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

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Objectives
To determine the effect of “ActiveChat” - an 8-week classroom-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

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

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amotivation</td>
<td>1.77 ± 0.84</td>
<td>1.64 ± 0.66</td>
<td>1.59 ± 0.65</td>
<td>1.77 ± 0.68</td>
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<tr>
<td>External</td>
<td>1.90 ± 0.98</td>
<td>2.03 ± 0.93</td>
<td>2.03 ± 0.97</td>
<td>1.88 ± 0.82</td>
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<tr>
<td>Introjected</td>
<td>2.23 ± 1.10</td>
<td>2.45 ± 1.11</td>
<td>2.56 ± 1.01</td>
<td>2.45 ± 1.21</td>
</tr>
<tr>
<td>Identified</td>
<td>3.34 ± 0.82</td>
<td>3.49 ± 0.82</td>
<td>3.55 ± 0.81</td>
<td>3.15 ± 0.81*</td>
</tr>
<tr>
<td>Integrated</td>
<td>2.89 ± 1.20</td>
<td>2.91 ± 1.20</td>
<td>3.10 ± 1.01</td>
<td>2.77 ± 0.99*</td>
</tr>
<tr>
<td>Intrinsic</td>
<td>3.50 ± 1.11</td>
<td>3.47 ± 0.96</td>
<td>3.49 ± 1.04</td>
<td>3.20 ± 0.89*</td>
</tr>
<tr>
<td>RAI</td>
<td>8.26 ± 6.95</td>
<td>8.30 ± 6.78</td>
<td>8.83 ± 7.03</td>
<td>6.60 ± 5.76**</td>
</tr>
</tbody>
</table>

*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.

References