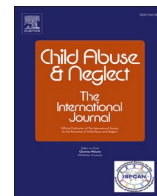




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Recurrent involvement with the Quebec child protection system for reasons of neglect: A longitudinal clinical population study

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ABSTRACT

Studies in several jurisdictions have found that families become recurrently involved with child protection systems most frequently for reasons of neglect. Child protection involvement for reasons of neglect is shown to correlate with various socioeconomic vulnerabilities.

Objective: This study, the largest of its kind in Canada, examines when and for whom recurring conditions of neglect were most likely to occur for all children involved with child protection in the province of Quebec over a span of fifteen years.

Participants and setting: Specifically, the study population includes all children whose ongoing child protection intervention in Quebec closed between 2002 and 2017 (N = 76,176).

Methods: This clinical population study uses a longitudinal research design drawing anonymized clinical administrative data from all of Quebec's child protection jurisdictions spanning 15 years, and Quebec data extracted from the 2011 Canadian National Household Survey to estimate socioeconomic vulnerability.

Results: Of the total population studied, 32.5 % (N = 24,816) experienced a recurrence of maltreatment during the study period, of which more than one third (N = 8707) experienced a recurrence for reasons of neglect.

Conclusions: Because the association between socioeconomic vulnerability and recurrence of neglect indicates a gap in material and social supports—which child protection systems have neither the mandate nor the resources to fill—we propose additional avenues that we urge policymakers and practitioners to consider in supporting the demonstrated needs of these families.

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1. Introduction

Over 230,000 families are investigated every year by Canadian child protection authorities because of concerns related to child maltreatment (Trocmé, Esposito, Nutton, Rosser, & Fallon, 2019). In over 85 % of these investigations, the concerns relate to the well-being of a child living in difficult conditions, monolithically categorized as “neglect” and not always related to immediate safety concerns (Trocmé et al., 2019). Families’ involvement with child protection for reasons of neglect can entail a combination of adverse socioeconomic conditions (Maguire-Jack & Font, 2017; Berger & Waldfogel, 2011) with limited access to resources, and various challenges related to health problems, disability, addiction, or interpersonal conflict (Logan-Greene & Semanchin Jones, 2017). While many families investigated for reasons of neglect are likely to experience one or more of the above-named factors, ready access to extended family and community supports, along with adequate financial resources, can provide a sufficient buffer to mitigate risk of child protection involvement for neglect reasons (DePanfilis & Zuravin, 2002; Jonson-Reid et al., 2018). However, for families who do not have access to sufficient supports, these problems can become crises where child protection intervention is deemed necessary. In North America, typically only child protection authorities have the mandate and funding required to respond to these situations and child protection intervention occurs when families meet a threshold of substantiated child maltreatment, as specified by jurisdiction-specific legislation. However, the scope of mandate and funding is limited to a safety-driven focus on protection, rather than proactive or preventive family support services (Trocmé et al., 2019).

Definitions of neglect vary across Canada according to provincial and territorial child protection mandates, but generally legislation frames neglect as failure to meet a child’s needs or permitting a child to be exposed to situations of foreseeable harm (Trocmé et al., 2019). In Quebec, neglect is defined as a “situation in which the child’s parents or the person having custody of the child do not meet the child’s basic needs” (*Youth Protection Act, 2007, 38.b.1*). Since 2007, this definition has expanded to include situations of “risk” of neglect (*Youth Protection Act, 2007, 38.b.2*). In cases of neglect, the threshold for intervention requires evidence of a situation that chronically impedes the parents’ ability to overcome their difficulties and puts children at risk of long-term socio-emotional and cognitive problems (Hildyard & Wolfe, 2002). “Chronicity” here emphasizes ongoing family or personal difficulties, or systemic problems that families continually confront and which has deleterious effects on parental capacity to provide and care for their children. Families who experience recurrence of neglect may have a more difficult time achieving permanent case closure because of systemic problems beyond their control, which can also amplify family stressors, reflecting a vicious cycle of chronic need. Yet despite the chronicity of difficulties the majority of families involved with child protection face, most child protection intervention is primarily geared toward addressing immediate safety concerns, rather than systemic conditions that undermine the development and well-being of children and align with many cases of neglect. (Connell et al., 2009; Jonson-Reid, Drake, Chung, & Way, 2003; Jonson-Reid, Emery, Drake, & Stahlschmidt, 2010; Logan-Greene & Semanchin Jones, 2017).

Child neglect is monitored across Canada as a public health concern through the Canadian Incidence Study (CIS) of Reported Child Abuse and Neglect, a cyclical health surveillance study that gathers data from provincial, territorial, and Indigenous child protection authorities. While these data provide important information about the incidence and characteristics associated with reported child maltreatment, they do not capture detailed information about children’s trajectories in child protection systems. Because child protection in Canada is legislated and administrated by the province or territory rather than federally, studies at the provincial or territorial level are necessary to precisely understand child protection involvement across Canada. While U.S. studies have reported risk factors for recurring neglect related to service availability (Logan-Greene & Semanchin Jones, 2017; Bae, Solomon, & Gelles, 2007), no such study reflects longitudinal population data from any Canadian province or territory, making it very difficult to understand the characteristics of families who are chronically involved with the child protection system and the additional services and supports these families require. Examining structural elements relevant to family functioning and well-being – such as socioeconomic vulnerabilities in the geographies where families live – is necessary to improve availability and accessibility of prevention and treatment services outside of the child protection system. This study – the first of its kind in a Canadian jurisdiction – examines when and for whom recurring involvement with child protection for reasons of neglect are most likely to occur from the point of initial child protection case closure for all children ($N = 76,176$) whose services ended between 2002 and 2017 in the province of Quebec.¹

1.1. Background

Although few studies have looked specifically at risk factors for recurring neglect, evidence generally suggests that recurrent involvement with child protection systems for reasons of neglect is common (Bae, Solomon, & Gelles, 2009; Bae et al., 2007; Fluke, Shusterman, Hollinshead, & Yuan, 2008; Jenkins, Tilbury, Hayes, & Mazerolle, 2018; Bae, Solomon, Gelles, & White, 2010; Casanueva et al., 2015; Connell, Bergeron, Katz, Saunders, & Tebes, 2007; Putnam-Hornstein, Simon, Eastman, & Magruder, 2015; Drake, Jonson-Reid, & Sapokaite, 2006; Eastman, Mitchell, & Putnam-Hornstein, 2016). In studies where the initial report was for neglect, subsequent reports were more likely to be also related to neglect (e.g., Bae et al., 2007; Connell et al., 2009). For example, Bae et al. (2007) found that among 25,500 cases of subsequent child protection reports related to neglect, 61 % followed initial reports of neglect

¹ Reforms of the Quebec Ministry of Health and Social Services in 2014 created 22 health and social service hubs covering 16 regions in the province (Government of Quebec, 2018). These hubs function as points of service or referral within the regions. Child protection services are administered through 18 Directors of Youth Protection (DYPs) which are also regionally situated throughout the province, including in northern First Nations and Inuit communities (Commission des droits de la personne et droits de la jeunesse du Québec, 2020). The mandate of the DYPs includes upholding the Youth Protection Act which articulates minimal provincial standards for child wellbeing (*Youth Protection Act, 2007*).

rather than another maltreatment type. Further, they found that neglect was the most common type of subsequent maltreatment across all forms of initial maltreatment. Similarly, [Connell et al. \(2009\)](#) found that for children reunified with their families following out-of-home placement for neglect, neglect was the primary type of maltreatment to recur. Children may also be at risk for re-report of neglect regardless of the initial maltreatment concerns. [Jonson-Reid et al. \(2003\)](#) found that for all initial maltreatment types (sexual abuse, physical abuse, emotional abuse, neglect, and other), re-reports related to neglect were the most common. Similarly, using data from the National Child Abuse and Neglect Data System (NCANDS) in the United States, [Fluke et al. \(2008\)](#) found neglect to be the most common maltreatment type underlying recurrence of reports following an initial event not specifically for neglect.

Previous findings suggest that risk of recurrent neglect is associated with parental substance abuse, domestic violence, parental mental health concerns ([Semanchin Jones & Logan-Greene, 2016](#); [Logan-Greene & Semanchin Jones, 2017](#)), a substantiated first report ([Kang, Bae, & Fuller, 2015](#); [Jonson-Reid et al., 2003](#); [Logan-Greene & Semanchin Jones, 2017](#); [Bae et al., 2007](#)), and family poverty ([Semanchin Jones & Logan-Greene, 2016](#); [Logan-Greene & Semanchin Jones, 2017](#); [Bae et al., 2007](#)). Family poverty has consistently been shown to be a major risk factor not only for initial child protection investigations for neglect ([Pelton, 1978](#)), but also for repeated involvement with child protection for reasons of neglect ([Jonson-Reid et al., 2019](#)). Many studies use repeated reports of neglect based on screening events as a measure for recurrence, rather than examining case closure following receipt of services – the latter can provide more robust estimates by reducing the possibility of co-occurring substantiated maltreatment appearing in the data. For example, some authors have looked at cases where multiple screened-in reports involving neglect were examined ([Semanchin Jones & Logan-Greene, 2016](#); [Logan-Greene & Semanchin Jones, 2017](#)), whereas others looked at a single recurrence or re-report of neglect ([Bae et al., 2007](#); [Kang et al., 2015](#)), or considered the number of ‘recidivism events’ as a variable ([Jonson-Reid et al., 2003](#)). Additionally, while neglect may be prevalent both as an initial and recurrent maltreatment type, moderating factors such as out-of-home placement – which can serve as a proxy measure indicating severity – may influence these findings ([Hélie, Poirier, & Turcotte, 2014](#)). The consistency of findings regarding recurrent neglect speaks to the need to understand what risk factors are predictive of recurring child protection involvement for reasons of neglect. Factors shaping environmental surroundings in which both reports and substantiation of child neglect may occur (and recur) indicate the need to better understand the risk factors related to neglect and recurrent child protection involvement.

Many studies confirm the association between family poverty and neglect leading to involvement in child protection across the United States ([Logan-Greene & Semanchin Jones, 2017](#); [Bae et al., 2007](#)). However, this relationship has not been adequately studied in jurisdictions that have made sustained efforts to reduce the effects of poverty and social exclusion such as Quebec, a province that has reduced income inequality through policies such as highly subsidized daycare ([Macdonald, 2018](#)), paid parental leave policies ([Commission des normes, de l'équité, de la santé et de la sécurité du travail, 2020](#)), and child tax benefits beyond those same programs offered federally ([Retraite Québec, 2020](#)).

1.2. Present study

This study contributes data from this unique jurisdiction, which may add to a broad, cross-jurisdictional conversation about recurrent involvement in child protection systems. The present study examines longitudinal data encompassing all child protection cases in the province of Quebec over a fifteen-year period. Because myriad socioeconomic, structural, and policy factors are intricately related to family well-being and child protection involvement, we find it important to study children’s trajectories in this system within the local provincial context. A further element of child protection in Canada which makes it important to study at the provincial level is that the way in which child maltreatment (“abuse,” “neglect,” etc.) is defined varies quite widely from one jurisdiction to another, rendering locally grounded studies distinct because data is categorized according to local definitions. When this kind of study is replicated in multiple jurisdictions, the results create opportunity for comparative analysis and a strong evidence base to inform practice and policy development. Recent developments in Quebec following the death of a young child due to severe neglect have prompted extensive public discussion² on rethinking child protection services and legislative frameworks for helping families facing mental health issues, substance abuse and addiction, family difficulties and crisis in a context of poverty. Because of the growing body of literature pointing to the relevance of these structural factors, along with the rapidly shifting landscape of child protection in Quebec, this study is relevant and timely for future policy and practice improvements grounded in robust data analysis.

2. Method

2.1. Data sources

This clinical population study uses a longitudinal research design that draws anonymized clinical administrative data from all of Quebec’s child protection jurisdictions³ and Quebec data extracted from the 2011 National Household Survey (NHS). Most covariates used in this study were constructed using child protection clinical-administrative data. The clinical population studied consists of the entire child population ($N = 76,176$) aged 17 years or younger served for the first time within one of Quebec’s child protection

² Following the death of a seven-year-old girl in the town of Granby on April 30, 2019, the Quebec government mandated a special Commission on the Rights of the Child and Youth Protection examining child protection services, the law that governs them, and the role of the courts, social services and other actors involved ([Commission des droits de la personne et droits de la jeunesse du Québec, 2020](#)).

³ Quebec’s health and social service regions administrate child protection services and are mandated by the Youth Protection Act of Quebec.

jurisdictions. Each member of the clinical population was defined as a child with ongoing child protection involvement whose first-ever child protection case was closed between April 1, 2002, and April 30, 2017. The socioeconomic disadvantage covariate was constructed using data from Quebec's census dissemination areas (CDA). The CDA data was extracted from the 2011 National Household Survey⁴ and is the smallest unit of census population data available. Given the lack of family-level poverty information in the clinical-administrative child protection dataset and the importance of moderating for poverty in frequentist models on child neglect, the CDA-level data was used to provide the most finite available measurement for socioeconomic vulnerabilities that children living in these areas experience. For example, this data provides the greatest amount of detail illustrating socioeconomic factors in a child's immediate surroundings, but also reaching beyond their family or household. The immediate surroundings can be imagined in geospatial terms such as an apartment block, cul-de-sac, or street, and behaves as a proxy family-level measure that does not allow for multi-level analysis.

Existing literature suggests that individual or family socioeconomic vulnerability may be approximated by measuring immediate surrounding socioeconomic factors (Lery, 2009). The socioeconomic disadvantage covariate (described in more detail below) is similarly used in this study as a proxy for family poverty.

The full composite index predicting recurrence of child protection involvement for reasons of neglect combines the CDA-level data with clinical-administrative child protection data. To create the composite index, CDA-level data were merged with clinical-administrative child protection data and organized by six-digit postal code (e.g. $\times 1X-1 \times 1$), culminating in a dataset composed of over 40,000 postal codes. The composite index was normalized using a log base 10 transformation, reflecting the socioeconomic disadvantage estimates of the clinical population (i.e., all children served by Quebec child protection prior to case closure). The index has a minimum score of -2.91 representing the lowest socioeconomic risk and a maximum score of 3.51 representing the highest socioeconomic risk. The index has a mean score of 0.431 ($SD\ 0.830$) and median of 0.415 .

2.2. Variables

Recurrence of child protection intervention for reasons of all forms of maltreatment and recurrence of child protection intervention for reasons of neglect are the dependent variables in this study. Recurrence of child protection involvement for reasons of maltreatment is a dichotomous variable defined as a substantiated report and determination of a child's safety and/or development being compromised, leading to a second case opening for ongoing child protection involvement for any substantiated reason following the initial case closure. Recurrence of child protection intervention for reasons of neglect consists of a dichotomous variable defined as a subsequent substantiated allegation leading to ongoing child protection involvement following initial case closure for reasons of either a) physical, material, or health neglect, b) emotional neglect, c) school neglect, or d) parent high-risk lifestyle. The follow-up period for the two models starts from the date of initial case closure to the date of: (1) substantiated child protection involvement for any reason (recurrence of maltreatment); and (2) substantiated child protection involvement for reasons of neglect (including all sub-types listed above). For children who do not experience a recurrence, the follow-up period starts from the date of case closure to the end of the follow-up period — April 30, 2017 or the youth's 18 th birthday, whichever came first.

Because the impact of maltreatment and neglect on children's developmental well-being is mediated by their age, recurrent involvement with child protection systems may impact children's developmental well-being differently during certain life stages (i.e., infancy vs. middle childhood vs. adolescence; Massinga & Pecora, 2004). Further, the timing of recurring child protection involvement may be a consequence of children's life-stage. For example, adolescents who, over time, may have developed important peer or non-family supports may rely on these supports as possible protective factors against the challenges associated with maltreatment and neglect, whereas younger children may find themselves contending with the challenges alone and this, in turn, may lead to relational stress and difficulty regulating emotional behavior. From this life-course perspective, children's age and child protection services are linked: a child's developmental stage and concomitant needs are important in considering their risk of maltreatment, risk of removal from the home, placement changes, case closure, and recurring child protection intervention (e.g., Elder, 1998). In order to account for differences in age-based vulnerabilities to the various moderators in our study design, we estimated Cox proportional hazard models for two distinct groups: (1) children aged 0–9 years at initial case closure; and (2) children aged 10–17 years at initial child protection case closure. The models include explanatory variables reflecting the ecological influences related to the likelihood of recurrence. **Age at case closure** is measured as a categorical variable with children age 6–9 years as the reference group in recurrence models for children 0–5 years at case closure and youth aged 14–17 years as a reference group for youth age 10–13 years at case closure. The younger cohort was also further broken down to specifically examine children age 0–1 due to the significant developmental shifts that happen during this window of time. **Gender** is a nominal variable with female as the reference group for male. **Reason for child protection intervention prior to case closure** consists of the following dichotomous constructs: (1) psychological abuse, which includes exposure to intimate partner violence and exploitation; (2) emotional or material neglect, which includes rejection, denigration, and material deprivation; (3) physical and health neglect, which includes physical and medical neglect; (4) parent high-risk lifestyle, which represents parents' lifestyle resulting in a failure to supervise or protect the child, including abandonment due to parental absence, substance misuse and abuse, refusal to assure child care, and risk of neglect; (5) school truancy and school neglect for school-aged

⁴ This data is not collected every year, so we have relied on data from one year to estimate CDA-level socioeconomic vulnerability. Further, the CDA-level socioeconomic vulnerability index is highly correlated with previous cycle of census data, indicating an almost near linear relationship.

children; (6) children's "serious behavioral disturbance" such as harming behavior, violence towards self and others, child substance abuse, school behavioral problems, runaway behavior, and destruction of property⁵; and (7) confirmed physical and sexual abuse, which are the reference categories for reason for child protection involvement at case closure. **Source of referral** includes the following nominal values: (1) public community health and social service clinics (*centres locaux de services communautaires*; CLSCs); (2) child protection agency; (3) police; (4) other professional institutions including community services and public services external to the child protection system; (4) school staff; (5) hospital staff; (6) anonymous referrals; and (7) extended family and neighbours, which is the reference category for source of referral. **Out-of-home placement** is a nominal variable that indicated whether a child was placed in out-of-home care at any point prior to initial case closure. Out-of-home placement is defined as any placement in subsidized family-based care or in a structured group living setting or a therapeutic residential treatment facility prior to initial case closure. **Number of placements** is a continuous variable calculated by examining the number of out-of-home placements children experienced during their first instance of coming into care; e.g., between initial case opening and case closure. As described above, the clinical population measure of **socioeconomic disadvantages** on data drawn from each CDA in Quebec, of which there are 13,161 containing between 400 and 700 people each. Six socioeconomic indicators comprised socioeconomic disadvantages: (1) average population 15 years and over who are either unemployed or not in the labor force; (2) median income for population 15 years and over; (3) average persons in a private household living alone; (4) average population 15 years and over who were separated, divorced, or widowed; (5) family median income; and (6) median household income. Finally, we were not able to extract meaningful ethno-racial data from the administrative data due to non-random missing data in this category for 23 % of children in the population studied.

2.3. Analytic model

Cox proportional hazard models were used to examine when and for whom recurrence of maltreatment and recurrence of neglect are most likely to occur, with special attention given to children involved with the child protection system prior to case closure for reasons of neglect. The Cox model (Kalbfleisch & Prentice, 2002) is specified as:

$$h(t) = h_0(t) \times \exp(b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k)$$

where $h_0(t)$ is the baseline hazard of (1) recurrence of maltreatment and (2) recurrence for reasons of neglect on any given day (t) following initial case closure for children with the value 0 for all the predictor variables. The coefficients $b_1 \dots b_k$ were estimated by the proportional regression function for predictor variables $X_1 \dots X_k$. The exponential of the coefficients $b_1 \dots b_k$ reflected the chances that recurrence will increase (greater than 1) or decrease (less than 1). We then calculated the reciprocal of the hazard for all significant coefficients with positive estimates (increased likelihood of recurrence), specified as $1 / b_{1 \dots k}$, in order to compare the expected event-free time per child at risk across models for the same explanatory variables. This comparison helped us understand the extent to which children involved with child protection for neglect at initial case closure continue to be involved with child protection for reasons of neglect.

We also ran sensitivity tests in the form of multinomial logistic regressions. As suspected, this produced exactly the same interpretation of results presented here. To account for risk on any given day and for ease of interpretation, we decided to present two comparative Cox proportional hazard models for each age-specific population. Tables 2 and 3 below report the results of the Cox proportional hazard models for these two age-specific cohorts. The models present hazard estimates and standard errors, allowing us to conclusively reject the null hypothesis and understand how the moderators influence neglect and recurrence, and compute reciprocal hazard estimates between positive explanatory coefficient estimates across the models. Statistical tests were conducted at 95 % level of confidence. We built, transformed, and analyzed the dataset using SPSS version 25.

3. Results

The total population of children studied constituted all 76,176 children involved in child protection who had their initial case closed between April 1, 2002, and April 30, 2017, of whom 37,724 were aged 0–9 years and 38,452 were aged 10–17 at case closure. Of the total population studied, 32.5 % ($N = 24,816$) experienced a recurrence of maltreatment and 11.4 % ($N = 8,707$) experienced a recurrence specifically for reasons of neglect. Fig. 1 illustrates these descriptive statistics.

For half of all children who experienced a recurrence of maltreatment, child protection intervention was initiated within 464 days of the initial case closure. While time to recurrence did not vary for cases initially opened for reasons of neglect, the children who did return to the attention of child protection authorities for reasons of neglect did so more quickly compared to all forms of maltreatment (median of 389 for neglect compared to 464 days for other forms of maltreatment). A description of the clinical population appears in Table 1.

Among children aged 0–9 years at initial case closure, 39.5 % ($N = 14,896$) experienced a recurrence of some form of maltreatment and among these, 16.7 % had a recurrence specifically for reasons of neglect. For older youth aged 10–17 years at case closure, 25.8 % ($N = 9,920$) experienced a recurrence of some form of maltreatment, among whom 6.2 % ($N = 2,402$) experienced a recurrence for reasons of neglect. There were relatively equal proportions of male and female children whose cases closed and who experienced a

⁵ In Quebec, this falls under the mandate of the Youth Protection Act, and intervention would typically involve referral to developmentally appropriate mental health services.

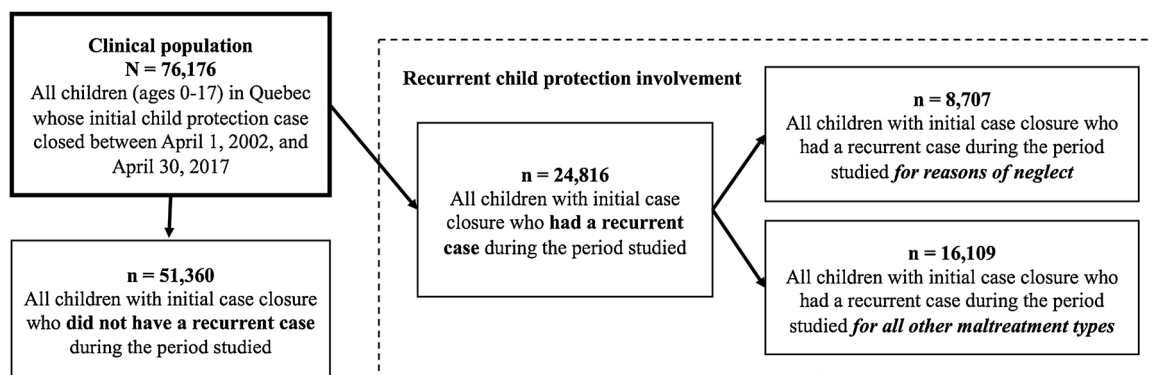


Fig. 1. Cohort and descriptive findings of recurrent involvement with child protection.

recurrence of maltreatment. Among children aged 0–9 years who experienced a recurrence of maltreatment, 55.5 % were involved with child protection for their parents' high risk lifestyle prior to case closure – a proportion that increased to 68.1 % for those who experienced a recurrence for reasons of neglect. For older youth aged 10–17 years old, close to a third (32.6 %) were involved with child protection for their parents' high risk lifestyle – this increased to 56.8 % for youth who had recurrent child protection involvement for reasons of neglect. While younger children whose cases were closed during the study period were primarily involved with child protection for reasons pertaining to parents' high risk lifestyle, serious behavioral issues were the leading cause for child protection involvement for older youth (32.1 %). However, serious behavioral issues at case closure were second in importance when looking only at recurring cases: 27.9 % of older youth experiencing a recurrence of maltreatment were involved with child protection for serious behavioral issues (versus 32.6 % for parents' high risk lifestyle), and 12.3 % of older youth recurring for reasons of neglect had been involved for serious behavioral issues at case closure (as opposed to 56.8 % for parents' high risk lifestyle). Among children 0–9 years old at case closure, more than half had been initially referred to child protection by a family member (20.6 %), a child protection agency (17.9 %), or the police (16.0 %), whereas for older youth, just under half were referred either by a family member (23.0 %) or another professional institution (23.3 %). For both age groups, the proportions based on source of referral remain distributed similarly for those experiencing a recurrence of maltreatment and for those recurring specifically for reasons of neglect.

More than fifteen percent of children aged 0–9 years at case closure were placed in out-of-home care, for which the average count of placements at case closure was 1.95 (*SD* 1.53) per child. While the proportion of children placed in out-of-home care decreased for younger children who experienced a recurrence, the average placement count increased to more than two placements on average for younger children who experienced a recurrent involvement with child protection for reasons of maltreatment and neglect. For older youth, over a quarter (26.2 %) were placed in out-of-home care prior to case closure, of which the average number of placements was 2.29 (*SD* 1.97) per youth – significantly more than for younger children. While the average number of placements decreased for those who experienced a recurrence for reasons of neglect, the average number of placements increased slightly to 2.36 (*SD* 2.12) for youth who experienced a recurrence of some form of maltreatment (neglect or otherwise). The composite estimate of socioeconomic disadvantages for child protection involved children aged 0–9 years at case closure was .492 (*SD* 0.821). Socioeconomic disadvantage estimates increased for younger children who experienced a recurrence of maltreatment (.531; *SD* 0.813), and were highest for those who experienced a recurrence for reasons of neglect (.569; *SD* 0.795). A similar pattern is noted for older child protection involved youth, with socioeconomic disadvantage estimates increasing to .453 (*SD* .827) for recurring youth, and highest estimates for those recurring specifically for reasons of neglect (.530; *SD* .789).

3.1. Hazard analyses of recurrence for children aged 0–9 years at initial case closure

Table 2 (below) presents final estimates of the effect of case level factors and socioeconomic disadvantages on the risk of recurrence for younger children aged 0–9 years. Factors that increased the risk of recurrence of maltreatment included: male gender; younger age at the time of case closure; psychological abuse; emotional and material neglect; physical and health neglect; parents' high risk lifestyle; school truancy; behavioral problems; family referrals; number of placements experienced prior to case closure; and socioeconomic disadvantages. While we found a similar risk pattern for recurrence specifically for reasons of neglect, gender, psychological abuse, and the number of placements, these were not significant risk factors for neglect-only index events. It is important to note here that younger children initially involved with child protection for reasons of neglect and behavioral problems were much more likely to recur for reasons of neglect compared to children initially involved with child protection for reasons of physical or sexual abuse. We noted shorter event-free time per child at risk for recurrence of neglect compared to recurrence for maltreatment in general, related to the effects of: emotional and material neglect; physical and health neglect; parents' high risk lifestyle; behavioral problems; and socioeconomic disadvantages particularly for younger children aged 0–1 years. Together, younger socioeconomically vulnerable children involved with child protection for reasons of neglect at case closure were the most at risk of recurrent involvement for reasons of neglect, aside from the very limited number of children involved with child protection for behavioral issues at initial case closure.

Table 1
Descriptive factors.

Individual factors	Children closed 0-9 (N = 37 724)	Recurrence of all forms of maltreatment 0-9 (N = 14 896)	Recurrence specifically of neglect 0-9 (N = 6 305)	Children closed 10-17 (N = 38 452)	Recurrence of all forms of maltreatment 10-17 (N = 9 920)	Recurrence specifically of neglect 10-17 (N = 2 402)
Recurrence		39.5 %	16.7 %		25.8 %	6.2 %
Child age at case closure:						
0–1 years	12.4 %	12.0 %	14.5 %	–	–	–
2–5 years	44.3 %	44.7 %	46.9 %	–	–	–
6–9 years	43.2 %	43.1 %	38.4 %	–	–	–
10–13 years	–	–	–	44.1 %	60.6 %	73.1 %
14 and older	–	–	–	55.8 %	39.3 %	26.8 %
Gender:						
Male	53.0 %	53.9 %	53.3 %	52.4 %	53.5 %	50.5 %
Female	47.0 %	46.1 %	46.7 %	47.6 %	46.5 %	49.5 %
Reason for services at case closure:						
Psychological abuse	14.1 %	12.1 %	5.7 %	10.1 %	9.3 %	4.8 %
Emotional and material neglect	1.7 %	2.7 %	3.4 %	1.8 %	2.4 %	3.8 %
Physical and health neglect	6.8 %	7.1 %	8.2 %	2.9 %	3.1 %	5.0 %
Parent high risk lifestyle	50.5 %	55.5 %	68.1 %	26.7 %	32.6 %	56.8 %
School truancy & neglect	9.8 %	9.0 %	6.4 %	10.7 %	10.2 %	6.2 %
Behavioral problems	0.9 %	1.1 %	0.8 %	32.1 %	27.9 %	12.3 %
Risk of or confirmed sexual abuse	3.5 %	2.4 %	1.6 %	5.4 %	4.2 %	3.3 %
Risk of or confirmed physical abuse	12.8 %	10.2 %	5.9 %	10.3 %	10.4 %	7.7 %
Source of referral at case closure:						
CLSC	12.0 %	11.9 %	11.4 %	11.6 %	11.4 %	10.6 %
Child welfare agency	17.9 %	17.4 %	17.1 %	13.3 %	12.6 %	13.9 %
Police	16.0 %	15.9 %	16.1 %	15.9 %	15.3 %	14.0 %
Other professional institutions	7.8 %	7.8 %	8.2 %	5.5 %	4.9 %	6.3 %
School	9.8 %	10.0 %	8.0 %	23.3 %	24.6 %	24.1 %
Hospital staff	12.6 %	9.8 %	10.8 %	4.3 %	3.9 %	4.0 %
Anonymous referrals	3.4 %	4.4 %	5.4 %	3.2 %	3.6 %	5.2 %
Family	20.6 %	22.8 %	23.0 %	23.0 %	23.7 %	21.9 %
Out-of-home placement:	15.2 %	12.2 %	13.8 %	26.2 %	26.7 %	21.1 %
Number of placements	1.95(1.53)	2.07(1.81)	2.08(1.80)	2.29(1.97)	2.36(2.12)	2.27(2.04)
Socioeconomic disadvantages	.492(.821)	.531(.813)	.569(.795)	.371(.836)	.453(.827)	.530(.789)

3.2. Hazard analyses of recurrence for youth aged 10–17 years at initial case closure

Table 3 (above) presents final estimates of the effect of case level factors and socioeconomic disadvantages on the risk of recurrence for older youth aged 10–17 years. Factors that increased the risk of recurrence of maltreatment included: female gender; younger youth at the time of case closure; psychological abuse; emotional neglect; physical, material, and health neglect; parents' high risk lifestyle; school truancy; behavioral problems; out-of-home placement; number of placements experienced prior to case closure; and socioeconomic disadvantages. A similar risk pattern was found for recurrence for reasons of neglect; however, behavioral problems, school truancy, and both placement variables were no longer significant. We observed longer event-free time per older child at risk of recurrence of all forms of maltreatment compared to recurrence specifically of neglect related to the effects of: being 10–13 years; emotional and material neglect; physical and health neglect; parents' high risk lifestyle; and socioeconomic disadvantages. Similar to younger children initially involved with child protection for any maltreatment type, youth involved for reasons of neglect at initial case closure were the most at risk of subsequent engagement with child protection for neglect.

4. Discussion

This study used clinical-administrative child protection data and National Household Survey (NHS) data for the province of Quebec to examine recurrence of child protection involvement related to all forms of maltreatment and specifically for reasons of neglect.

Table 2
Cox proportional hazard model of recurrence for children 0–9 years at case closure.

	Number of Events and Censored Values									
	Total	Events	Censored	% Censored		Beta	1 / Beta	SE	Adj. HR	(95 % CI)
	37 724	14 896	22 828	60.5 %						
	Total	Events	Censored	% Censored						
	37 724	6 305	31 724	83.3 %						
	Recurrence of maltreatment					Recurrence for reasons of neglect				
	Beta	1 / Beta	SE	Adj. HR	(95 % CI)	Beta	1 / Beta	SE	Adj. HR	(95 % CI)
Child age at case closure:										
0–1 years	.112	8.93	.029	1.118***	(1.057, 1.183)	.320	3.12	.042	1.377***	(1.268, 1.496)
2–5 years	.032		.018	1.032	(.995, 1.070)	.130	7.69	.029	1.139***	(1.076, 1.204)
6–9 years (ref)										
Male (female ref)	.052	19.2	.016	1.053**	(1.019, 1.087)	.030		.025	1.031	(.981, 1.083)
Reason for services at initial case closure:										
Psychological abuse	.310	3.22	.033	1.364***	(1.277, 1.456)	-.003		.071	.997	(.868, 1.145)
Emotional and material neglect	.542	1.84	.056	1.719***	(1.542, 1.917)	1.34	0.74	.083	3.815***	(3.241, 4.491)
Physical and health neglect	.440	2.27	.039	1.553***	(1.439, 1.676)	1.06	0.94	.064	2.880***	(2.539, 3.268)
Parent high risk lifestyle	.279	3.58	.026	1.322***	(1.256, 1.391)	1.01	0.99	.049	2.769***	(2.514, 3.050)
School truancy & neglect	.395	2.53	.036	1.484***	(1.383, 1.593)	.521	1.91	.068	1.683***	(1.472, 1.924)
Behavioral problems	.384	2.60	.081	1.468***	(1.253, 1.719)	.704	1.42	.146	2.022***	(1.520, 2.690)
Risk of or confirmed sexual abuse(ref)										
Risk of or confirmed physical abuse(ref)										
Source of referral at initial case closure:										
CLSC	-.124		.029	.883***	(.834, .936)	-.194		.046	.823***	(.753, .901)
Child protection agency	-.144		.026	.866***	(.822, .911)	-.194		.041	.824***	(.761, .892)
Police	-.089		.027	.915**	(.868, .965)	-.039		.041	.962	(.887, 1.042)
Other prof. institutions	-.122		.034	.886***	(.828, .947)	-.081		.051	.922	(.834, 1.020)
School	-.071		.032	.932*	(.875, .993)	-.150		.053	.860**	(.775, .955)
Hospital staff	-.446		.033	.640***	(.600, .683)	-.520		.049	.594***	(.540, .654)
Anonymous referrals	-.022		.043	.978	(.899, 1.064)	.123		.060	1.131*	(1.005, 1.273)
Family (ref)										
Out-of-home placement	-.374		.037	.688***	(.640, .739)	-.325		.052	.722***	(.652, .800)
Number of placements	.031	32.25	.013	1.031*	(1.006, 1.057)	.032		.018	1.033	(.997, 1.070)
Socioeconomic disadvantages	.072	13.80	.010	1.074***	(1.053, 1.096)	.095	10.53	.016	1.100***	(1.067, 1.134)

Consistent with results reported by [Hélie et al. \(2014\)](#) and [Jenkins et al. \(2018\)](#), the current study finds that the majority of children involved with child protection do not experience a recurrence of maltreatment after initial case closure. However, for those who do, this is driven predominantly by initial and subsequent child protection cases in which the primary concerns regarding the security and development of the child are coded as neglect, which is consistent with previous findings ([Bae et al., 2007, 2009](#); [Jenkins et al., 2018, 2010](#); [Casanueva et al., 2015](#); [Connell et al., 2007](#); [Putnam-Hornstein et al., 2015](#)).

In this study, socioeconomic disadvantages were significant predictors of recurrence of maltreatment generally, and neglect in particular. The results regarding socioeconomic vulnerability and recurrent neglect cases prompt us to further consider chronic family need in analyzing child protection trajectories. While there are many previous studies linking poverty to neglect in particular ([Connell et al., 2007](#); [Esposito, Chabot, Rothwell, Trocmé, & Delaye, 2017](#); [Dakil, Sakai, Lin, & Flores, 2011](#); [Jonson-Reid et al., 2003](#); [Semanchin Jones & Logan-Greene, 2016](#)), we suggest that our findings merit further attention to families’ chronic socioeconomic vulnerability.

Several case-level demographic findings indicate various considerations, particularly regarding clinical case factors, the age and gender of a child, and the source of child protection reports in Quebec. For the younger cohort in our study, behavioral issues were related to an increased risk of recurrence of maltreatment, particularly for reasons of neglect. This concurs with [Jones and Semanchin Jones and Logan-Greene \(2016\)](#), who identified behavioral issues (delinquent or ‘risky’ behavior) as a risk factor for chronic neglect. While behavioral problems were a main concern for child protection involvement in less than 1 % of cases closed for younger children (see [Table 1](#)), our findings highlight a subgroup of younger children facing a complex array of difficulties that surround neglect, which together affect their well-being and contribute to the chronicity of child protection system involvement. Our findings corroborate results from previous studies illustrating younger age as a risk factor for recurrence ([Fluke et al., 2008](#); [Jenkins et al., 2018](#); [Hélie, Turcotte, Trocmé, & Tourigny, 2012, 2014](#); [Bae et al., 2007, 2009, 2010](#); [Connell et al., 2007](#); [Drake et al., 2006](#); [Jedwab, Harrington, & Dubowitz, 2017](#); [Logan-Greene & Semanchin Jones, 2017](#)), as well as differential effects of referral source on risk of recurrence for

Table 3
Cox proportional hazard model of recurrence for children 10–17 years at case closure.

	Number of Events and Censored Values									
	Total		Events	Censored	% Censored					
	38 452		9 920	28 532	74.2 %	Recurrence of maltreatment				
	Total		Events	Censored	% Censored	Recurrence for reasons of neglect				
	38 452		2 402	36 050	93.8 %	Recurrence for reasons of neglect				
	Beta	1 / Beta	SE	Adj. HR	(95 % CI)	Beta	1 / beta	SE	Adj. HR	(95 % CI)
Child age at case closure										
10–13 years	.496	2.01	.025	1.642***	(1.565, 1.723)	.763	1.31	.051	2.145***	(1.940, 2.373)
14–17 years (ref)										
Male (female ref)	-.044		.020	.957*	(.919, .996)	-.122		.041	.885**	(.816, .959)
Reason for services at case closure:										
Psychological abuse	.108	9.26	.042	1.114*	(1.025, 1.210)	-.275		.112	.759*	(.610, .945)
Emotional and material neglect	.280	3.57	.070	1.323***	(1.153, 1.519)	1.04	0.96	.122	2.830***	(2.230, 3.592)
Physical and health neglect	.181	5.52	.063	1.199**	(1.059, 1.357)	.907	1.10	.111	2.478***	(1.994, 3.079)
Parent high risk lifestyle	.200	5.00	.032	1.222***	(1.148, 1.301)	1.05	0.95	.068	2.866***	(2.509, 3.272)
School truancy & neglect	.224	4.46	.041	1.251***	(1.154, 1.357)	.021		.103	1.021	(.835, 1.249)
Behavioral problems	.388	2.58	.035	1.475***	(1.376, 1.581)	.003		.089	1.003	(.841, 1.195)
Risk of or confirmed sexual abuse(ref)										
Risk of or confirmed physical abuse(ref)										
Source of referral at case closure:										
CLSC	-.063		.036	.939	(.874, 1.008)	-.084		.076	.920	(.792, 1.068)
Child protection agency	-.170		.035	.843***	(.787, .904)	-.119		.070	.888	(.774, 1.019)
Police	-.057		.033	.945	(.886, 1.008)	-.083		.070	.920	(.802, 1.055)
Other prof. institutions	-.180		.050	.835***	(.757, .921)	.018		.093	1.018	(.849, 1.220)
School	-.010		.029	.990	(.935, 1.049)	.062		.061	1.064	(.944, 1.199)
Hospital staff	-.136		.055	.873*	(.784, .973)	-.105		.111	.900	(.724, 1.119)
Anonymous referrals	-.074		.057	.928	(.830, 1.039)	.184		.100	1.202	(.988, 1.464)
Family (ref)										
Out-of-home placement	.144	6.94	.032	1.155***	(1.085, 1.229)	-.003		.072	.997	(.867, 1.147)
Number of placements	.046	21.74	.009	1.047***	(1.028, 1.065)	.023		.022	1.023	(.980, 1.068)
Socioeconomic disadvantages	.110	9.09	.012	1.116***	(1.090, 1.143)	.173	5.78	.025	1.189***	(1.132, 1.249)

different kinds of maltreatment (e.g., [Fluke et al., 2008](#); [Bae et al., 2007, 2009, 2010](#)). In particular, our finding that school as a source of referral was much more common for recurrent reports for older children (age 10–17) compared to younger children, reflects previous literature noting that differential exposure may explain increased reporting to child welfare by certain referral sources (e.g., [Bae et al., 2010](#)). Contrary to most recurrence research suggesting that gender is not a factor for risk of recurrence ([Connell et al., 2007](#); [Jenkins et al., 2018](#); [Li et al., 2014](#); [Dakil et al., 2011](#)), this study found that gender played a significant role when examining age at case closure, affecting the probability of recurrence differently over the lifespan. Being male increased recurrence of maltreatment for younger children, while being female increased the risk of both recurrence of maltreatment and recurrence for reasons of neglect for older children. Further studies on recurrent child protection involvement related to developmental stage and gender are needed to make sense of this finding.

The well-documented chronic need of a large proportion of child protection-involved families (e.g., [Trocmé, Kyte, Sinha, & Fallon, 2014](#)) and our finding that all kinds of maltreatment cases are more likely to recur when socioeconomic need is high should prompt further questions about how policy, practice, and research solutions can fill this gap for families. In particular, the finding that children's involvement in child protection systems recurs more quickly when concerns relate to neglect in particular is important: when socioeconomic gaps exist, they persist even when initial child protection cases are closed.

4.1. Policy

This study invites policymakers to critically evaluate the availability, and more specifically the accessibility, of family support services within the most impoverished jurisdictions. Further, we advocate working towards a supportive policy structure that mitigates the impact of social and economic needs, which have been shown to be associated with recurring child protection involvement ([Eckenrode, Smith, McCarthy, & Dineen, 2014](#)), particularly due to neglect. Because of this, a renewed emphasis on prevention through universal access to a diverse array of family support services should be sought. Our time-to-recurrence finding that neglect

cases were more quickly re-referred than those related to other child maltreatment concerns undergirds the importance of considering the chronicity of need in these families. Policy frameworks must consider the availability of services designed to meet the socioeconomic needs of families to reduce recurrent involvement with child protection systems. While the province of Quebec offers a relatively robust array of poverty reducing and family support services that are often recognized as helpful in mitigating the deleterious socioeconomic conditions that often correlate with neglect (Loman & Siegel, 2012; Rostad, Rochers, & Chaffin, 2017), the findings of this study indicate that more—or different—supports may be required. Additional poverty reduction policies – well beyond the scope of child protection or family support services – should be introduced to support the security of children and families and the areas in which they live.

4.2. Practice

While several studies recommend poverty-focused practice approaches to addressing neglect (Loman & Siegel, 2012; Rostad et al., 2017), expanded risk- and safety-focused definitions of child neglect in practice mean many families experiencing socioeconomic precarity do not have their fundamental needs addressed through child protection intervention, leaving them vulnerable to recurrence. A narrow focus on maltreatment, safety, and risk of harm—as opposed to the broader, chronic conditions that correlate with neglect—will do little to support families in meeting children’s developmental needs when socioeconomic challenges persist. Addressing socioeconomic needs and increasing parental capacity in families involved with child protection for neglect, especially for younger children (ages 0–9), has the potential to reduce the likelihood of neglect recurrence to the extent that it relates to socioeconomic factors and behavioral problems. Accordingly, child protection practice ought to include considerations of socioeconomic need in family assessments to preclude too narrow a focus on risk and safety, and instead incorporate structural, chronic needs into assessment and intervention frameworks. If decisions at case closure are solely based on immediate risk of harm to children, chronic socioeconomic needs of families—and concomitant developmental harms—will persist.

Based on our findings, we invite child protection practice to be proactive in addressing family needs and challenges while reducing recurring risks to child well-being through prioritizing community and family support services. Practitioners should make every effort to increase the scope of intervention beyond assessment of immediate safety concerns to include risk of cumulative harm based on the difficult environments that often surround neglect. Approaches simultaneously addressing multiple challenges associated with family needs, family engagement, and service linkage have been associated with lower rates of recurring investigations for maltreatment (Fluke et al., 2018). Further, intensive home-based services in the U.S. have been shown to reduce the risk of chronic child protection involvement for reasons of neglect (DePanfilis & Dubowitz, 2005). Finally, when assessing case closure, child protection authorities should assess and refer to an array of services and supports for families, mobilizing both formal and informal family supports with the aim of preventing subsequent child protection involvement.

4.3. Research, limitations, and considerations

Future research should further consider the association between socioeconomic needs and recurrent maltreatment (and the pace and prevalence of recurrent neglect), the context in which these needs arise, and the various ways in which these needs can be mitigated. Similar comparative studies in other jurisdictions, with a deepened focus on social service spending and socioeconomic vulnerability, would create space for further analysis to better understand recurrent involvement in child protection.

Methodological differences between this study and most of the published literature make direct comparison of results difficult. While we started our observation at the point of initial case closure, many previous studies were based on cohorts constituted of cases (children or sometimes families) re-reported from the point of initial child protection investigation. In addition, our approach diverges from some of the definitions of recurrence found in the literature; while we defined recurrence as a new substantiated allegation leading to ongoing child protection involvement, previous studies generally defined the recurring event to be a new report or allegation. Further, our socioeconomic vulnerability index is constructed using latent variables from census data during one year. While these data correlated strongly with data from other years, the lack of available data prevented us from using socioeconomic data covering the full period during which the administrative child protection data was collected. Lastly, due to the lack of usable data, including children’s ethno-racial background as a predictive characteristic in the final models was not possible, meaning analysis in this area could not be conducted.

Conflict of interest

The authors declare no conflict of interest. This manuscript does not contain any studies with human participants performed by any of the authors.

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