

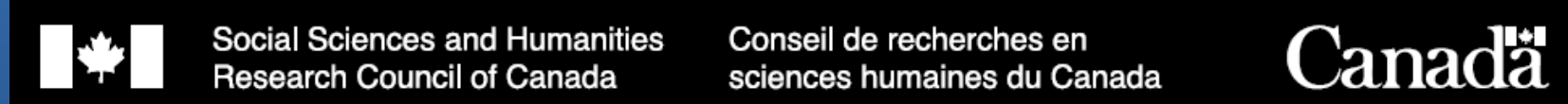
Predictors of Adaptation for Children Attending Nonprofits Childcare Services since Their First Year of Life

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BACKGROUND AND OBJECTIVE

- ❖ Maladaptation to the environment has been identified as a precursor to behavior problems [4]; and such problems are affecting the future social and scholastic achievement of an individual.
- ❖ Quality of adaptation appears to be affected by some variables such as child temperament and family socioeconomic status [3].
- ❖ Attending a good quality daycare early in life may protect the child's development by encouraging the learning of socially acceptable behaviors.
- ❖ In Quebec (Canada), early childhood education has expanded in the past years.
 - 1997: the government creates a subsidized network of nonprofit educative daycares offering quality services to children aged 0 to 5 years old;
 - 1997-2007: more than 120,000 places are added;
 - 2008: 203,998 places (77,405 in daycare center and 91,253 in family daycare);
 - More than 50% of children are affected by these circumstances.
- ❖ Attending these daycares could promote the optimal development of children by providing them sensitive, positive and educative interactions with significant adults.
- ❖ Yet, few studies have examined the effects of Quebec non-profit daycare on the adaptation of young children.
- ❖ Therefore, the current longitudinal study wants to identify the predictor variables of adaptation for the 18 month old.

METHOD

Sample

93 infants (43 girls) distributed in 2 unequal groups

- 1) Daycare center (n=52; 25 girls);
- 2) Family daycare (n= 41; 18 girls).

Procedures

- ❖ Recruitment from 2004 to 2006 in Montreal & Montérégie
- ❖ 3 home visits to measure the child's adaptation
 - T1) Upon entry (X=10 months)
 - T2) 15 months
 - T3) 18 months

Table 1. Measures calendar

	T1	T2	T3
Dependent variables			
Adaptation			X
Independent variables			
Infant' temperament	X	X	X
Family income	X		
Mother' education	X		
Family structure	X		
Type of daycare	X	X	X
Quality of daycare			X

Measures

Standardized test

Behavior Rating Scale of Bayley Scales of Infant Development-II (BSID-II)

- ❖ While the infant performs motor and cognitive tasks, his adaptation to novelty is observed to complete the BRS.
 - Higher score = better adaptative behaviors
 - Negative skewness of scores= logarithm transformation

Questionnaires

- ❖ Temperament with *Infant Characteristics Questionnaire* [ICQ] (Bates, 1979)
- ❖ Childcare experience;
- ❖ Family socioeconomic status

Observational rating scale

- ❖ *Educative Quality Observation Scales* [1, 2]

RESULTS SUMMARY

Correlations

Table 2. Correlations between infant', family' and daycare' characteristics and adaptation

	Adaptation 18 months
Child's Temperament 10 months	-.05
Child's Temperament 15 months	-.10
Child's Temperament 18 months	-.30*
Mother's education (low or high)	-.04
Single parenthood (yes or no)	.09
Family income (low or high)	.27*
Type of daycare (center vs family daycare)	-.12
Daycare Quality at 18 months	.26*
1-Physical characteristics	.17
1.1-Furnishings and layout	.05
1.2-Equipment and material available	.25*
2- Structure and variation of activities	.27*
2.1-Activity planning by the educator	.32*
2.2-Observation of the children	.21
2.3-Daily schedule	.20
2.4-Activities	.09
3-Interactions/children	.19
3.1-Educational value of play	.23*
3.2-Democratic intervention	.17
3.3-Communication	.11
4-Interaction with parents	.23*
4.1-Exchange between family and DC	.25*
4.2-Supportive subject of exchange	.15
4.3-Collaboration about difficult child	.09
4.4-Support to family integration	.13

***p < .05**

Hierarchical Regression Analysis

Table 3. Means,Standard Deviations, and Intercorrelations for Infant Adaptation and Infant, Family and Daycare predictor Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9
Adaptation 18 months	1,00	0.53	-.30*	.27*	.,25*	.32*	.23*	.25*	.27*	.23*	.26*
Predictors:											
1.Temperament 18 months	3.31	0.70	---	-.11	-.18	-.20	-.30*	.03	-.19*	-.05	-.22*
2.Family income				---	.12	-.02	.13	-.14	.12	.08	.09
3. Quality 1.2	2.58	0.44			---	.16	.54*	.38*	.54*	.41*	.72*
4. Quality 2.1	2.34	0.69				---	.15	.18	.55*	.10	.35*
5. Quality 3.1	2.22	0.51					---	.25*	.66*	.28*	.82*
6. Quality 4.1	3.25	0.63						---	.39*	.67*	.48*
7. Quality 2	2.65	0.45							---	.31*	.87*
8. Quality 4	3.24	0.44								---	.48*
9. Quality global	2.74	0.34									---

***p < .05**

Table 4. Regression Analysis Summary for Infant, Family and Daycare Variables Predicting Infant's Adaptation at 18 months

Variables	B	SE B	ß	Incremental R2
Step 1				
-Child' temperament 18 months	-.23	.08	-.30	.09
Step 2				
-Family income (low or high)	.48	.16	.31*	.09
Step 3				
-Daycare quality 1.2 material available	.15	.12	.12	.11
-Daycare quality 2.1 activity planning	.22	.08	2.93*	

***p < .05.** Note. R2 = .076 ($p = .007$) for step 1; R2 = .159 ($p = .004$) for step 2, and R2 = .249 ($p = .005$) for step 3.

RESULTS

- ❖ Adaptation at 18 months is correlated with temperament at 18 months, family income and quality of daycare (**table 2**).
- ❖ Many subscales of the *Educative Quality Observation Scales* are intercorrelated. The strongest correlated to adaptation and not intercorrelated has been kept for the regression model (**table 3**).
- ❖ Level 1: difficult temperament at 18 months predicted lower adaptation score and explained 9.0% of the variance, $F(1,79) = 7.54$, $p = .01$.
- ❖ Level 2: higher family income predicted lower adaptation score and accounted for 9.0% of the variance, $F(1,78) = 8.89$, $p = .01$.
- ❖ Level 3: higher quality of care (material and planning) predicted higher adaptation score and explained 11.0% of the variance, $F(2,76) = 5.63$, $p = .01$.
- ❖ The model accounted for 24.9% of the variance of adaptation. Only income and quality (planning) remain significant predictors of adaptation (**table 4**).

DISCUSSION

Predictors

- ❖ **Infant Temperament:** The infant with a difficult temperament could react more negatively to novelty and show less adapted behavior in an unknown situation.
- ❖ **Family Income:** A good quality daycare could promote sensitive and educative stimulations from the educator which could be beneficial for a child growing in an environment where fewer resources are available.
- ❖ **Quality of daycare:** The variety of material and the activity planning may promote activities adapted to the individual rhythms and personal interest of the child which can help him adapt more easily to daycare.

Global model

- ❖ Once the family income and the quality of care (activity planning) are accounted for, the temperament and the quality of care (material available) are no longer significant predictors of adaptation at 18 months.
 - It is possible that the quality is more important than the type of temperament, since a good quality daycare offers sensitive interactions to all of the infants and, by doing so, facilitates the adaptation of all infants.
 - It is possible that the activity planning by the educator is more important than the material available, since “what is done” in daycare might be more important for the adaptative behavior than “what it is done with”.
- ❖ Also, the quality appears to explain the biggest proportion of variance. The scale used for this study might be more sensitive to our cultural reality since it has been created specifically to evaluate the quality of Quebec's daycares.

CONCLUSION

- ❖ This study suggests that, for infants attending nonprofits daycare in Quebec since their first year of life, infant temperament, family income and quality of care explain 24.9% of the child's adaptation at 18 months.
- ❖ This underlie the importance of sustaining the quality in daycare, mainly the importance of facilitating and promoting the activity planning of the educator.
- ❖ However, these results could be a selection effect since our sample is unrepresentative of the children, families and daycares of Montreal and Montérégie areas.
- ❖ Future work should examine if the quality of the adaptation early in life is a precursor of behavior problem as it has been reported in the literature.

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