RESEARCH ON ENGAGEMENT AND PRESCHOOL ENVIRONMENT

17 YEARS OF RESEARCH ON ENGAGEMENT IN PORTUGAL

Ana Isabel Pinto
ana@fpce.up.pt
Catarina Grande
Vera Coelho

16th November 2017
Research on Engagement | Porto, Portugal

The quality of child interactions in family and daycare center and its impact in child sociocognitive development (Financed PhDs) FCT [POCTI / PSI / 35207 / 1999]

Longitudinal Study on child engagement and adaptation (Financed PhD) FTC [POCI / PSI / 58712 / 2004]

Contribution of the ICF-CY to the study of Participation in children with disabilities at early ages (Financed PhD) FCT[RIPD/CIF/109664/2009]

Participation and Engagement in Preschool Inclusive Settings – an international study (Financed PhD)

**FAMILY / DAYCARE/PRESCHOOL**

Typically developing children
- 0 to 3 years old

Typically & atypically developing children
- 3 to 6 years old

Children with disabilities
- 0 to 6 years old

**PRESCHOOL CONTEXTS**

Typically developing children
- 0 to 6 years old

Children at risk
- 3 to 6 years old

Children with disabilities
- 3 to 6 years old
PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS – A INTERNATIONAL STUDY

PROJECT GOALS

• Describe and compare preschool environments.

• Analyze two dimensions of participation – time/variety of activities and engagement (core & developmental)

• Investigate the role of classroom process quality

• Analyze transactional effects between child characteristics, preschool quality and participation processes.

Longitudinal Study | Children with and without disabilities

M1 M3 M2
Feb. 2016 6/7 months Sept. 2016 6/7 months Mar. 2017

Feb. 2016 6/7 months Sept. 2016 6/7 months Mar. 2017
### Participants | children with disabilities, at risk and typically developing

<table>
<thead>
<tr>
<th></th>
<th>Receiving SEN support</th>
<th>Not receiving Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disabilities</strong></td>
<td>54</td>
<td>78</td>
</tr>
<tr>
<td><strong>At-risk</strong></td>
<td>54</td>
<td>78</td>
</tr>
<tr>
<td><strong>Typically</strong></td>
<td>54</td>
<td>78</td>
</tr>
<tr>
<td><strong>Gender (male)</strong></td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td><strong>Develop. Functioning</strong></td>
<td>2.83 ( \pm 1.07 )</td>
<td>3.58 ( \pm 0.47 )</td>
</tr>
<tr>
<td><strong>Age (months)</strong></td>
<td>53.34 (7.53)</td>
<td>51.92 (6.57)</td>
</tr>
</tbody>
</table>

**M (SD)**

<table>
<thead>
<tr>
<th></th>
<th>226.19***</th>
<th>.65</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>( \eta^2 )</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** \( p < .001 \)
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Variables</th>
<th>Measures</th>
<th>Measures Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Process Quality (education contexts)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Quality of specific aspects of teacher-child interactions</strong> (teachers behaviors contingent to children's behaviors)</td>
<td>TOP - The Teacher Observation in Preschool (Bilbrey, Vorhaus, &amp; Farran, 2014)</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td><strong>Global quality of teacher-child interactions</strong></td>
<td>Classroom Assessing Scoring System (Pianta, La Paro &amp; Hamre, 2008)</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td><strong>Participation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Time in &amp; variety of activities</strong></td>
<td>COP - Child Observation In Preschool (Farran, 2006)</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td><strong>Core engagement</strong></td>
<td>COP - Child Observation In Preschool (Farran, 2006)</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td><strong>Developmental engagement</strong></td>
<td>CEQ – Child Engagement Questionnaire (McWilliam, 1991)</td>
<td>Teacher questionnaire</td>
</tr>
<tr>
<td></td>
<td><strong>Developmental Functioning</strong></td>
<td>MAAP - Matrix of Assessment of Activities and Participation (Castro, Pinto, &amp; Figueiredo, 2013)</td>
<td>Teacher questionnaire</td>
</tr>
<tr>
<td></td>
<td><strong>Self-regulation - executive function regarding attention, working memory and inhibitory control</strong></td>
<td>HTKS - Head-Toes-Knees-Shoulders (Ponitz et al. 2008)</td>
<td>Direct assessment</td>
</tr>
<tr>
<td></td>
<td><strong>Behaviors, emotions and children’s prosocial behaviors</strong></td>
<td>SDQ – Strengths and Difficulties Questionnaire (Goodman, 2001)</td>
<td>Teacher questionnaire</td>
</tr>
<tr>
<td></td>
<td><strong>Family</strong></td>
<td>YC-PEM</td>
<td>Young Children’s Participation and Environment Measure (Khetani et al, 2013)</td>
</tr>
</tbody>
</table>
PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS

SOME RESULTS | how children spend their time

Children/Group Schedule

- Whole Group: 47%
- Small Group: 3%
- Centers: 10%
- Small Group/Centers: 11%
- Special: 2%
- Transition: 11%
- Meal time: 7%
- Playground: 8%
- Gym: 1%
- Meal time: 7%
- Transition: 10%
- Special: 2%
- Small Group/Centers: 11%
- Centers: 10%
- Playground: 9%
- Gym: 1%
- Whole Group: 48%
- Small Group: 10%
- Whole Group: 47%
- Small Group: 2%
- Centers: 10%
- Small Group/Centers: 11%
- Centers: 10%
- Playground: 8%
- Gym: 1%

Coelho et al., ISEI, 2016
PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS

SOME RESULTS | learning focus for teacher and children

Coelho et al., ISEI, 2016
PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS

SOME RESULTS: Learning focus children with and without disabilities

Coelho et al., ISEI, 2016
PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS – A INTERNATIONAL STUDY

Participation

Time in activities
Diversity of activities

ENGAGEMENT

CORE

interest, belonging, attention, wellbeing
(Coster et al. 2012; Granlund, 2013; Sjöman et al., 2016)

DEVELOPMENTAL

effort, mastery motivation, problem solving
(Granlund, 2013; McWilliam & Bailey, 1995; McWilliam, 2008; Sjöman et al., 2016)
### SOME RESULTS

Analyze two dimensions of participation – time/variety of activities and engagement (core)

<table>
<thead>
<tr>
<th></th>
<th>With disabilities</th>
<th>At -risk</th>
<th>Typical development</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M (SD)</td>
<td>n</td>
<td>M (SD)</td>
<td>n</td>
</tr>
<tr>
<td><strong>Time in</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative Play</td>
<td>54</td>
<td>.016 (.038)</td>
<td>78</td>
<td>.036 (.057)</td>
<td>115</td>
</tr>
<tr>
<td>Social Play</td>
<td>54</td>
<td>.038 (.052)</td>
<td>78</td>
<td>.069 (.073)</td>
<td>115</td>
</tr>
<tr>
<td>Associative Play</td>
<td>54</td>
<td>.069 (.081)</td>
<td>78</td>
<td>.110 (.114)</td>
<td>115</td>
</tr>
<tr>
<td>Parallel Play</td>
<td>54</td>
<td>.269 (.163)</td>
<td>78</td>
<td>.343 (.151)</td>
<td>115</td>
</tr>
<tr>
<td>Onlooker</td>
<td>54</td>
<td>.135 (.084)</td>
<td>78</td>
<td>.133 (.094)</td>
<td>115</td>
</tr>
<tr>
<td>Alone Play</td>
<td>54</td>
<td>.127 (.137)</td>
<td>78</td>
<td>.041 (.049)</td>
<td>115</td>
</tr>
<tr>
<td>Unoccupied</td>
<td>54</td>
<td>.153 (.157)</td>
<td>78</td>
<td>.110 (.110)</td>
<td>115</td>
</tr>
<tr>
<td><strong>Engagement in</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Activities</td>
<td>54</td>
<td>2.15 (0.47)</td>
<td>78</td>
<td>2.90 (0.37)</td>
<td>115</td>
</tr>
<tr>
<td>Cooperative Play</td>
<td>8</td>
<td>3.02 (0.58)</td>
<td>27</td>
<td>2.97 (0.41)</td>
<td>41</td>
</tr>
<tr>
<td>Social Play</td>
<td>20</td>
<td>3.13 (0.39)</td>
<td>45</td>
<td>3.18 (0.50)</td>
<td>72</td>
</tr>
<tr>
<td>Associative Play</td>
<td>30</td>
<td>3.40 (0.47)</td>
<td>53</td>
<td>3.47 (0.48)</td>
<td>86</td>
</tr>
<tr>
<td>Parallel Play</td>
<td>51</td>
<td>3.05 (0.58)</td>
<td>73</td>
<td>3.22 (0.47)</td>
<td>109</td>
</tr>
<tr>
<td>Onlooker</td>
<td>49</td>
<td>2.65 (0.58)</td>
<td>69</td>
<td>2.67 (0.48)</td>
<td>103</td>
</tr>
<tr>
<td>Alone play</td>
<td>39</td>
<td>3.46 (0.59)</td>
<td>32</td>
<td>3.47 (0.72)</td>
<td>57</td>
</tr>
</tbody>
</table>
SOME RESULTS | Effects of classroom quality on child engagement

<table>
<thead>
<tr>
<th>Tone</th>
<th>Level of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td>.22*</td>
</tr>
</tbody>
</table>

$p < .05$
## Participation and Engagement in Preschool Inclusive Settings

### Some Results | Effects of classroom quality on child engagement

<table>
<thead>
<tr>
<th>Between level</th>
<th>Engagement</th>
<th>Associative play with peers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Age</td>
<td>0.14</td>
<td>0.19</td>
</tr>
<tr>
<td>CLASS</td>
<td>0.34</td>
<td>0.16*</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>0.38</td>
<td>0.16*</td>
</tr>
<tr>
<td>Classroom organization</td>
<td>0.41</td>
<td>0.15*</td>
</tr>
<tr>
<td>Instructional Support</td>
<td>0.20</td>
<td>0.19</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .001.

---

Coelho et al., 2017 (SRCD2017)
**PARTICIPATION AND ENGAGEMENT IN PRESCHOOL INCLUSIVE SETTINGS**

**SOME RESULTS** | Moderation effect of self-regulation on the relation between developmental functioning and engagement

Developmental functioning $\beta = .43, p < .001$ Self-regulation

controlling for age and gender

---

$F(2, 209) = 3.16, p < .05$ Coelho et al., 2017 (SRCD2017)
ENGAGEMENT | INTERACTIVE PROCESS

Longitudinally

- Child characteristics T1
- Child characteristics T2
- Child characteristics T3
- Interactive processes T1
- Interactive processes T2
- Interactive processes T3
- Process quality T1
- Process quality T2
- Process quality T3

- Developmental functioning status
- Self-regulation skills
- Time in activities
- Engagement (core & developmental)
- Global interaction quality
- Specific aspects of teachers interactive behaviors

...2015,... 2016...2017
...2018... 2019 ... 2020 ...
...
ENGAGEMENT | and now?

ENGAGEMENT | Developmental indicator in context

ENGAGEMENT | Participation component

ENGAGEMENT | multidimensional construct (core, developmental)

ENGAGEMENT | How to operationalize Developmental Engagement?
THANK YOU!

17 YEARS OF RESEARCH ON ENGAGEMENT IN PORTUGAL

Ana Isabel Pinto
ana@fpce.up.pt
Catarina Grande
Vera Coelho

16th November 2017