

# Social Determinants of Initiation, Duration and Exclusivity of Breastfeeding at the Population Level

The Results of the Longitudinal Study of Child Development in Quebec (ELDEQ 1998-2002)

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## ABSTRACT

**Background:** According to Canadian public health recommendations, newborns should be fed exclusively with breast milk during their first 4 to 6 months of life. The aim of this paper is to identify the main social determinants of initiation, duration and exclusivity of breastfeeding from birth to 4 months, at the population level. The results will help the development of public health interventions aimed at improving the prevalence of exclusive breastfeeding for at least the first 4 to 6 months of babies' life.

**Methods:** The analyses were performed with the data of the *Longitudinal Study of Child Development in Quebec (ELDEQ 1998-2002)*. The study follows a representative sample (n=2,223) of the children born in 1998 in the province of Quebec, in Canada. The relations between breastfeeding (all and exclusive) and mothers' education level, annual family income, family type, parents' working situation and mothers' age group have been evaluated by crude and adjusted odds ratios. Multivariate analyses were used to identify the most influential factors.

**Results:** In 1998, nearly three quarters (72%) of the Quebec newborns were breastfed at birth. When they reached 4 months, only 6% of the Quebec children were exclusively breastfed, thus following public health recommendations. Mothers' education level remains the strongest factor of influence on breastfeeding from birth to 3 months, and its impact increases with baby's age. At 4 months, it is also the most important factor for all breastfeeding, but mothers' age is more important for exclusive breastfeeding. When all the studied factors are considered equal for all children, being breastfed in accordance with public health recommendations, which refers to exclusive breastfeeding for at least 4 months, is mainly influenced by mothers' age, followed by mothers' education level. Family income, family type and parents' working situation do not influence exclusive breastfeeding at 4 months. It should be noted that when considering all breastfed children, if mothers' age and education level are equal, annual family income shows a negative relationship with breastfeeding at any of the studied ages. This negative relationship is also observed at 2 months for exclusive breastfeeding (\$40,000-\$59,999).

**Conclusion:** From a public health perspective, it is important that newborns be breastfed at birth and exclusively breastfed during their first 4 to 6 months of life. The analysis indicates that once the decision to breastfeed is made, different social factors influence the duration of breastfeeding and its exclusivity. Public policy targets are necessary to evaluate whether the situation is improving from one year to another and whether disparities are increasing or decreasing for newborns accumulating the impact of material and social deprivation early in life.

La traduction du résumé se trouve à la fin de l'article.

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According to Canadian public health recommendations, newborns should be fed exclusively with breast milk during their first 4 to 6 months of life.<sup>1\*</sup> During this period, babies should be given no other type of milk or formula, no water, juice or food. Then solid food should be gradually introduced in the daily routine to complement breastfeeding, which could continue for up to 2 years or longer. These recommendations were developed to guide mothers in ensuring the optimal health and development of their babies.<sup>1</sup>

Previous studies on breastfeeding in developed countries have shown that different demographic and social factors influence the initiation and duration of breastfeeding. Mothers' age and education level, family type and family income, and working status of the parents are among the main factors of influence.<sup>2-5</sup>

Few studies analyze the social determinants of breastfeeding at the population level. Moreover, studies on breastfeeding generally give few details about children being breastfed exclusively or not, or about the simultaneous strength of influence of different social determinants on breastfeeding.<sup>6,7</sup>

The aim of this paper is to identify the main social determinants of initiation, duration and exclusivity of breastfeeding in the first 4 months of life, at the population level. The results will help to identify sources of social disparities in infancy and guide the development of public health interventions aimed at improving the prevalence of exclusive breastfeeding for at least the first 4 to 6 months of life.

## METHODS

The analyses were performed with the data of the *Longitudinal Study of Child Development in Quebec (ELDEQ 1998-2002)*. The study follows a representative sample (n=2,223) of the children born in 1998 in the province of Quebec (total population over 7 million – approximately 70,000 newborns per year) in Canada.† Detailed information on breastfeeding and complementary feeding was collected at 5 months through a face-to-face interview.

\* The new recommendations tend to recommend exclusive breastfeeding for the first 6 months of life. It was not the case at the time of data collection for this study.

† Children with major diseases or handicaps at birth and those who died before the age of 5 months are not part of the study.

The mother was asked to indicate if the child had been breastfed and for how long. Questions on the time of introduction of infant formula, other types of milk, water, juice and solid food were also asked.<sup>8</sup>

Two different types of breastfeeding are used in the analysis. *All breastfeeding* includes all breastfed children whether or not they received formula, other types of milk, water, food or juice in addition to breastfeeding. *Exclusive breastfeeding* refers to the children receiving only breast milk (no water, formula, other milk, juice, food). The latter type is in accordance with the definition of breastfeeding in public health recommendations. All breastfeeding and exclusive breastfeeding are analyzed separately at birth and at 1, 2, 3 and 4 months.

Demographic and social indicators were chosen from the literature on breastfeeding among all the available indicators in the study. Mothers' age and education level, annual family income, family type, and parents' working situation were included in the final analysis. These determinants were analyzed individually and then in combination to determine the impact of these factors on breastfeeding from birth to 4 months.

All statistical analyses are based on odds ratios. Associations were verified by looking at the 95% confidence intervals produced with logistic regression, using SAS software (version 8.2). Multivariate analyses were used to identify the most influential factors, and were performed using logistic regressions at significance level of 5%. Since the sampling plan was a three-level stratified sample, the analyses were done using weighted data. The Quebec Bureau of Statistics, responsible for the study, set the overall design effect at 1.3, after several analyses on the variance inflation induced by the complex sampling plan in relation to simple random sampling. These prior analyses were done with SUDAAN.

## RESULTS

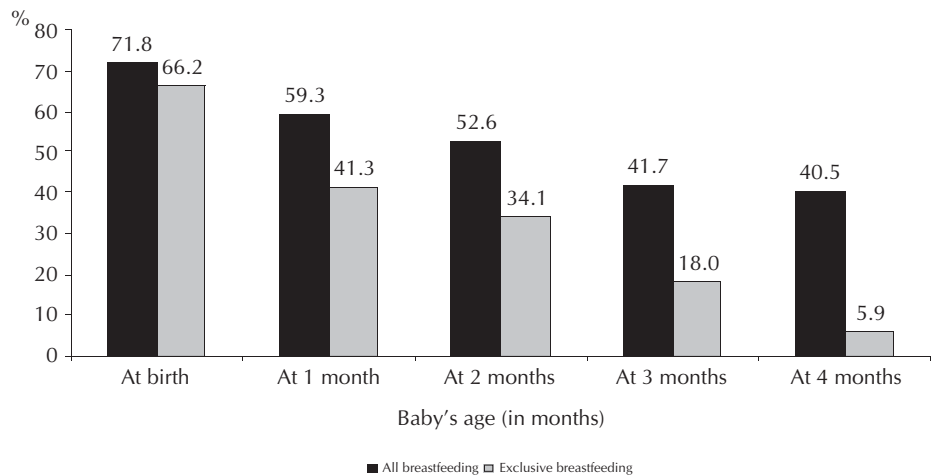
### Description of the sample

The analyses were done with a sample of 2,223 newborns using weighted data. These children represent all the same-age children in the Quebec population. Table I presents characteristics of the newborns. Almost a quarter (23%) had a mother aged

**TABLE I**  
Characteristics of the Sample, 1998

Factors	Characteristics	%
Mothers' age group (years)	<25	22.8
	25-29	30.6
	30-34	32.5
	35-39	14.1
Mothers' highest educational level	No high school diploma	20.2
	High school diploma	26.9
	Post-secondary (except university) diploma	28.3
	University diploma	24.6
Annual family income	<\$20,000	19.2
	\$20,000-\$39,999	28.3
	\$40,000-\$59,999	24.8
	≥\$60,000	27.6
Family type	Two-parent family	90.8
	Single-parent family	9.2
Parents' working situation	At least one parent working	89.9
	No parent working	10.1

N=2,223 children  
Source : Institut de la statistique du Québec, ELDEQ 1998-2002



**Figure 1.** Prevalence† of all breastfeeding\* and exclusive breastfeeding\*\* in Quebec, 1998-1999

† The prevalence is based on the whole infant population, breastfed or not.

\* All breastfeeding includes all breastfed children (partial plus exclusive breastfeeding).

\*\* Exclusive breastfeeding includes children receiving only breast milk (no water, formula, milk, juice, food).

Source : Institut de la statistique du Québec, ELDEQ 1998-2002

less than 25 years, a fifth (20%) had a mother with no high school diploma and the same proportion (19%) lived in a family with an annual income less than \$20,000. A tenth (9%) of the newborns lived in a single-parent family and the same proportion (10%) had no parent working.

### Breastfeeding during the first 4 months of life

Figure 1 presents the results for all breastfeeding and exclusive breastfeeding during the first 4 months of life. In 1998, nearly three quarters (72%) of the Quebec newborns were breastfed at birth; the

figure drops rapidly to 59% at 1 month, and only 41% of the children were still breastfed at 4 months. Moreover, the majority of these breastfed children were getting formula and/or complementary food. At 1 month, the proportion for exclusive breastfeeding was 41%; at 4 months, only 6% of the Quebec children were exclusively breastfed, thus following public health recommendations.

### The social determinants of breastfeeding

#### Univariate Analysis

Tables II and III present crude odds ratios (unadjusted data) for all breastfeeding and

TABLE II

## Crude Odds Ratio for All Breastfeeding at Birth and at 1,2,3,4 months, 1998

Factors	Characteristics	All Breastfeeding at Birth	All Breastfeeding at 1 Month	All Breastfeeding at 2 Months	All Breastfeeding at 3 Months	All Breastfeeding at 4 Months
Mothers' age group (years)	<25 **	1.000	1.000	1.000	1.000	1.000
	25-29	1.495 [1.169-1.912]	1.732 [1.373-2.184]	1.84 [1.455-2.327]	1.921 [1.496-2.467]	1.921 [1.492-2.474]
	30-34	1.699 [1.328-2.174]	2.21 [1.752-2.787]	2.497 [1.977-3.154]	2.617 [2.047-3.346]	2.653 [2.070-3.401]
	35-39	2.139 [1.546-2.961]	2.936 [2.175-3.962]	3.184 [2.373-4.272]	3.328 [2.472-4.481]	3.365 [2.495-4.538]
Mothers' highest educational level	No high school diploma **	1.000	1.000	1.000	1.000	1.000
	High school diploma	1.689 [1.310-2.179]	1.745 [1.362-2.235]	1.7 [1.320-2.189]	1.929 [1.463-2.543]	1.944 [1.469-2.573]
	Post-secondary (except university) diploma	2.02 [1.564-2.608]	2.121 [1.657-2.714]	2.062 [1.605-2.648]	2.369 [1.805-3.109]	2.354 [1.787-3.10]
	University diploma	5.421 [3.956-7.427]	5.5 [4.158-7.275]	5.664 [4.304-7.453]	5.891 [4.447-7.804]	5.913 [4.455-7.850]
Annual family income	<\$20,000**	1.000	1.000	1.000	1.000	1.000
	\$20,000-\$39,999	1.24 [0.950-1.618]	1.154 [0.899-1.481]	1.072 [0.836-1.375]	1.043 [0.807-1.349]	0.962 [0.742-1.246]
	\$40,000-\$59,999	1.204 [0.916-1.583]	1.125 [0.870-1.454]	1.101 [0.852-1.421]	1.183 [0.910-1.539]	1.127 [0.865-1.468]
	≥\$60,000	1.882 [1.421-2.493]	1.968 [1.520-2.549]	1.949 [1.512-2.511]	1.786 [1.384-2.306]	1.756 [1.360-2.267]
Family type	Two-parent family	2.237 [1.667-3.001]	1.885 [1.410-2.520]	1.642 [1.226-2.20]	1.991 [1.447-2.740]	1.913 [1.388-2.637]
	Single-parent family**	1.000	1.000	1.000	1.000	1.000
Parents' working situation	At least one parent working	2.164 [1.631-2.871]	1.786 [1.352-2.360]	1.59 [1.202-2.104]	1.6 [1.191-2.150]	1.561 [1.160-2.102]
	No parent working**	1.000	1.000	1.000	1.000	1.000

\*\* Reference category

Source : Institut de la statistique du Québec, ELDEQ 1998-2002

TABLE III

## Crude Odds Ratio for Exclusive Breastfeeding at Birth and at 1,2,3,4 Months, 1998

Factors	Characteristics	Exclusive Breastfeeding at Birth	Exclusive Breastfeeding at 1 Month	Exclusive Breastfeeding at 2 Months	Exclusive Breastfeeding at 3 Months	Exclusive Breastfeeding at 4 Months
Mothers' age group (years)	<25**	1.000	1.000	1.000	1.000	1.000
	25-29	1.424 [1.128-1.799]	2.003 [1.560-2.571]	2.104 [1.607-2.754]	2.751 [1.869-4.051]	4.523 [1.894-10.80]
	30-34	1.426 [1.133-1.796]	2.45 [1.916-3.134]	2.624 [2.015-3.417]	3.736 [2.565-5.441]	6.753 [2.893-15.767]
	35-39	1.892 [1.408-2.544]	3.141 [2.333-4.227]	3.177 [2.326-4.340]	4.019 [2.636-6.129]	7.56 [3.086-18.515]
Mothers' highest educational level	No high school diploma **	1.000	1.000	1.000	1.000	1.000
	High school diploma	1.643 [1.284-2.104]	1.944 [1.477-2.561]	2.054 [1.523-2.769]	2.943 [1.858-4.662]	2.158 [1.030-4.524]
	Post-secondary (except university) diploma	1.966 [1.537-2.515]	2.167 [1.651-2.842]	2.308 [1.720-3.098]	3.458 [2.201-5.432]	2.259 [1.088-4.694]
	University diploma	4.131 [3.142-5.432]	5.659 [4.277-7.487]	5.195 [3.866-6.980]	8.042 [5.182-12.481]	4.943 [2.473-9.881]
Annual family income	<\$20,000**	1.000	1.000	1.000	1.000	1.000
	\$20,000-\$39,999	1.507 [1.173-1.936]	1.433 [1.098-1.870]	1.32 [0.999-1.743]	1.717 [1.166-2.528]	2.041 [1.041-4.003]
	\$40,000-\$59,999	1.653 [1.276-2.142]	1.521 [1.158-1.998]	1.38 [1.038-1.835]	2.047 [1.389-3.017]	2.136 [1.080-4.225]
	≥\$60,000	2.257 [1.742-2.923]	3.037 [2.330-3.958]	2.366 [1.802-3.107]	3.136 [2.167-4.538]	2.533 [1.309-4.902]
Family type	Two-parent family	2.569 [1.914-3.449]	2.997 [2.107-4.262]	2.352 [1.638-3.376]	2.352 [1.438-3.848]	2.484 [0.997-6.191]
	Single-parent family**	1.000	1.000	1.000	1.000	1.000
Parents' working situation	At least one parent working	2.543 [1.917-3.373]	2.432 [1.765-3.351]	2.178 [1.551-3.058]	2.696 [1.642-4.426]	1.936 [0.885-4.235]
	No parent working**	1.000	1.000	1.000	1.000	1.000

\*\* Reference category

Source : Institut de la statistique du Québec, ELDEQ 1998-2002

**TABLE IV**  
**Adjusted Odds Ratio for All Breastfeeding at Birth and at 1,2,3,4 Months, 1998**

Factors	Characteristics	All Breastfeeding at Birth	All Breastfeeding at 1 month	All Breastfeeding at 2 Months	All Breastfeeding at 3 Months	All Breastfeeding at 4 Months
Mothers' age group (years)	<25**	1.000	1.000	1.000	1.000	1.000
	25-29	1.082 [0.822-1.425]	1.371 [1.059-1.776]	1.479 [1.138-1.921]	1.477 [1.118-1.952]	1.489 [1.123-1.975]
	30-34	1.084 [0.814-1.442]	1.553 [1.187-2.032]	1.78 [1.358-2.332]	1.848 [1.390-2.456]	1.877 [1.408-2.503]
	35-39	1.641 [1.143-2.355]	2.34 [1.679-3.260]	2.508 [1.811-3.472]	2.519 [1.809-3.507]	2.54 [1.820-3.545]
Mothers' highest educational level	No high school diploma **	1.000	1.000	1.000	1.000	1.000
	High school diploma	1.623 [1.232-2.137]	1.606 [1.229-2.099]	1.589 [1.209-2.087]	1.809 [1.343-2.435]	1.829 [1.353-2.474]
	Post-secondary (except university) diploma	1.988 [1.489-2.655]	1.991 [1.510-2.626]	1.939 [1.465-2.565]	2.291 [1.694-3.099]	2.279 [1.677-3.095]
	University diploma	5.671 [3.907-8.232]	5.072 [3.640-7.067]	5.175 [3.735-7.171]	5.609 [4.014-7.836]	5.57 [3.976-7.801]
Annual family income	<\$20,000**	1.000	1.000	1.000	1.000	1.000
	\$20,000-\$39,999	0.736 [0.524-1.033]	0.74 [0.540-1.013]	0.741 [0.542-1.013]	0.729 [0.526-1.009]	0.664 [0.478-0.921]
	\$40,000-\$59,999	0.552 [0.383-0.794]	0.535 [0.382-0.751]	0.563 [0.402-0.787]	0.597 [0.422-0.844]	0.564 [0.398-0.798]
	≥\$60,000	0.559 [0.377-0.828]	0.597 [0.416-0.856]	0.619 [0.434-0.882]	0.554 [0.386-0.796]	0.543 [0.378-0.781]
Family type	Two-parent family	1.392 [0.921-2.106]	1.304 [0.870-1.954]	1.161 [0.772-1.747]	1.567 [1.012-2.429]	1.521 [0.980-2.361]
	Single-parent family**	1.000	1.000	1.000	1.000	1.000
Parents' working situation	At least one parent working	1.798 [1.163-2.780]	1.458 [0.956-2.221]	1.308 [0.856-1.998]	1.044 [0.668-1.633]	1.077 [0.687-1.688]
	No parent working**	1.000	1.000	1.000	1.000	1.000

\*\* Reference category

Source : Institut de la statistique du Québec, ELDEQ 1998-2002

exclusive breastfeeding, from birth to 4 months. The probability to be breastfed (all and exclusive) increases with mothers' age and education level, from birth to 4 months. Mothers' education level has the strongest impact, especially for the children with mothers with a university diploma. The probability to be breastfed from birth to 4 months is more than 5 times higher for these children than for those with mothers with no high school diploma. For exclusive breastfeeding, the children of the more educated mothers have an 8 times higher probability of being exclusively breastfed at 3 months (OR 8.0, 95% CI 5.1-12.5) than those of less educated mothers. It should be noted that at 4 months only, being exclusively breastfed is more strongly related with mothers' age (OR 7.6, 95% CI 3.1-18.5) than with mothers' education level (OR 4.9, 95% CI 2.5-9.9).

Annual family income only makes a difference for the children born in families earning \$60,000 and more for all breastfeeding, whereas the probability to be exclusively breastfed increases with annual income. From birth to 3 months, the probability to be breastfed (all and

exclusive) also increases for children living in two-parent families compared to those living in single-parent families, and for children having at least one parent working compared to those with no parent working.

#### Multivariate Analysis

Tables IV and V present adjusted odds ratios for all breastfeeding and exclusive breastfeeding. When all the studied factors are taken into account simultaneously in the analysis, mothers' age is still significant from 1 to 4 months, although it has less impact than when the factors are looked at individually. At birth, mothers' age is only significant for all breastfeeding, and for children of mothers aged 35-39 years, compared with children of mothers aged less than 25 years. Mothers' education level remains the strongest factor of influence on breastfeeding from birth to 3 months, and its impact increases with baby's age. At 4 months, it is also the most important factor for all breastfeeding, but mothers' age is more important for exclusive breastfeeding. The probability of being breastfed exclusively at 4 months, which is in accordance with the public health

recommendations, is 3.1 (95% CI 1.3-7.7) times higher for children of mothers aged 25-29 years, 4.7 (95% CI 2.0-11.5) times higher when the mothers are 30-34 years, and reaches 5.7 (2.2-14.3) times higher when the mothers are 35-39 years.

The analysis also indicates that when all the studied factors are taken into account simultaneously, annual family income is not a protective factor anymore for all and exclusive breastfeeding. The relationship is even negative, indicating that when mothers' age and education level are equal, the probability of being breastfed decreases with an income of \$40,000 or more, in comparison with an income of less than \$20,000. This is true for all breastfeeding from birth to 4 months, and for exclusive breastfeeding at 2 months (\$40,000-\$59,999 only). These results indicate that the positive relationship observed with univariate analysis between income and breastfeeding is due to the relation between income and mothers' education level and/or mothers' age, but not to family income *per se*. The protective role of two-parent families observed with crude OR is only seen at 3 months for all breastfeeding and at 1 month for exclusive breastfeeding

TABLE V

## Adjusted Odds Ratio for Exclusive Breastfeeding at Birth and at 1,2,3,4 Months, 1998

Factors	Characteristics	Exclusive Breastfeeding at Birth	Exclusive Breastfeeding at 1 Month	Exclusive Breastfeeding at 2 Months	Exclusive Breastfeeding at 3 Months	Exclusive Breastfeeding at 4 Months
Mothers' age group (years)	<25**	1.000	1.000	1.000	1.000	1.000
	25-29	0.922 [0.711-1.197]	1.383 [1.049-1.823]	1.587 [1.180-2.136]	1.933 [1.260-2.964]	3.121 [1.274-7.645]
	30-34	0.811 [0.620-1.062]	1.449 [1.091-1.924]	1.779 [1.314-2.407]	2.416 [1.576-3.705]	4.735 [1.956-11.462]
	35-39	1.299 [0.935-1.806]	2.121 [1.524-2.951]	2.356 [1.667-3.328]	2.838 [1.777-4.531]	5.646 [2.235-14.259]
Mothers' highest educational level	No high school diploma **	1.000	1.000	1.000	1.000	1.000
	High school diploma	1.466 [1.124-1.912]	1.566 [1.168-2.099]	1.652 [1.203-2.267]	2.202 [1.366-3.549]	1.624 [0.752-3.508]
	Post-secondary (except university) diploma	1.76 [1.337-2.318]	1.686 [1.252-2.271]	1.892 [1.374-2.605]	2.589 [1.610-4.164]	1.717 [0.797-3.696]
	University diploma	3.685 [2.661-5.103]	3.805 [2.746-5.272]	3.791 [2.691-5.339]	5.353 [3.298-8.688]	3.412 [1.591-7.318]
Annual family income	<\$20,000**	1.000	1.000	1.000	1.000	1.000
	\$20,000-\$39,999	0.992 [0.729-1.350]	0.912 [0.659-1.264]	0.817 [0.581-1.148]	1.255 [0.781-2.018]	1.649 [0.718-3.788]
	\$40,000-\$59,999	0.928 [0.667-1.292]	0.762 [0.540-1.077]	0.657 [0.458-0.942]	1.073 [0.658-1.752]	1.235 [0.522-2.922]
	≥\$60,000	0.936 [0.658-1.330]	1.061 [0.742-1.517]	0.775 [0.536-1.122]	1.076 [0.657-1.762]	0.954 [0.40-2.275]
	Family type	Two-parent family	1.375 [0.924-2.046]	1.871 [1.181-2.964]	1.478 [0.917-2.382]	0.989 [0.521-1.877]
	Single-parent family**	1.000	1.000	1.000	1.000	1.000
Parents' working situation	At least one parent working	1.66 [1.099-2.509]	1.28 [0.808-2.029]	1.439 [0.886-2.338]	1.322 [0.661-2.645]	0.824 [0.266-2.555]
	No parent working**	1.000	1.000	1.000	1.000	1.000

\*\* Reference category

Source : Institut de la statistique du Québec, ELDEQ 1998-2002

with adjusted OR. Similarly, having at least one parent working is only important for all breastfeeding and exclusive breastfeeding at birth with adjusted OR. Again, these results illustrate that mothers' age and education level are so strongly related with breastfeeding that the other factors disappear in the relationship.

Finally, when all the studied factors are considered equal for all children, being breastfed in accordance with public health recommendations – which refers to exclusive breastfeeding for 4 months – is mainly influenced by mothers' age, followed by mothers' education level only when they have a university diploma. Family income, family type and parents' working situation have no influence on exclusive breastfeeding at 4 months.

## DISCUSSION

From a public health perspective, it is important that newborns be breastfed at birth and exclusively breastfed during their first 4 to 6 months of life. The data in this study indicate that although 72% of Quebec children are breastfed at birth,

only 6% are exclusively breastfed for at least 4 months. These figures are low in comparison with other developed countries,<sup>6</sup> and it is important to identify the causal factors.

Multivariate analysis indicates that mothers' education level is the most important factor for the initiation of breastfeeding and for its duration for up to 4 months when all breastfed children are considered, and for up to 3 months for exclusive breastfeeding. Nevertheless, for exclusive breastfeeding at 4 months, which is the aim of the public health recommendations, mothers' age has a stronger impact than mothers' education level. At this age, the combined impact of mothers' age and education level on exclusive breastfeeding is so strong that annual family income, family type and parents' working situation are not significant anymore. Moreover, for all breastfed babies, the fact that annual family income (\$40,000 and over) exerts a negative influence on breastfeeding when mothers' age and education level are equal may be related to the working situation of older and more educated mothers, as

observed in other studies.<sup>9-12</sup> The results of this study are not entirely in accordance with those of other studies indicating a strong positive influence of income on breastfeeding, but they confirm the importance of mothers' age and education level for breastfeeding.<sup>5,7,13-15</sup> More in line with our results, other authors reported an inconsistent relationship between socioeconomic status and breastfeeding,<sup>15</sup> while Riva and colleagues<sup>12</sup> found that income is positively related with breastfeeding but not with its duration.

Our study also indicates that inequalities are not only experienced by children from less educated, young and poor mothers. Interventions should therefore target different social groups to improve the situation for all children. Moreover, for the 72% of mothers who initiated breastfeeding, better support is required to improve the duration and exclusivity of breastfeeding.

The data of the Longitudinal Study of Child Development in Quebec (ELDEQ 1998-2002) indicate an important gap between public health recommendations and breastfeeding practices in the first

4 months of life. The data collected in this study are the first ever collected using a representative sample of Quebec's entire off-reserve population.<sup>8</sup> They will serve as a basis for monitoring the situation in the years to come. Public policy targets should include the determinants of breastfeeding to evaluate whether the situation is improving from one year to another and whether disparities are increasing or decreasing for newborns accumulating the impact of material and social deprivation early in life. As well, the long-term impact of such disparities on the health and well-being of these children will need to be addressed at the population level.

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## RÉSUMÉ

**Contexte :** Selon les recommandations canadiennes de santé publique, les nouveau-nés doivent être allaités exclusivement pendant les quatre à six premiers mois de leur vie. Cet article vise à définir les principaux facteurs sociaux qui influencent l'initiation, la durée et l'exclusivité de l'allaitement, de la naissance à 4 mois, à l'échelle de la population. Ces résultats favoriseront l'élaboration de mesures de santé publique visant l'allaitement exclusif pendant les quatre à six premiers mois de la vie.

**Méthode :** Les analyses ont été réalisées avec les données de l'Étude longitudinale du développement des enfants du Québec (ELDEQ 1998-2002), qui suit un échantillon représentatif (n=2 223) d'enfants nés au Québec en 1998. La relation entre l'allaitement total et exclusif et le niveau d'instruction de la mère, le revenu familial, le type de famille et le nombre de parents ayant un emploi, ainsi que l'âge de la mère, a été évaluée par des analyses de rapports de cotes non ajustées et ajustées. Des analyses multivariées ont servi à définir les principaux facteurs d'influence.

**Résultats :** En 1998, près des trois quarts (72 %) des nouveau-nés québécois étaient allaités à la naissance. Toutefois, seulement 6 % étaient encore allaités exclusivement à 4 mois, suivant les recommandations de santé publique. Le niveau d'instruction de la mère demeure le prédicteur le plus important pour l'allaitement de la naissance à 3 mois, et son impact augmente avec l'âge du bébé. À 4 mois, c'est aussi le facteur le plus important pour l'allaitement total, mais l'âge de la mère est plus important pour l'allaitement exclusif. Lorsque tous les facteurs étudiés sont pris en considération simultanément, le fait d'être allaité selon les recommandations (c.-à-d. exclusivement pendant au moins quatre mois) est principalement influencé par l'âge de la mère, suivi par son niveau d'instruction. Le revenu familial, le type de famille et le nombre de parents ayant un emploi n'influencent pas cette relation. Soulignons toutefois que pour l'ensemble des enfants allaités, pour un âge et un niveau d'instruction équivalent de la mère, le revenu familial annuel influence négativement l'allaitement à chacun des âges étudiés. Cette relation négative avec le revenu (40 000 \$ à 59 999 \$) est aussi observée à 2 mois pour l'allaitement exclusif.

**Conclusion :** Dans une perspective de santé publique, il est important que les nouveau-nés soient allaités à la naissance et qu'ils soient allaités exclusivement pendant les quatre à six premiers mois de leur vie. Les analyses indiquent que différents facteurs sociaux influencent l'initiation, la durée et l'exclusivité de l'allaitement. Les politiques publiques doivent avoir des objectifs à atteindre pour évaluer si la situation s'améliore au fil des ans et si les inégalités sociales augmentent ou diminuent pour les nouveau-nés qui accumulent les impacts de la privation matérielle et sociale si tôt dans leur vie.