Social Anxiety Moderates the Effect of E-Coach Support on Weight Loss

Jeanne Gabriele[1,3], M.S., M.A., Deborah Tate[2], Ph.D., Brian Carpenter, Ph.D.[3], & Edwin Fisher, Ph.D. [2]

[1] University of Mississippi Medical Center
[2] University of North Carolina at Chapel Hill
[3] Washington University

Jgabriele@wustl.edu

Social Anxiety

- Can be a barrier to help-seeking and the utilization of in person services

- Associated with *lower* success in a physical activity telephone counseling intervention with human advice

- Higher success rate with computer advice

Goodwin & Fitzgibbon, 2002; King et al., in press

Purpose

- Does social anxiety moderate the effect of e-coach support on weight loss?

- Are there differences in desired and reported weight loss support in individuals with high and low social anxiety?

Participant Characteristics

- 95 overweight UNC employees
- BMI 25.0 – 40.0; M = 32.18
- Age 30 – 60; M = 45.25 yrs
- 69.5% Caucasian
- 83.2% Female
- 70.5% College degree

In-Person Baseline Assessment

- Assessed height and weight

- Administered questionnaires

- Explained study procedures (5-10 min)

- Provided participants with study materials:
  - Calorie King Calorie, Fat, & Carbohydrate Counter Book
  - Exercise energy expenditure chart
  - 12 weekly self-monitoring booklets

Brief Fear of Negative Evaluation Scale (Leary, 1993)

- 7 items

  - I often worry I will say or do the wrong things.
  - When I am talking to someone, I worry about what they may be thinking of me.
  - I am usually worried about the kind of impression that I make.
  - I am afraid people will find fault with me.

- Response choices: 1 = Not at all characteristic of me; 5 = Extremely characteristic of me

Randomized to Support Condition

- Minimal Support
- Nondirective Support
  - Flexible, collaborative, participant sets agenda
- Directive Support
  - Protocol driven, prescriptive, e-coach sets agenda

12 Week Intervention

- All participants received 2 e-mails each week for 12 weeks
  - Lesson E-mail
  - Feedback E-Mail

- Support Groups received individualized support in feedback e-mail

Intervention Features

Intervention Feature	Directive Support	Nondirective Support
Order of Lessons	Protocol Based	Tailored by Individual
Goal Setting	Selected by e-Coach	Selected by Individual
Topics of Discussion	Chosen by e-Coach	Open to participant choice
When no contact	Lack of communication pointed out; specific quest. asked	Lack of communication pointed out; Here if you need me

Lesson E-Mail

Hi Anna -

Attached is your lesson for this week on Understanding and Increasing Physical Activity for Weight Loss. It discusses the health benefits of physical activity and strategies for adopting and maintaining an exercise routine.

Here is the link to the Check-In Survey: http://www.[surveylink].com. Please fill out this survey so we can provide you with feedback.

Have a great day!

Jeanne

****

Jeanne M. Gabriele, M.S., M.A.
Department of Health Behavior and Health Education
University of North Carolina at Chapel Hill

Healthy Eating

There are a variety of ways in which you can change your food habits. The current lesson discusses three areas in which you can change your eating behavior:

1. How you eat
2. What you eat
3. How you prepare food

How you eat

One way to eat healthier is to change the way in which you eat. Here are suggestions:

Have a regular pattern of meals. A regular pattern of meals is importan you from getting too hungry and losing control. You can strive for calorie of these meals. three m

If your

The Slippery Slope of Lifestyle Change

What are Slips?

Slips are:

- Times when you don't follow your plans for healthy eating or being active.
- A normal part of lifestyle change.
- To be expected.

To illustrate how this concept relates to weight management, let's use the analogy of learning to ski. Everyone who learns to ski knows that they will "slip" and fall down. It's a natural part of learning to ski. In a similar manner, everyone who sets out to lose weight and be more active will have slips. If you haven't already had some slips, you most certainly will have them in the future. Slips are inevitable.

What a skiing instructor does is to help beginning skiers anticipate when they might fall down and show them how to get up again. That's what this lesson will do – it will teach you about when you might "slip" from your eating and activity plans, and how you can get back on track again after you slip.

Quiz:

Submit answers to your E-Coach.

1. How many calories are in a pound?
a) 1200
b) 1800
c) 3500
d) 4000

2. What is a healthy rate of weight loss?
a) 1-2 pounds per week
b) 2-3 pounds per week
c) 3-4 pounds per week
d) 5 pounds per week

3. Using your Calorie, Fat, & Carbohydrate Counter book, which of the following has the least amount of calories:
a) Wendy's Mandarin chicken salad with dressing
b) Caribou Coffee's 16 oz mocha
c) Mc Donald's cheeseburger
d) Arby's baked potato with butter and sour cream
e) Starbuck's cinnamon chip scone
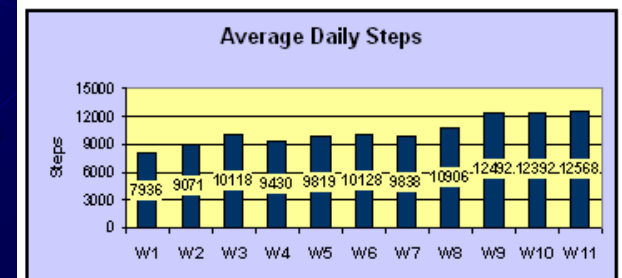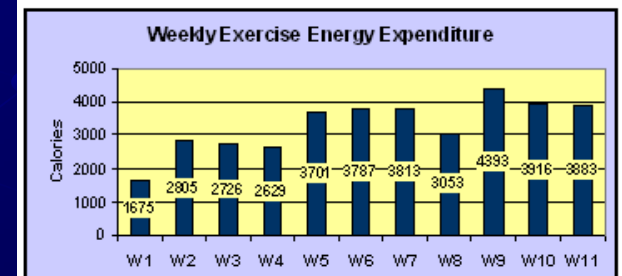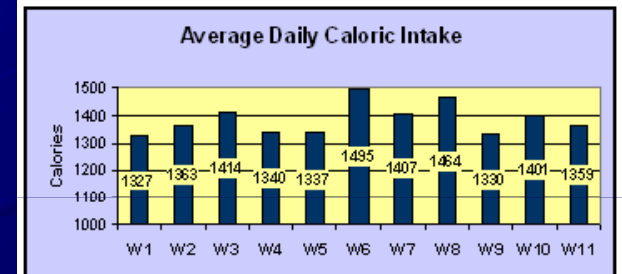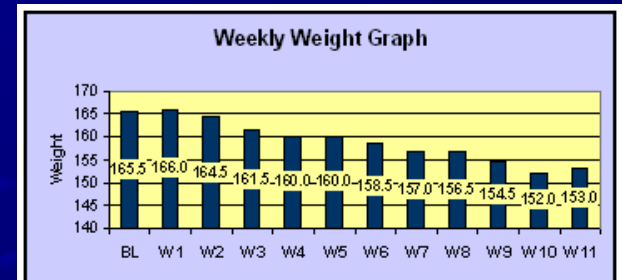
Feedback E-Mail

Hi Charlotte -

Here are your feedback graphs for this week along with the answers to the Talking Back to Negative Thoughts quiz. Your next lesson will focus on Enlisting Social Support for Weight Loss.

Have a great day - hope you are able to enjoy this nice weather,

Jeanne

Talking Back to Negative Thoughts Quiz Answers

1. "I have to write down everything I eat" is which type of the following negative thoughts?
a. Good or Bad Thoughts
b. Excuses
c. Should Thoughts
d. Not as Good Thoughts
e. Give Up Thoughts

Weekly Weight Graph

Average Daily Caloric Intake

Weekly Exercise Energy Expenditure
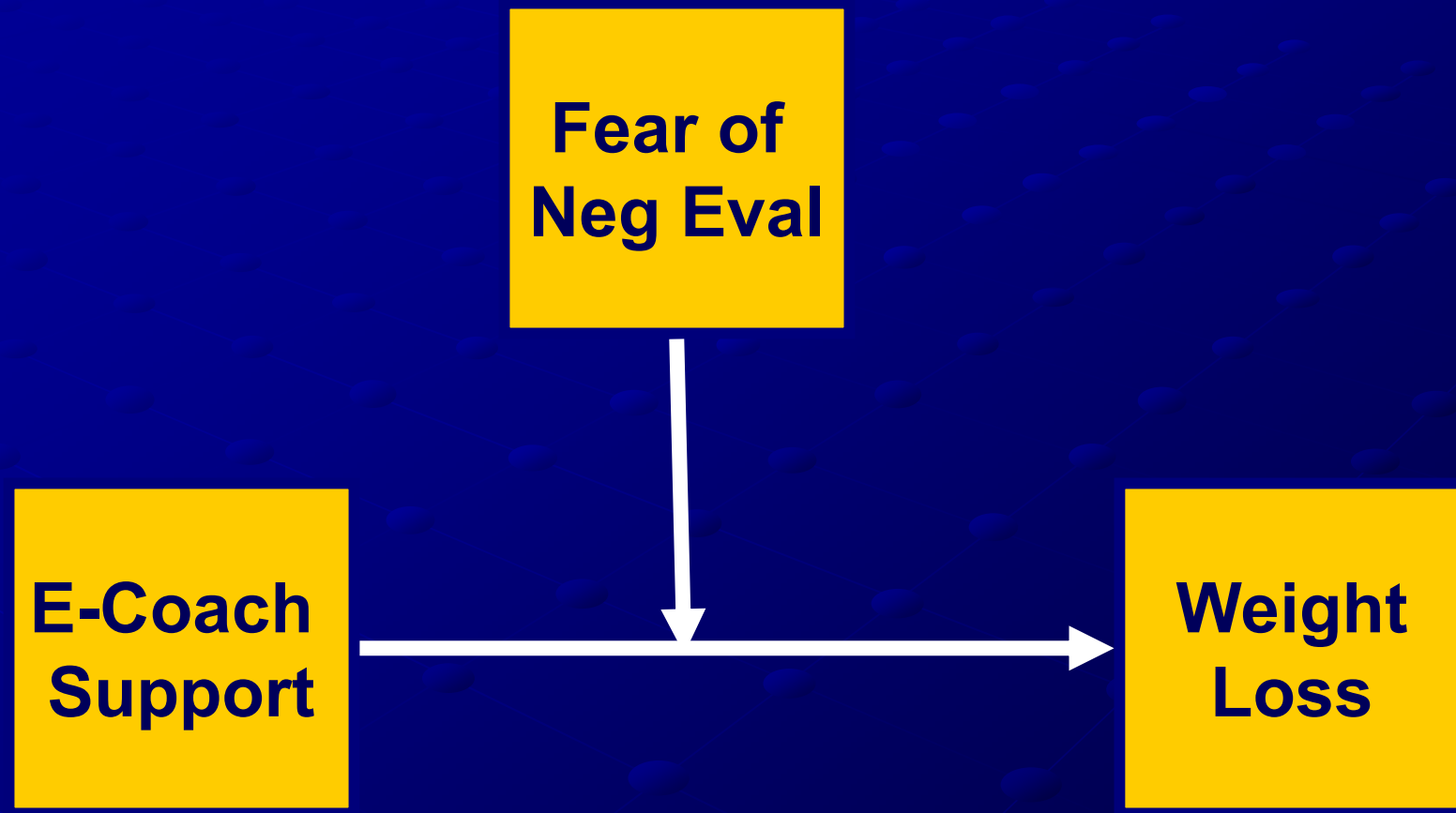

Average Daily Steps

Follow-Up Assessment

- 12 weeks after baseline

- Assessed weight

- Administered questionnaires

  88 participants (93%) completed follow-up assessment

Does Social Anxiety Moderate the Effect of E-Coach Support on Wt Loss?

Regression analysis assessing whether BFNE moderates effect of E-Coach support on weight loss
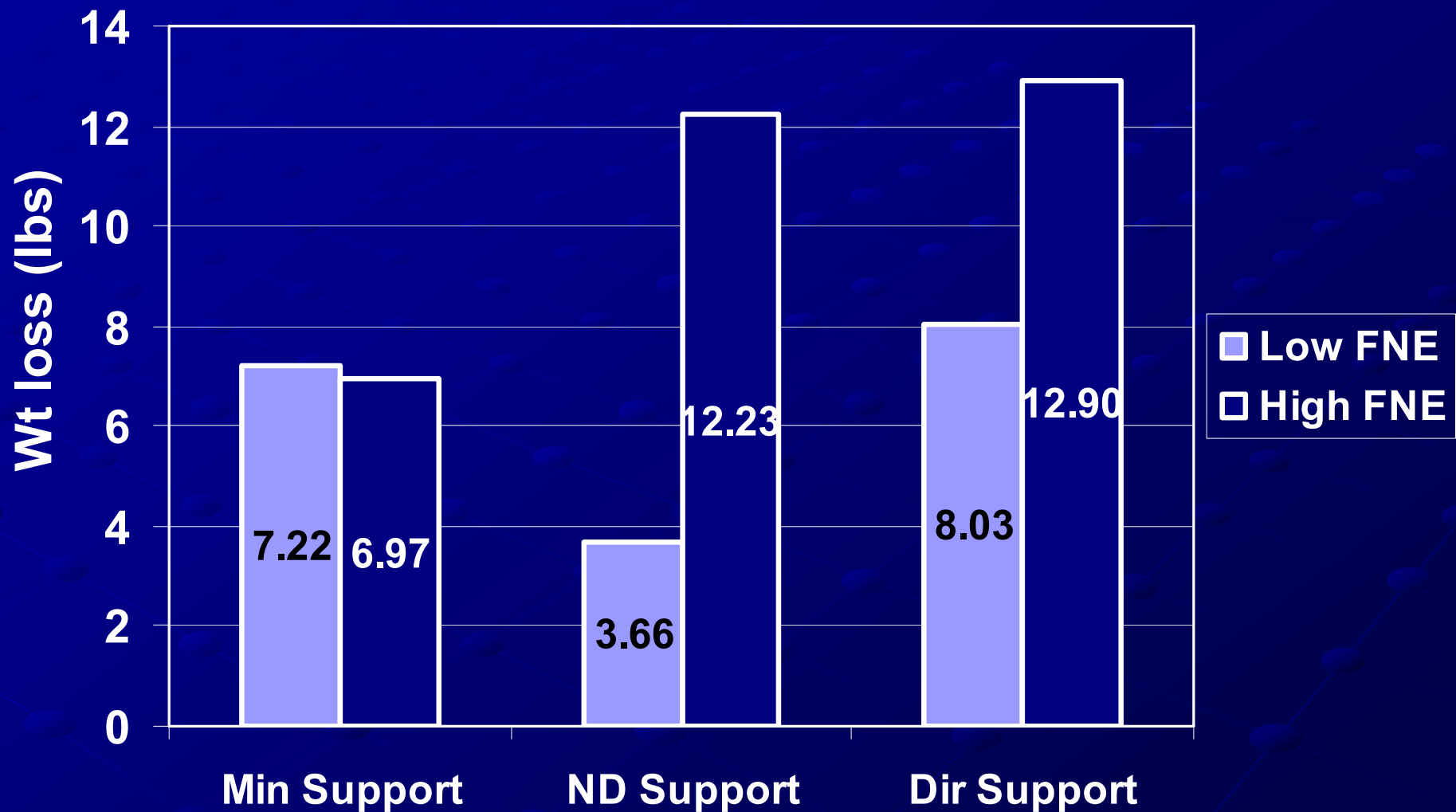
	Final Step			
	β	p	R^2	ΔR^2
1. BL Wt	-.03	.75		
2. Female	-.28	.01		
3. FNE	.29	.01		
E-Coach	.12	.24		
4. FNE * E-Coach	.25	.01	.23*	.06*

Participants with high FNE lose more weight with e-coach support
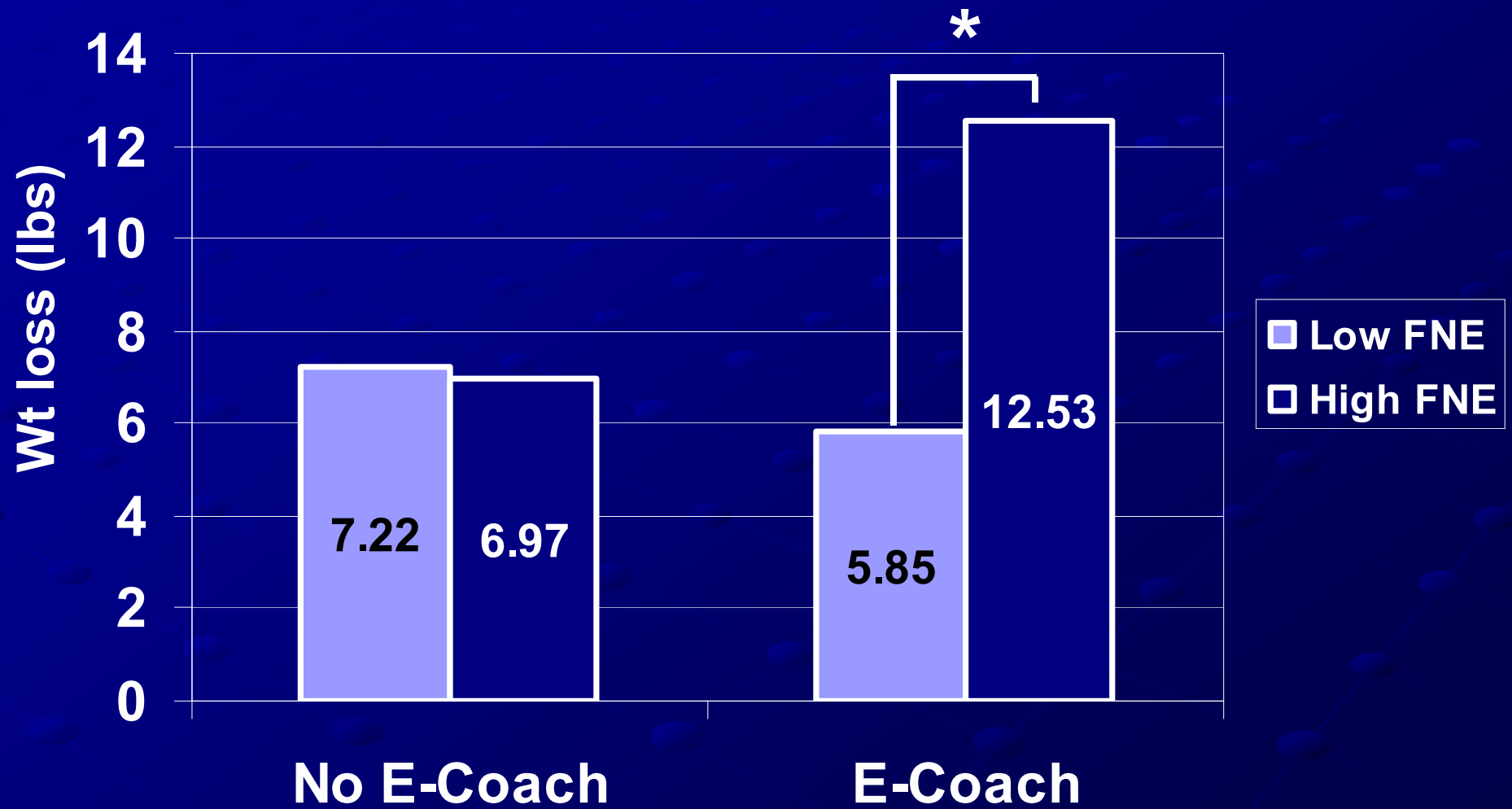
Participants with high FNE lose more weight in e-coach support conditions

Are there differences in desired and reported support in those with high and low fear of negative evaluation?

Social Support Inventory

16 items; 8 Directive & 8 Nondirective

- Cooperate with you to get things done (ND)
- Show interest in how you are doing (ND)
- Take charge of your problems (Dir)
- Point out harmful or foolish ways you view things (Dir)

Response choices: 1 = Not at all typical (desirable);
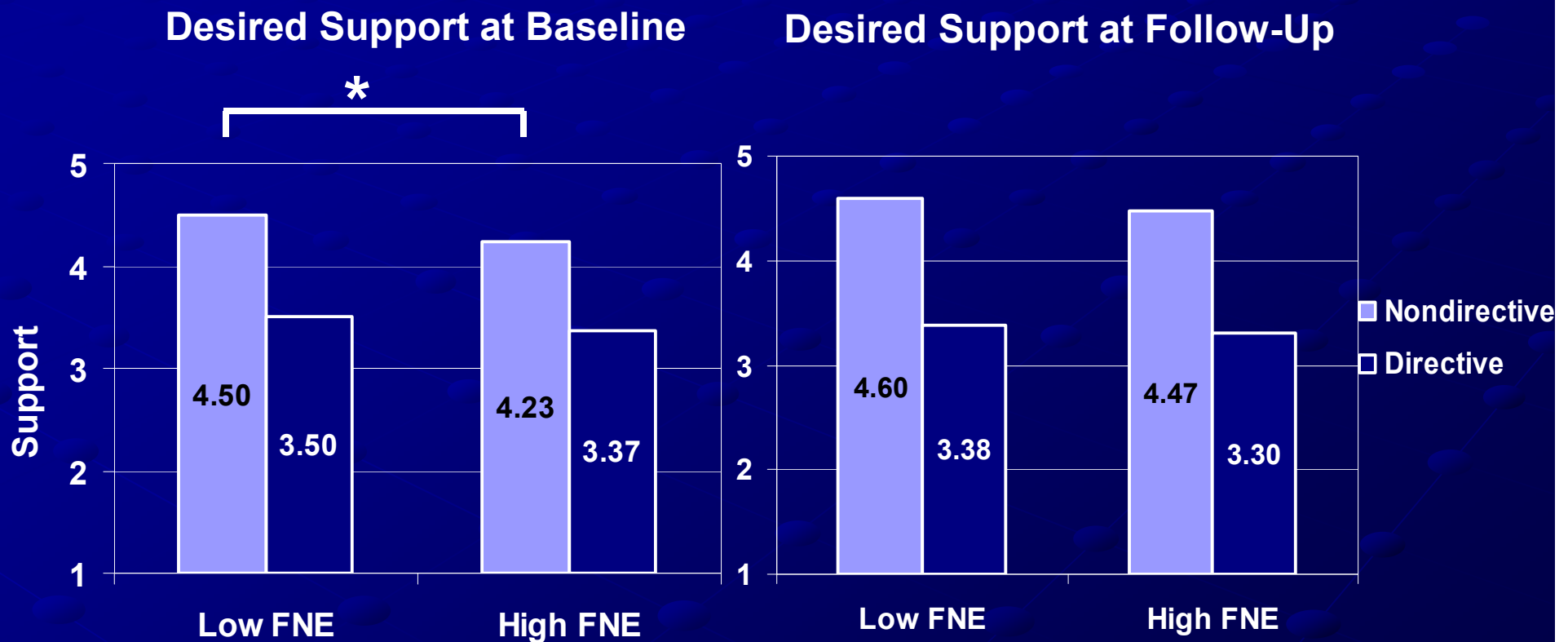5 = Very typical (desirable)

Reported Support From Family/Friends

Participants with high fear of negative evaluation report lower support from family/friends
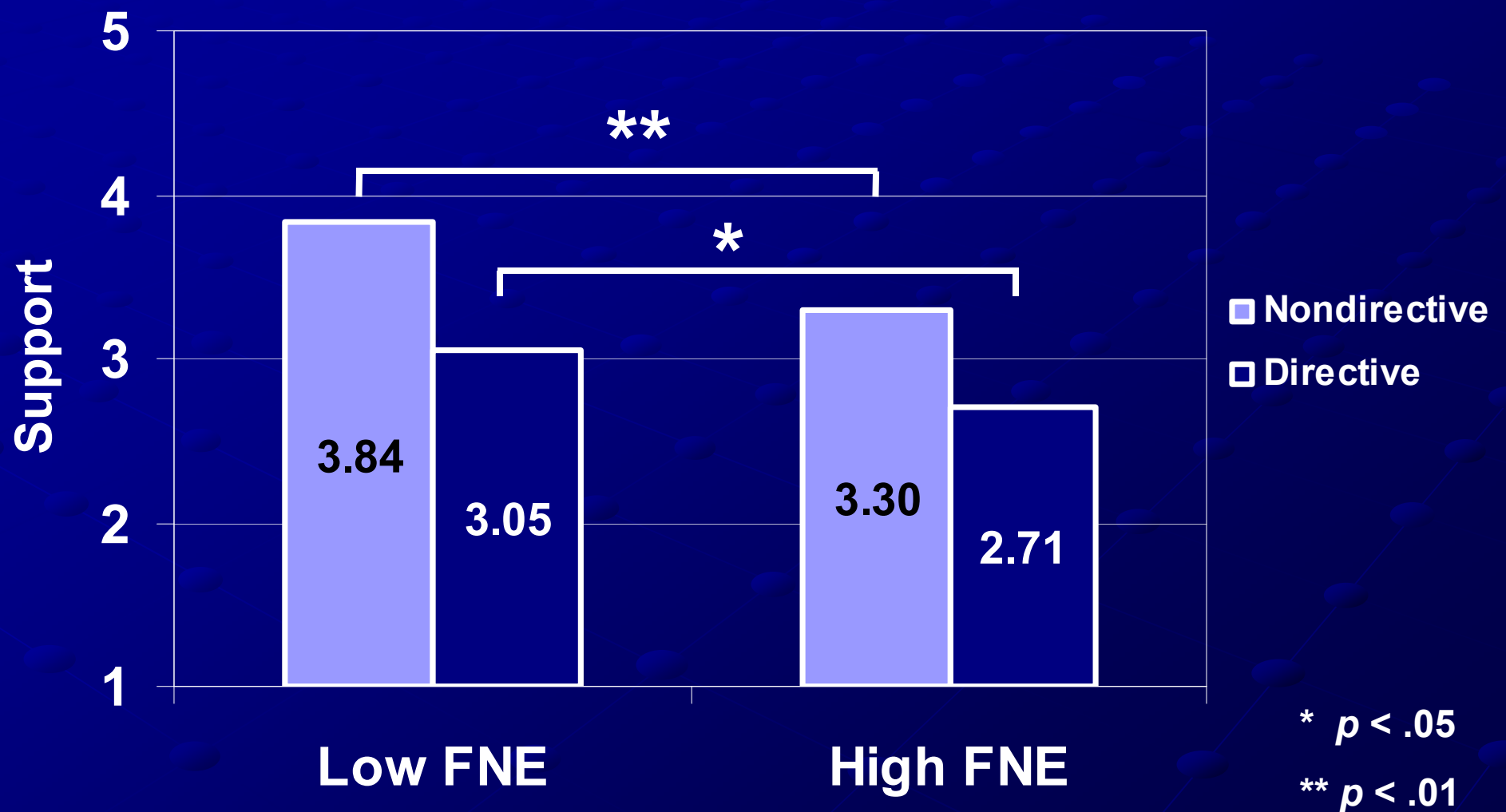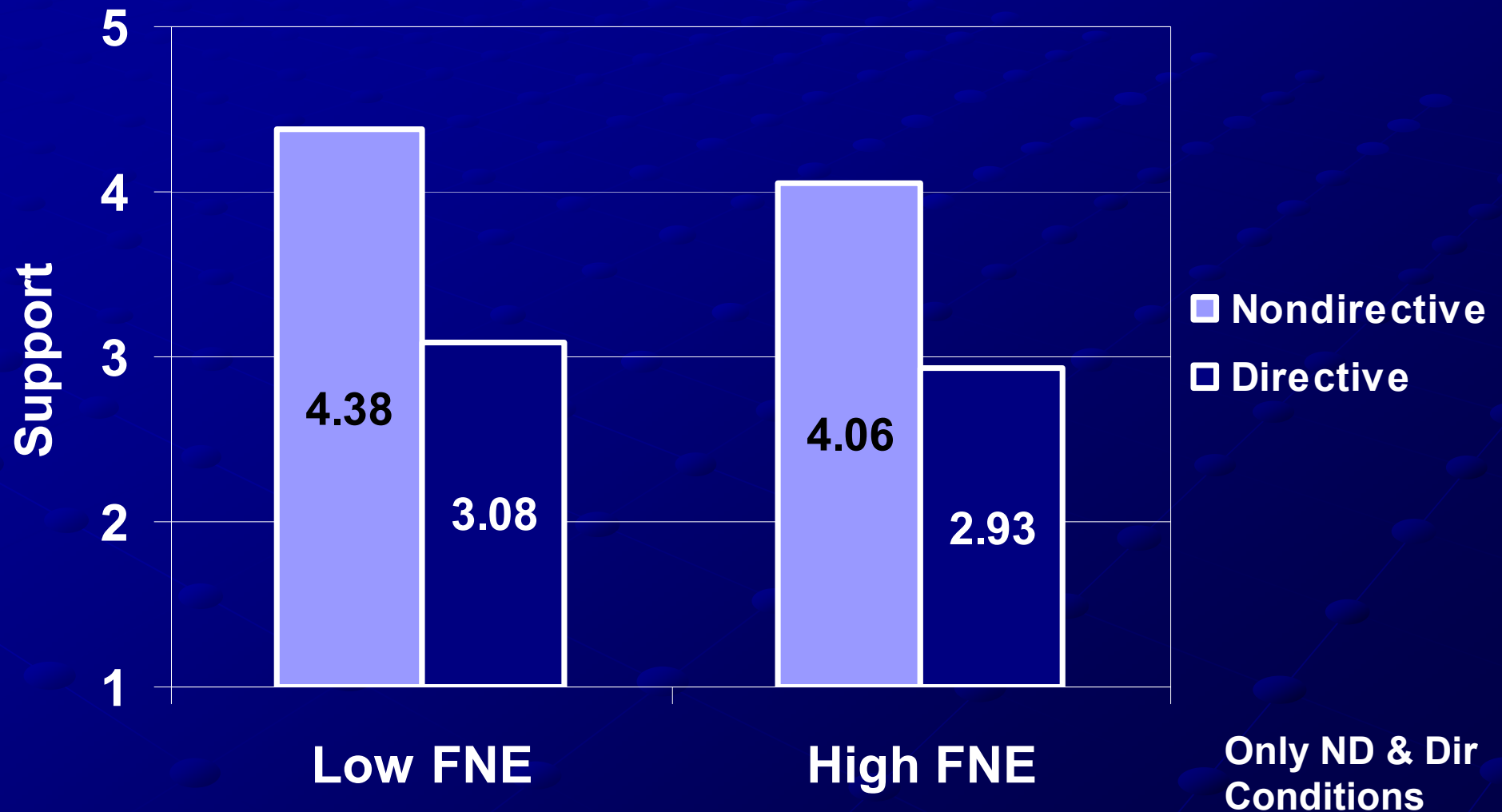
Desired E-Coach Support

Reported E-Coach Support

No differences in reported e-coach support in individuals with high and low fear of negative evaluation

Conclusions

- Social anxiety moderates the effect of e-coach support on weight loss
    - For participants in the e-coach condition, social anxiety associated with greater weight loss

- Individuals with high social anxiety report less support from family/friends

- Individuals with high and low social anxiety report no differences in e-coach support

Implications

E-coach supportive interventions may be especially helpful to those high in social anxiety who have lower support from family and friends and who may not access or may not respond well to conventional health promotion interventions.

Funding Sources

- NHLBI Predoctoral Training Fellowship T32 HL007456
- Washington University Dissertation Fellowship