How the Bright and Dark Side of Self-Determination Theory Relate to Students’ Life Skills Development Within Physical Education

LORCAN CRONIN¹, DAVID MARCHANT¹, JUSTINE ALLEN², CLAIRE MULVENNA³, DAVID CULLEN⁴, GARETH WILLIAMS¹, & PAUL ELLISON¹

¹EDGE HILL UNIVERSITY, ²UNIVERSITY OF STIRLING, ³UNIVERSITY OF BOLTON, & ⁴WOODBROOK COLLEGE
Introduction

- Throughout the world, the personal development of students is seen as a key curricular aim of PE (Hardman, 2011)

- PE has also been proposed as an ideal setting for the development of life skills (Goudas, 2010)

- Teachers play a key role in young peoples’ development within PE (Bailey et al., 2013)
Self-Determination Theory and Life Skills Development

- Self-Determination Theory (Ryan and Deci, 2000) is a theory of human development and wellness.
- Hodge, Danish, and Martin’s (2013) conceptual framework for life skills interventions suggested that Self-Determination Theory could be utilized to investigate life skills development.
- Within PE, Cronin et al. (2018) found that teacher autonomy support was related to the development of eight different life skills within students.
Purpose of the Study

**Teaching Climate**
- Teacher autonomy support
- Controlling teaching

**Basic Need Satisfaction and Frustration**
- Autonomy
- Competence
- Relatedness

**Life Skills**
- Teamwork
- Leadership
- Communication
- Social skills
- Goal setting
- Time management
- Problem solving
- Emotional skills

Bartholomew et al. (2011)
Haerens et al. (2015)
Liu et al. (2017)
Method

Participants

406 PE Students aged 12-17 years ($M_{age} = 13.71$ years)

Males ($n = 189$) & females ($n = 217$)

Average of 2.02 hours of PE per week

5 schools across England and Ireland - included 39 teachers
**Measures**

**Autonomy Supportive and Controlling Teaching**
- Empowering and Disempowering Motivational Climate Questionnaire (Appleton et al., 2016)
- Autonomy-Supportive Coaching Questionnaire (Conroy and Coatsworth, 2007)
- 10 items for each subscale

**Alpha coefficients** $= .94$ and $.89$

<table>
<thead>
<tr>
<th>My PE teacher….</th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gives students choices and options</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Threatens to punish students to keep them in line during PE classes</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
**Measures**

**Basic Need Satisfaction and Frustration**

- **Basic Needs Satisfaction and Frustration Scale for PE** (Haerens et al., 2015)
- 24-item scale

<table>
<thead>
<tr>
<th>During PE lessons...</th>
<th>Not true at all</th>
<th>Completely true</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel a sense of choice and freedom in the things I undertake</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I am capable at what I am doing</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I feel that class members I care about also care about me</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I feel obligated to do certain things</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I feel insecure about my abilities</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>I feel excluded from the group I want to belong to</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

**Alpha coefficients** = .85 to .91

**Factorial validity** = supported via CFA
**Measures**

**Life skills development** – Life Skills Scale for PE (Cronin et al., 2018)
- 43 items assessing the eight life skills listed earlier

<table>
<thead>
<tr>
<th>PE classes have taught me to...</th>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work well within a team/group</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Set specific goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Speak clearly to others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Organise team/group members to work together</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Alpha coefficients** = .90 to .94
**Factorial validity** = supported via CFA, ESEM and bifactor analysis
Data Analyses

- To assess if multilevel analyses would be appropriate
- To assess the normality of the data and possible gender and age group differences
- Descriptive statistics and correlations
- Process Macro for SPSS to assess our mediational models (cross checked our findings using structural equation modelling and the results were substantively identical)
## Students’ perception of their PE teacher/s?

<table>
<thead>
<tr>
<th>Autonomy supportive</th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1  2  3 ⋅ 4  5</td>
<td></td>
</tr>
<tr>
<td>Controlling</td>
<td>1  2 ⋅ 3  4  5</td>
<td></td>
</tr>
</tbody>
</table>
### Results

**Students’ perception of the PE environment?**

<table>
<thead>
<tr>
<th></th>
<th>Not true at all</th>
<th>Completely true</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autonomy satisfaction</strong></td>
<td>1 2 3★★ 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Competence satisfaction</strong></td>
<td>1 2 3★★ 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Relatedness satisfaction</strong></td>
<td>1 2 3★★ 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Autonomy frustration</strong></td>
<td>1 2 ★★ 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Competence frustration</strong></td>
<td>1 2 ★★ 3 4 5</td>
<td></td>
</tr>
<tr>
<td><strong>Relatedness frustration</strong></td>
<td>1 2 ★★ 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
**Students’ perception of whether PE has taught them the eight different life skills?**

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teamwork</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Social skills</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Leadership</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Goal setting</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Time management</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Problem solving</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Emotional skills</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total life skills</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Correlational Results

Teacher autonomy support

- Autonomy satisfaction
- Competence satisfaction
- Relatedness satisfaction

r range = .42*** to .68***

Teamwork
Goal setting
Leadership
Social skills
Problem solving
Emotional skills
Time management
Communication

Controlling Teaching

- Autonomy frustration
- Competence frustration
- Relatedness frustration

r range = .35*** to .41***
Mediation Results

β range = .12*** to .55***

Teacher autonomy Support

Autonomy satisfaction

Competence satisfaction

Relatedness satisfaction

Total Effects = .46*** to .59***

Direct Effects = .11* to .17**

Teamwork
Goal setting
Leadership

Teamwork
Goal setting
Leadership
Social skills
Problem solving
Emotional skills
Time management
Communication

β range = .12*** to .55***
Discussion

Key Findings
- Bright side of the pathway is related to students' development of their life skills within PE
- Dark side of the pathway is only related to need frustration

Practical Application
- Teachers should provide an autonomy supportive climate and seek to satisfy students’ three basic needs

Limitations
- Causality could not be established
- Self-report
For those interested in collaborating on future projects, contact me at: Lorcan.Cronin@edgehill.ac.uk
References

References