

Assessing attitudes, knowledge and intentions held by pre-service teachers regarding North Carolina's Healthy Active Children policy



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Presentation Objectives

- Describe the North Carolina Healthy Active Children policy.
- Identify current methods for integrating physical activity into classroom instruction beyond physical education and recess.
- Compare and contrast professional development and pre-service teacher training models.
- Describe methods of the HAC pre-service teacher study.
- Describe the results and conclude effectiveness of alternative training models based on quantitative and qualitative evidence.



NC Healthy Active Children Policy



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NC Healthy Active Children Policy

1. Local School Health Advisory Councils
2. Physical Education and Healthful Living
3. Recess and Physical Activity
4. Coordinated School Health Programs
5. Implementation and Reporting

www.nchealthyschools.org



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NC Healthy Active Children Policy

Study focus

HSP-S-000

Section 3: Recess and Physical Activity:

- Mandates a minimum of 30 minutes daily of physical activity in grades K-8.
 - Changed from 150 minute “*RECOMMENDATION*” of PE
- The 30 minutes may be taken all at one time accumulated during three 10 minute breaks throughout the day.
 - Breaks must be at least 10 minutes
- Severe and inappropriate exercise may not be used as a form of punishment.



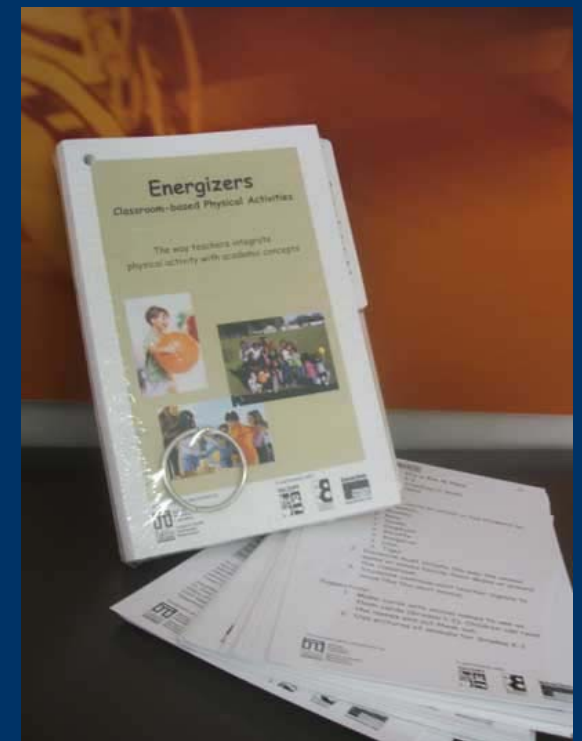
**Integrating physical activity
into classroom instruction
beyond physical education and
recess**



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“Energizers”

- Classroom based physical activities
- Developed by the Activity Promotion Laboratory at East Carolina University
- modeled after “Brain Breaks” a program developed by the Michigan State Department of Education



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**Compare and contrast
professional development and
pre-service teacher training
models.**



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Train the trainer model



Scheduled meeting time and place for training

Substitute teacher pay provided

Training includes

- Knowledge
- Energizers

Pre-service teacher training



In-class training (on campus)

Existing College classes

Training includes

- Knowledge
- Energizers



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Research Questions



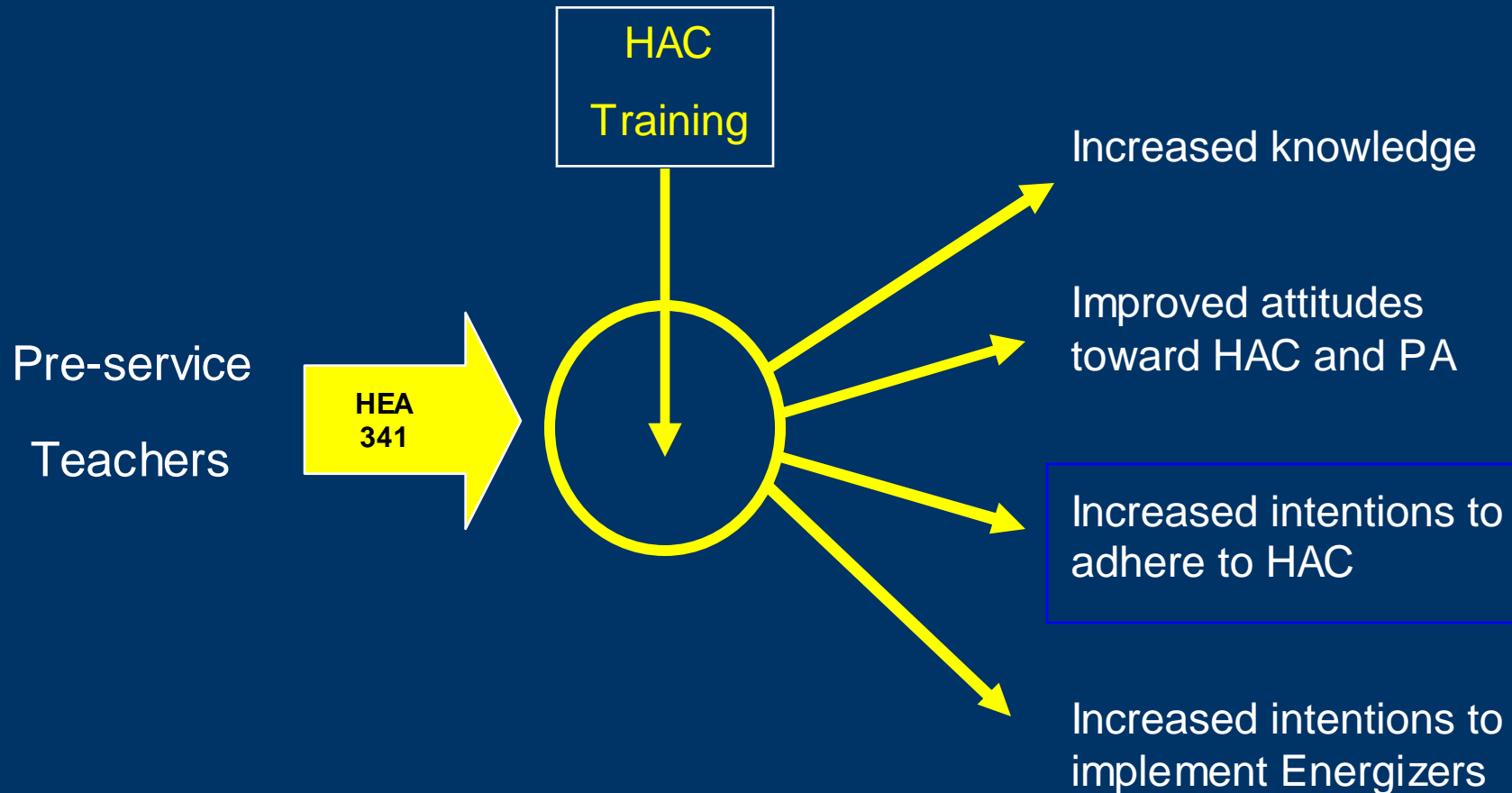
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Research Question

To what extent does the HAC policy training effect the knowledge, attitudes, and intentions of pre-service teachers?



Logic Model



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Experimental Design

| Participant Group | Pre test survey | Training | Post test survey | Follow-Up |
|--------------------------|------------------------|-----------------|-------------------------|------------------|
| Treatment | ○ | X | ○ | ○ |
| Control | ○ | | ○ | |



Participants: *Demographics*

University of North Carolina Greensboro

HEA 341: Elementary School Health



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Gender

What sex are you?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid | Male | 3 | 3.8 | 3.8 | 3.8 |
| | Gender | 76 | 95.0 | 96.2 | 100.0 |
| | Total | 79 | 98.8 | 100.0 | |
| Missing | System | 1 | 1.3 | | |
| Total | | 80 | 100.0 | | |

Ethnicity

What is your ethnicity?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------------|-----------|---------|---------------|--------------------|
| Valid | African American | 10 | 12.5 | 12.7 | 12.7 |
| | White | 65 | 81.3 | 82.3 | 94.9 |
| | Hispanic | 1 | 1.3 | 1.3 | 96.2 |
| | Asian | 1 | 1.3 | 1.3 | 97.5 |
| | Other | 2 | 2.5 | 2.5 | 100.0 |
| | Total | 79 | 98.8 | 100.0 | |
| Missing | System | 1 | 1.3 | | |
| Total | | 80 | 100.0 | | |



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Age

How old are you?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-------------|-----------|---------|---------------|--------------------|
| Valid | 19 | 1 | 1.3 | 1.3 | 1.3 |
| | 20 | 33 | 41.3 | 41.8 | 43.0 |
| | 21 | 24 | 30.0 | 30.4 | 73.4 |
| | 22 | 7 | 8.8 | 8.9 | 82.3 |
| | 23 | 3 | 3.8 | 3.8 | 86.1 |
| | 24 | 1 | 1.3 | 1.3 | 87.3 |
| | 25 or order | 10 | 12.5 | 12.7 | 100.0 |
| | Total | 79 | 98.8 | 100.0 | |
| Missing | System | 1 | 1.3 | | |
| Total | | 80 | 100.0 | | |

Condition

Condition

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid | Treatment | 55 | 68.8 | 69.6 | 69.6 |
| | Control | 24 | 30.0 | 30.4 | 100.0 |
| | Total | 79 | 98.8 | 100.0 | |
| Missing | System | 1 | 1.3 | | |
| Total | | 80 | 100.0 | | |



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Instrument

- 15 minute paper survey adapted from the Be Active NC training evaluation survey
- 46 questions primarily assessing:
 - **Knowledge**
 - Physical activity and brain function
 - Physical activity and obesity
 - **Attitudes**
 - Toward HAC policy
 - Physical activity and obesity
 - **Intentions**
 - To implement Energizer activities
 - Adhere to the HAC policy



RESULTS



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HAC Pre-service teacher study identified:

Changes in overall knowledge

Changes in attitudes toward HAC policy

Changes in attitudes towards physical activity (PA)

Changes in intentions to adhere to the HAC policy

Changes in intentions to incorporate PA into classroom

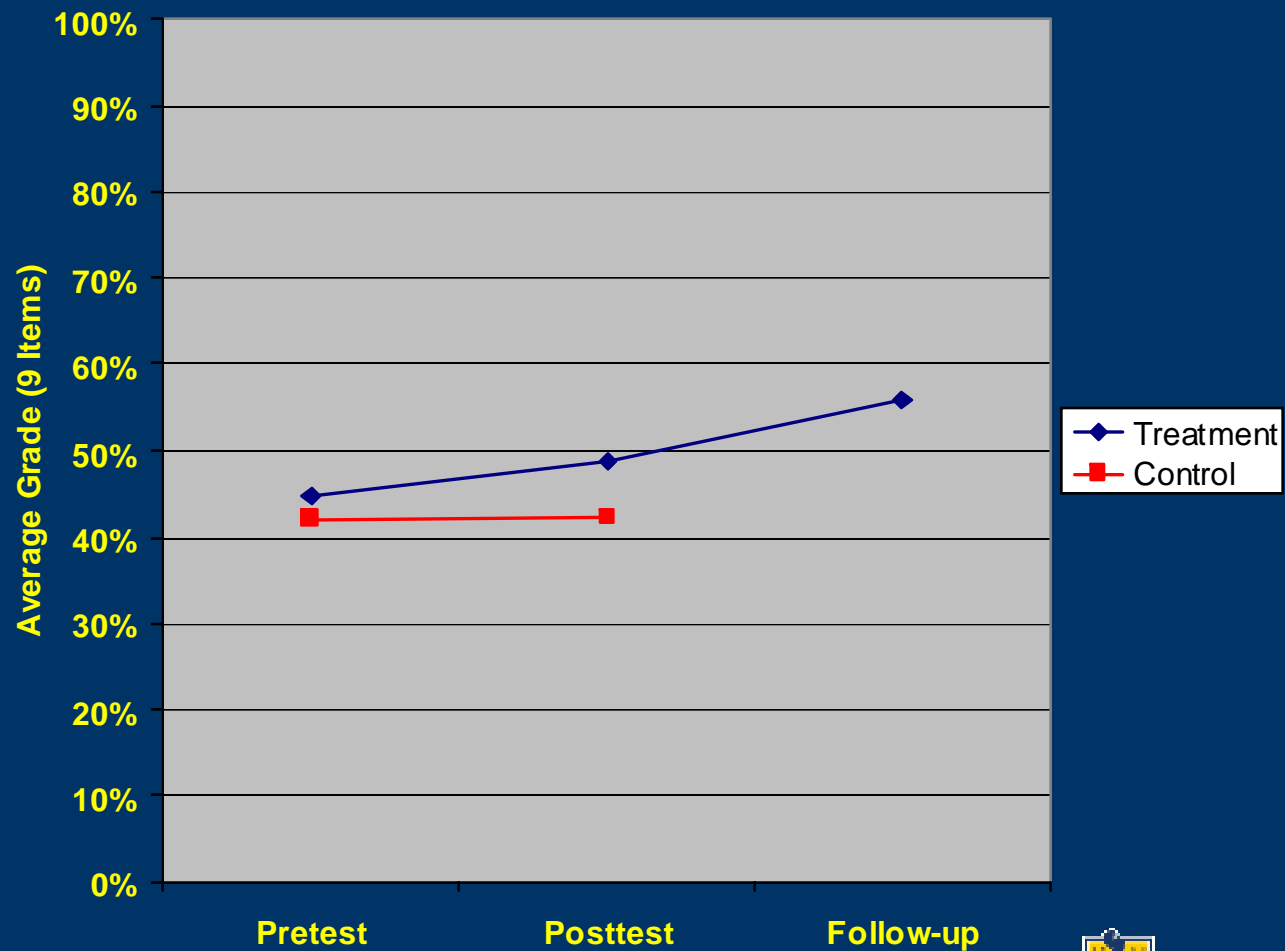
Changes in self-efficacy (confidence to implement Energizers)



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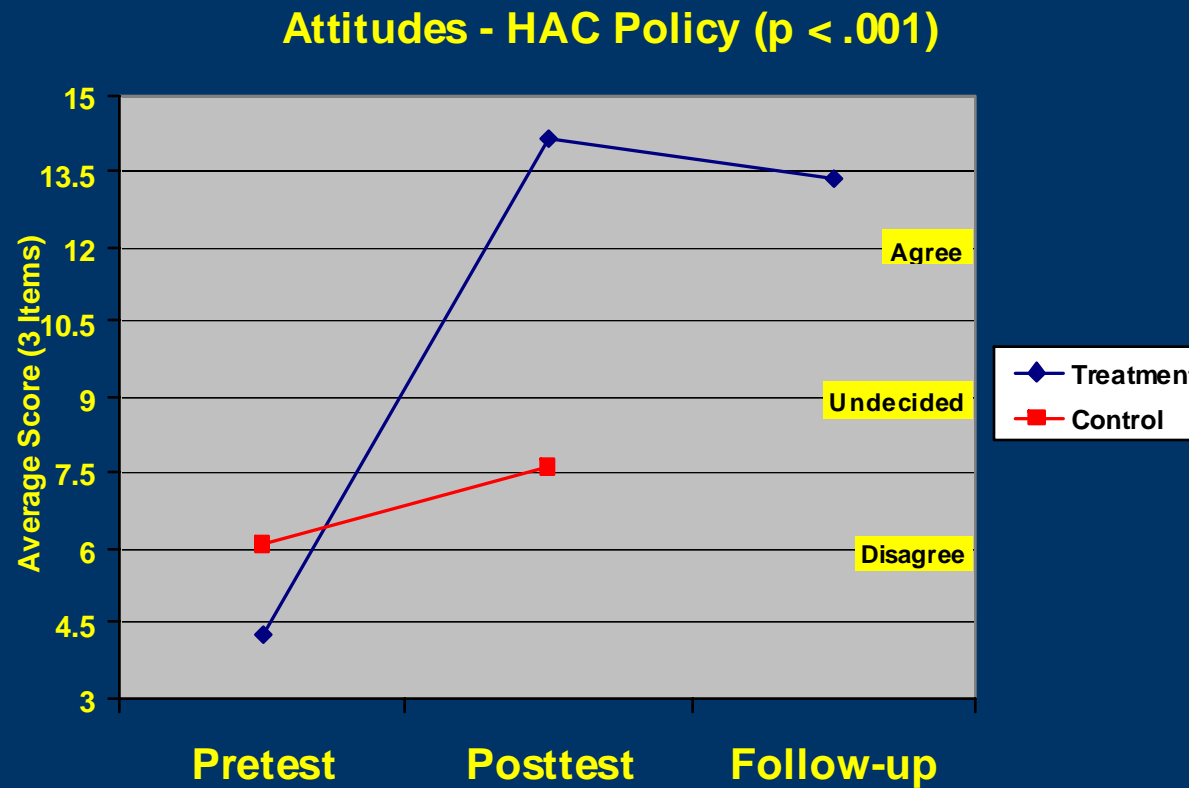
Changes in overall knowledge

Knowledge ($p = .09$)



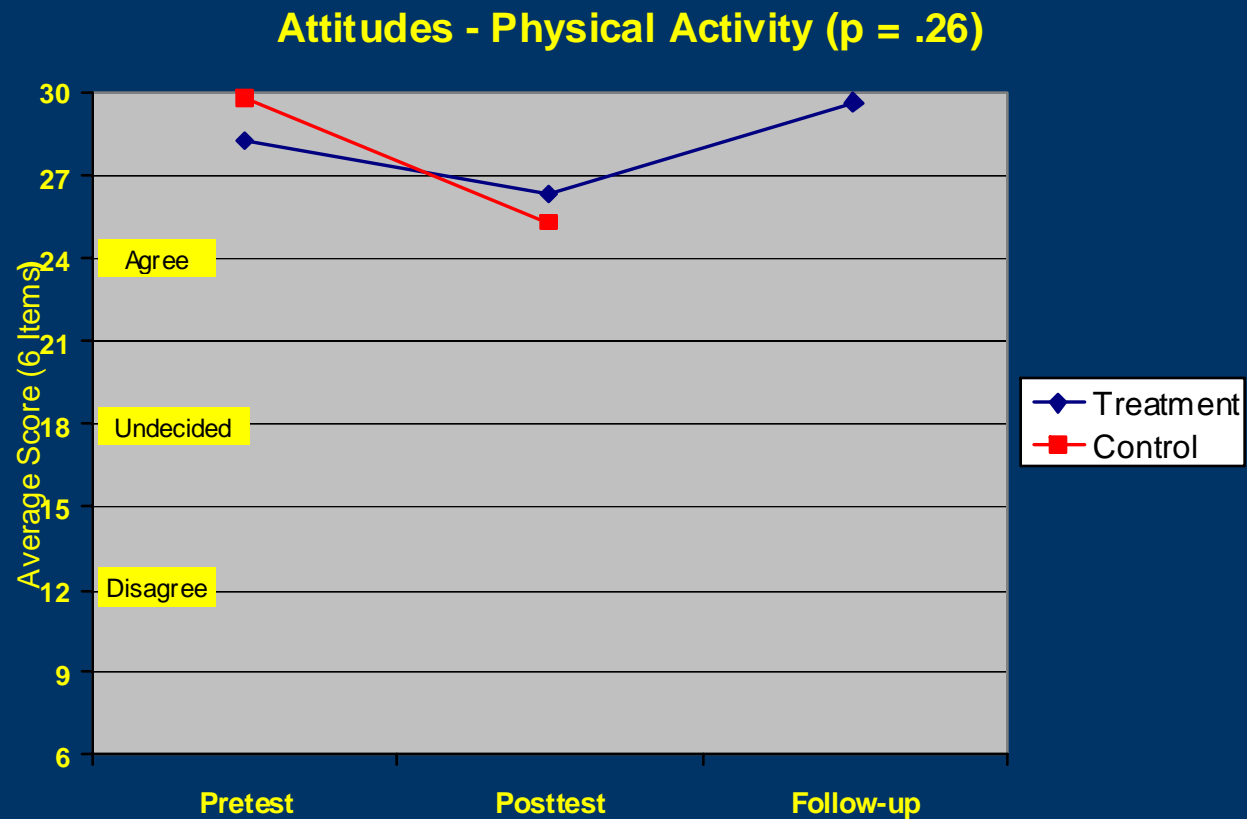
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Changes in attitudes toward HAC policy



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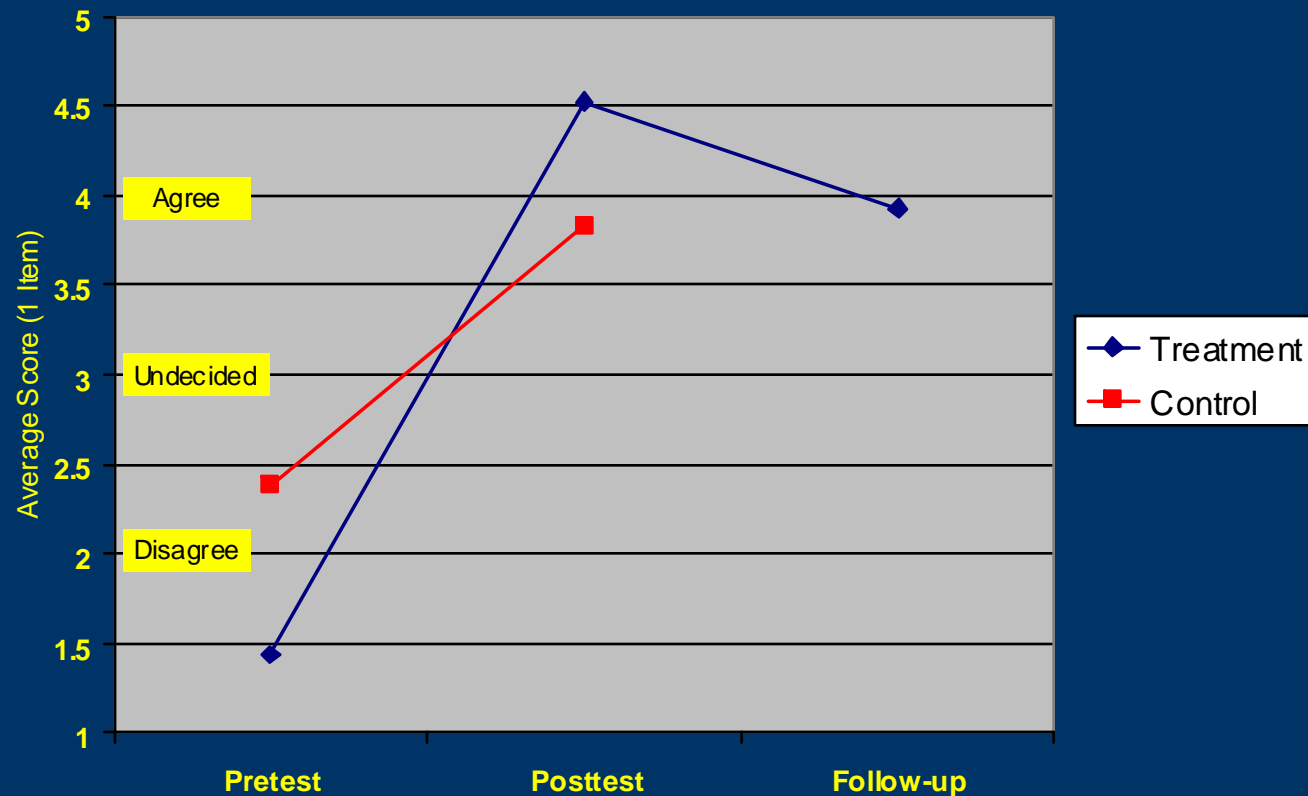
Changes in attitudes towards physical activity



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Changes in intentions to adhere to HAC policy

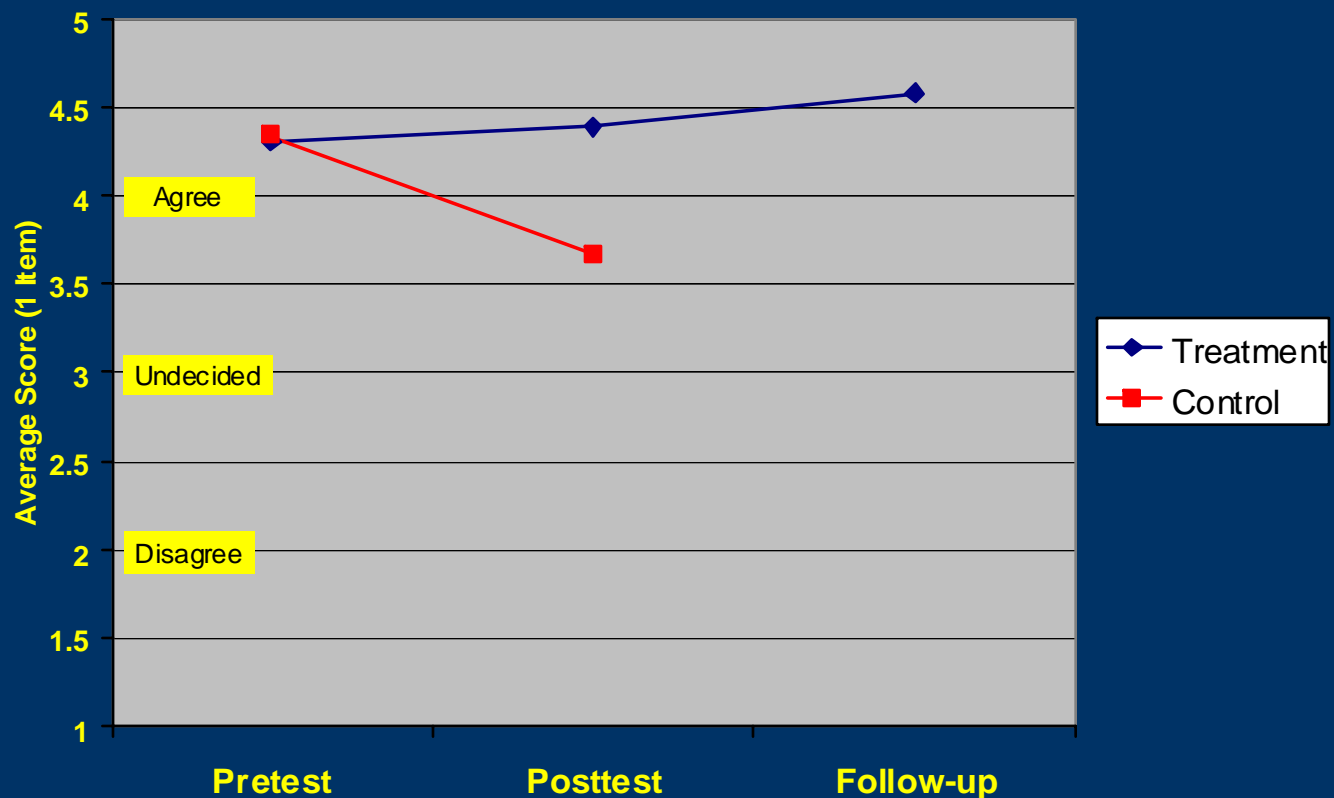
Intention - HAC Policy ($p = .005$)



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Changes in intentions to incorporate physical activity into classrooms

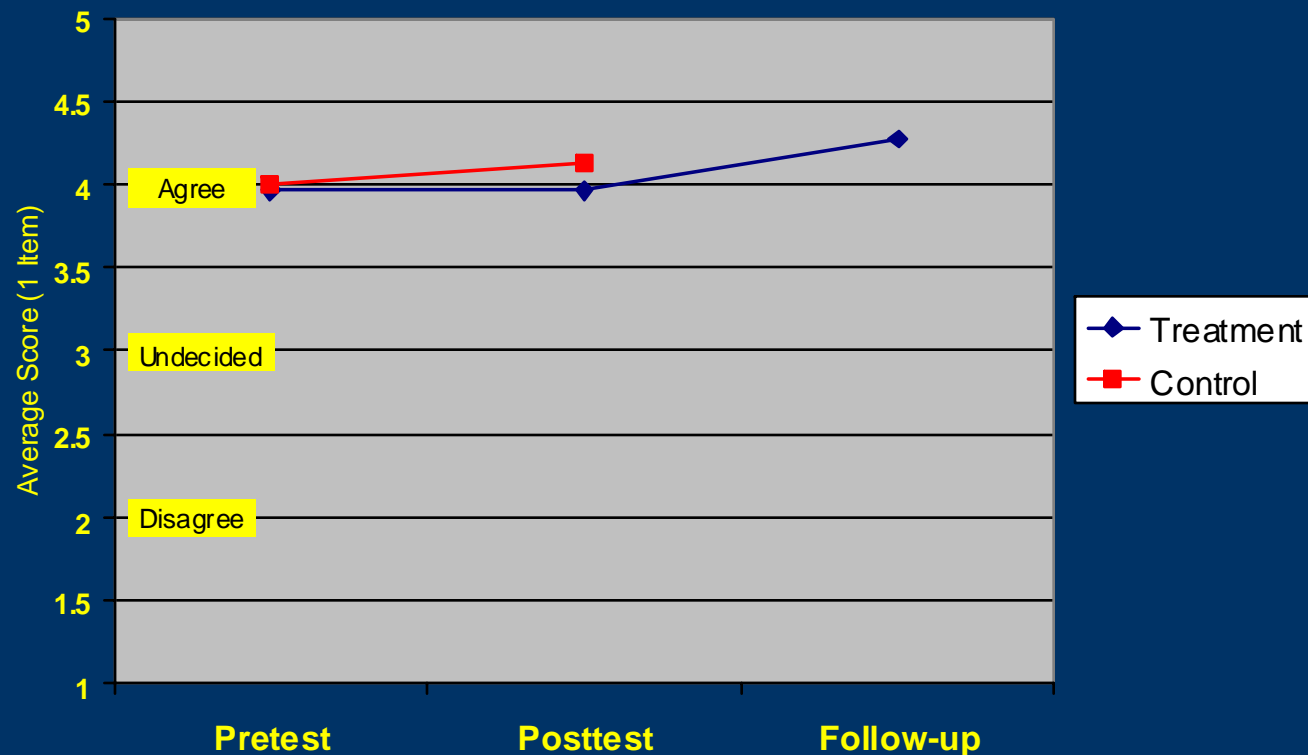
Intention - Physical Activity ($p < .001$)



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Changes in self-efficacy (implement physical activity)

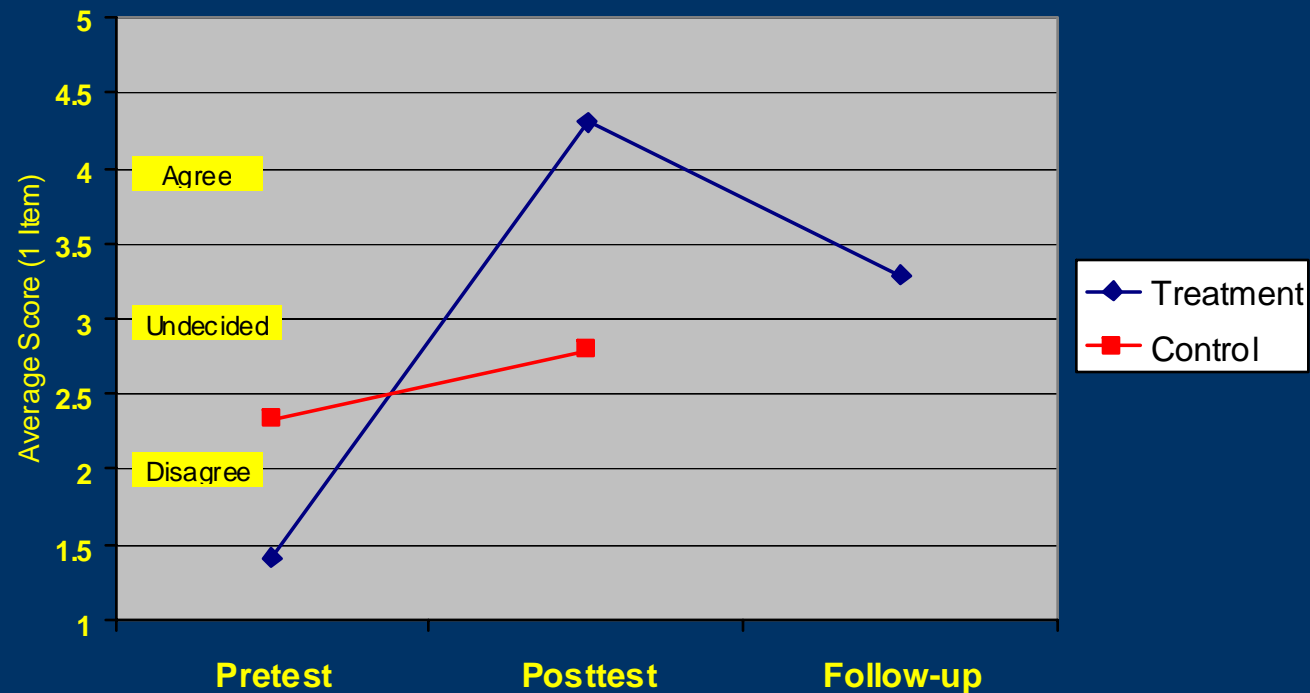
Self-efficacy - Physical Activity ($p = .58$)



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Changes in attitudes towards pre-service versus in-service training

Attitude - Preservice vs. Inservice Training ($p < .001$)



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Qualitative Results

An Email questionnaire asked students to comment on their in-class teaching experiences (mainly graduate students):
2 of the seven email responses reported:

"I taught more than 20 lessons in an elementary school; I taught 1 lesson that incorporated physical activity: We ran (a) mile, and I talked with kids about jogging strategies, and then (I) ran the mile with them. Thanks for the energizers! I will use them!"

"I taught 13 lessons and incorporated physical activity into 1 (of them). We went along with the butterfly life cycle unit we had a cocoon-wrapping contest. Children selected partners and each team received a roll of toilet paper. They decided who would be the caterpillar and who would be the wrapper. On 'go' they began wrapping. Then students switched roles and played again."



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Future Research



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- Evaluate effectiveness of alternative training models
- Future trainings should include pre-service teachers in Schools of Education across NC to better saturate the teaching population
- Develop and test an online version of the HAC and Energizer and training for future training of in-service teaching population



Thank you for your time!

**Enjoy the remainder of the
conference.**



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