The effect of an 8-week classroom-based physical activity and sedentary behaviour programme on adolescents' motivation and physical activity

Lauren McMichan, Ann-Marie Gibson, David A. Rowe

Physical Activity for Health Research Group, School of Psychological Sciences and Health, University of Strathclyde, Glasgow, UK.

Objectives

To determine the effect of "ActiveChat" - an 8-week class-room-based physical activity (PA) and sedentary behaviour (SB) programme on adolescents' motivation and PA.

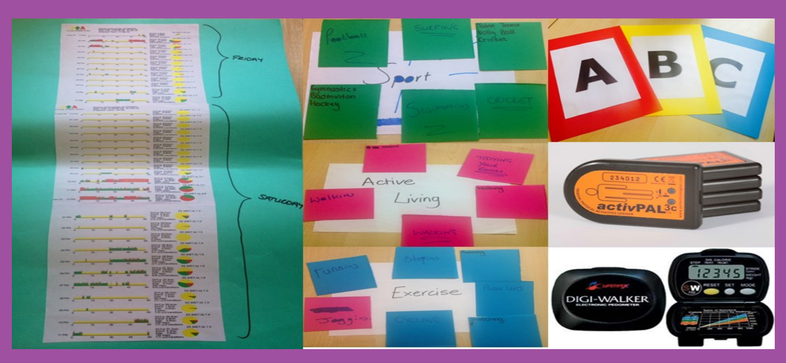
Design

A two-group intervention/control design was adopted to determine the effects of the ActiveChat programme on motivation towards PA in comparison to those who did not receive the programme.

ActiveChat

- **An 8-week classroom-based PA and sedentary behaviour programme based around Self-Determination Theory (SDT) (Deci & Ryan, 1985).**
- **Aimed to address three key elements of the Curriculum for Excellence:**

Health and Wellbeing | Literacy | Numeracy



Lesson Outlines:

1) Why is Physical Activity Important?

2) Different Types of Physical Activity/ Increasing your own Physical Activity

3) What is Sedentary Behaviour?

4) Motivations/Barriers/Solutions/ Active Quiz

5) Measurement of Physical Activity/ Sedentary Behaviour

6) Measuring your own Physical Activity using Pedometers

7) Design your own Physical Activity/Sedentary Behaviour Lesson

Methods

- **ActiveChat was teacher-led.**
- **1x lesson per week.**
- **Delivered to pupils in years 1-3 of secondary school in their Personal and Social Education (PSE) class.**
- **Two PSE classes per year were recruited.**
- **Three classes received the programme (*n=47*)**
- **Three classes acted as controls (*n=44*) receiving normal PSE**
- **Motivation/weekly activity measured at baseline & post-intervention.**
- **Adapted versions of the Behavioural Regulation in Exercise Questionnaire and the Health Behaviour in School-Aged**

Author's contact details:
lauren.mcmichan@strath.ac.uk
Follow on Twitter @LaurenMcM90

Results

- **Mean age of participants 12.8 ± 0.94 years (*N = 91*)**

Motivation

- **There were no significant differences between groups pre or post ActiveChat programme.**
- **There were no significant changes in motivation in the intervention group.**
- **There were significant decreases in identified and integrated regulation, intrinsic motivation, and RAI in the control group**

Table 1. Summary of BREQ-3 Data Pre and Post ActiveChat Programme

	Intervention		Control	
	Pre	Post	Pre	Post
Amotivation	1.77 ± 0.84	1.64 ± 0.66	1.59 ± 0.65	1.77 ± 0.68
External	1.90 ± 0.98	2.03 ± 0.93	2.03 ± 0.97	1.88 ± 0.82
Introjected	2.23 ± 1.06	2.45 ± 1.11	2.56 ± 1.01	2.45 ± 1.21
Identified	3.34 ± 0.82	3.49 ± 0.82	3.55 ± 0.81	3.15 ± 0.81**
Integrated	2.89 ± 1.20	2.91 ± 1.20	3.10 ± 1.01	2.77 ± 0.99*
Intrinsic	3.50 ± 1.11	3.47 ± 0.96	3.49 ± 1.04	3.20 ± 0.89*
RAI	8.26 ± 6.95	8.30 ± 6.78	8.83 ± 7.03	6.60 ± 5.76**

** $p < 0.05$; ** $p < 0.01$*

Physical Activity

There were no significant changes in habitual PA pre/post ActiveChat programme ($p > 0.05$) for intervention or control group.

Yet on average, in-class PA was significantly ($p < 0.001$) higher in the intervention group compared to control (Light PA +8.72%; MVPA +2.25%).

Conclusion

The results of the feasibility study provides preliminary evidence suggesting that an 8-week teacher-led classroom-based PA and SB programme has the potential to maintain adolescents' motivation towards PA, and increase in-class levels of PA. This indicates that pedagogical methods could be adapted to incorporate more PA within secondary school classrooms.

The next phase of the feasibility study will be to determine acceptability of the ActiveChat programme using qualitative methods.

curriculum for excellence

References

Currie, C., Van der Sluijs, W., Whitehead, R., Currie, D., Rhodes, G., Neville, F., & Inchley, J. (2015). HBSC 2014 Survey in Scotland National Report. Child and Adolescent Health Research Unit (CAHRU). University of St Andrews.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum Publishing Co.

Markland, D., & Tobin, V. (2004). A modification to the behavioural regulation in exercise questionnaire to include an assessment of amotivation. Journal of sport & exercise psychology, 26(2), 191-196.

Wilson, P. M., Rodgers, W. M., Loitz, C. C., & Scime, G. (2006). "It's who I am... Really!" The importance of integrated regulation in exercise contexts. Journal of Applied Biobehavioural Research, 11(2), 79-104.