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Explaining the Economic Disparity Gap in the Rate of Substantiated Child Maltreatment in Canada

Authors

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Aux États-Unis, les enfants issus de familles ayant des difficultés économiques ont cinq fois plus de risque que leurs équivalents socioéconomiques supérieurs, de subir des préjudices ayant été corroborés, liés à la violence et à la négligence envers les enfants. La différence de risque entre les blocs économiques est ce qu'on appelle « écart économique dans la violence envers les enfants ». Les dynamiques de cet écart économique au Canada sont encore peu connues. Cette étude vise à comprendre la prévalence des difficultés économiques dans le système de protection de l'enfance et à expliquer l'écart économique. Nous avons utilisé l'Étude canadienne sur l'incidence des signalements de cas de violence et de négligence envers les enfants 2008 (ECI-2008), dans le cadre de laquelle des données ont été recueillies auprès des travailleuses et des travailleurs lors d'enquêtes ($n = 15\,980$) réalisées dans 112 établissements de protection de l'enfance. En 2008, les difficultés économiques étaient source de préoccupation pour 13 % de toutes les familles ayant fait l'objet d'une enquête. Le taux de corroboration de la maltraitance était plus élevé pour les enfants issus de familles ayant des difficultés économiques (80 %) que pour les enfants issus de familles sans difficulté économique (51 %). Le risque relatif non corrigé (RR) pour la maltraitance ayant été corroborée était de 1,49 (groupe de référence = enfants issus de famille sans difficulté économique), IC [1,46 – 1,52]; le RR corrigé par régression était de 1,21, IC [1,16 – 1,24]. Sur les 29 points de pourcentage de l'écart économique quant à la maltraitance ayant été corroborée, une analyse de décomposition a indiqué que le 69 % (soit l'équivalent de 20 points de pourcentage) était expliqué par des différences des covariables. Les facteurs de risque associés aux personnes soignantes comme l'utilisation d'alcool ou d'autres drogues, la santé mentale, de même que les facteurs sociaux, historiques et relationnels représentent la majeure partie de ces différences. De nouveaux programmes et politiques interdisciplinaires seront nécessaires pour combler le grand écart économique.

Children from families living in conditions of economic hardship are at five times greater risk of substantiated harm of child abuse and neglect compared to their upper socioeconomic counterparts in the United States. This difference in risk across economic

groups is referred to as the economic disparity gap in child maltreatment. Little is known about how the economic disparity gap functions in Canada. The purpose of this study is to understand the prevalence of economic hardship in the child welfare system and explain the economic disparity gap. We used the Canadian Incidence Study of Reported Child Abuse and Neglect, 2008 (CIS-2008) that collected worker reported data on investigations ($n = 15,980$) from 112 Canadian child welfare sites. In 2008, economic hardship was noted as a concern for 13% of all families investigated. The rate of maltreatment substantiation was greater for children in families with economic hardship (80%) compared to children without economic hardship (51%). The unadjusted risk ratio (RR) for substantiated maltreatment was 1.49 (reference group = children not experiencing economic hardship), CI [1.46 – 1.52]; regression-adjusted RR was 1.21, CI [1.16 – 1.24]. Of the 29-percentage point economic disparity gap in substantiated maltreatment, decomposition analysis showed that 69% (*i.e.*, equivalent to 20 percentage points) was explained by differences in covariates. Caregiver risk factors such as substance use, mental health, and social/historical factors such as having been a victim of domestic violence or past placement in foster care, accounted for most of that difference. Closing the large economic disparity gap requires new interdisciplinary policies and programs.

A SUBSTANTIAL NUMBER OF CHILDREN in Canada experience economic hardship. While most research on child well-being has focused on income poverty, we deliberately examine the broader construct of economic hardship.¹ Economic hardship is defined as a household failing to meet the family's nutritional, clothing, shelter, and medical needs due to lack of money.² Statistics Canada's low income cut-offs (LICOs), designed to identify the income levels at which families are devoting more than the average family to meet such necessities, help capture the numbers of Canadian families who may be experiencing economic hardship. The latest figures suggest that 8.3% of Canada's children are living in families below the LICOs.³ In comparative terms, Canada's child poverty rate ranks twentieth out of forty-one OECD countries.⁴ Growing up in an

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¹ Because of the paucity of research on economic hardship and child welfare we also include the literature on poverty. We consider poverty an indicator of the broader construct of economic hardship. As such, we presume that all income poor children experience economic hardship.

² John Mirowsky & Catherine E Ross, "Economic Hardship across the Life Course" (1999) 64:4 *American Sociological Review* 548.

³ Children are considered those under the age of eighteen years. Statistics Canada, "Low income statistics by age, sex and economic family type, Canada, provinces and selected census metropolitan areas (CMAs)" *CANSIM* Table 206-0041 (2016), online: Statistics Canada <www5.statcan.gc.ca/cansim/a26?lang=eng&id=2060041> [perma.cc/9KMG-TZUU]

⁴ UNICEF Office of Research, *Children of the Recession: The Impact of the Economic Crisis on Child Well-Being, Innocenti Report Card* (Florence: UNICEF Office of Research, 2014), online: <www.unicef.ca/sites/default/files/legacy/imce_uploads/images/reports/unicef_report_card_12_children_of_the_recession.pdf>. [perma.cc/R59J-DFHC]

environment lacking sufficient economic resources is associated with lifelong hardship. For example, poor children have greater risk of involvement with the child welfare system compared to non-poor children. Overwhelming evidence suggests that low income and poverty are positively related to rates of child maltreatment,⁵ though the magnitude of the relationships vary by type of maltreatment, and child welfare service disposition.⁶ While the high prevalence of economic hardship among children involved with the child welfare system is well known among practitioners and policy-makers, the specific factors driving the observed inequalities, and their interrelationships are not well understood.

In this study, we examine how the risk of substantiated maltreatment differs between families experiencing economic hardship compared to those not experiencing that hardship. We use a nationally-representative Canadian sample of child maltreatment reports to estimate and compare the rates of substantiated child maltreatment between families with and without economic hardship. We then employ a novel decomposition technique to quantify how much of the disparity gap is explained by characteristics of the investigation, children, caregivers, and household environment. Results aid researchers, policymakers, and practitioners in understanding how economic inequalities compare with the more frequently studied inequalities based on race and Indigeneity. Further, our findings identify potential intervention areas at the caregiver level that may help reduce the economic disparity gap.

I. BACKGROUND

A. ECONOMIC HARDSHIP AND CHILD MALTREATMENT

Living in a family experiencing economic hardship leads to a number of negative impacts on child development.⁷ Additionally, from a social determinants of health perspective, economic conditions

⁵ Child maltreatment is an overarching term that encompasses physical abuse, sexual abuse, emotional maltreatment, exposure to intimate partner violence, and neglect. In some circumstances, specific forms of maltreatment are examined separately.

⁶ Lawrence M Berger, "Income, family structure, and child maltreatment risk" (2004) 26:8 *Children and Youth Services Review* 725; Lawrence M Berger & Jane Waldfogel, "Out-of-Home Placement of Children and Economic Factors: An Empirical Analysis" (2004) 2:4 *Rev Econ Household* 387; Alan J Dettlaff et al, "Disentangling substantiation: The influence of race, income, and risk on the substantiation decision in child welfare" (2011) 33:9 *Children and Youth Services Review* 1630; Howard Dubowitz et al, "Identifying children at high risk for a child maltreatment report" (2011) 35:2 *Child Abuse & Neglect* 96; Melissa Jonson-Reid, Brett Drake & Pan Zhou, "Neglect Subtypes, Race, and Poverty: Individual, Family, and Service Characteristics" (2013) 18:1 *Child Maltreat* 30; Sabrina Moraes et al, "Professionals' decision-making in cases of physical punishment reported to child welfare authorities: does family poverty matter?" (2006) 11:2 *Child & Family Social Work* 157; Kristen Shook Slack et al, "Risk and protective factors for child neglect during early childhood: A cross-study comparison" (2011) 33:8 *Children and Youth Services Review* 1354; Kristen Shook Slack et al, "Understanding the Risks of Child Neglect: An Exploration of Poverty and Parenting Characteristics" (2004) 9:4 *Child Maltreat* 395.

⁷ Jeanne Brooks-Gunn & Greg J Duncan, "The effects of poverty on children" (1997) 7:2 *The future of children* 55; Rand D Conger & Katherine J Conger, "Resilience in midwestern families: Selected findings from the first decade of a prospective, longitudinal study" (2002) 64:2 *Journal of Marriage and Family* 361; Rand D Conger & M Brent Donnellan, "An interactionist perspective on the socioeconomic context of human development" (2007) 58 *Annu Rev Psychol* 175; Glen H Elder & Avshalom Caspi, "Economic stress in lives: Developmental perspectives" (1988) 44:4 *Journal of Social Issues* 25; AS Masarik & RD Conger, "Stress and child development: a review of the Family Stress Model" (2017) 13 *Current Opinion in Psychology* 85; Mirowsky & Ross, *supra* note 2; UNICEF Innocenti Research Centre, *Measuring child poverty: New league tables of child poverty in the world's rich countries*, Innocenti Report Card 10 (Florence: UNICEF Innocenti Research Centre, 2012).

are a key driver of health inequalities in what some refer to as the social causation hypothesis.⁸ The idea is that socio-economic inequalities produce downstream health impacts. One such example is an established elevated risk of child maltreatment for poor children.⁹ The difference in risk is large between children in families who are struggling economically to those who are not struggling. We label this difference the economic disparity gap. The purpose of this article is to understand and explain that gap for substantiated maltreatment investigations in Canada.

1. FACTORS THAT CONTRIBUTE TO CHILD MALTREATMENT

In the context of this study, the meaning of risk requires further elaboration. The term risk takes two meanings. First various characteristics that are more common among families that experience a given child welfare outcome are described as “risks”. We are most interested in substantiated maltreatment. In this sense, risks are manifest qualities of the investigation, child, caregiver, or household that are measurable in the data. The second use of the term risk involves investigation type. After a case is opened case workers indicate whether the case is “risk only” or another outcome. More on this distinction is described below in the Method section.

As a starting point to understanding the economic disparity gap, we review existing evidence and plausible pathways for how child, family, and household characteristics influence the likelihood of child maltreatment. As others have done, we recognize there is no single mechanism to explain the relationship between economic hardship and child maltreatment.¹⁰ The etiology of maltreatment is influenced by a series of complex processes and interactions between the child, family, and their environment.¹¹

i. Child Characteristics

A number of studies have found that characteristics of the child, such as functioning concerns, age, and race contribute to the likelihood of maltreatment and continued involvement with the child welfare system. The presence of at least one child functioning concern, particularly positive toxicology at birth, depression, attachment issues, aggression, and fetal alcohol syndrome, are positively associated with substantiated maltreatment.¹² Concerns related to attachment, failure to

⁸ Hannes Kröger, Eduwin Pakpahan & Rasmus Hoffmann, “What causes health inequality? A systematic review on the relative importance of social causation and health selection” (2015) 25:6 Eur J Public Health 951.

⁹ Maria Cancian, Kristen Shook Slack & Mi Youn Yang, *The effect of family income on risk of child maltreatment* (Institute for Research on Poverty, University of Wisconsin-Madison Madison, WI, 2010); Brett Drake & Shanta Pandey, “Understanding the relationship between neighborhood poverty and specific types of child maltreatment” (1996) 20:11 Child Abuse & Neglect 1003; Andrea J Sedlak et al, “Fourth national incidence study of child abuse and neglect (NIS-4)” (2010) 9 Washington, DC: US Department of Health and Human Services Retrieved on July 2010; Slack et al, (2004) *supra* note 6.

¹⁰ B Drake & M Jonson-Reid, “Poverty and Child Maltreatment” in JE Korbin & RD Krugman, eds, *Handbook of Child Maltreatment*, Child Maltreatment 2 (Springer Netherlands, 2014) 131.

¹¹ Jay Belsky, “Etiology of Child Maltreatment: A Developmental-Ecological Analysis” (1993) 114:3 Psychological Bulletin 413; Dante Cicchetti & Sheree L Toth, “Child Maltreatment” (2005) 1 Annual Rev Clinical Psychology 409.

¹² Barbara Fallon et al, “Untangling Risk of Maltreatment from Events of Maltreatment: An Analysis of the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008)” (2011) 9:5 Intl J Mental Health & Addiction 460 [Fallon, Untangling Risk]; Vandna Sinha, Stephen Ellenbogen & Nico Trocmé, “Substantiating Neglect of First Nations and non-Aboriginal Children” (2013) 35:12 Children & Youth Services Rev 2080; Nico Trocmé et al, “Differentiating between Substantiated, Suspected, and Unsubstantiated Maltreatment in Canada” (2009) 14:1 Child Maltreatment 4 [Trocmé et al, Differentiating]; Gabriela Williams et al, “Determinants of Maltreatment

meet developmental milestones, internalizing and externalizing behaviours, and positive toxicology at birth are also associated with referral to ongoing services¹³ and placement in out-of-home care.¹⁴ Children are at higher risk of placement in out-of-home care in cases where positive toxicology at birth, externalizing, or biological concerns are noted.¹⁵ The extent to which these risk factors predict substantiation and child welfare service dispositions differ as a function of the age of the child. For example, positive toxicology at birth is the most significant risk factor for infants, whereas behavioural issues tend to be more of a concern for older children.¹⁶

Within the Canadian context, ethno-cultural disparities have been found within the child welfare system, particularly for Aboriginal¹⁷ and Black children.¹⁸ Strong bivariate evidence suggests that Aboriginal children are overrepresented during the investigation stage and this continues across all child welfare service dispositions.¹⁹ Holding other factors constant, however, the strength of the relationship between Aboriginality and child welfare involvement varies by service disposition. In multivariate models of substantiated maltreatment, when caregiver risk

Substantiation in a Sample of Infants Involved with the Child Welfare System” (2011) 33:8 Children & Youth Services Rev 1345.

¹³ Barbara Fallon et al, “Opportunities for Prevention and Intervention with Young Children: Lessons from the Canadian Incidence Study of Reported Child Abuse and Neglect” (2013) 7 Child & Adolescent Psychiatry & Mental Health [Fallon et al, Opportunities for Prevention]; Barbara Fallon et al, “Characteristics of Young Parents Investigated and Opened for Ongoing Services in Child Welfare” (2011) 9:4 Intl J Mental Health & Addiction 365 [Fallon, Characteristics of Young Parents]; Elizabeth Fast et al, “A Troubled Group? Adolescents in a Canadian Child Welfare Sample” (2014) 46 Children & Youth Services Rev 47; A Jud, B Fallon & N Trocmé, “Who gets Services and Who does not? Multi-level Approach to the Decision for Ongoing Child Welfare or Referral to Specialized Services” (2012) 34:5 Children & Youth Services Rev 983.

¹⁴ Tonino Esposito et al, “Placement of children in out-of-home care in Québec, Canada: When and for whom initial out-of-home placement is most likely to occur” (2013) 35:12 Children and Youth Services Review 2031; Elizabeth Fast et al, “A troubled group? Adolescents in a Canadian child welfare sample” (2014) 46 Children and Youth Services Review 47; Lil Tonmyr et al, “Infant Placement in Canadian Child Maltreatment-Related Investigations” (2011) 9:5 Int J Ment Health Addiction 441.

¹⁵ Tonmyr et al, *supra* note 14; Fast et al, *supra* note 14; Esposito et al, *supra* note 14.

¹⁶ Esposito et al, *supra* note 14; Barbara Fallon et al, Opportunities for prevention, *supra* note 13; Tonmyr et al, *supra* note 14; Gabriela Williams et al, “Determinants of maltreatment substantiation in a sample of infants involved with the child welfare system” (2011) 33:8 Children and Youth Services Review 1345.

¹⁷ In the Canadian context, ‘Aboriginal’ is an umbrella term which includes First Nations, Metis and Inuit peoples. At the present moment, the term Indigenous is often used instead and is preferred by many individuals and organizations in the community.

¹⁸ Cindy Blackstock, Nico Trocmé & Marlyn Bennett, “Child Maltreatment Investigations Among Aboriginal and Non-Aboriginal Families in Canada” (2004) 10:8 Violence Against Women 901; B Fallon et al, “Ethno-racial Categories and Child Welfare Decisions: Exploring the Relationship with Poverty” (2016) 133:3 CWRP Information Sheet #176E 454; Chantal Lavergne et al, “Visible minority, Aboriginal, and Caucasian children investigated by Canadian protective services” (2008) 87:2 Child Welfare 59; N Trocmé et al, *Mesnmimk wasatek catching a drop of light: Understanding the overrepresentation of First Nations children in Canada’s child welfare system. An analysis of the Canadian incidence study of reported child abuse and neglect (CIS-2003)* (Toronto, ON: Centre of Excellence for Child Welfare, 2006) [Trocmé et al, *Mesmimk wasatek*]; N Trocmé, D Knoke & C Blackstock, “Pathways to the overrepresentation of Aboriginal children in Canada’s child welfare system” (2004) 78:4 Social Service Review 577.

¹⁹ Fast et al, *supra* note 14; Vandna Sinha, Stephen Ellenbogen & Nico Trocmé, “Substantiating neglect of first nations and non-aboriginal children” (2013) 35:12 Children and Youth Services Review 2080; Vandna Sinha et al, “Understanding the investigation-stage overrepresentation of First Nations children in the child welfare system: An analysis of the First Nations component of the Canadian Incidence Study of Reported Child Abuse and Neglect 2008” (2013) 37:10 Child Abuse & Neglect 821; Trocmé, Knoke & Blackstock, *supra* note 18; Trocmé et al, *Mesmimk wasatek*, *supra* note 18.

factors are accounted for, Aboriginality is no longer statistically significant.²⁰ For placement, Aboriginality remains a significant predictor of placement in out-of-home care, even after adjusting for a range of child, family, and household characteristics.²¹

ii. Family Characteristics

A large proportion of the research on maltreatment emphasizes the role that family characteristics has on increased probability of involvement with child welfare services. Caregiver risk factors²² are consistent and strong predictors of substantiated maltreatment.²³ More specifically, the most commonly identified caregiver concerns are related to substance abuse, mental health, few social supports, and domestic violence.²⁴

The importance of caregiver risk factors appears to differ based on both the service disposition and the age of the children examined. For infants, caregiver risk factors are a significant predictor of substantiation, ongoing services, and placement in out-of-home care.²⁵ In contrast, caregiver functioning concerns increase the risk of receiving ongoing child welfare services but are not associated with placement for adolescents.²⁶

The family structure within which children grow and develop may also shape the likelihood of maltreatment, particularly neglect. Children from single-parent families have been identified at an increased risk for child maltreatment.²⁷ Further, findings from the National Incidence Study in the US indicated that parents with a cohabitating but not married partner had higher rates of maltreatment than single mothers.²⁸ Children of young parents are more likely than children of older parents to experience substantiated maltreatment.²⁹ It is suggested that the disparities in maltreatment rates among Black and Hispanic children in the US is, in part, explained by

²⁰ Sinha, Ellenbogen & Trocmé, *supra* note 19; Trocmé et al, *Mesmimk wasatek*, *supra* note 18; Trocmé, Knoke & Blackstock, *supra* note 18.

²¹ Trocmé, Knoke & Blackstock, *supra* note 18; Trocmé et al, *Mesmimk wasatek*, *supra* note 18.

²² Within Canadian studies, economic hardship is often conceptualized in studies as one of many risk factors, rather than the indicator of focus which makes it difficult to untangle the relationship between poverty, caregiver functioning and maltreatment.

²³ Barbara Fallon et al, *Untangling Risk*, *supra* note 12; Jonson-Reid, Drake & Zhou, *supra* note 6; Sinha, Ellenbogen & Trocmé, *supra* note 19; Trocmé, Knoke & Blackstock, *supra* note 18; Trocmé et al, *Mesmimk wasatek*, *supra* note 18; Nico Trocmé et al, *Differentiating*, *supra* note 12; Williams et al, *supra* note 16.

²⁴ Vernon Carter & Miranda R Myers, "Exploring the risks of substantiated physical neglect related to poverty and parental characteristics: A national sample" (2007) 29:1 *Children and Youth Services Review* 110; Mark Chaffin, Kelly Kelleher & Jan Hollenberg, "Onset of physical abuse and neglect: Psychiatric, substance abuse, and social risk factors from prospective community data" (1996) 20:3 *Child Abuse & Neglect* 191; Fallon et al, *Untangling Risk*, *supra* note 12; Jonson-Reid, Drake & Zhou, *supra* note 6; A Jud, B Fallon & N Trocmé, "Who gets services and who does not? Multi-level approach to the decision for ongoing child welfare or referral to specialized services" (2012) 34:5 *Children and Youth Services Review* 983; Sinha, Ellenbogen & Trocmé, *supra* note 19; Tonmyr et al, *supra* note 14; Williams et al, *supra* note 16; Barbara Fallon et al, *Characteristics of Young Parents*, *supra* note 13.

²⁵ B Fallon et al, "Opportunities for prevention" *supra* note 13; Tonmyr et al, *supra* note 14; Williams et al, *supra* note 16.

²⁶ Esposito et al, *supra* note 14; Fast et al, *supra* note 14.

²⁷ Berger, *supra* note 6; Trocmé et al, *Differentiating*, *supra* note 12.

²⁸ A Sedlak et al, *Fourth National Incidence Study of Child Abuse and Neglect (NIS-4): Report to Congress* (Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, 2010).

²⁹ Dettlaff et al, *supra* note 6.

disproportionately higher rates of single and teenage mothers.³⁰ In addition, more children in the household has also been linked to a higher incidence of child maltreatment.³¹

iii. Household characteristics.

Issues related to household safety and stability are also associated with substantiated maltreatment. Moving more than two times in the past year is related to an increased likelihood of substantiated maltreatment³² and referral to ongoing services.³³ Housing stability, defined as a recent eviction, more than one move, or homelessness, had a direct effect on risk of neglect.³⁴ Cases were also more likely to be substantiated for maltreatment concerns in circumstances where unsafe housing conditions (i.e., accessible weapons, drugs, or other injury hazards) were noted.³⁵ In another study, inadequate housing was significantly associated with receiving services, but not with substantiated maltreatment.³⁶ The interaction between living in doubled up housing (i.e., at least two non-family members in the household) and caregiver mental health or substance use problems did, however, increase the likelihood of substantiated maltreatment. It also appears that housing factors are more problematic as a function of the type of reported maltreatment. For example, Sinha et al. found that housing problems were positively related to substantiation of neglect cases, but not when analyses were conducted on all forms of maltreatment combined.³⁷ Further, Fowler et al. found that inadequate housing also increased the risk of placement in out-of-home care.³⁸ Geographic factors also shape risk for certain groups. For example, the most densely urban areas and the most sparsely populated rural areas both have higher racial disparities in maltreatment compared to moderate densities.³⁹

iv. Economic hardship as a confounder for child maltreatment

There is no one theory that fully explains why child maltreatment occurs.⁴⁰ Yet, it is well known that economic hardship is correlated with most of the factors reviewed in the previous section. For

³⁰ Paul Lanier et al, “Race and Ethnic Differences in Early Childhood Maltreatment in the United States” (2014) 35:7 *Journal of Developmental & Behavioral Pediatrics* 419.

³¹ Carter & Myers, *supra* note 24; Dettlaff et al, *supra* note 6; Sedlak et al, *supra* note 9.

³² Fallon et al, Characteristics of Young Parents, *supra* note 13.

³³ A Jud, B Fallon & N Trocmé, “Who gets services and who does not? Multi-level approach to the decision for ongoing child welfare or referral to specialized services” (2012) 34:5 *Children and Youth Services Review* 983; Fast et al, *supra* note 14.

³⁴ Emily J Warren & Sarah A Font, “Housing insecurity, maternal stress, and child maltreatment: An application of the family stress model” (2015) 89:1 *Social Service Review* 9.

³⁵ B Fallon et al, Untangling risk, *supra* note 12; Trocmé et al, *Mesmimk wasatek*, *supra* note 18; Trocmé, Knoke & Blackstock, *supra* note 18; Trocmé et al, Differentiating, *supra* note 12.

³⁶ Sarah A Font & Emily J Warren, “Inadequate Housing and the Child Protection System Response” (2013) 35 *Children & Youth Services Rev* 1809.

³⁷ Sinha, Ellenbogen & Trocmé, *supra* note 19.

³⁸ Patrick Fowler et al. “Inadequate Housing Among Families Under Investigation for Child Abuse and Neglect: Prevalence from a National Probability Sample” (2013) 52:1–2 *American Journal of Community Psychology* 106.

³⁹ Kathryn Maguire-Jack et al, “Geographic variation in racial disparities in child maltreatment: The influence of county poverty and population density” (2015) 47 *Child Abuse Negl* 1.

⁴⁰ Poverty is major risk factor. See Lawrence M Berger & Jane Waldfogel, “Economic Determinants and Consequences of Child Maltreatment” (2011), online: <http://www.oecd-ilibrary.org/social-issues-migration-health/economic-determinants-and-consequences-of-child-maltreatment_5kgf09zj7h9t-en> [<https://perma.cc/LJ64-E6XN>]. From an environmental deficit perspective, Pelton suggested intergenerational poverty and poverty-induced

example, Aboriginal children are at greater risk than non-Aboriginal children for both economic hardship and maltreatment. There are parallels for the age of the child, the number of children, caregiver age, family structure, race and ethnicity of parent/caregiver, and household risk factors. Younger children, larger households, single mothers, younger mothers, Aboriginal mothers, and households with risk factors are more likely to be poor. To date, we are not aware of any studies of maltreatment in the Canadian child welfare literature that systematically account for the confounding nature of economic hardship.

II. RESEARCH AIMS

The overall purpose of this article is to explain the economic disparity gap in cases of substantiated maltreatment. In doing so, we aim to refine our understanding of how child, family/caregiver, and household factors interact with economic hardship to shape maltreatment risk. Results will introduce new areas of potential policy and service intervention with the intent of reducing the economic disparity gap. The study is guided by a series of research questions. We begin by asking: What is the prevalence of economic hardship among families involved with the Canadian child welfare system? We then ask: What is the risk of substantiated maltreatment for families experiencing economic hardship? Based on research in other countries, we expect that families experiencing economic hardship will have higher rates of substantiation compared to those without economic hardship. Next, we ask: what are the rates of economic hardship across case characteristics for families involved with the Canadian child welfare system? We expect that groups that have experienced historical, social, and economic disadvantage will experience disproportionate rates of economic hardship. Next, we examine the individual and socio-demographic composition of families experiencing economic hardship. Last, we ask: Which factors can explain the economic disparity gap in child maltreatment?

A. METHOD

The relationship between economic hardship and substantiated investigations of child maltreatment in Canada was examined using data from the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008). The primary objective of the CIS-2008 was to provide a national estimate of the incidence and characteristics of child maltreatment in Canada.⁴¹ All information was collected directly from the investigating child welfare worker.⁴²

1. SAMPLE

stress can render parents overwhelmed and unable to respond to the basic needs of their children. Leroy H Pelton, "Child Abuse and Neglect": (1978) 48:4 *American Journal of Orthopsychiatry* 608. From the ecological-transactional and family stress perspectives, families living in poverty often encounter stress levels that outweigh coping strategies, which influence interactions within families and pose a threat to the well-being and development of the children that grow up in them. See Drake & Pandey, *supra* note 9; Claudia J Coulton et al, "How neighborhoods influence child maltreatment: a review of the literature and alternative pathways" (2007) 31:11–12 *Child Abuse Negl* 1117; Bridget Freisthler, Darcey H Merritt & Elizabeth A LaScala, "Understanding the ecology of child maltreatment: a review of the literature and directions for future research" (2006) 11:3 *Child Maltreat* 263; Masarik & Conger, *supra* note 7.

⁴¹ Nico Trocmé et al, "CIS 2008 Guidebook" in *Canadian incidence study of reported child abuse and neglect, 2008: major findings* (Ottawa: Public Health Agency of Canada, 2010) [Trocmé et al, Guidebook].

⁴² This study received approval from the Research Ethics Board at McGill University (file #404-0415).

The CIS-2008 sample involved three stages: first, a representative sample of 112 child welfare sites was selected out of a total of 412 child welfare organizations identified across Canada.⁴³ To ensure that the sample of sites covered Canada's regional variety and subpopulations, stratification along provinces and territories was applied; provinces inhabited by a large population were further stratified by size of the organization and by region. Separate strata were developed for Aboriginal organizations. Within the study sites, case openings were sampled during the three-month period from 1 October 2008 to 31 December 2008, and, in a final step, child investigations that met the study criteria were identified. This process yielded a total sample of 15,980 child maltreatment investigations of children under the age of sixteen years with a mean age of 7.4 years. Given that one small agency did not screen in any referrals in the three-month period, the sample on the agency level was reduced to $n = 111$. For the purposes of our analysis, we excluded cases where the worker indicated the economic hardship variable as unknown or missing and restricted the sample to children aged fifteen and younger (removing $n = 2791$) given that many jurisdictions in Canada only provide child welfare services under the age of sixteen years. Because the latter portions of this study focus exclusively on substantiated maltreatment, we then removed investigations with a reported risk of maltreatment ($n = 3,412$) and suspected cases of maltreatment ($n = 907$). Overall, this resulted in a final unweighted sample of 8,870 investigations.

2. CONTEXT

The Canadian context is relevant to the study of economic hardship and child welfare. Most of the evidence on this topic has emerged from the United States where, compared to Canada, inequality is relatively higher and the public support for government redistribution is considerably weaker. Furthermore, research on the relationship between poverty and child maltreatment in Canada is relatively undeveloped. In a review of the Canadian child welfare literature over the past twenty-five years, Rothwell and de Boer found that only sixteen studies measured poverty or economic hardship at all. In these studies, indicators of poverty and hardship were inconsistently operationalized and were mostly used as control variables for other substantive questions.⁴⁴

3. MEASUREMENT

Following the completion of each investigation, investigating child welfare workers completed a three-page, "Maltreatment assessment form." Questions were asked regarding the type of investigation (*i.e.*, risk only, or maltreatment); reported form(s) of maltreatment; level of substantiation (*i.e.*, substantiated or unfounded, investigations classified as "suspected" maltreatment were excluded from this analysis); and short-term service provision. Substantiated maltreatment was the focus of this study. Reported concerns were deemed as substantiated if the balance of evidence indicated that an incident of maltreatment had occurred, and unfounded if the balance of evidence indicated that maltreatment did not occur.⁴⁵

To understand the economic disparity gap we measured economic hardship at the household level. For each investigation, caseworkers responded to the question, "[t]o the best of

⁴³ Nico Trocmé et al, "Chapter 2: Methodology" in *Canadian incidence study of reported child abuse and neglect, 2008: major findings* (Ottawa: Public Health Agency of Canada, 2010).

⁴⁴ David W Rothwell & Kaila R de Boer, "Measuring Economic Hardship in Child Maltreatment Research: Evidence from Canada" (2014) 7:2 Child Ind Res 301.

⁴⁵ Trocmé et al, Guidebook, *supra* note 41.

your knowledge, indicate whether the household regularly runs out of money for the child's basic necessities (e.g., food, clothing)," which was coded as a dichotomous (yes or no) variable.⁴⁶

Information was also gathered on characteristics of child(ren) in the home, caregiver(s), and the household environment. In this study, all indications of Aboriginality/Indigeneity of the children or caregivers come via the child welfare worker's indications on the Maltreatment Assessment Form⁴⁷ In addition, characteristics of the investigation were also measured (e.g., previous report, referral source, and physical harm). Table 1 provides a full description of the variables and coding scheme used in the study.

Table 1 Operationalization of Variables

Variable	Definition	Values
Variable of interest		
Economic hardship	Worker identified whether or not the household regularly runs out of money for basic necessities such as food, shelter and clothing.	0 No 1 Yes
Dependent variable		
Substantiated maltreatment	An allegation of maltreatment is considered substantiated if the balance of evidence indicated that the primary form of maltreatment has occurred.	0 No 1 Yes
Investigation characteristics		
Previous report	Worker indicated if there were one or more previous child protection reports.	0 No 1 Yes
Physical harm	Workers identified if the investigated child experienced physical harm as a result of maltreatment.	0 No harm 1 Harm
Referral source	Workers identified the source of the referral that resulted in the investigation from a list of 19 options. Professional sources included: social assistance worker, crisis services/shelter, community/recreation, hospital, community health nurse, community physician, community mental health professional, school, other child welfare service, daycare centre, police, community agency. Non-professional sources included: custodial parent, non-custodial parent, child, relative, neighbour/friend. Other included: anonymous and other.	0 Professional 1 Non-professional 2 Other

Child characteristics

⁴⁶ *Ibid.*

⁴⁷ Question 9 in the CIS Maltreatment Assessment Form instructed the worker to: "Check the ethno-racial category that best describes the caregiver." Question 10 followed up with questions to be answered only "If Aboriginal" including question 10b "Caregiver's status". Options were: "First Nations status (caregiver has formal Indian or treaty status, that is, registered with the Department of Indian and Northern Affairs), Inuit, First Nations non-status, Métis or Other (specify and use the Comment Sheet if necessary). Question 28 "Aboriginal Status" asked about the child: "Indicate the Aboriginal status of the child for which the CIS Maltreatment Assessment Form is being completed: Not Aboriginal, First Nations status (caregiver has formal Indian or treaty status, that is, is registered with the Department of Indian and Northern Affairs), First Nations non-status, Métis, Inuit or Other (specify and use the Comment Sheet if necessary)." CIS-2008, Appendix G 61-64. A slightly different form was used in Quebec.

Variable	Definition	Values
Child Aboriginal status	Worker identified the Aboriginal status of the child.	0 Non-Aboriginal 1 Aboriginal
Child age	Worker indicated child age.	Continuous variable (Range: 0 - 15 years)
Child functioning concerns: Worker could note up to 18 child functioning concerns. Grouped into three different categories.		
Biological	Biological concerns included intellectual/developmental disability, failure to meet developmental milestones, FAS/FAE, positive toxicology at birth and physical disability.	0 No biological concern(s) noted 1 Biological concern(s) noted
Internalizing	Internalizing concerns included depression/anxiety/withdrawal, suicidal thoughts, or self-harming behaviour.	0 No internalizing concern(s) noted 1 Internalizing concern(s) noted
Externalizing	Externalizing concerns included ADD/ADHD, aggression, running, inappropriate sexual behaviour, Youth Criminal Justice Act involvement, academic difficulties and alcohol or drug abuse.	0 No externalizing concern(s) noted 1 Externalizing concern(s) noted
Family characteristics		
Number of children in the home	Worker identified the number of children in the home.	Continuous variable (Range: 1-13)
Primary caregiver age	Worker identified the age of the primary caregiver.	0 under 22 years 1 22-30 years 2 31-40 years 3 41-50 years 4 51 years and over
Primary caregiver Aboriginal status	Worker identified the Aboriginal status of the primary caregiver.	0 Non-Aboriginal 1 Aboriginal
Family structure	Variable constructed based on caregiver's relationship to the child.	0 Single parent 1 Biological family 2 Blended/other
Primary caregiver risk factors: Workers could note up to nine risk factors for the primary caregiver. Grouped into three different categories.		
Substance use/mental health	Substance use/mental health included alcohol abuse, drug abuse, or mental health issues.	0 No substance use/mental health concern(s) noted 1 Substance use/mental health concern(s) noted
Physical health/cognitive impairment	Physical health/cognitive impairment included physical health issues or cognitive impairment.	0 No physical health/cognitive impairment concern(s) noted 1 Physical health/cognitive impairment concern(s) noted

Variable	Definition	Values
Social/relational/historical	Social/relational/historical included few social supports, victim of domestic violence, perpetrator of domestic violence, or history of foster care or group home.	0 Social/relational/historical concern(s) noted 1 Social/relational/historical concern(s) noted
Household characteristics		
Family moves	Workers asked to indicate if the number of times the child and their family had moved in the past year. Workers could note no moves or one move or two or more moves.	0 No moves 1 One or more moves
Social assistance income	One of the caregivers receives social assistance as the main form of income. Variables – ‘other benefits or unemployment or no source of income’ included?	0 No 1 Yes
Home overcrowded	Workers indicated if the home was made up of multiple families or if the home was overcrowded.	0 No 1 Yes
Public housing	Family currently resides in public housing.	0 No 1 Yes
Household hazards	Workers identified whether household hazards were present in the home or not, based on a list including accessible weapons, accessible drugs or drug paraphernalia, drug production or trafficking in the home, chemicals or solvents used in production, other home injury hazards and other home health hazards.	0 No household hazards 1 At least one household hazard

B. ANALYTICAL PLAN

The first step in the analysis was to estimate the prevalence of economic hardship in the study sample. Second, we analyzed the association between economic hardship and substantiated versus unfounded maltreatment for all maltreatment investigations and by primary maltreatment type. This analysis involved estimating bivariate and regression-adjusted risk ratios. Bivariate risk ratios are the probability of an event occurring (substantiation of maltreatment) among the exposed group (economic hardship) to the probability of the event occurring in an unexposed group (no economic hardship). Regression adjusted risk ratios provided a comparable probability estimate after controlling for the influence of characteristics of the investigation, child, caregiver, and household. Next, we calculated the rates of economic hardship across the factors observed (investigation, child, caregiver, household). Following, we described the composition of the economic hardship cases and juxtaposed them with the overall sample. To explain the gap in substantiation rates between cases with economic hardship and cases without economic hardship, we decomposed the difference in rates using a procedure called the Oaxaca-Blinder method. The Oaxaca-Blinder decomposition is a well-known technique in labour economics which is most commonly used to explain gaps in income and wages, *e.g.*, differences in wages between Whites and Blacks.⁴⁸ The procedure decomposes the difference between two groups into a portion attributable to observed

⁴⁸ Ronald Oaxaca, “Male-Female Wage Differentials in Urban Labor Markets” (1973) 14:3 International Economic Review 693; Alan S Blinder, “Wage Discrimination: Reduced Form and Structural Estimates” (1973) 8:4 The Journal of Human Resources 436.

differences (characteristics) and another portion that is attributable to differences in the coefficients (returns to the coefficients). In the ordinary least squares regression framework:

$$Y = X\beta + \epsilon$$

Y represents substantiated child maltreatment. Y can be predicted by a matrix of several covariates (X_1, X_2, X_3 , etc.) represented by X . The symbol B represents the matrix of covariate coefficients and E is the residual or unexplained portion. Oaxaca and Blinder showed how to decompose a difference in Y between two groups into two different contributions. The first is the part of Y due to the characteristics of the two groups being compared (*i.e.*, the X s) and the second part is those contributions in Y due to differences in the β (*i.e.*, returns to those characteristics or coefficients). Consider the following:

$$\Delta Y = Y_{nh} - Y_h = (X_{nh} - X_h)\beta_h + X_{nh}(\beta_{nh} - \beta_h)$$

Where subscript nh represents the first comparison group and subscript h represents the second comparison group (the error term is assumed to not change or equal to zero). The first term on the right side of the equation represents the share of the difference attributable to characteristics. The second term represents the share of the difference attributable to the coefficients (*i.e.*, returns to the characteristics). In our framework, Y_{nh} are children who did not experience economic hardship and Y_h are children who experienced economic hardship. While this approach quantifies the amount due to characteristics and coefficients overall, we are also able to disaggregate and quantify the contribution of the observed investigation, child, caregiver, and household variables.

All analyses accounted for the complex survey design of the CIS-2008 by adjusting estimates and standard errors for the primary sampling unit and stratification. Because the sample design occurred without replacement and the sample comprised a relatively large size of the population (more than 5%), a finite population correction was employed to adjust the variance.⁴⁹ The statistics software Stata 14 was used for all analyses.⁵⁰

III. RESULTS

Within the nationally representative sample of child welfare investigations in Canada, 15% of households reported regularly running out of money for the child's basic necessities. Table 2 shows that 80.8 % of maltreatment investigations involving this type of economic hardship were substantiated as opposed to unfounded, whereas 54.2% of investigations were substantiated where no such economic hardship was noted. Investigations involving economic hardship were considerably more likely to be substantiated ($RR: 1.49, CI [1.46 - 1.52]$)⁵¹. This pattern was consistent across all forms of primary maltreatment, with risk ratios for substantiation ranging from 1.16 for exposure to intimate partner violence to 1.63 for neglect.⁵² Turning to the probit

⁴⁹ Sharon L Lohr, *Sampling: Design and Analysis*, 2 edition ed (Boston, Mass: Duxbury Press, 2009).

⁵⁰ StataCorp. 2015. Stata Statistical Software: Release 14. College Station, TX: StataCorp LP.

⁵¹ All risk ratios refer to the relative risk of families with economic hardship to families without economic hardship. The baseline reference point is 1.0, meaning the risks are the same for both groups. A risk ratio of 1.59 can be interpreted as 59% greater probability for the economic hardship group.

⁵²Sexual abuse was excluded due to insufficient cell sizes.

regression-adjusted risk ratios⁵³, likelihoods of substantiated maltreatment were attenuated by characteristics of the investigation, child, caregiver, and household. Nevertheless, investigations involving economic hardship were more likely to result in substantiation (*RR*: 1.21, *CI* [1.16 – 1.24]). With the exception of physical abuse, children experiencing economic hardship remained at greater likelihood of all types of substantiated maltreatment.

Table 2 Unadjusted and adjusted risk ratios for substantiated maltreatment, weighted

	N	Economic Hardship %	No Economic Hardship %	Unadjusted		N	Economic hardship %	No Economic Hardship %	Adjusted	
				RR	95% CI				RR	95% CI
Substantiation	8870	80.8	54.2	1.49	[1.46,1.52]	6077	65.4	54.5	1.21	[1.16, 1.24]
Physical Abuse	2381	59.4	42.1	1.41	[1.31,1.52]	1541	36.7	40.4	0.91	[.718, 1.10]
Emotional Abuse	784	90.5	55.7	1.62	[1.48,1.76]	559	74.5	55.6	1.34	[1.27, 1.55]
Exposure to IPV	2068	93.7	80.8	1.16	[1.13,1.19]	1503	92.5	80.1	1.16	[1.10, 1.21]
Neglect	3131	79.9	48.9	1.63	[1.58,1.69]	2178	66.5	47.1	1.41	[1.34, 1.48]

A. WHAT IS THE DISTRIBUTION OF ECONOMIC HARDSHIP?

Considering the strong and consistent relationship between substantiated maltreatment and economic hardship, we directed our focus to who experiences economic hardship. First, we examined the rate of investigations involving economic hardship across case characteristics and compared that to the overall rate of economic hardship (15%) within the study sample. Investigations with noted household hazards and crowded housing experienced high rates of economic hardship at 46% and 39%, respectively (see Table 3). Disproportionate amounts of economic hardship were also found for investigations involving children and caregivers identified by the child welfare worker as Aboriginal. More specifically, the proportion of Aboriginal children with economic hardship was more than double the overall rate of economic hardship alone (35% vs. 15%, respectively), which was similar for Aboriginal caregivers (36% vs. 15%). The age of the primary caregiver had a negative relationship with economic hardship, where older caregivers had less risk of economic struggle.

Table 3 Rates of economic hardship across case characteristics, weighted

	%	Ratio to overall sample
Overall sample	14.7	1
Investigation characteristics		

⁵³ Probit regressions are a type of binary classification model with a binary dependent variable. Probit models estimate the probability that an observation will fall into one of the binary categories.

	%	Ratio to overall sample
Previous report	21.3	1.4
Physical harm	13.9	0.9
<i>Referral source</i>		
Professional	12.9	0.9
Non-professional	22.3	1.5
Other	14.8	1.0
Child characteristics		
Aboriginal status	34.9	2.4
<i>Child functioning concern</i>		
Biological	24.5	1.7
Internalizing	16.2	1.1
Externalizing	19.6	1.3
Caregiver characteristics		
<i>Caregiver age</i>		
under 22 years	20.9	1.4
22-30 years	21.1	1.4
31-40 years	13.4	0.9
41-50 years	7.9	0.5
51 years and over	9.6	0.7
Aboriginal status	36.4	2.5
<i>Family structure</i>		
Single parent	17.5	1.2
Biological family	12.8	0.9
Blended/other	13.3	0.9
<i>Risk factors</i>		
Substance use/mental health	31.5	2.1
Physical health/cog. Impair	31.3	2.1
Social, historical, relational	23.4	1.6
Household characteristics		
Moves	24.9	1.7
Social assistance income	30.0	2.0
Crowded housing	39.4	2.7
Public housing	30.4	2.1
Household hazards	46.2	3.1
n (unweighted)	8,870	

B. WHO ARE THOSE EXPERIENCING ECONOMIC HARDSHIP?

To further understand those experiencing hardship, we compared case characteristics of investigations without economic hardship to those with economic hardship and the total sample mean (Table 4). Regarding investigation characteristics, those with economic hardship had a higher proportion of families with a previous record. As for child characteristics, functioning concerns (biological, internalizing and externalizing) were higher, and children were more likely

to be identified as Aboriginal in investigations involving economic hardship. For caregivers, single parent families and all caregiver risk factors (substance use/mental health, health/cognitive impairment, and social/historical/relational) were higher among investigations with reported hardship. Caregivers with reported economic hardship were also much more likely to be Aboriginal than the non-hardship group. Many differences were observed at the household level: investigations with economic hardship had more moves in the previous year and, not surprisingly, were more likely to be on social assistance than the non-poor. Overcrowding, public housing, and the presence of household hazards were also more common among investigations involving economic hardship.

Table 4 Bivariate associations between cases with and without economic hardship, weighted

Case characteristics	No economic hardship	Economic hardship	Total sample
Investigation characteristics			
Previous report	45.6	70.3***	49.3
Physical harm	7.0	6.7	7.0
<i>Referral source</i>			
Professional	73.7	62.5***	72.0
Non-professional	18.8	31.0***	20.6
Other	7.5	6.5	7.4
Child characteristics			
Aboriginal status	11.3	35.3***	14.8
<i>Child functioning concern</i>			
Biological	18.1	34.2***	20.4
Internalizing	17.7	19.9*	18.0
Externalizing	28.2	40.1***	29.9
Caregiver characteristics			
<i>Caregiver age</i>			
under 22 years	3.7	5.6***	3.9
22-30 years	25.1	40.3***	28.2
31-40 years	47.5	42.4***	46.8
41-50 years	19.8	9.8***	18.3
51 years and over	3.0	1.8***	2.8
Aboriginal status	9.5	31.7***	12.8
<i>Family structure</i>			
Single parent	35.6	44.1***	36.8
Biological family	42.5	36.3***	41.5
Blended/other	22.0	19.7**	21.6
<i>Risk factors</i>			
Substance use/mental health	24.8	66.4***	30.9
Physical health/cog. impair	9.0	23.9***	11.2
Social, historical, relational	48.1	85.6***	53.6
Household characteristics			
Moves	31.1	55.6***	34.9
Social assistance income	24.0	60.0***	29.3

Case characteristics	No economic hardship	Economic hardship	Total sample
Crowded housing	5.5	21.0***	7.8
Public housing	11.0	28.1***	13.5
Household hazards	5.6	28.1***	8.9
Age of child	7.5	6.4***	7.4
Number of children in the home	2.4	2.8***	2.5
n (unweighted)	7,529	1,341	8,870

Note. Statistical significance tested from design-based survey weighted F. * = $p < .05$; ** = $p < .01$; *** = $p < .001$

C. DECOMPOSING THE GAP IN SUBSTANTIATION

When the covariates are accounted for, the difference in substantiation rates between those with economic hardship (.80) and those without (.51) was -.29.⁵⁴ Overall, 20 of the 29-percentage point gap (*i.e.*, 69%) in the rate of substantiated maltreatment was explained by differences in covariate characteristics (Table 5). Of these, caregiver factors explained 18 of the 20-percentage point difference. More specifically, social/relational/historical caregiver risk factors explained the largest proportion of the difference (11 percentage points), followed by substance use or mental health concerns (6.5 percentage points). In counterfactual terms, if investigations with economic hardship had the caregiver characteristics of the investigations without economic hardship (*i.e.*, distributions of substance use, mental health, and social/relational/historical factors), we could expect the economic disparity gap to reduce by about 18 percentage points. Investigation and child factors were minimal or zero. The remaining 9 percentage points of difference were attributable to the coefficients of those characteristics. However, this part of the model was almost entirely explained by the constant. In other words, the economic hardship group was more likely to experience substantiated maltreatment, net of the observed variables in our model (*i.e.*, not explained). Of the coefficients that contribute to the gap, child factors such as biological concerns were among the most important, however, the magnitudes were small. Using the same analogy as above, if investigations with economic hardship had the returns to the characteristics (*i.e.*, coefficients) on child level factors, we could expect the economic disparity gap to decrease by less than four percentage points. This exercise suggests that children with similar characteristics may be treated differently (coefficients) when they become involved with the child welfare system.

Table 5 Summary of decompositions, weighted

Overall	b	s.e.	p value	CI lower	CI upper
No economic hardship	0.51	0.01	0	0.50	0.53
Economic hardship	0.80	0.01	0	0.78	0.82
Difference	-0.29	0.01	0	-0.31	-0.27

⁵⁴ This gap differs slightly from the differences shown in Table 2: .808 to .542 due to listwise deletion on observed covariates.

Characteristics	-0.20	0.01	0	-0.22	-0.18
Coefficients	-0.09	0.01	0	-0.12	-0.07
<hr/>					
Characteristics (explained)					
Investigation	0.01	0.00	0.07	0.00	0.01
Child	0.00	0.01	0.49	-0.02	0.01
Caregiver	-0.18	0.01	0.00	-0.20	-0.16
Household	-0.02	0.01	0.07	-0.04	0.00
<hr/>					
Coefficients (unexplained)					
Investigation	0.07	0.05	0.18	-0.03	0.17
Child	-0.04	0.02	0.14	-0.08	0.01
Caregiver	0.30	0.05	0.00	0.19	0.41
Household	0.03	0.01	0.04	0.00	0.06
Constant	-0.45	0.05	0.00	-0.56	-0.34

Note. The characteristics portion is sometimes referred to as explained and the coefficients portion is sometimes labeled the unexplained.

IV. DISCUSSION

Numerous cross-sectional studies have established that children living in poverty and experiencing economic hardship are much more likely to experience various forms of maltreatment. Much of the previous work has centered on the relationship between poverty and neglect. What continues to perplex the field, however, are the mechanisms through which economic hardship translates into higher likelihood of maltreatment. In this study, we used a nationally representative sample of reported child welfare investigations in Canada to better understand inequalities in the likelihood of substantiation of maltreatment across various dimensions of the case, child, caregiver, and household.

Although worker-identified economic hardship affects a relatively small number of children, it is the source of a large disparity in the decision to substantiate maltreatment. To place this gap in context of the literature, consider the frequently studied gap in maltreatment rates across Aboriginal and non-Aboriginal children. Large bivariate gaps are observed; however, when caregiver risk factors are considered, the gap is reduced and often loses statistical significance.⁵⁵ In contrast to that gap, we show for the first time that the economic disparity gap does not dissipate when controlling for other factors. That is, with other factors controlled, investigations of children experiencing economic hardship remain at least 1.2 times as likely as investigations of children not experiencing economic hardship to experience substantiated maltreatment. This finding lends support for the social causation hypothesis.⁵⁶ We interpret this to mean that household economic hardship is driving large and persistent disparities in the child welfare system. Understanding the causes of the economic disparity gap is critical to forming policy and tailoring services to reduce them.

For 2008, we observed a 29-percentage point difference in the rate of substantiation between investigations with reported economic hardship compared to those without. Our findings

⁵⁵ Trocmé, Knoke & Blackstock, *supra* note 18; Trocmé et al, *Mesmimk wasatek*, *supra* note 18.

⁵⁶ Kröger, Pakpahan & Hoffmann, *supra* note 8.

demonstrate that the vast majority of this gap is explained by caregiver risk factors, which were much more common among caregivers involved in investigations with economic hardship. This conclusion aligns with studies showing that caregiver risk factors are associated with confirmed risk,⁵⁷ substantiated maltreatment,⁵⁸ and provision of ongoing child welfare services.⁵⁹

These results add to our understanding of how risk factors play a particularly strong role in the likelihood of substantiated maltreatment. Using the same CIS-2008 data, researchers found that alcohol abuse, mental health concerns, and few social supports were positively related to substantiated maltreatment.⁶⁰ Sinha et al. also found that substance use, domestic violence, and few social supports predicted maltreatment substantiation.⁶¹ In addition to observing caregiver risk as an important predictor of substantiation, we quantify how much of the economic disparity gap is explained by such factors. For example, the distribution of social/relational/historical risk factors in the economic hardship group (*i.e.*, few social supports, domestic violence, or a history of foster care) accounted for the largest proportion (11 percentage points) of the gap in substantiated maltreatment, followed by substance abuse and mental health concerns (6.5 percentage points). Historically and in contemporary society, caregivers with limited social supports and a history of domestic violence or foster care are some of society's most marginalized and vulnerable groups. Addressing these challenges, which are often structural in nature, represents a major challenge for the field going forward.

Our decomposition method provides further insight into the complex interaction of Aboriginality and class inequities. We quantify the importance of demographic characteristics and returns to those characteristics. In doing so, we demonstrate that Aboriginality alone is not responsible for the inequalities in substantiated maltreatment rates across economic groups. Further, the coefficients portion of the decomposition shows no evidence of differential treatment across economic hardship groups in the system for Aboriginal children and caregivers. These findings should be interpreted with caution for at least two reasons. First, because we study the economic disparity gap and how Aboriginality relates to that gap, we are not suggesting an absence of bias in the overall child welfare system. Second, the historical and political mechanisms causing economic hardship among Aboriginal households are qualitatively different from the mechanisms causing economic hardship in non-Aboriginal households. To reduce the economic disparity gap requires an understanding of the multifaceted causes of economic hardship.

A. LIMITATIONS

Causal inferences cannot be made given the cross-sectional nature of the study. The CIS-2008 is limited to information gathered within the four to six-week period in which the investigation was open and does not include reports which were screened out, cases investigated only by police, or those that were never reported.⁶² In addition, the study is based on worker assessments of investigations and could not be independently verified. As such, we recognize the presence of measurement error. For example, workers made their best judgments about economic

⁵⁷ Fallon et al, *Untangling Risk* *supra* note 12.

⁵⁸ Fallon et al, *Characteristics of Young Parents*, *supra* note 12; Sinha, Ellenbogen & Trocmé, *supra* note 19; Trocmé, Knoke & Blackstock, *supra* note 18.

⁵⁹ Fallon et al, *Opportunities* *supra* note 13; Fallon et al, *Characteristics of Young Parents*, *supra* note 13; Fast et al, *supra* note 14; Jud, Fallon & Trocmé, *supra* note 24.

⁶⁰ Fallon et al, *Untangling Risk*, *supra* note 12.

⁶¹ Sinha et al, *supra* note 19.

⁶² Trocmé et al, *supra* note 43.

circumstances but often without accurate and reliable information about the household finances of the investigation. Disclosure of economic information to an investigating child welfare worker may be complicated by perceived negative consequences that disclosure could have on the family.

B. IMPLICATIONS FOR POLICY AND RESEARCH

The overrepresentation of low income families within the child welfare system is not a new phenomenon. Our findings imply that policy reform is urgently needed to reduce the inequalities of child maltreatment rates across socioeconomic groups. Despite the fact that Canada has a relatively strong social safety net, there is concern about the retrenchment of the welfare state⁶³ and growing income inequality.⁶⁴ The child poverty rate is relatively high by international standards and is one of few countries where the child poverty rate is higher than the overall poverty rate. Through social assistance and other income transfers and tax credits, federal and provincial social policies can do more to directly and immediately lift households with children out of economic hardship. Further, policies that focus on raising the standard of living for all children have the potential to reduce disparities experienced by specific groups of children (e.g., Aboriginal children). Our findings are important for the relationship between Canada and the more than 392100 Aboriginal children living inside the borders of the Canadian state.⁶⁵ Specifically, the Truth and Reconciliation Commission's Calls to Action and the 2016 Canadian Human Rights Tribunal decision in the *Caring Society* case illuminate discriminatory practices based on unequal funding provisions for child welfare and other public social services in First Nations communities across the country.⁶⁶ Future research is needed to articulate how discriminatory funding models shape economic hardship.

Significant shifts within the existing culture of the Canadian child welfare system are required. It has been suggested that the current context of child protection needs to place less emphasis on legal processes and move toward a system of building relationships and a broadened mandate that encompasses *family welfare* rather than child welfare alone.⁶⁷ At the time of writing, some provinces have implemented differential response models designed to allow for child welfare workers to work with families for a short period of time to connect them to community and preventative services. These are promising models that many provinces are working to implement in some form or another.

⁶³ John R Graham, Karen J Swift & Roger Delaney, *Canadian Social Policy: An Introduction*, 4 edition ed (Toronto: Pearson Canada, 2011).

⁶⁴ Nicole Fortin et al, "Canadian Inequality: Recent Developments and Policy Options" (2012) Canadian Public Policy, online: <<http://utpjournals.press/doi/abs/10.3138/cpp.38.2.121>> [perma.cc/4ZWU-A5L6].

⁶⁵ Statistics Canada, "Table 4 Age distribution and median age for selected Aboriginal identity categories, 2011 Census Program: Aboriginal Peoples in Canada: First Nations People, Métis and Inuit." Online: <http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/2011001/tbl/tbl04-eng.cfm> [perma.cc//ZJE7-KS8R]

⁶⁶ *First Nations Child and Family Caring Society of Canada v Canada (Minister of Indian Affairs and Northern Development)* 2016 CHRT 2; *Honouring the Truth, Reconciling the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada*, (Ottawa: TRCC, 2015).

⁶⁷ G Cameron, N Freymond & L Cheyne-Hazineh, "Doing the work: Child protection jobs in centralized and accessible service delivery models" in K Kufeldt & B McKenzie, eds, *Child welfare: Connecting research, policy and practice*, 2nd ed (Waterloo, ON: Wilfrid Laurier University Press, 2011) 117; Karen J Swift, "Canadian child welfare: Child protection and the status quo" in *Child protection systems: International trends and orientations* (New York: Oxford University Press, 2011) 36; Karen J Swift & Henry Parada, "Child welfare reform: Protecting children or policing the poor" (2004) 19 JL & Soc Pol'y 1.

While reform is needed within the child welfare system, improving outcomes for low-income families is not a challenge that can be addressed by this sector alone. Considering our main finding that economic hardship was positively associated with almost all forms of substantiated maltreatment (physical abuse the exception), there is a need for an interdisciplinary response. Swift and Parada posit that cross-system collaboration is required, which involves breaking down siloes between sectors providing services to similar vulnerable populations and advocating for policy change.⁶⁸ Our findings highlight that caregiver functioning concerns drive a large proportion of the inequality in rates of substantiated maltreatment. Commitment at multiple levels (local, provincial, federal) to preventing and treating caregiver risk factors may reduce the likelihood of maltreatment.

Further research is also needed to gain a more in-depth understanding of the mechanisms that contribute to increased risk of maltreatment among families who experience economic hardship to better tailor supports and services. Improved data and measurement will help. Longitudinal data is needed to understand how time-varying factors such as caregiver risk factors intersect with economic hardship. Researcher-agency partnerships, such as the Building Research Capacity initiative in Quebec may be a potential model for understanding longitudinal trajectories of children through the child welfare system.⁶⁹ Measurement of economic hardship can also be greatly improved, which has started with refined definitions in provincial incidence studies. For example, the 2013 Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2013) disaggregated the economic hardship variable into three categories - food, housing and utilities.⁷⁰ At a practical level, investigation and evaluation of promising practices that aim to reduce the impact of identified risk factors on the likelihood of maltreatment among families who experience economic hardship also warrant further inquiry.

Table 6 (Appendix) Decomposition results, difference in substantiation rate for economic and non-economic hardship, weighted

	Characteristics/Explained			Coefficients/Unexplained		
	b	se	p	b	se	p
Investigation	0.007	0.00	.07	.068	.05	.18
Previous report	-0.002	0.003	0.57	-0.010	0.014	0.487
Physical harm	0.000	0.001	0.637	0.000	0.002	0.936
Referral professional (other)	0.012	0.002	0	0.053	0.035	0.141
Referral non-professional	-0.004	0.002	0.021	0.026	0.015	0.099
Child	-.004	.01	.49	-.036	.02	.14
Age	0.001	0.001	0.262	0.053	0.016	0.002
Functioning: biological	-0.002	0.002	.197	-.038	.006	0.00
Functioning: internalizing	-0.003	0.001	0.19	.012	.003	0.00
Functioning: externalizing	0.000	0.001	0.490	-.031	.008	0.00
Aboriginal status	-0.001	0.006	0.870	-.031	.018	.091
Caregiver	-.179	.01	0.00	.300	.05	0.00
22-30 years (under 22 years)	-0.007	0.003	0.012	0.066	0.026	0.013
31-40 years	0.002	0.001	0.219	0.056	0.023	0.018

⁶⁸ Swift & Parada, *supra* note 66.

⁶⁹ Nico Trocmé, Catherine Roy & Tonino Esposito, "Building research capacity in child welfare in Canada" (2016) 10 *Child and Adolescent Psychiatry and Mental Health* 16.

⁷⁰ B Fallon et al, *Ontario Incidence Study of Reported Child Abuse and Neglect - 2013 (OIS-2013)* (Toronto, ON: Child Welfare Research Portal, 2015).

	Characteristics/Explained			Coefficients/Unexplained		
	b	se	p	b	se	p
41-50 years	0.002	0.002	0.335	0.011	0.006	0.084
51 years and over	0.001	0.000	0.117	0.002	0.001	0.00
Aboriginal status	-0.014	0.007	0.041	0.019	0.017	0.252
Single parent (blended/other)	0.000	0.002	0.936	0.026	0.011	0.024
Biological family	0.002	0.001	0.014	0.009	0.009	0.304
Number of children in the home	0.010	0.004	0.006	-0.011	0.031	0.726
Risk: substance use/mental health	-0.065	0.004	0.000	0.009	0.016	0.584
Risk: physical health/cog. impair	0.002	0.003	0.537	0.009	0.008	0.316
Risk: social, historical, relational	-0.112	0.005	0.000	0.104	0.026	0
Household	-0.091	.01	0.07	.028	0.01	.04
Moves	0.006	0.002	0.002	0.034	0.009	0.001
Social assistance	0.008	0.006	0.201	0.005	0.016	0.774
Crowded housing	-0.011	0.003	0.002	0.026	0.008	0.001
Public housing	0.005	0.004	0.256	-0.017	0.006	0.01
Household hazards	-0.027	0.004	0.00	-0.019	0.007	0.009
Constant				-0.452	0.053	0.00
Total	-.197	.011	0.000	-.091	.012	0.00