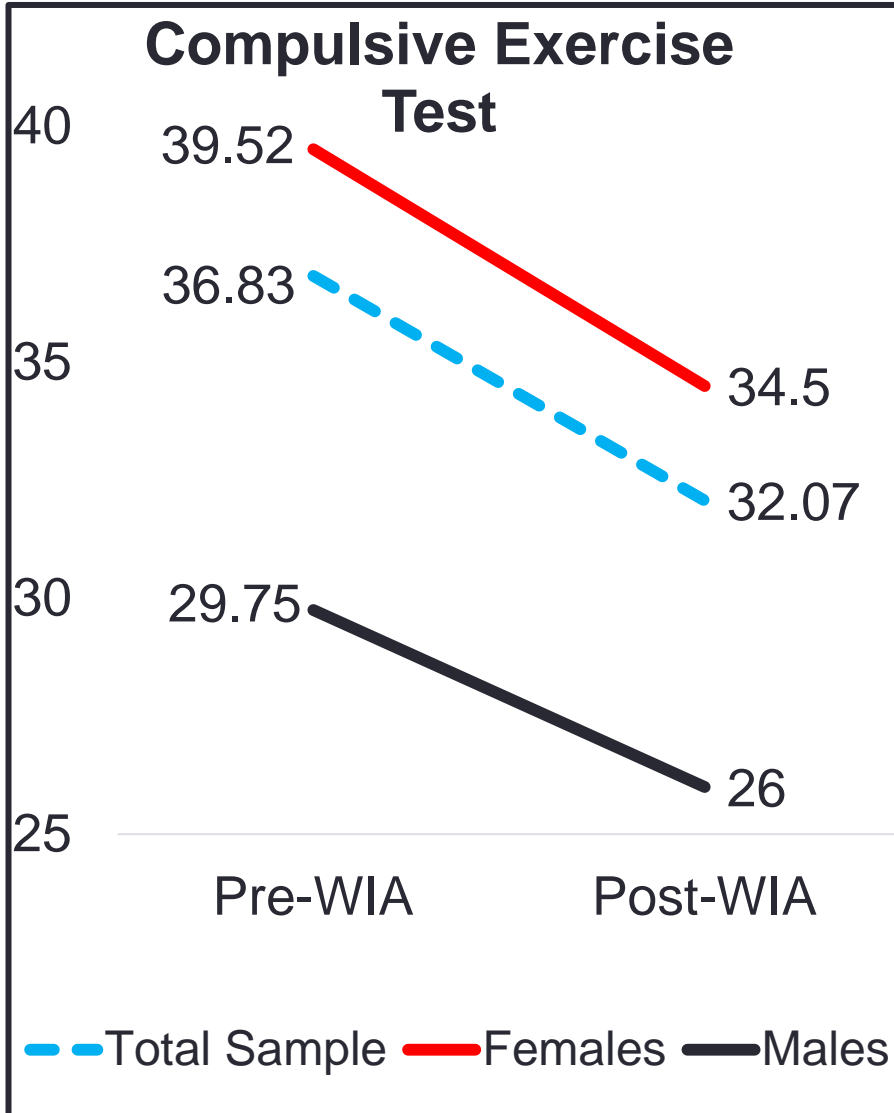
Nearly all measures demonstrated modest decreases in body image and disordered eating concerns from pre- to post-WIA, with corresponding small to medium effect sizes



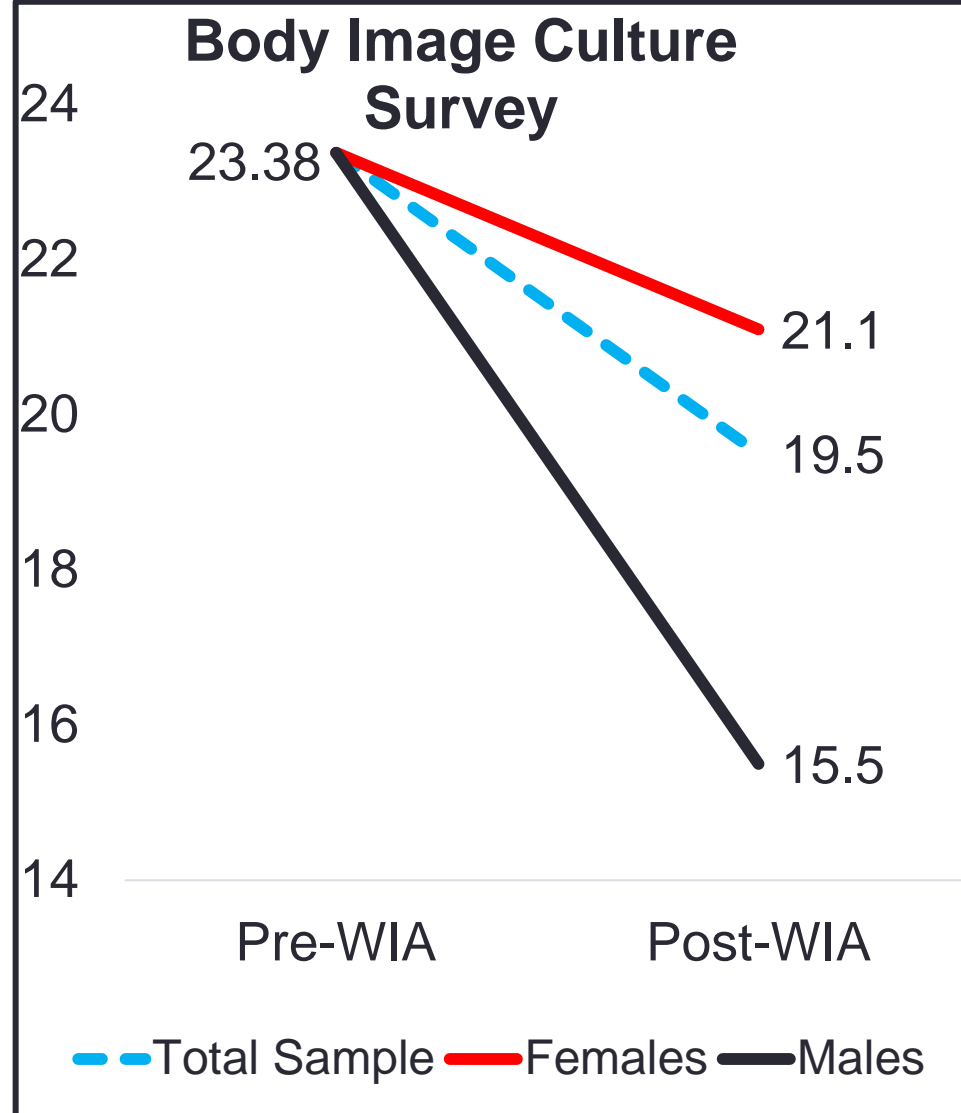


WIA Preliminary Effectiveness

Compulsive Exercise Test

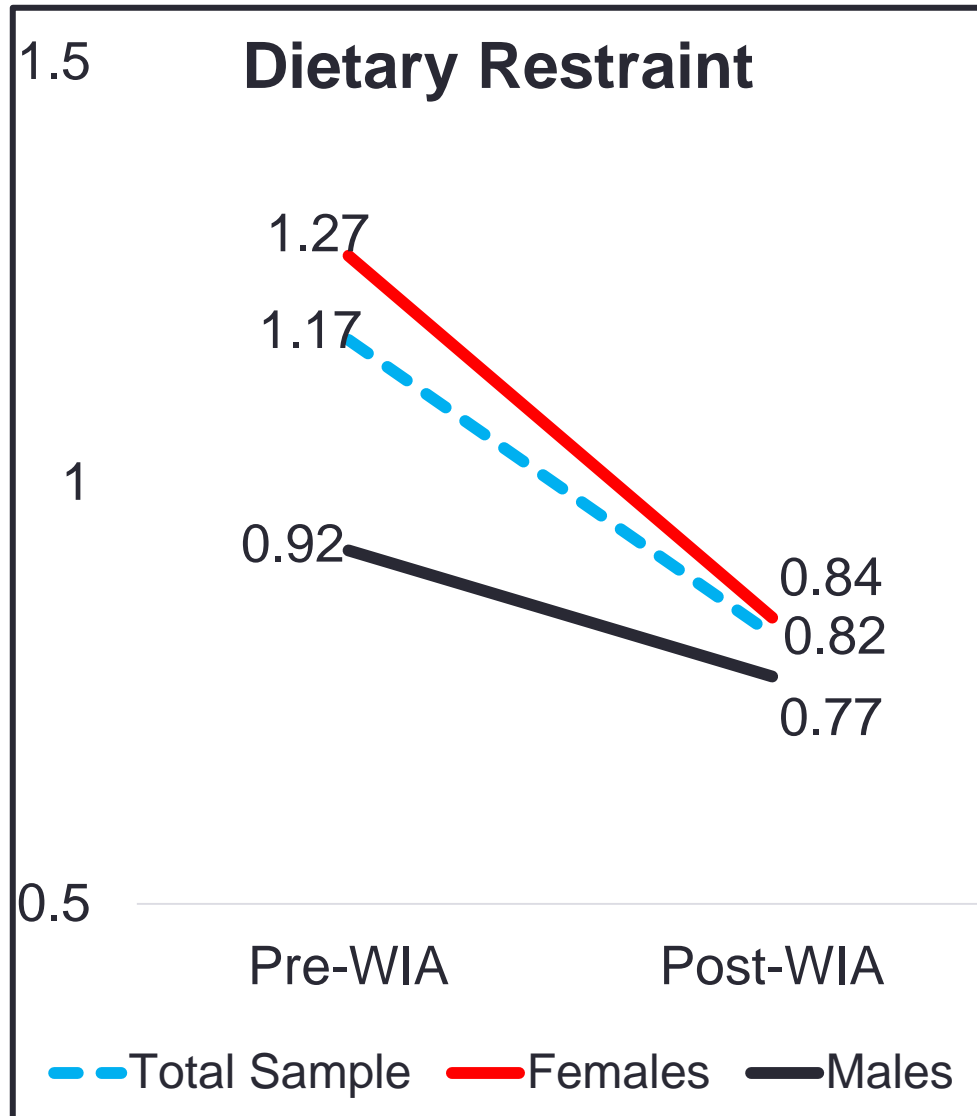
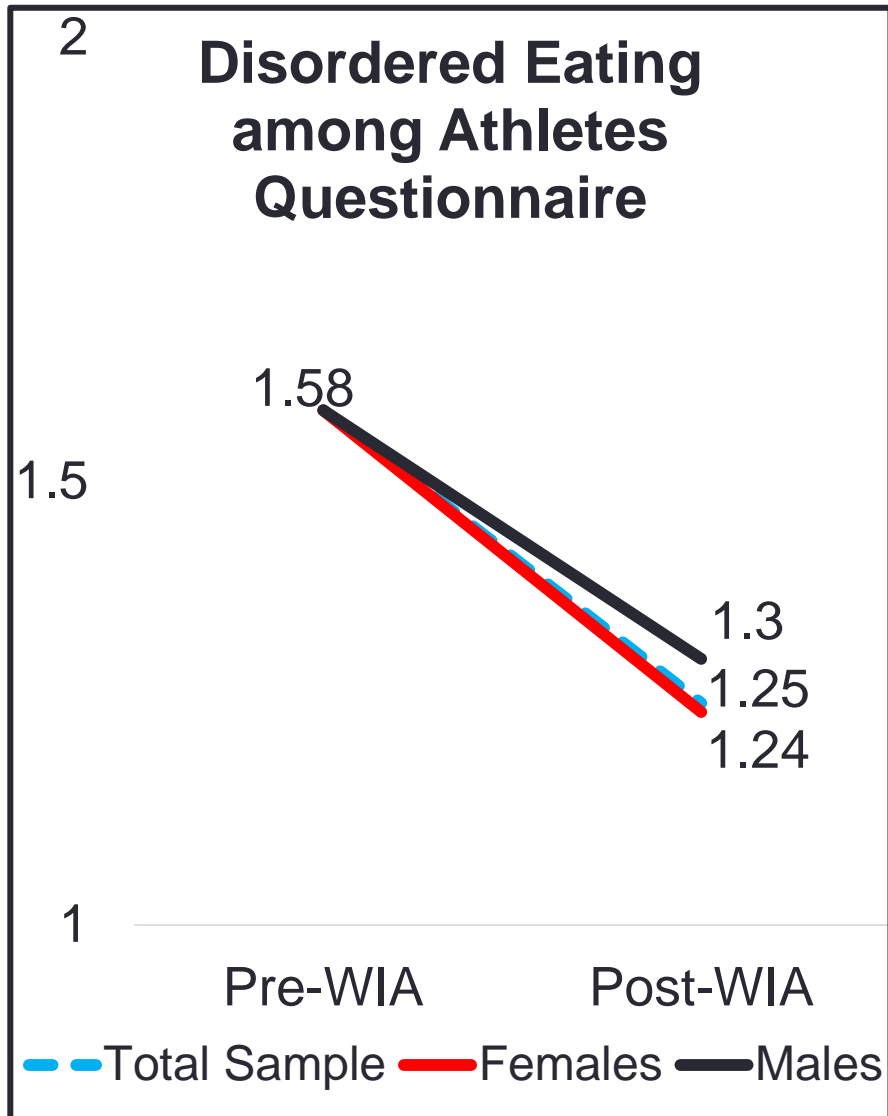


Body Image Culture Survey





WIA Preliminary Effectiveness





Summary

WIA:

- ✓ brief (8 weeks; ~120 minutes)
- ✓ the first online body image enhancement and disordered eating intervention tailored specifically for *both male and female athletes*,
- ✓ achieved modest improvements in body image and disordered eating concerns and
- ✓ high acceptability among a small pilot sample of Stanford athletes.
- ✓ further research warranted





Dissemination Challenges

- Significant barriers hinder college campuses' willingness and ability to adopt, implement, and maintain intervention programs.
 - Financial and personnel resources
 - Multidisciplinary coordination and management between Athletics, Psychiatry, Psychology, Medicine, Dieticians, Parents





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 - Financial and personnel resources
 - Multidisciplinary coordination and management between Athletics, Psychiatry, Psychology, Medicine, Dieticians, Parents
- ***The short- and long-term viability of such programs could greatly increase if we better understood, and could increase, stakeholders interest in and support of them***





THANK YOU

WIA Team:

Sarah Lyons, MS, ATC, PES, Athletic Trainer, Stanford University Sports Medicine

Miriam Parrott, Graduate Student Research Assistant, PGSP Stanford PsyD Consortium

Katerina Gregoriou, Undergraduate Student Research Assistant, Varsity Rowing

Sarah Pajarito, MS, Research Assistant, Department of Psychiatry, Stanford

Robyn Tepper, MD, Vaden Student Health Center Medical Director, Stanford

Jenifer Waldrop, RD, Vaden Student Health Center Dietician, Stanford

Megan Jones, PsyD, Clinical Assistant Professor, Department of Psychiatry, Stanford



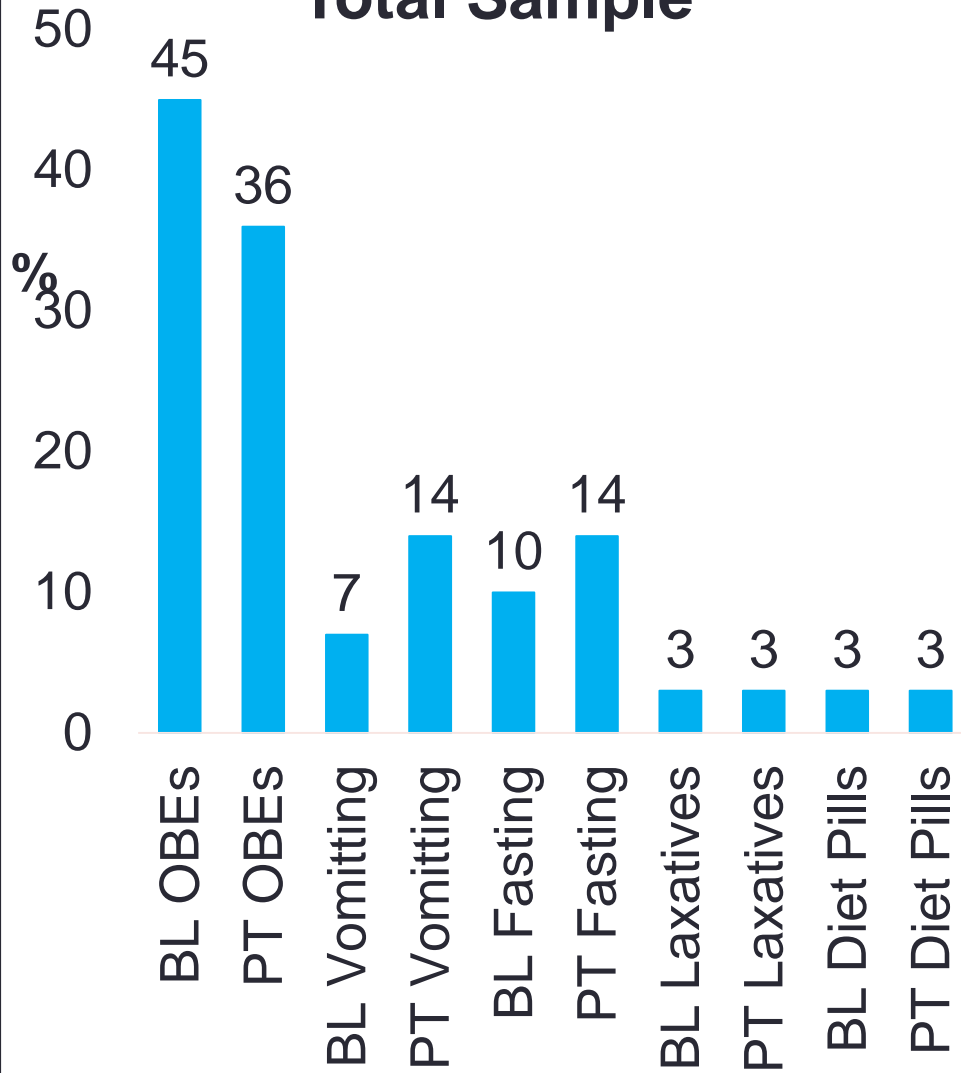
EXTRA SLIDES

DEMOGRAPHICS	FEMALE n=21 (72%)	MALE n=8 (38%)	TOTAL SAMPLE n=29
Age (M, SD)	19.81 (1.12)	20.50 (1.51)	20.0 (1.25)
Race	Asian=2 (9%); Black=1 (5%); White=18 (86%)	Asian=1 (12.5%); Black=1 (12.5%); White=6 (75%)	Asian=3 (10%); Black=2 (7%); White = 24 (83%)
Sport	Cross country =2 Track and field =1 Field hockey =5 Gymnastics =5 Lacrosse =1 Lightweight crew =2 Open weight crew =1 Softball =1 Soccer =1 <hr/> Swimming =1 Volleyball =1 Total Sports =11	Fencing =2 Soccer =2 <hr/> Swimming =2 Wrestling =2 Total Sports =4	13 sports
Scholarship	Yes=15 (71%) No=6(29%)	Yes=4 (50%) No=4 (50%)	Yes=19 (65.5%) No=10 (34.5%)
Academic Year	Freshman=2 (9%) Sophomore=6 (29%) Junior=7 (33%)	Freshman=1 (12.5%) Sophomore=1 (12.5%) Junior=2 (25%)	Freshman=3 (10%) Sophomore=7 (24%) Junior=9 (31%)

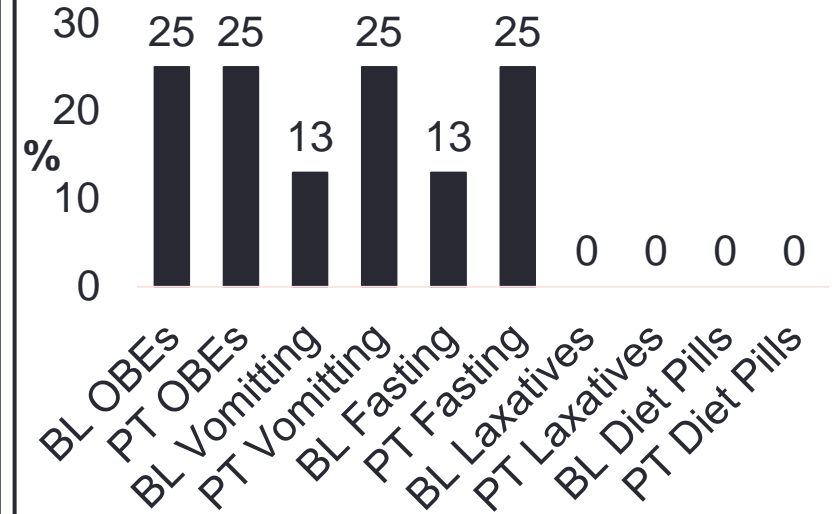


Rates of Disordered Eating

Total Sample



Male



Female

