Educational daycare from infancy and externalizing and internalizing behaviors in early childhood: differential effect by children's vulnerability

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Québec (Canada) = network of regulated daycares offering an educational program for children from birth to school entry, for $5 per day from families ($7 per day since 2004).

- 214,804 children are attending, the majority in non-profit centers (82,671 spots) and homes (91,607 spots).
- First transition between the family and an educational setting.
  - Educators have the task of ensuring that children acquire behaviors that promote adaptation in a group.
  - This early educational experience could ensure fewer externalizing and internalizing behaviors.
Previous research - non-vulnerable children

- Inconsistency of results
  - Higher rates of externalizing or internalizing behaviors
    (Côté et al., 2008; Hickman, 2006; Loeb et al. 2007; Van Beijsterveldt, Hudziak & Boomsma, 2005).
  - Lower rates of externalizing or internalizing behaviors
    (Bigras et al., 2009; Hickman, 2006)
  - No differences
    (Bacharach & Baumeister, 2003; Bigras et al., 2009; Côté et al., 2008; Van Beijsterveldt, Hudziak & Boomsma, 2005)

- Limits
  - Children's vulnerability isn't considered in these results.
Previous research - vulnerable children

• Some focused on children exposed to risk factors in their home.
  ▫ Associated with less-positive socialization processes that place children at a greater risk of following less-favourable trajectories.
  ▫ Educational daycare = compensatory environment?

• Daycare attendance initiated in the first year of life is associated with less externalizing and internalizing behaviors.

(Borge et al. 2004; Côté et al. 2008; Peng & Robin, 2010)
Objective

This study compare externalizing and internalizing behaviors at 2 and 4 years-old between children, non-vulnerable and vulnerable, attending an educational daycare and those remaining under parental care from their first year of life.
Method

Subjects
• 66 healthy participants recruited between 5-12 months old
  ▫ 45 children in daycare (6 vulnerable)
  ▫ 21 children under parental care (7 vulnerable).

Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>1 year old</th>
<th>2 years old</th>
<th>4 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Externalizing and internalizing behaviors (CBCL 1.5/5; Achenbach &amp; Rescorla, 2000)</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>Type of care (Childcare experience questionnaire; Lemay &amp; Bigras, 2006)</td>
<td>X</td>
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<tr>
<td>Vulnerability (Family’s socioeconomic profile; Bigras, et al., 2008)</td>
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Procedures
• 2 X 2 X 2 mixed-design
  ▫ Child’s vulnerability (vulnerable or non-vulnerable) and type of care (daycare or parental care) = between-subject
  ▫ Child's age (2 and 4 years old) = within-subject
Results – Externalizing behaviors

Significant interaction between child's age, type of care and vulnerability, explaining 10.83% of the externalizing behaviors variance.

Suggest that the effect of type of care on externalizing behaviors at 2 and 4 years old depend on child's vulnerability.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
<th>η²</th>
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<td><strong>Between-subjects</strong></td>
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<tr>
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<tr>
<td>Age (A)</td>
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<tr>
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†p < 0.10; *p < 0.05
Results – Externalizing behaviors

- Non-vulnerable children: daycare & parental care = similar low rates.
- Vulnerable children:
  - Daycare = reduction of externalizing behaviors
  - Parental care = increase of externalizing behaviors

Fig 1. a) Non-vulnerable children

Fig 1. b) Vulnerable children
Results – Internalizing behaviors

Significant interaction between child's age, type of care and vulnerability, explaining 4.52% of the internalizing behaviors variance.

Suggest that the effect of type of care on internalizing behaviors at 2 and 4 years old depend on child's vulnerability.

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</table>

†p < 0.10; *p < 0.05
Results – Internalizing behaviors

- Non-vulnerable children: daycare & parental care = similar low rates.
- Vulnerable children:
  - Daycare = higher internalizing behavior at 2 years old, but reduction afterward
  - Parental care = increase in internalizing behaviors
Effect of type of care on children's externalizing and internalizing behaviors from 2- to 4-year-old is moderated by children's vulnerability.

Vulnerable children

- Ecosystemic model = child X environment interactions.
- Daycare = compensative educational environment.
- Educators need to adopt practices that create a high-quality environment.

(Gouvernement du Québec, 2007)

Is it always the case?

- Borderline scores of children in daycare at 2 years old.
- Educators not as familiar with the internalizing behaviors of vulnerable 2-year-old?
Discussion

• Non vulnerable children
  ▫ No differences between daycare and parental care.
  ▫ A particularity Quebec's network of regulated daycares associated with higher quality?
    • Countries regulating early childhood education tend to offer homogeneous higher quality.
      (Sheridan & Schuster, 2001)
    • High quality $\Rightarrow$ less externalizing and internalizing behaviors.
      (Crockenberg & Leerkes, 2005; NICHD, 1998)

• Hypothesis
  ▫ Associations with quality of educator’s practices still need to be verified.
Conclusion

- This study suggests that:
  - Non vulnerable children - daycare attendance associated with the same normal externalizing and internalizing behaviors as parental care from 2 to 4 years of age.
  - Vulnerable children - daycare attendance associated with a reduction in externalizing and internalizing behaviors from 2 to 4 years of age, but internalizing behavior scores still remain higher.

- Further work ➔ features of the educational experiences that contributed to attain these normal rates.
  - Ensure the socialization goal of the daycare network is fully reached for all children and all types of behaviors.