What makes them happy?
Exploring the relationship between outdoor play environment at schools and children’s wellbeing in Toronto, Canada

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School is important for a child’s social development

Favourite places to play

- Indo... 12%
- The... 44%
- Oth... 19%
- Oth... 7%
- I do... 18%

Where to find friends

- Online 16%
- School 55%
- Park 24%
- Organiz... 5%
- I do not... 1%
Exploring children’s play in school environment is important

- Children are in school >30 hours/week.
- Kindergarten-Grade 6 = 1.4 years in recess & lunch.
- North American research on school play environment & children’s overall wellbeing - limited
- Children’s self-reported wellbeing in school - scarce
Perception of Wellbeing: **COMPLICATED**

- How happy are you when you play outdoors at your school? Circle the face that best describes you.

![Faces indicating happiness levels](image)

**Happiness In Relation to Outdoor Play**

<table>
<thead>
<tr>
<th>Happiness Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Happy</td>
<td>42%</td>
</tr>
<tr>
<td>Very Unhappy</td>
<td>3%</td>
</tr>
<tr>
<td>Unhappy</td>
<td>16%</td>
</tr>
<tr>
<td>Unhappy</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Happiness Subjective Wellbeing**

Seligman’s (2011) comprehensive and robust model proposed five different elements to explain happiness: **Pleasure, Engagement, Relationships, Meaning and Accomplishment**.
Research Objective:

To explore the statistical association between school’s play environment and children’s subjective wellbeing.

Findings will help understand the importance of play related policy and interventions in improving children’s health and wellbeing.
# Key Outcomes

## Subjective Wellbeing Index

### Positive Emotion
- Strong & active
- Not afraid to take risk
- Happy most of the times
- Really like school

### Engagement
- Easily concentrate in classroom
- Enjoy trying new things

### Relationship
- Have good friends in school
- Enjoy meeting new people

### Achievement
- Most things I do turn well
- Feel good about myself
## Potential indicators

### Socio-demographic Indicators
- Age
- Gender
- School location
- Household composition: single parent H/H & H/H with siblings

### Parental encouragement towards outdoor play
- Parents always to sometimes encourage or play with child

### School Play Environment
- Allowed to play alone or with friends
- Adults help to have a great play time
- Play in school yard all year long
- Plenty of things to play with/ make up a game/ build something
- Very exciting outdoor play
- Feel safe while playing
Methodology:

- Questionnaire Survey
  Survey: Summer 2016
  Six elementary public schools in Toronto (urban, suburban, ethnic & mixed neighbourhood schools)
  Grades 4, 5, & 6
  n=352
  School play environment: 6 question
  Self reported subjective wellbeing: 10 question
- Ethics approval from TDSB and Ryerson REB
- Research supported by Ryerson University
- Co-Authors: Raktim Mitra, Associate Professor, School of Urban & Regional Planning, Ryerson University
  Brenda Simon, Director of Play Programs, Earth Day Canada
Data Analysis

• Subjective wellbeing outcomes were measured based on unweighted average of relevant survey questions.

• The average values for each outcome were grouped into ordered categories.

• Three broad types of influences were explored: Socio-demographic indicators, parental encouragement towards outdoor play and school play environment.

• Ordered logistic regression (or proportional odds) model was estimated to statistical association between school’s play environment and children’s subjective wellbeing.
## Results

<table>
<thead>
<tr>
<th>Key Indicators</th>
<th>Model 1 Positive Emotions OR (95% CI)</th>
<th>Model 2 Engagement OR (95% CI)</th>
<th>Model 3 Accomplishment OR (95% CI)</th>
<th>Model 4 Relationship OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental encouragement towards outdoor play</td>
<td>2.42 (1.44-4.08)</td>
<td>1.68 (0.95-2.98)</td>
<td>1.02 (0.67-1.83)</td>
<td>2.58 (1.44-4.66)</td>
</tr>
<tr>
<td>Allowed to play alone or with friends</td>
<td>0.98 (0.63-1.52)</td>
<td>0.70 (.42-1.15)</td>
<td>0.80 (0.48-1.33)</td>
<td>0.67 (0.41-1.12)</td>
</tr>
<tr>
<td>Adults help to have a great play time</td>
<td>1.18 (0.75-1.87)</td>
<td>0.88 (0.52-1.48)</td>
<td>0.85 (0.50-1.45)</td>
<td>0.80 (0.47-1.37)</td>
</tr>
<tr>
<td>Play in school yard all year long</td>
<td>1.14 (0.75-1.74)</td>
<td>1.07 (0.66-1.72)</td>
<td>1.32 (0.81-1.45)</td>
<td>1.11 (0.68-1.83)</td>
</tr>
<tr>
<td>Plenty of things to play with/make up a game/build something</td>
<td>1.21 (0.77-1.90)</td>
<td>1.74 (1.03-2.93)</td>
<td>1.76 (1.05-2.96)</td>
<td>1.17 (0.69-1.98)</td>
</tr>
<tr>
<td>Very exciting outdoor play</td>
<td>1.53 (0.96-2.45)</td>
<td>1.66 (0.97-2.86)</td>
<td>2.36 (1.37-4.11)</td>
<td>0.95 (0.54-1.64)</td>
</tr>
<tr>
<td>Feel safe while playing</td>
<td>1.52 (0.99-2.35)</td>
<td>1.11 (0.68-1.82)</td>
<td>1.61 (0.98-2.66)</td>
<td>1.66 (1.00-2.75)</td>
</tr>
</tbody>
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### Model Fit

<table>
<thead>
<tr>
<th>Residual Deviance</th>
<th>781.04</th>
<th>483.51</th>
<th>470.26</th>
<th>464.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIC</td>
<td>811.04</td>
<td>511.51</td>
<td>498.26</td>
<td>492.42</td>
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</tbody>
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Note: All models are adjusted for variations in grade/age, gender, single parent households and households with siblings. Odds Rations that are **bold** are significant at α=0.05; ORs that are **bold italics** showed a weak association with wellbeing indicators at α=0.10.
## Results

### Key Indicators

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<th>Indicator</th>
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<tr>
<td>Parental encouragement towards outdoor play</td>
<td>2.08 (1.19-3.66)</td>
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<td>0.78 (0.49-1.26)</td>
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<td>Play in school yard all year long</td>
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Implications

Model results indicate the importance of the following in improving a child’s wellbeing.

• Parental encouragement towards outdoor play:
• Plenty of things to play with/make up a game/build something
• Very exciting outdoor play
• Feel safe while playing

• In Toronto Earth Day Canada is piloting the Outdoor Play and Learning (OPAL) Project to improve play environments in school.
Thank you

For More Information

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