

Healthy PAC-CATS

Personal Assessment Challenge - - Choosing Activities for Today's Success

Freshmen 15?

A program to establish healthy behaviors

Fred B. Newton

Eunhee Kim

M.E. Yeager

Georgette Miller

Kansas State University

First Year Experience Conference

Monday, February 19, 2007

Healthy PAC-CATS

Personal Assessment Challenge - - Choosing Activities for Today's Success



*Physical
Activity*



Nutrition



*Stress
Management*

TIME LINE:

- Preparation & Development (2004-2005)
- Implementation (2005-2006)
- Sustainability (2006 –2007)

Presentation Outline

- Goals and Mission for the Program
- Description of Program Elements
- Results from the Study of Freshmen Students
- Anecdotal Reports from Participating Students
- Peer Mentor Implications
- Discussion and Implications

PAC-CATS Mission

The purpose of the PAC-CATS grant program is to provide an intervention for first-year K-State students that raises awareness and promotes healthy lifestyle behaviors in the areas of physical activity, eating behavior, and stress management.

Helping students to develop these lifestyle behaviors can help reduce future risk of overweight and obesity.



PAC-CATS Staff & Resources

- Student Services Consortium:
Counseling, Health Ed., Recreation, Freshmen Class
- Funding from Sunflower Foundation:
Health Foundation for Kansas
- Development of Process & Materials:
Health Behaviors Assessment, Website, Incentives
- Training Students to Help Students

Healthy PAC-CATS Approach

Objectives for Freshmen

- Gain Awareness of Health Behaviors
- Have Knowledge of Health Guidelines
- Become Motivated to Change
- Set Personal Goals
- Learn Processes to Self Regulate

College is a Critical Time for Weight Gain

- 35% of college students may be overweight or obese. (National College Health Risk Behavior Survey)
- 60% of females and 32% of males want to lose weight. (National College Health Assessment)
- Critical moment for lifestyle patterns to be established

Major Barriers to Engage in Physical Activity and Healthy Eating

- Inability to manage stress -

- Poor time management/organization skills
- Inability to relax, sleep, regenerate
- Lack of problem solving skills
- Inability to cope effectively with stressors

How will students benefit from regular physical activity and healthy eating?



- Be more energized
- Maintain healthy weight/lean body mass
- Feel good about the way they look
- Feel physically stronger and mentally sharp
- Have positive social interactions
- Do better in school and work
- Better able to cope with stressors

Elements of PAC-CATS Program

1. Health Behaviors Assessment

Individual assessment and personalized feedback on:

- ✓ Eating behavior
- ✓ Physical activity
- ✓ Stress management

Pre & Post-Tests: Participants take the assessment at the beginning and at the end of the program

Your PAC-CATS Health Behaviors Assessment Feedback

I. Weight Status According to BMI*	
Your BMI is: <u>23</u>	Classification of Weight Status by BMI
	BMI (lbs./in.² x 703)
	< 18.5
	18.5 – 24.9
	25.0 – 29.9
≥ 30	
	Weight Status
	Underweight
	Normal
	Overweight
	Obese
<p>*Body Mass Index (BMI) is a ratio of your weight to your height squared. It is just one of many factors used to predict risk for developing chronic disease, such as heart disease, cancer, or diabetes. <i>BMI is not a measure of body fitness.</i> For more information, please visit http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-means.htm</p>	

Legend:

✓✓✓ = Doing well ✓✓ = Could be improved ✓ = Needs improvement

II. Eating Behaviors			
Category – Foods that should be consumed often (Recommended consumption)	Meeting recommendation	Close, but not yet meeting recommendation	Not meeting recommendation
Fruits & Vegetables (5 to 9 servings daily)	✓✓✓		
Whole Grains (3 servings daily)			✓
Low-Fat or Fat-Free Dairy (3 servings daily)		✓✓	
Category – Foods to use in moderation or sparingly	Low Consumption	Moderate Consumption	High Consumption
High Fat Foods		✓✓	
Caffeinated Beverages			✓
Regular Pop/Soda		✓✓	
Sweetened Beverages	✓✓✓		

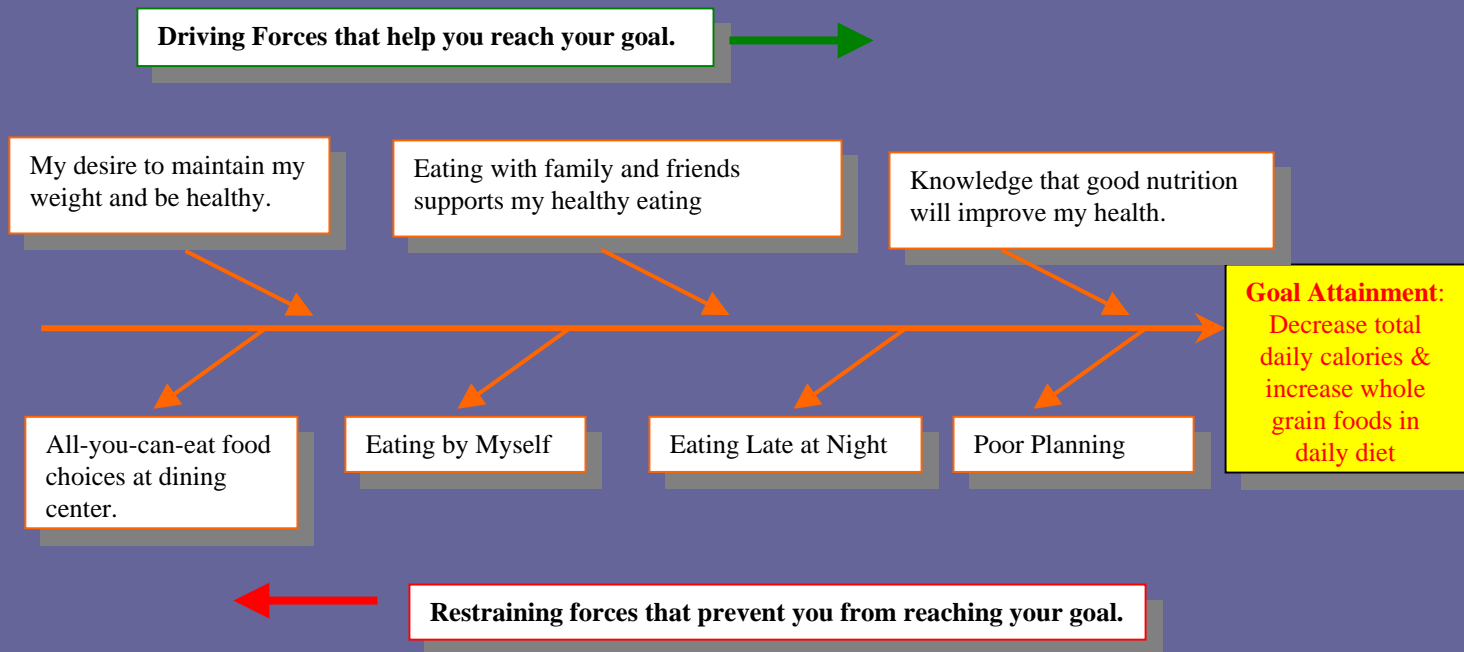
2. Behavior Change Process

- Establish goals for increasing healthy behaviors, based on health assessment feedback:
 - I want to jog or use the aerobics machines at the Rec Center 3 times a week for 30 minutes a session.

- Establish Action Steps to reach goals:
 - Block off 1 hour for exercise on Mondays, Tuesdays, and Thursdays of each week in weekly planner.
 - Arrange to meet a friend at the Rec every Monday at a certain time.

- Design system to monitor behaviors and progress toward goals - which includes designing ways to reinforce your progress.

FORCE FIELD ANALYSIS EXAMPLE



3. Peer Mentors

- Participants have their own personal mentor who are students with knowledge in the areas of physical activity, nutrition, and stress management.
- Mentors help students set goals, design action steps, and monitor progress, and provide motivation.
- Mentors provide support (Students Helping Students)

4. Program Website with Resources

- The PAC-CATS website contains information, self-help tips and links to helpful resources in the areas of physical activity, nutrition, and stress management.
- It is a valuable tool for developing the knowledge and skills that help students be successful in their personal programs.

5. Incentives

Extrinsic reinforcement for participants may include:

water bottles

colored bracelets

knap-sacks

t-shirts

pedometers

journals

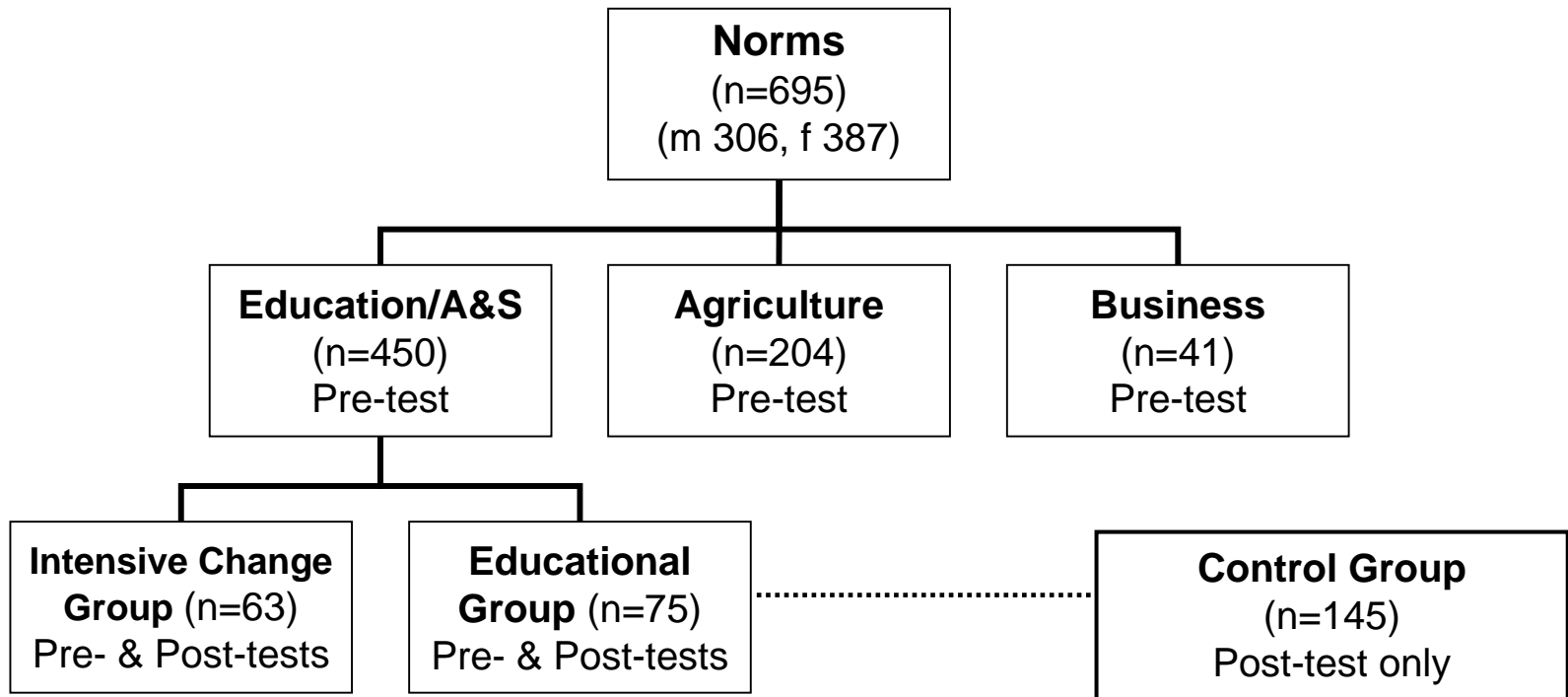


How Fit are KSU Freshmen Students?

- Baseline behaviors
- Readiness for change
- Educational intervention
- Intensive change intervention
- Outcomes

Baseline Sample

PAC-CATS Health Behaviors Assessment
(Fall, 2005)

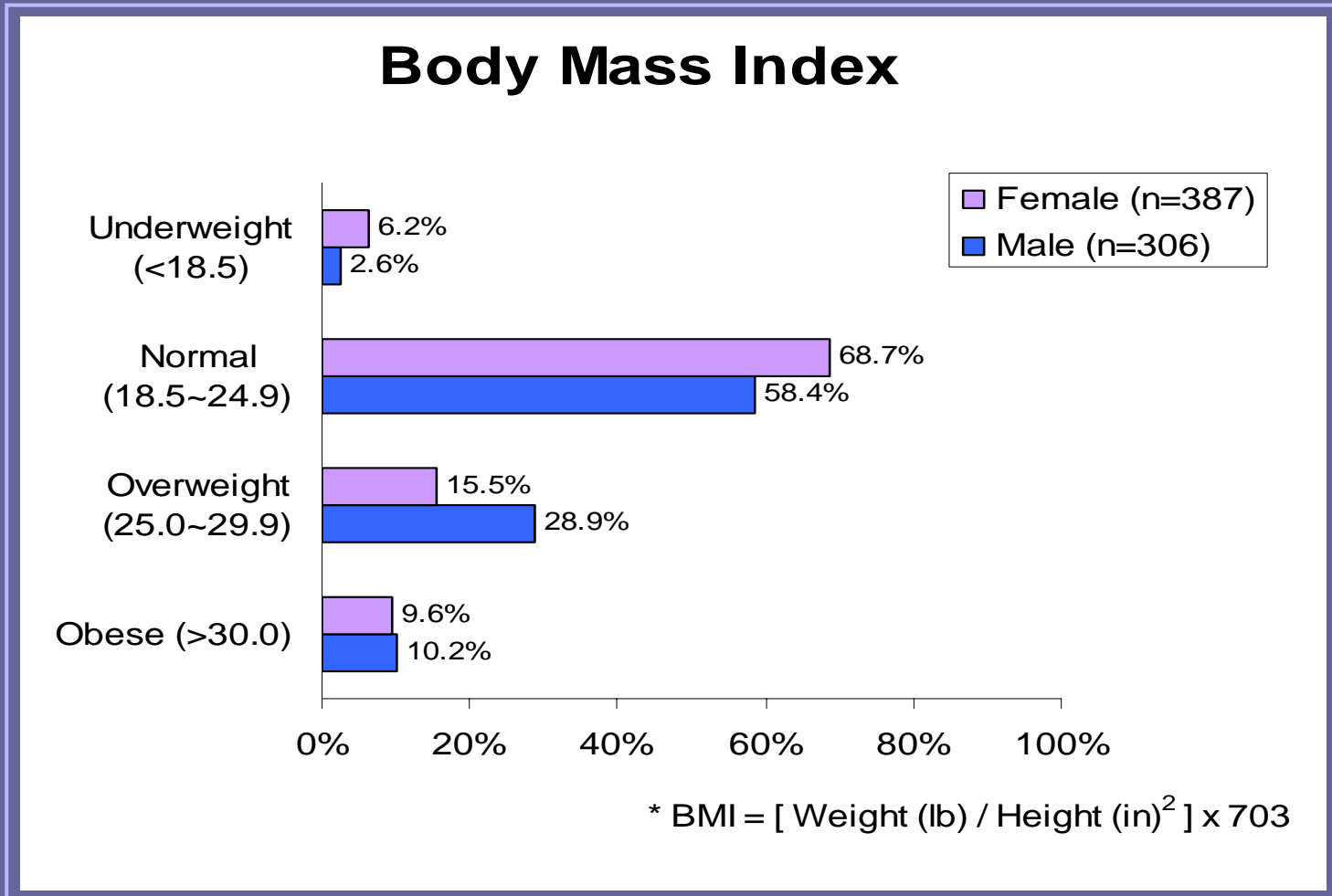


Baseline Participants

- 695 KSU Freshmen (Fall 2005) -

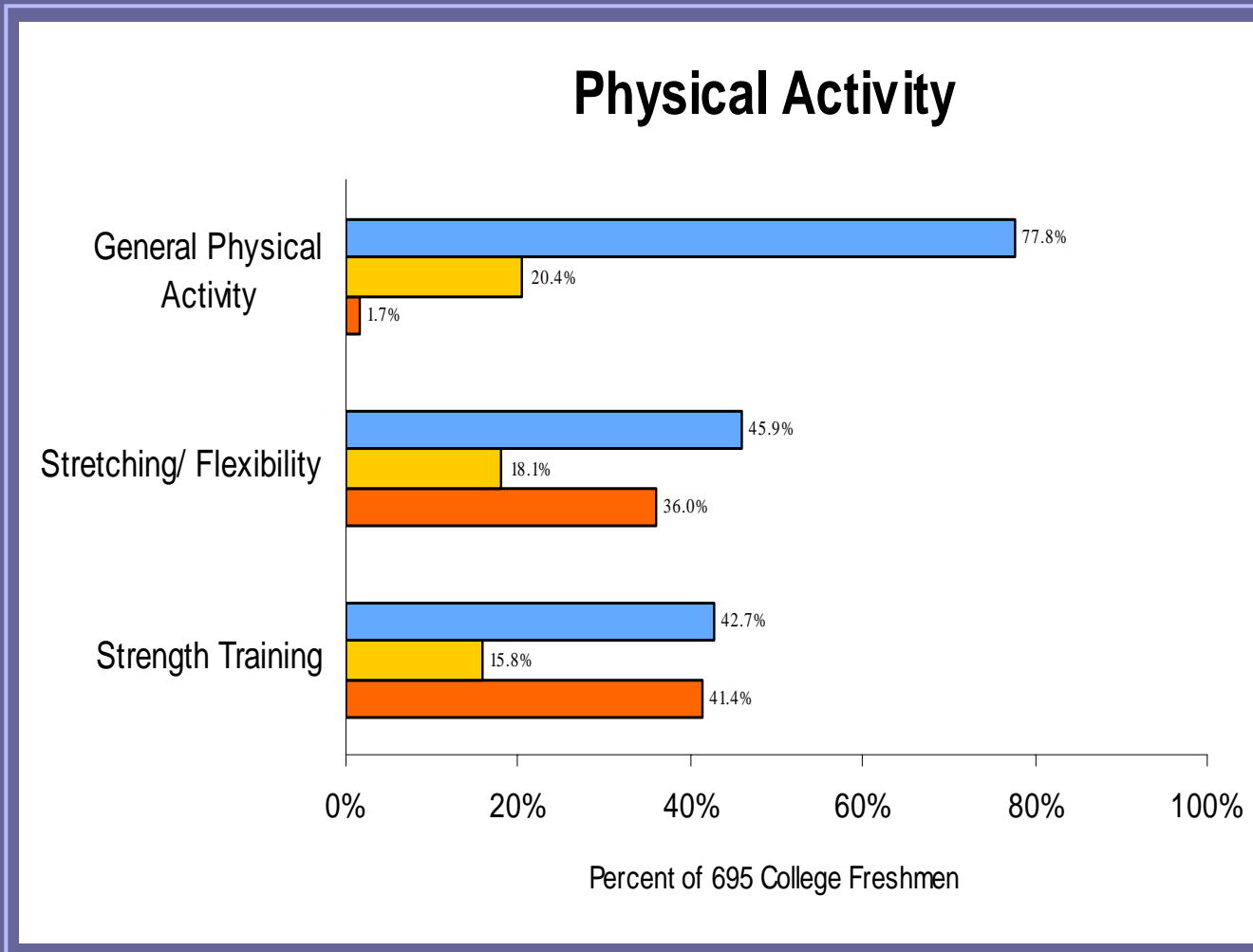
- 306 Males (44%), 387 Females (56%)
- 18~19 Years Old (94.1%)
- College: Education/A&S (450), Agriculture (204), Business (41)
- White-non Hispanic (85.3%)
- Fraternity/Sorority Member (22%)
- Housing: Residence Hall (67.7%),
Fraternity or Sorority House (10.7%)
- Work Hours: 0 hrs (75.6%), 1~19 hrs (18.4%)

Baseline Results



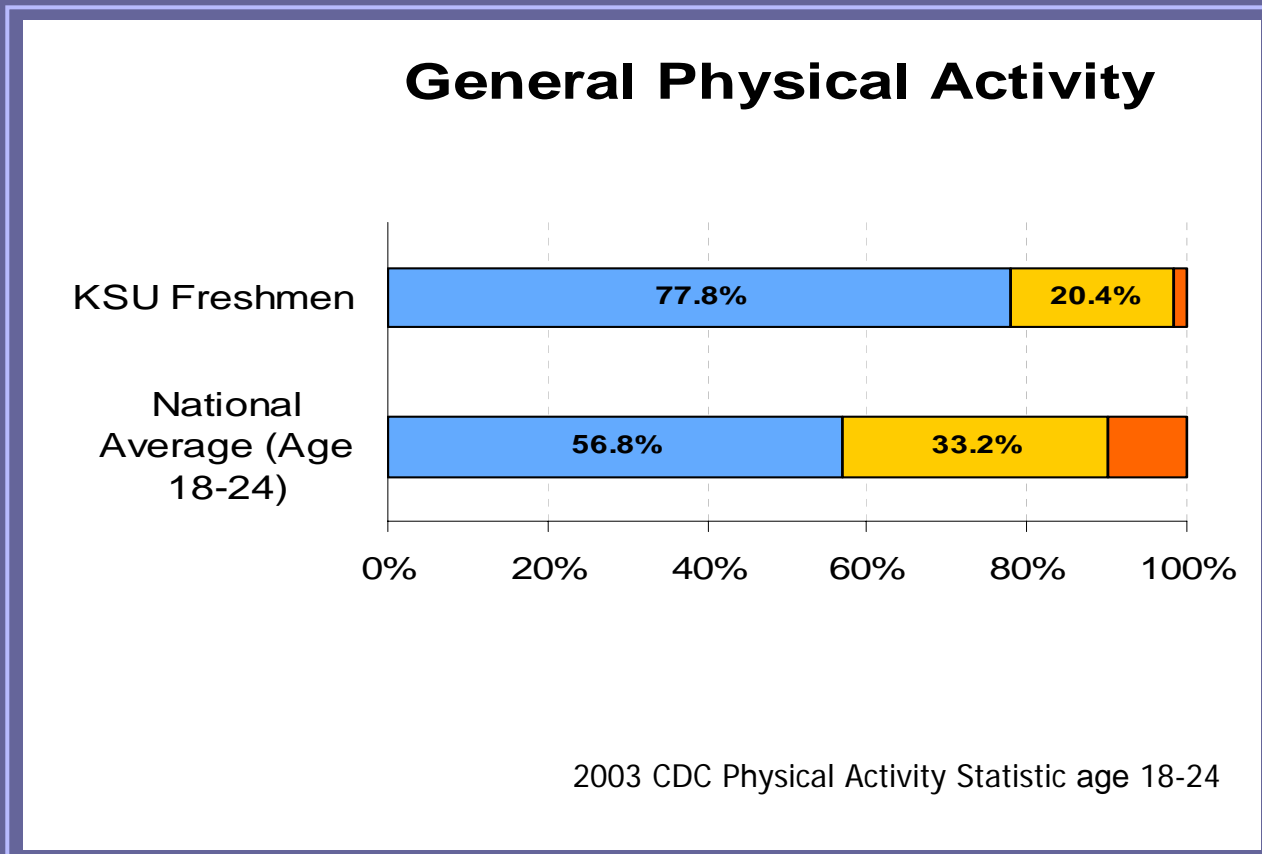
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



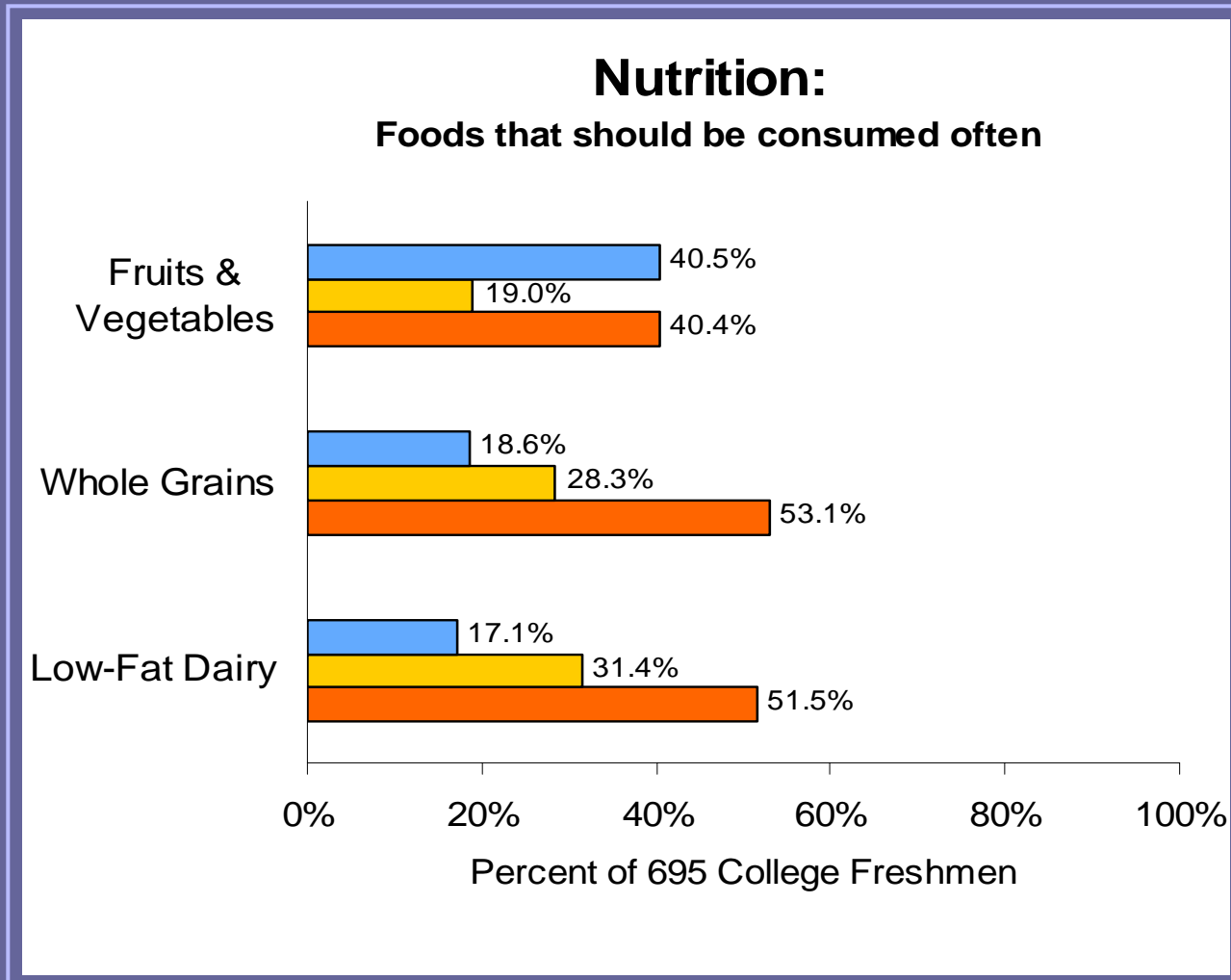
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



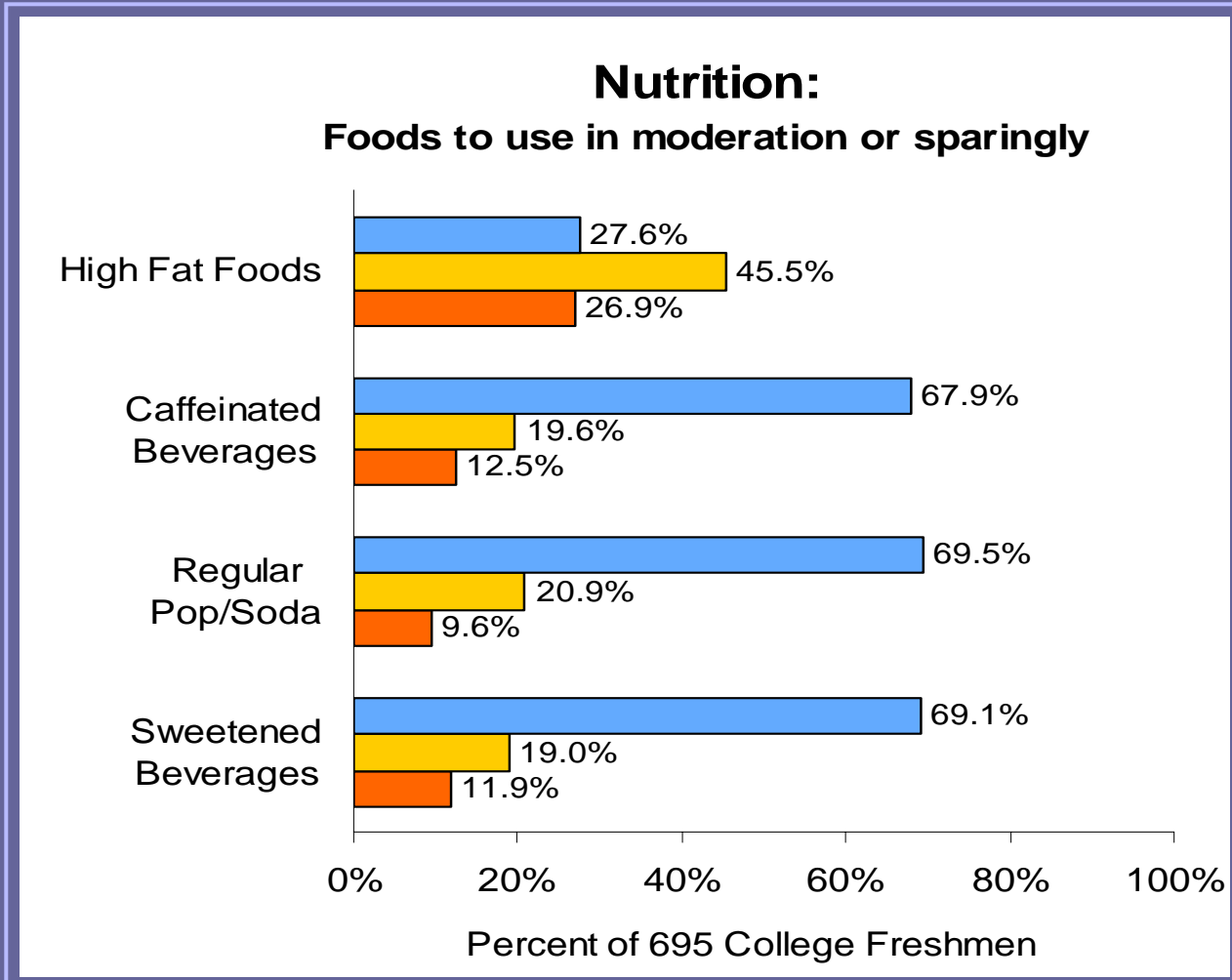
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



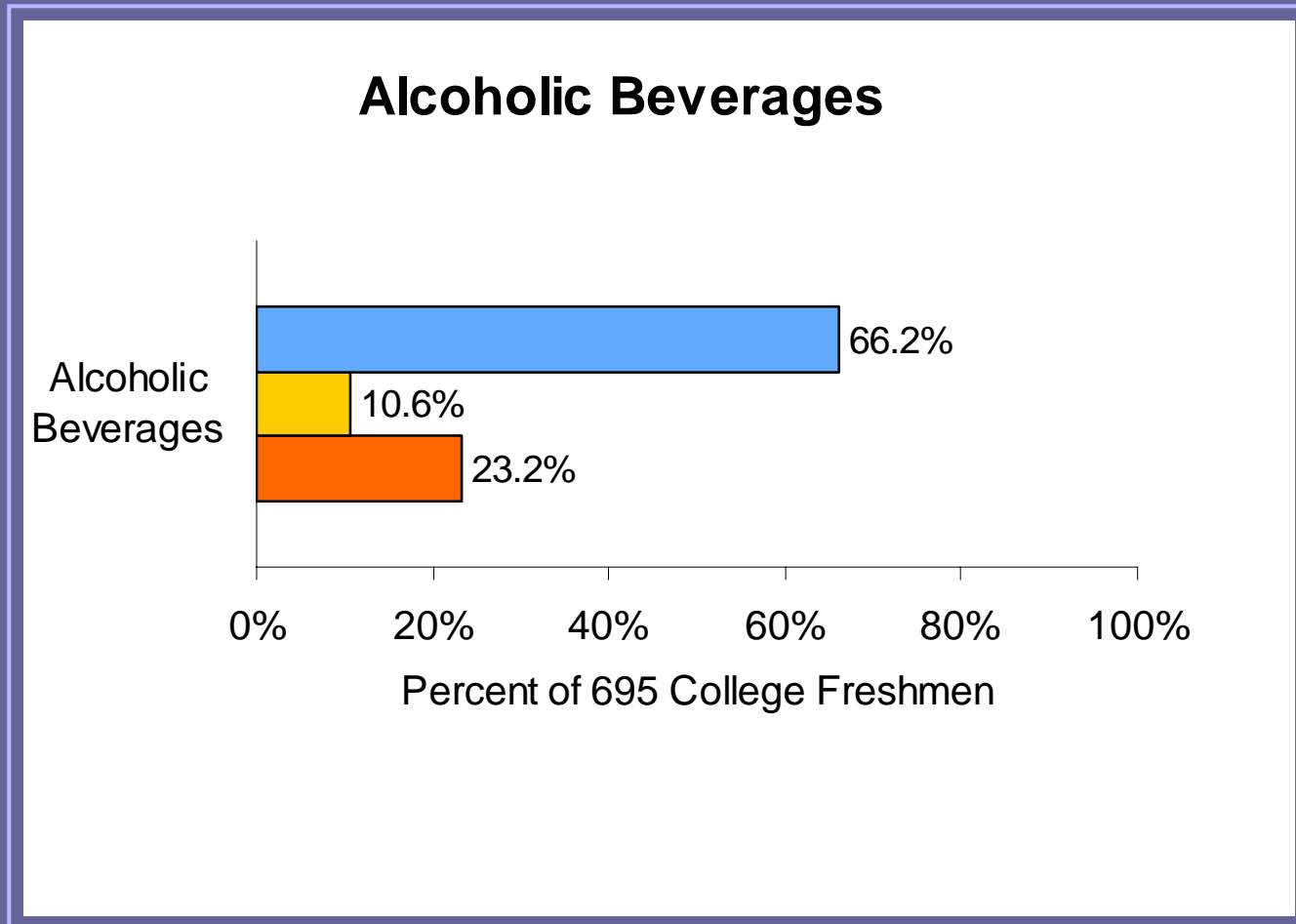
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



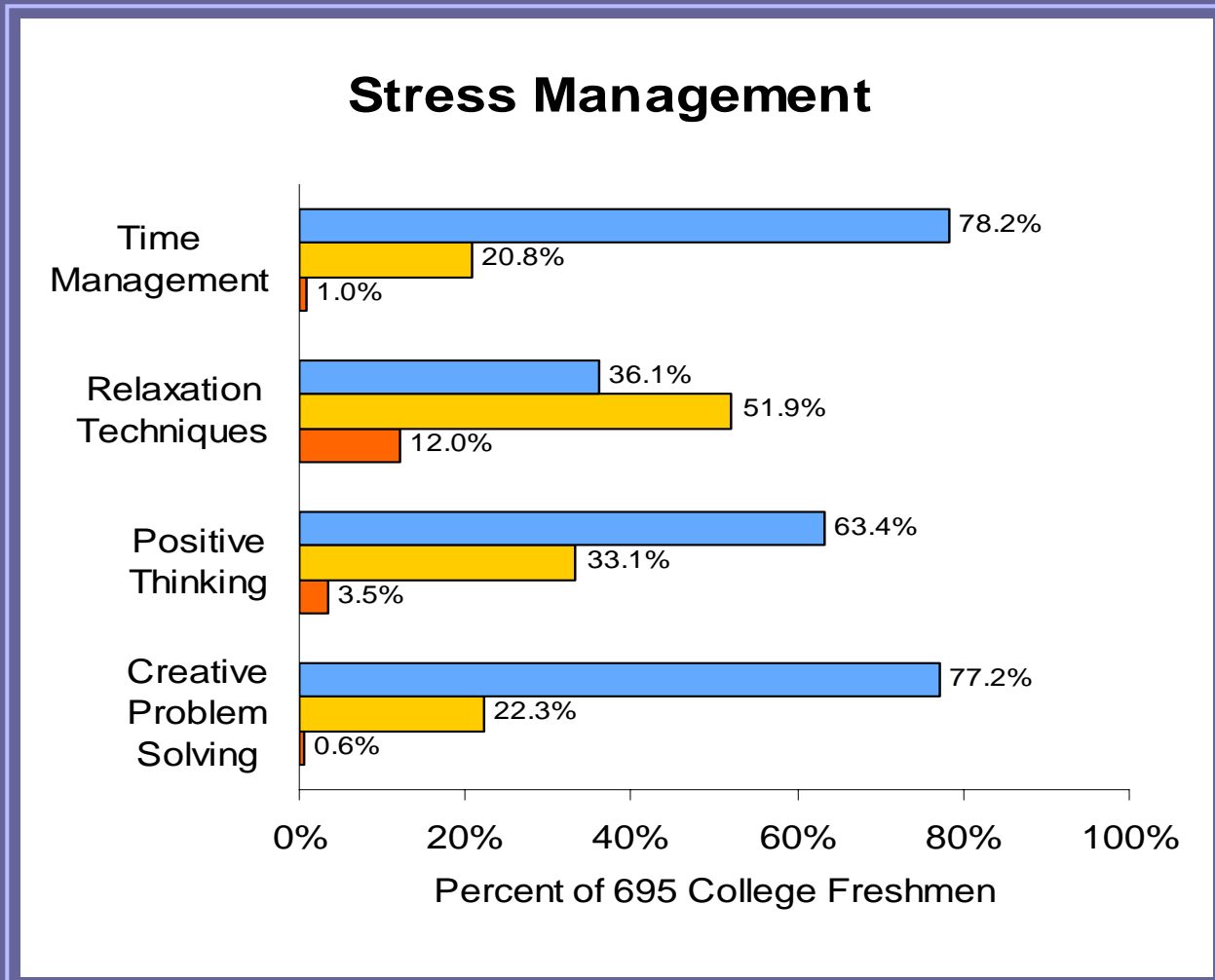
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



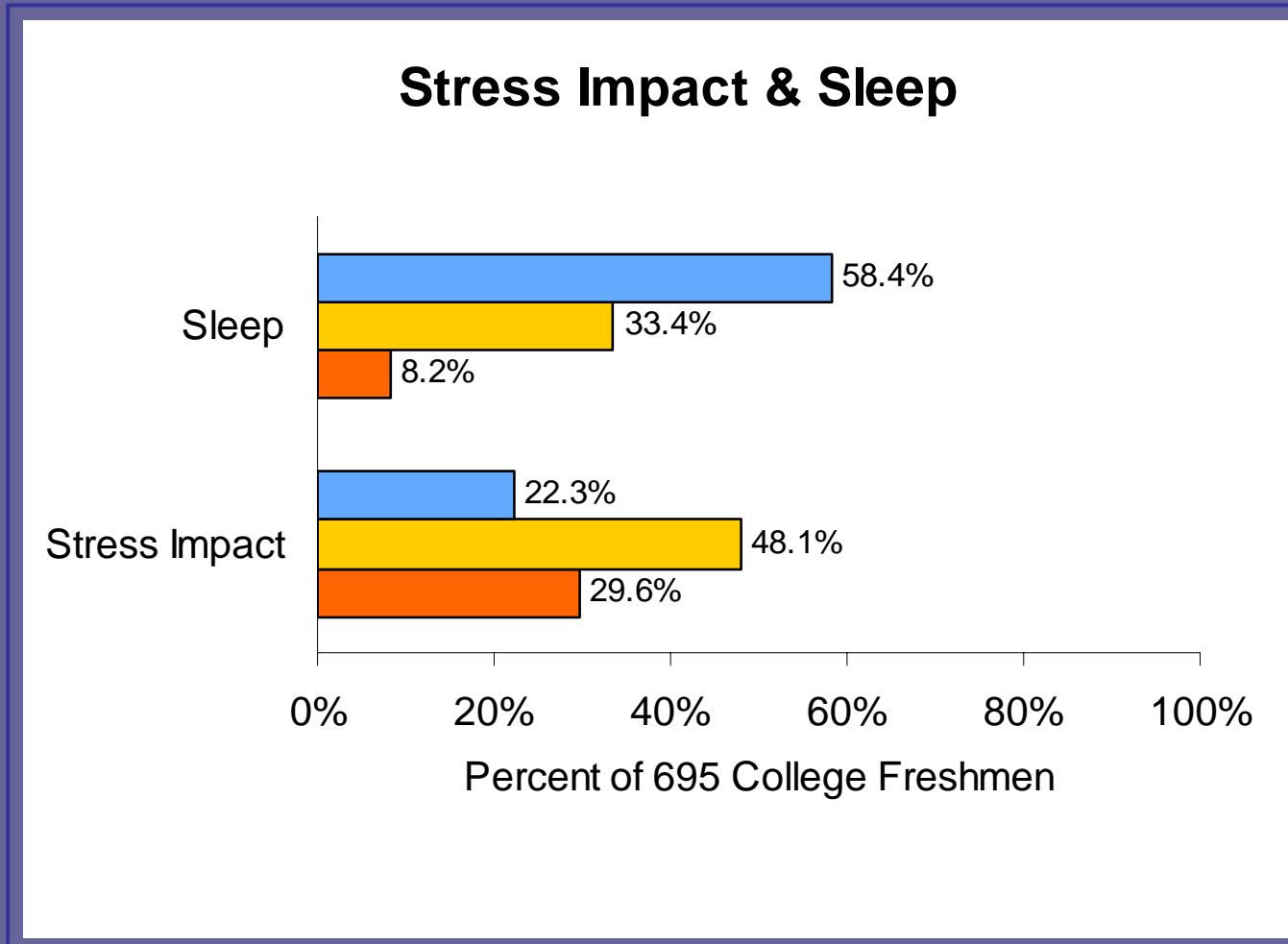
Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



Baseline Results

- Meeting recommendation
- Close, but not yet meeting recommendation
- Not meeting recommendation



Health Behaviors & Demographics

- Gender -

- **Female** students are better with **eating behaviors**, specifically in the areas of foods to use in moderation or sparingly (caffeinated, sweetened, alcoholic beverages, and regular pop/soda).
- **Male** students do more physical activities, specifically in strength training.
- **Male** students have less **stress impacts**, and use **relaxation techniques** more frequently.

Health Behaviors & Demographics - Fraternity/Sorority Membership -

Fraternity/sorority members as compared to non-members:

- Lower BMI
- Greater fruits & vegetables consumption
- Greater physical activity (stretching/flexibility, strength training)
- Greater alcoholic beverages consumption

Health Behaviors & Demographics - Housing Types-

1. Students with **On-campus Housing**
(Residence Hall, Other University Housing):
 - Greater in **fruits & vegetables** consumption
 - Higher stage in **readiness of exercise**
2. Students living in **Greek House** or **Off-campus House** consume more alcoholic beverages.

Relationship of Health Behaviors to Students Success Variables

➤ GPA:

- ✓ Alcohol Consumption
- ✓ Readiness of Stress Management
- ✓ Use of Creative Problem Solving Skill
- ✓ Stress Impact
- ✓ Sleep

➤ Variables being assessed:

- ✓ First Year Retention Rate
- ✓ Social Support
- ✓ Involvement and Responsibility



Educational and Change Interventions

➤ **Option 1: Intensive Change Intervention**

Assessment, Presentation, Website &
Change Process

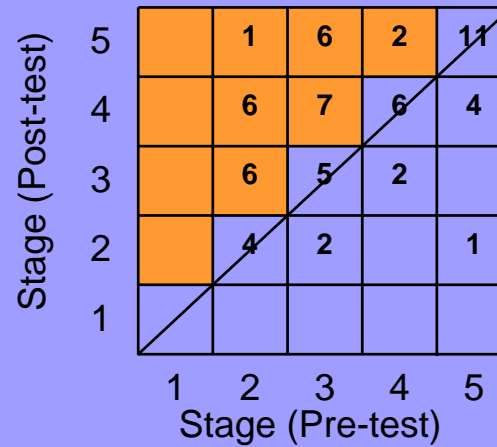
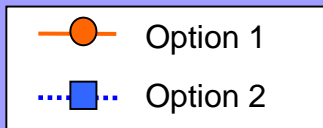
➤ **Option 2: Educational Intervention**

Assessment, Presentation & Website

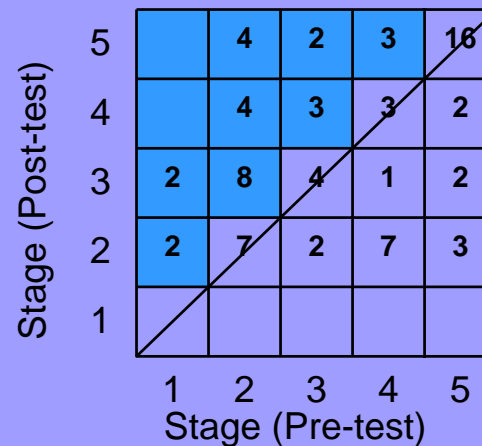
Qualitative Information for Option 1 (Intensive Change Intervention)

- Involvement level average 4 direct contacts
- Achieved average of 2 goals
- Satisfaction levels 97%
- Examples of goal attainment

Readiness: Exercise

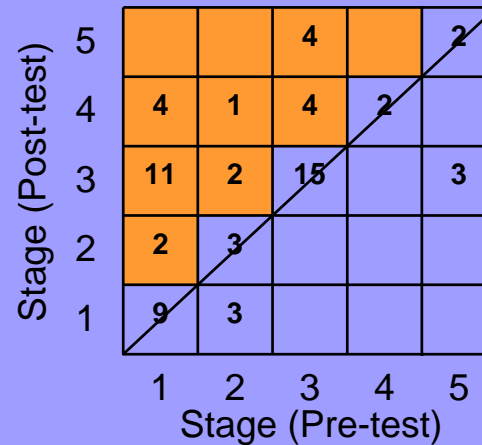
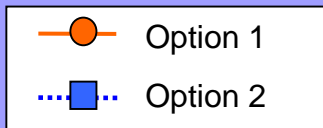
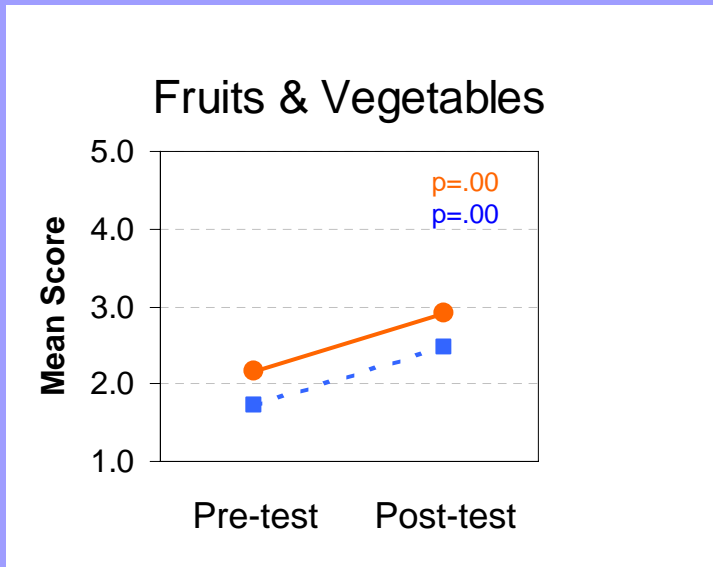


Option 1 (n=63)
Increase: 44.4%
Decrease: 14.3%



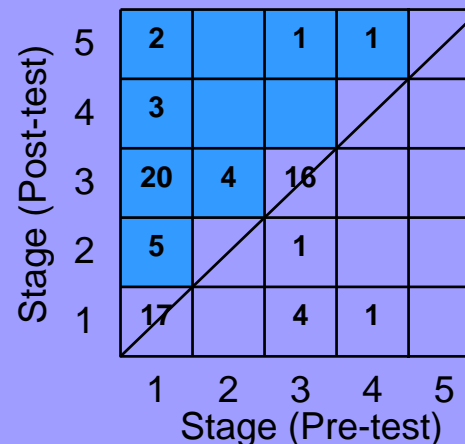
Option 2 (n=75)
Increase: 37.3%
Decrease: 22.7%

Readiness: FV Consumption



Option 1 (n=63)
Increase: 30.1%
Decrease: 9.5%

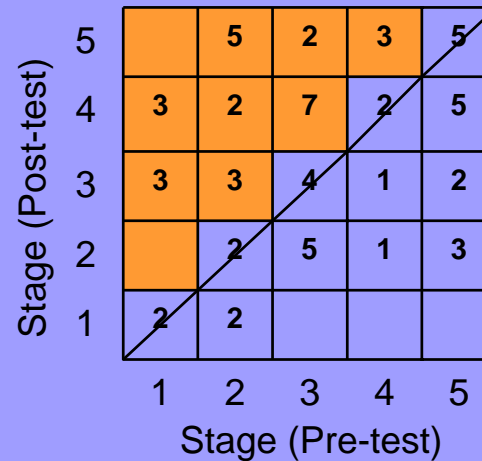
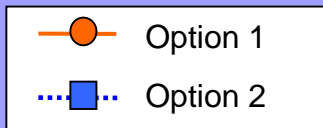
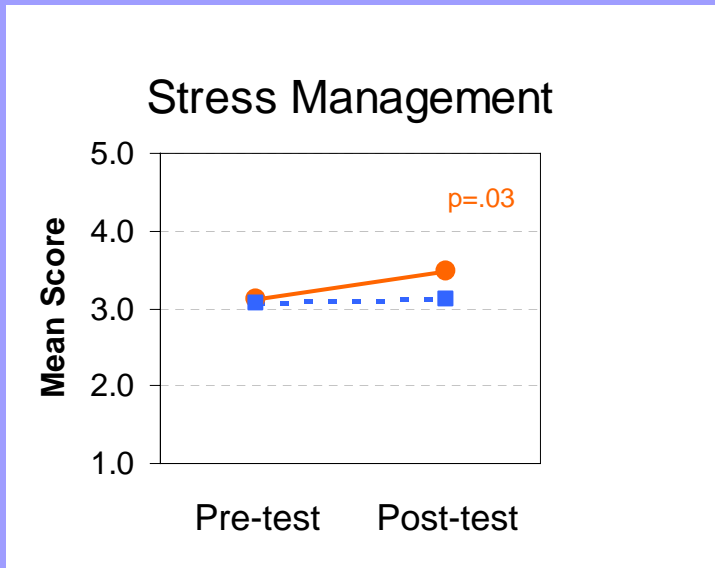
* 41.3% (stage 1)
at pre-test



Option 2 (n=75)
Increase: 48.0%
Decrease: 8.0%

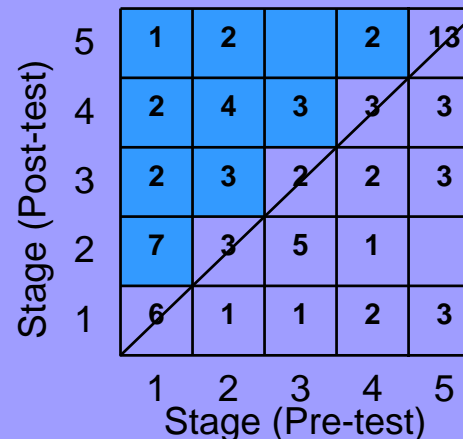
** 62.7% (stage 1)
at pre-test

Readiness: Stress Management



Option 1 (n=63)
Increase: 44.4%
Decrease: 30.2%

* 12.7% (stage 1)
 at pre-test



Option 2 (n=75)
Increase: 34.7%
Decrease: 28.0%

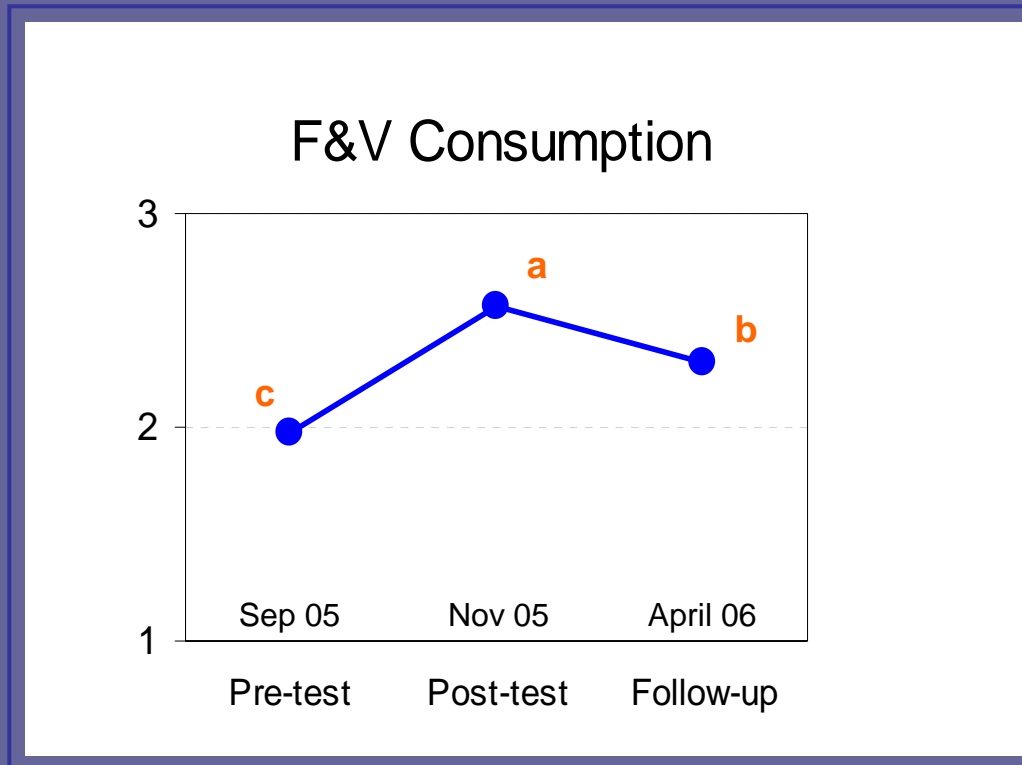
** 24% (stage 1)
 at pre-test

Health Behavior Changes: Option 1 vs 2

	Profile Variables	Positive Change from Pre to Post		Group Difference
		Option 1 (N=128)	Option 2 (N=132)	
Physical Activities	General Physical Activity	*		
	Stretching/Flexibility	**	**	
	Strength Training	**	*	*
Eating Behaviors	Fruits & Vegetables	**	**	
	Whole Grains	*		
	Low-fat or Fat-free Dairy	*		
	High-fat Foods			
	Caffeinated Beverages	**		
	Regular Pop/Soda	**	*	
	Sweetened Beverages	*		
	Alcoholic Beverages	*		**
Stress Management	Time Management			
	Relaxation Techniques	**		
	Positive Thinking	**		**
	Creative Problem Solving	*		*
	Stress Impact			*
	Sleep			

* p < .05, ** p < .01

Follow-up Study of Option 1 Students



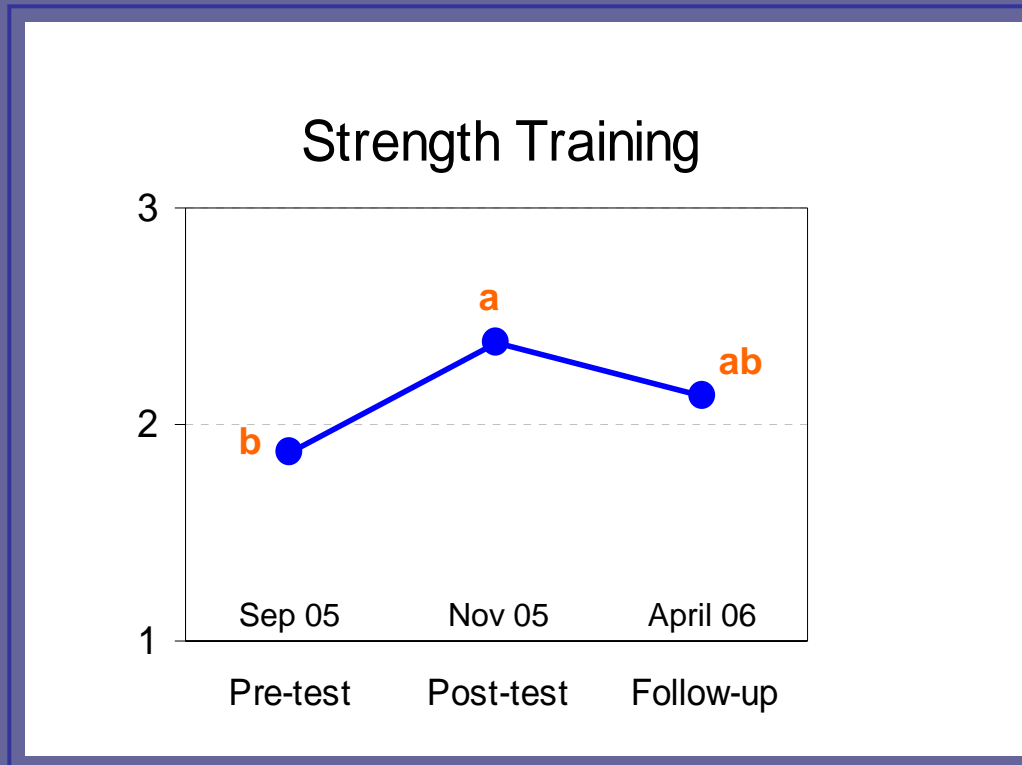
1=Not meeting recommendation

2=Close, but not meeting recommendation

3=Meeting recommendation

N=39 (67% of 58 Option 1 students enrolled in Spring 2006)

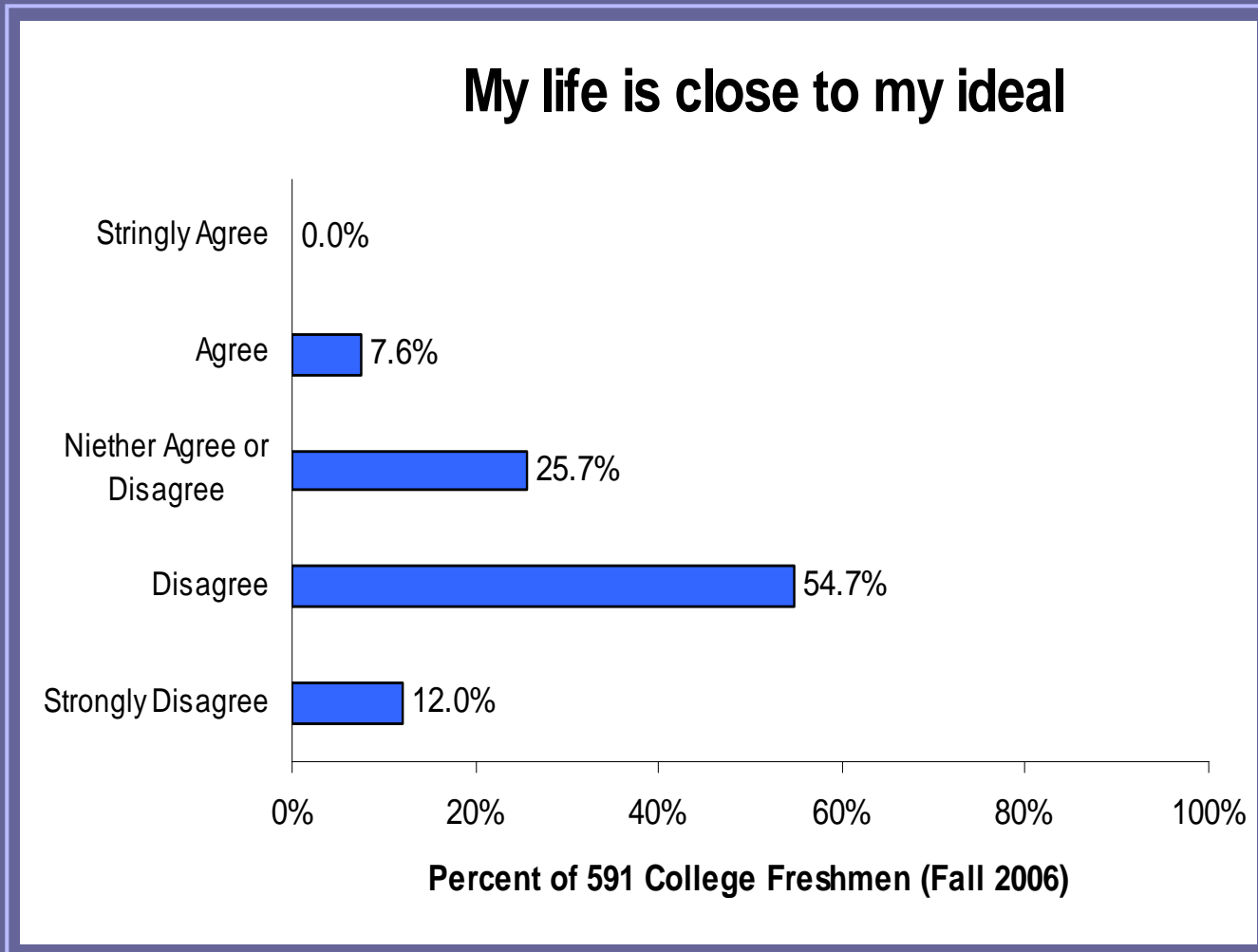
Follow-up Study of Option 1 Students



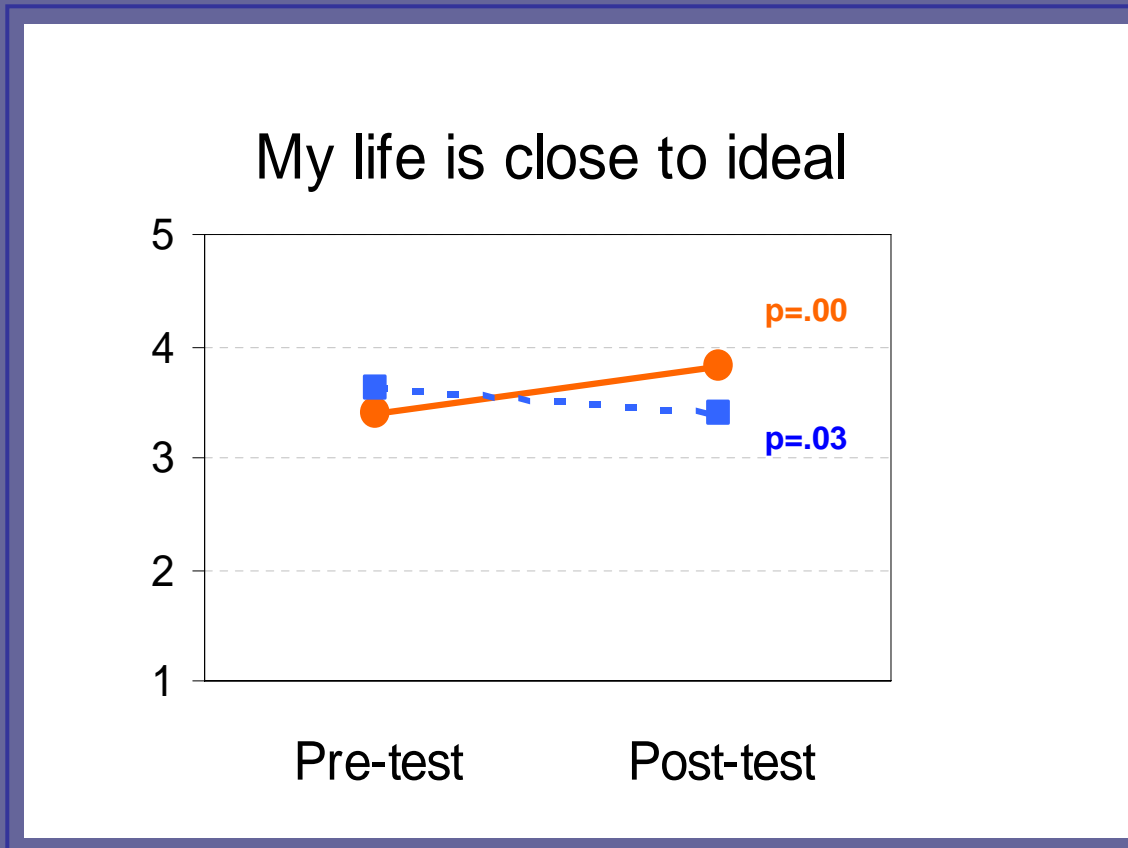
1=Not meeting recommendation
2=Close, but not meeting recommendation
3=Meeting recommendation

N=39 (67% of 58 option 1 students enrolled in Spring 2006)

Life Satisfaction Scale Responses by Freshmen at the beginning of their First Semester (Fall 2006)



Life Satisfaction Changes of Freshmen in PAC-CATS Intervention Programs (Fall 2006)



1=Strongly Disagree
2=Disagree
3=Neither Agree or Disagree
4=Agree
5=Strongly Agree

—●— Option 1 (n=65)
- - -■- - - Option 2 (n=57)

Health Behavior Changes: Year 2005 & 2006

	Profile Variables	Positive Change from Pre to Post		Group Difference
		Option 1 (N=128)	Option 2 (N=132)	
Physical Activities	General Physical Activity	**		**
	Stretching/Flexibility	**	**	**
	Strength Training	**	**	**
Eating Behaviors	Fruits & Vegetables	**	**	*
	Whole Grains	**	*	
	Low-fat or Fat-free Dairy	**		
	High-fat Foods	**	*	
	Caffeinated Beverages	**	**	
	Regular Pop/Soda	**	**	
	Sweetened Beverages	**	**	
	Alcoholic Beverages	*		*
Stress Management	Time Management			
	Relaxation Techniques	**	*	*
	Positive Thinking	**		**
	Creative Problem Solving	**		**
	Stress Impact	**		**
	Sleep			

* p < .05, ** p < .01

What did we learn about K-State students?

- Weight and health issues were present with a significant number of students.
- Awareness building using methods of assessment & education were steps that increased readiness for change.
- Involvement in programs of change & support produced significantly positive changes in health behaviors:
 - 15 of 17 areas for two cohort freshmen (Fall 05, Fall 06)
- Participant reports indicated that learning to self-regulate (set goals and carry through) increased confidence and transferred to other behaviors applied to many areas of their life.

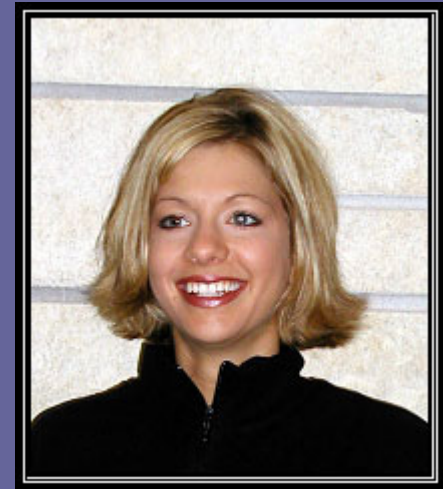
MENTORING



Helping Students, Help Themselves

Mentors: First Year

- Recruitment
- Compensation
- Training
- Participant : Mentor Ratio



Mentors: Second Year

- Recruitment
- Compensation
- Training
- Participant : Mentor Ratio



Motivation

- Begin Where The Student Is
- Reminder E-mails
- Share Personal Experience
- Incentives
- Referral To Additional Resources



Problems Encountered

- Funding
- Time
- Variability



Student Testimonials



Mentor Testimonials



Future Directions?

Questions or Comments?

End of Slide Show

PowerPoint Slides:

<http://www.k-state.edu/paccats/KSUPACCATS.pdf>