



A Tailored Physical Education Program Enhances Elementary Students' Attitudes, Self-Efficacy, and Motivation to Engage in Physical Activity

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Background & Purpose of Study

- Red Deer, AB: Community need
- “Physical Activity Leadership” (PAL) program evaluation
- **Aim:** positive exercise-related attitudes

Team Members

- Red Deer Primary Care Network - \$75,000 grant
- Alberta Health Services
- Red Deer College
- Red Deer Public Schools
- Red Deer Catholic Schools
- City of Red Deer
- Sportball Red Deer

What is the PAL Program?

- **Physical Activity Leadership (PAL)**
- 20 Schools in Red Deer, Alberta
 - Grade four and five classes
- 5 PALs
 - University of Alberta Bachelor of Education students with Phys. Ed. background
- Needs-based
 - Environmental scans
 - PALs developed individualized curricula

Research Questions

➤ **What effect does the PAL Program have on...**

- Teacher self-efficacy for leading Phys. Ed. classes¹
- Attitudes toward exercise
- Perceptions of physical ability (physical self-efficacy)
- Program impact and value to participants

¹*Sallis et al., 1997*

Ethics

- Red Deer College Research Ethics Board approval
- Parental permission forms
- Informed consent prior to surveying

Research Methods

- Participants: ~700 students, 30 teachers
- Paired-samples t -test design with open-ended questions on teacher survey for thematic analysis
- Pre- and post-test online surveys

Research Methods

➤ Measures

➤ **Student** measures

- Positive and Negative Attitudes Toward Exercise¹ (*PNATE*)
- Behavioural Regulation in Exercise Questionnaire² (*BREQ-2*)
- Perceptions of Physical Ability³ (*PPA*)

¹Nelson, Benson & Jensen, 2010; ²Markland & Tobin, 2004; ³Ryckman, Robbins, Thornton, & Cantrell, 1982

Research Methods

➤ Measures

➤ **Teacher** measures

- Physical Education Teacher's Physical Activity Self-Efficacy Scale¹ (*PETPAS*)
- School Physical Activity Promotion Attitudes Questionnaire² (*SPAPAQ*)
- Behavioural Regulation in Exercise Questionnaire³ (*BREQ-2*)

➤ Open-ended questions

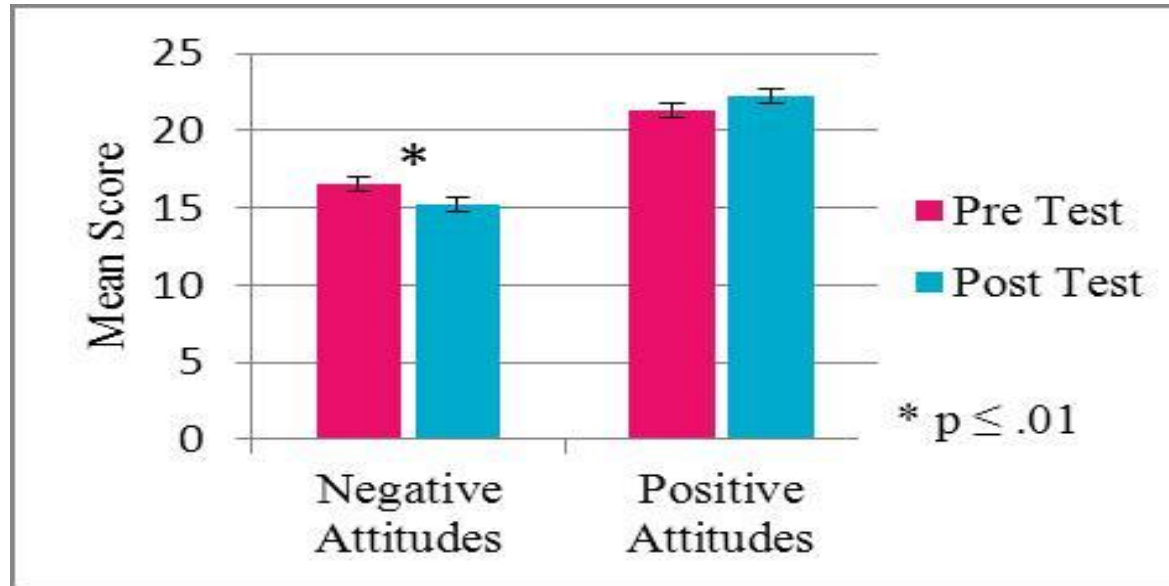
¹Martin & Hodges-Kulinna, 2003; ²Webster, Monsma, & Erwin, 2010; ³Markland & Tobin, 2004

Analysis

- Student data – paired-sample t tests (N=117)
- Teacher data – insufficient power to run analyses due to low response rate

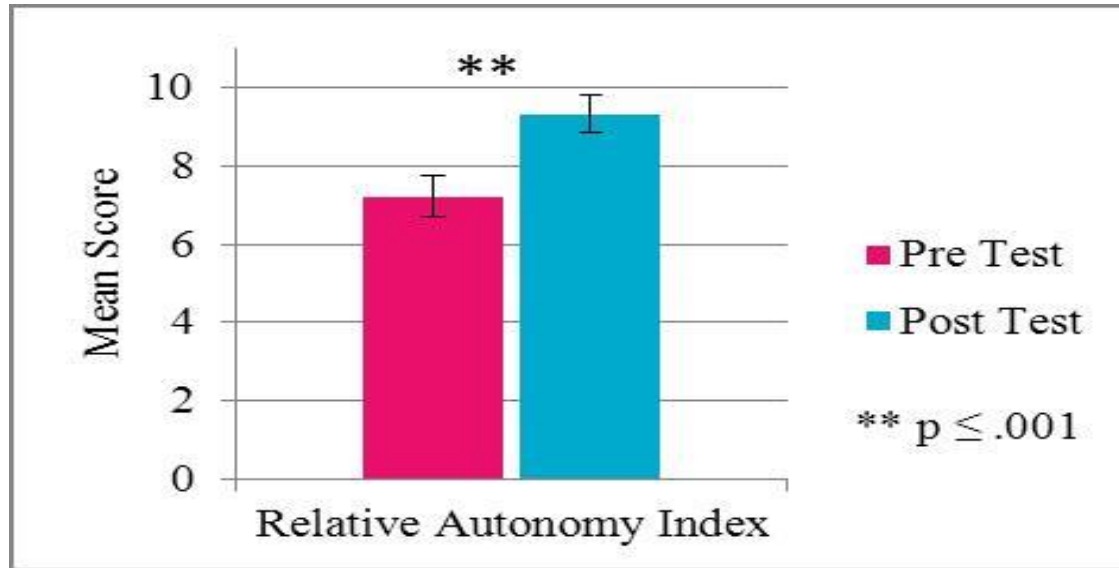
Student Results

Positive and Negative Attitudes Toward Exercise



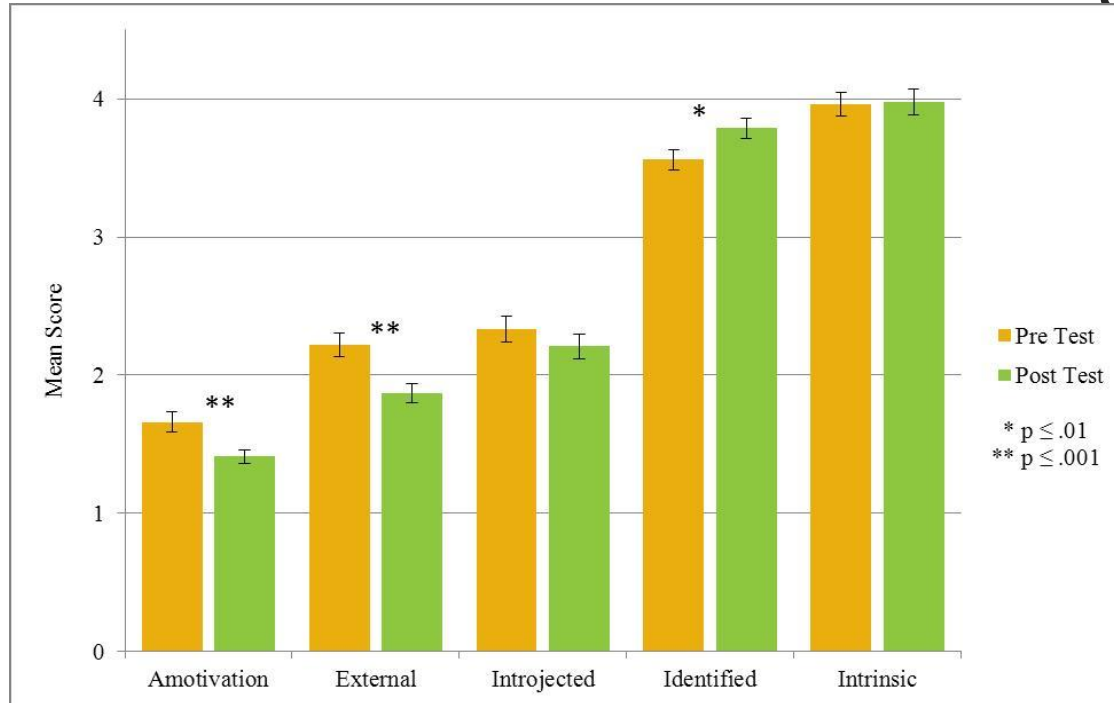
Student Results

Relative Autonomy Index (BREQ-2)



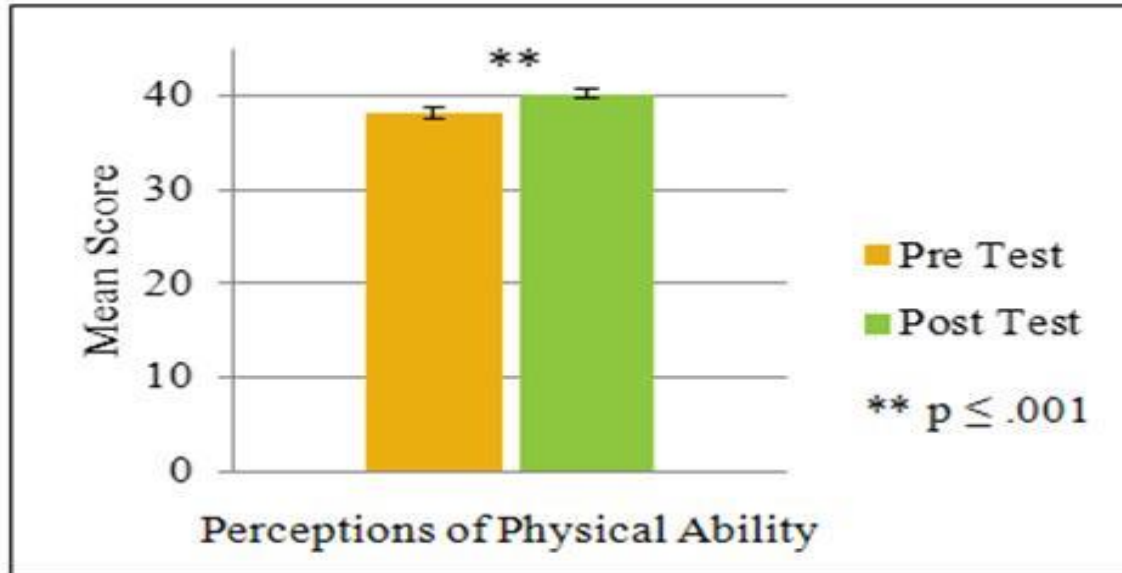
Student Results

Motivational Subscales of the BREQ-2



Student Results

Perceptions of Physical Ability (PPA)



Discussion

- **Overall, well received by both students and teachers**
- Making health behaviours less undesirable an important factor in fostering intention to exercise¹
- Perceived physical competence positively correlated with reported engagement in physical activity²

¹Conner et al., 2011; ²Papaioannou, Bebetos, Theodorakis, Christodoulidis, & Kouli, 2006; Knowles, Niven, Fawkner, & Henretty, 2008

Discussion

- Increase in motivation to exercise linked to greater sense of enjoyment of exercise, higher likelihood to participate¹
- No evidence to suggest that the PAL program improved teacher self-efficacy for leading Phys. Ed. classes
 - Averaged scores suggest Red Deer teachers who participated were already confident in their abilities
 - PAL program an additional tool for increasing student PA, according to teacher feedback in surveys

¹Yli-Piipari, Watt, Jaakkola, Liukkonen, & Nurmi, 2009

Concluding Remarks

- Lack of control group
- Low teacher response rate
- Professional development opportunities for teachers
- Benefits for PALs
- Foundations for healthy living

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