

A comparative study of Structural and Process Quality in Center-based and Family-based Child Care Services

Nathalie Bigras¹, Caroline Bouchard¹, Gilles Cantin¹, Liesette Brunson¹, Sylvain Coutu², Lise Lemay¹, Mélissa Tremblay¹, & Annie Charron¹

¹Université du Québec à Montréal; ²Université du Québec en Outaouais
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INTRODUCTION

❖ Early childhood education has rapidly expand between 1997 and 2009 in Quebec (Canada). This province has grown the most with the creation of a subsidies child care services (CCS) (205,000 places for children under four years old). One of the government's objectives in developing these services was to facilitate access to high quality educational services (Gouvernement du Québec, 1997).

❖ Two broad families of variables included in the concept of child care quality:

- **Structural quality:** characteristics often controlled by government regulation
- **Process quality:** element in the activity program and interactions staff-children.

❖ Research consistently reports that center-based CCS have higher process quality scores than family-based CCS.

❖ Structural variables related to the group (ratio and size) and the staff (education, specialized training in early childhood education, participation in ongoing educational activities, and job satisfaction) when seeking to identify the elements promoting or inhibiting process quality are also important.

❖ Few studies have examined structural predictors of process quality in CCS offered to infants in different types of child care settings.

OBJECTIVES

- 1) Determine whether center-based and family-based CCS serving infants in Quebec differ with respect to process quality scores.
- 2) Identify the structural quality characteristics associated with higher process quality scores in these two types of settings.

METHOD

Sample

89 Quebec regulated CCS serving children 18 months old or younger

- 1) Center-based child are (n= 53);
- 2) Family-based childcare (n= 36);

Procedures

- ❖ Recruitment from 2005 to 2006 in Montréal & Montérégie (QC, Canada)
- ❖ Five hours of observations at the settings conducted by an evaluator with 30 hours of training completed by a 20 minutes interview

Measures

| Instrument | Content |
|--|---|
| Process Quality: <i>Educative Quality Observation Scales (EQOS)</i> (Bourgon & Lavallée, 2004a, b, c) | Overall quality score 1) Physical Characteristics scale (21 and 25 items) 1.1 Furnishings and Layout 1.2 Equipment and Educational Material Available 2) Structure and Variation of Activities scale (21 items) 2.1 Activity Planning by the Educator 2.2 Observation of the Children by the Educator 2.3 Daily Schedule 2.4 Activities 3) Interactions Educators-Children scale (28 and 35 items) 3.1 Educational Value of Play 3.2 Democratic Intervention 3.3 Communication 3.4 Interpersonal Relationships 4) Interactions Educators-Parents scale (4 items) |
| Structural Quality: <i>Child Care Providers and Family Child Care Providers Questionnaires</i> (Drouin et al., 2004) | 25 items in six dimensions: 1) Working conditions (5 items) 2) Previous job experience (5 items) 3) Ongoing education (5 items) 4) Job satisfaction (12 items) 5) Personal information (2 items: age and sex) 6) Training (3 items) Additional questions: when the setting was established, total number of children attending, total number of educators working. |

RESULTS

Objective 1: Process Quality According to Childcare Type

| Quality scores | Center-based childcare (n = 53) | | Family-based childcare (n = 36) | | F(1, 87) |
|--|---------------------------------|-----|---------------------------------|-----|-----------------|
| | M | SD | M | SD | |
| Overall scores | 2.85 | .28 | 2.57 | .37 | 17.04*** |
| Physical Characteristics | 2.77 | .36 | 2.68 | .34 | 1.59 |
| Furnishings and Layout | 2.85 | .49 | 2.84 | .34 | .003 |
| Equipment and Material Available | 2.67 | .42 | 2.45 | .44 | 5.69* |
| Structure and Variation of Activities | 2.79 | .41 | 2.40 | .44 | 18.98*** |
| Activity Planning by the Educator | 2.47 | .72 | 2.09 | .59 | 6.89** |
| Observation of the Children | 2.68 | .51 | 2.10 | .50 | 28.53*** |
| Daily Schedule | 2.92 | .60 | 2.51 | .67 | 9.15** |
| Activities | 2.94 | .60 | 2.67 | .56 | 4.73* |
| Interactions with Children | 2.89 | .37 | 2.50 | .45 | 20.02*** |
| Educational Value of Play | 2.32 | .48 | 2.07 | .52 | 5.23* |
| Democratic Intervention | 2.97 | .42 | 2.67 | .49 | 8.92** |
| Communication | 3.17 | .42 | 2.63 | .46 | 33.22*** |
| Interactions with Parents | 3.25 | .42 | 3.19 | .48 | .48 |
| Exchange between Family and DC | 3.41 | .50 | 2.97 | .74 | 11.49*** |
| Supportive Subject of Exchange | 3.26 | .49 | 3.14 | .73 | .87 |
| Collaboration about Difficult Child | 3.15 | .74 | 3.40 | .69 | 2.49 |
| Support to Family Integration | 3.19 | .79 | 3.28 | .70 | .30 |

* $p < .05$, ** $p < .01$, *** $p < .001$.

Center-based groups received higher scores on:

•Overall Quality

•Scales:

- Structure and Variation of Activities;
- Interaction between Educators and Children;
- Interaction with Parents

•Subscales:

- Equipment and Materials available;
- Activity Planning by the Educator;
- Observation of the Children by the Educator;
- Daily Schedule;
- Activities;
- Educational Value of Play;
- Democratic Intervention;
- Communication

Some quality dimensions were "unsatisfactory", below the average determined as "acceptable " (2.5):

•For Center-based:

- Educational Value of Play, $t(1,52) = 8.06$, $p = .000$.

•In Family-Based:

- Observation of Children, $t(1,35) = -4.75$, $p = .000$;
- Activity Planning, $t(1,35) = -4.19$, $p = .000$;
- Educational Value of Play, $t(1,35) = 4.92$, $p = .000$

Objective 2: Predictive Variables for Process Quality for Infants

| Variables | B | SE B | β | Incremental R^2 |
|---|------|------|---------|-------------------|
| Step 1. | | | | |
| Education in Early Childhood ^a | .01 | .03 | .31** | .09** |
| Step 2. | | | | |
| Ratio ^b | .11 | .04 | .31** | .10** |
| Step 3. | | | | |
| Type of ChildCare ^c | -.16 | .07 | -.27* | .05* |
| Step 4. | | | | |
| Type of Child Care x Education | .00 | .05 | .14 | .03 |
| Type of Child Care x Ratio | .01 | .07 | .22 | |

^a1 for no diploma in early childhood education and 2 for a diploma in early childhood education.

^b1 for a ratio under .20 and 2 for a ratio of .20 and above.

^c1 for center-based childcare and 2 for family-based childcare.

* $p < .05$, ** $p < .01$.

Process quality was predicted from structural quality variables, such as specialized training in early childhood education and adult-child ratio. When these two variables were included in the model, child care type accounted for less variance.

CONCLUSION

Process Quality According to Childcare Type

- ❖ Process quality scores of family-based childcare serving infants are lower than those of center-based childcare serving infants for most of the dimensions.
- Confirm findings widely reported (Bigras, Drouin, Fournier, Desrosiers, & Bernard, 2005; Bigras, Pomerleau, Malcuit, & Blanchard, 2008; Vandell, 2004).
 - Lower scores in family-based childcare can be attributed to certain features specific to this type of setting. For exemple, regulation in Quebec is particularly undemanding with regard to minimal education levels required of family-based childcare providers.
- ❖ Some of both the center-based childcare and family-based childcare in this study were rated as offering unsatisfactory process quality.
- ❖ Shortfalls noted on dimensions relating to observational and activity planning practices; educational value placed on playtime activities; and accessibility of equipment and material, especially in family-based childcare.
- Results consistent with Drouin et al. (2004), who noted that planning was almost absent in the majority of CCS observed, center-based and family-based alike.
 - Could be related to a weak integration of the basic principles associated with active learning.
 - Future research should examine the causes of these inadequate practices.

Predictors of Process Quality for Infants

- ❖ Process quality was predicted from structural quality variables, such as specialized training in early childhood education and adult-child ratio. When these two variables were included in the model, child care type accounted for less variance.
- This underlines the importance of specialized early childhood training for attaining higher quality levels.
 - It also suggests that higher quality appear associated with the presence of additional conditions, such as a low adult-child ratio (Drouin et al., 2004).
- ❖ Higher levels of structural quality in center-based versus family-based care supports our other results regarding process quality differences.
- ❖ Indeed, certain characteristics of regulated center-based childcare, such as more staff with specialized training in early childhood education and a lower adult-child ratio, appears to foster higher levels of process quality.

Conclusion

Quality levels in this study were generally within the unsatisfactory range, which reaffirm the importance of supporting quality-improvement initiatives in CCS. In particular, family-based CCS should receive special attention, as their quality level is lower than that found in center-based child cares.

Recommendation

These results also indicate that certain structural variables could contribute to increasing levels of process quality.

Firstly, it is urgent to target child care workers and family-based childcare providers who work with children under 18 months old and where the adult-child ratio is higher than 1:5.

Secondly, an effort should be made to encourage educational staff, especially family-based childcare providers, to increase their educational level in this regard.

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