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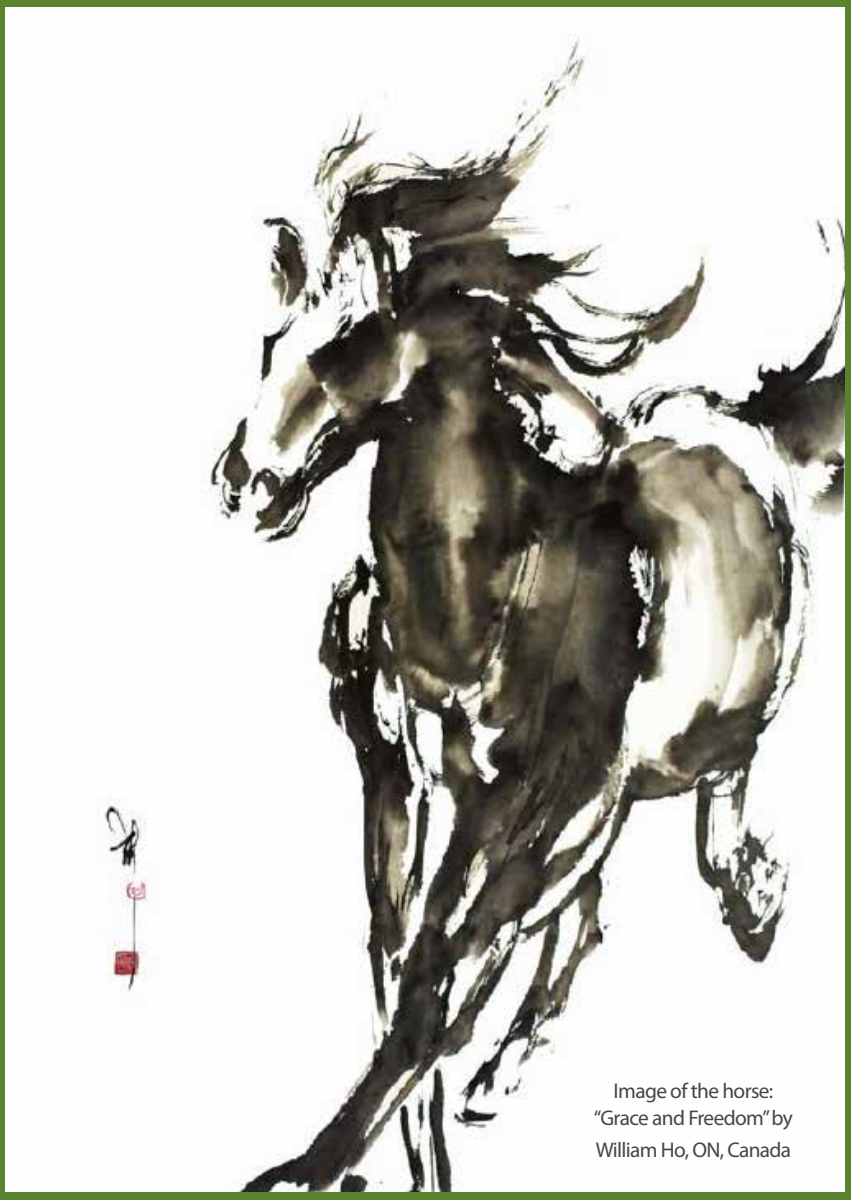

Image of the horse:
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Differences in Abuse and Related Risk and Protective Factors by Runaway Status for Adolescents Seen at a U.S. Child Advocacy Centre

Laurel D. Edinburgh[1], Scott B. Harpin[2], Carolyn M. Garcia[3], and Elizabeth M. Saewyc[4]

1 Midwest Children's Resource Center, Children's Hospital and Clinics of Minnesota, St. Paul, USA
Corresponding author: c/o Midwest Children's Resource Center, Children's Hospital of St. Paul, 347 N. Smith Ave., St. Paul, MN 55102, laurel.edinburgh@childrensmn.org

2 University of Colorado College of Nursing, Denver, CO, USA

3 University of Minnesota School of Nursing, Minneapolis, MN, USA

4 University of British Columbia, School of Nursing, Canada

Abstract:

Objective(s): This study examined the abuse prevalence and characteristics, and risk and protective factors, among both runaway and non-runaway adolescents evaluated at a Child Advocacy Center (CAC) in Minnesota, which had implemented a referral program to assess runaways for potential sexual assault or sexual exploitation. **Methods:** A cross-sectional analysis of self-report and chart data for the 489 adolescent girls who were evaluated between 2008 and 2010. Chi-square and t-tests by runaway status compared abuse experiences, trauma responses, health issues, and potential protective assets associated with resilience between runaways and non-runaways. Bivariate logistic regressions explored the relationship of these risk and protective factors to self-harm, suicide attempts, and problem substance use, separately for runaways and non-runaways who had experienced sexual abuse. **Results:** Runaways were significantly more likely than non-runaways to have experienced severe sexual abuse, to have used alcohol and drugs, and reported problem substance use behavior, higher levels of emotional distress, more sexual partners, and they were more likely to have a sexually transmitted infection (STI). Runaways had lower levels on average of social supports associated with resilience, such as connectedness to school, family or other adults. Yet higher levels of these assets were linked to lower odds of self-harm, suicide attempt and problem substance use for both groups. **Conclusions and Implications:** CACs should encourage referrals of runaway adolescents for routine assessment of sexual assault, and incorporate screening for protective factors in addition to trauma responses in their assessments of all adolescents evaluated for possible sexual abuse, to guide interventions.

Keywords:

Runaway, sexual abuse, adolescent, risk factor, protective factor, child advocacy center

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Introduction

Runaway adolescents are a group with elevated risks for sexual abuse, sexual assault or exploitation, either as a precipitating factor for leaving home, or experienced while they are "on the run" (Saewyc, MacKay, Anderson, & Drozda, 2008; Slesnick, Dashora, Letcher, Erdem, & Serovich, 2009; Sullivan & Knutson, 2000; Tyler & Cauce, 2002). A history of sexual abuse increases adolescents' vulnerability to being sexually re-victimized, including sexual exploitation (Wilson & Widom, 2010). Although the actual number of sexually exploited runaways is unknown, this type of abuse appears to occur at higher rates for runaway and street-involved adolescents than among other young people (Mitchell, Finkelhor & Wojak, 2010; Stransky & Finkelhor, 2008).

Beyond sexual assault and exploitation, runaway young are at higher risk for other health-compromising behaviors and related health problems (Slesnick & Prestopnik, 2005). More than two decades of research among runaway adolescents in North America has documented higher rates of suicide attempts and self-harm (see for example, Rotheram-Borus, 1993; Koopman, Rosario, & Rotheram-Borus, 1994; Saewyc, Wang, Chittenden & Murphy, 2006; Melzer, Ford, Bebbington & Vostanis, 2012). In some studies, this increased risk has been directly linked to sexual abuse: in a multi-city study of homeless and runaway youth in the U.S., sexual abuse was an independent predictor of suicide attempts, with girls who had been sexually abused before leaving home reporting 3.2 times the odds and boys 4.2 times the odds of attempted suicide than their runaway and homeless peers who had not been abused (Molnar, Shade, Kral, Booth & Watters, 1998).

Substance abuse is also common among runaway youth (Baer, Ginzler & Peterson, 2003; Koopman, et al., 1994; Rosenthal, Mallett, Milburn, & Rotheram-Borus, 2008), and can be severe enough to be diagnosed as problem substance use or dependence disorders. Kipke and colleagues found that two-thirds of runaway and homeless youth in Los Angeles met DSM-IV criteria for problem substance abuse (1997), and in a recent longitudinal study, Tyler & Bersani (2008) noted early substance use (i.e., before age 13) can be a precursor to running away. As with suicidality, sexual abuse may increase the risk of substance use among runaway and homeless youth. In a study of homeless youth in Texas, Rew and colleagues (2001) reported those with a history of sexual abuse were more likely to report recent alcohol and marijuana use, and to have attempted suicide in the past 12 months. In a study of adult women working in the sex trade, Martin, Hearst & Widome (2010) found that sexual exploitation had occurred before first substance use among those who first traded sex as adolescents rather than those who first traded sex as adults. In contrast, in a study of 762 street-involved adolescents age 12 to 18, Saewyc, MacKay, and colleagues (2008) found the majority of sexually exploited adolescents had first tried alcohol and marijuana before trading sex, but exploited youth were also more likely to have run away at an earlier age than first being exploited, to report sexual abuse by family members, and to report they were more likely to use other drugs, such as heroin or cocaine, than street-involved youth who were not sexually exploited; unfortunately, their study did not ask about the age of first sexual abuse, so it is unclear whether first substance use came before or after first sexual abuse.

Although most runaways return home within a short period of time (Milburn et al., 2007) trauma from the circumstances that led them to runaway or experiences they had while on the street are not necessarily easily resolved. Tucker, Orlando-Edelen, Ellickson, and Klein (2011) found that runaways had

higher rates of depressive symptoms and substance use four to five years later, and this was significant even after controlling for early substance use, depressive symptoms, lack of parental support, school disengagement and general delinquency. In their study, even a single act of running away was linked to subsequent health problems. However, this study did not include assessments for sexual or physical abuse, either at baseline or during the longitudinal study, so it is unclear how much of the increased risk of mental health and substance use issues among runaways may have been the sequelae of abuse.

There is a growing body of research and theoretical knowledge that explains how the timing of sexual abuse and other maltreatment during childhood and adolescence can affect developmental pathways, both physiologically and psychologically, and increase the risk of health compromising behaviors. Developmental traumatology as described by DeBellis (2001) is one theoretical model that can help explain the mechanisms behind this increased risk. A key element of this theory is a recognition that sexual abuse and other maltreatment can be a potent stressor, influencing neuroendocrine development, especially the stress responses (DeBellis, Spratt, and Hooper 2011). These studies describe changes in brain morphology and endocrine responses that have been linked to substance abuse and post-traumatic stress disorder, among other mental health outcomes (Cohen, Perel, DeBellis, Friedman, and Putman, 2002). This helps explain the large body of research among sexually abused adolescents that finds the degree of trauma experienced (i.e., frequency, severity, age of onset, relationship to abuser, abuse type) is associated with acute psychological and physiological stressors, which can result in depression, disassociation, hyper-sexuality, and low self-esteem (DeBellis et al., 2011). However, because abuse often occurs amid other life stressors, such as poverty, parental substance use, and lack of social support, the complex interaction of abuse with genetics, developmental timing and environmental factors makes it difficult to predict the specific pathways that influence each child's or adolescent's subsequent trauma responses (Watts-English, Fortson, Gibler, Hooper, & De Bellis, 2006).

At the same time, not all adolescents who have been sexually abused end up with severe trauma responses such as self-harm, suicide attempts, or substance abuse. Some studies suggest that psychobiological responses may be amenable to intervention (DeBellis, 2011). Resiliency theory (Resnick, 2000; Blum, McNeely, & Nonnemaker, 2002) describes the context of environmental and interpersonal protective factors that have been shown to buffer against negative social and health outcomes; resilience is defined as doing well in spite of negative exposures and risks that would normally lead to adverse outcomes, usually because of protective assets or life experiences (Resnick, 2000). These protective assets in young peoples' lives can include supportive relationships in family, schools, and among peers; spiritual or religious involvement; pro-social extracurricular activities and volunteering, which have been linked to reduced odds of a variety of risk behaviours in the general population, including sexual risk behaviours, suicide and problem substance use (Saewyc & Tonkin, 2008). Research has shown that even among sexually abused or runaway youth, the increased risks for health problems can be modified by protective factors such as family or peer support (Saewyc & Edinburgh, 2011;Trickett, Noll, & Putnam, 2011). In a population-based study of more than 30,000 adolescents in western Canada, for example, both sexually abused and runaway youth who reported high levels of caring relationships with non-offending caregivers and other family members, or who felt connected to school, or were engaged in the community, were significantly less likely to report self-harm, suicidality, and substance abuse (Saewyc, et al., 2006). Health care providers who assess sexually abused youth may not routinely ask about such protective factors, since much of the medical and mental health care related to abuse is problem-focused, yet knowledge of relevant supports that might reduce traumatic responses could be helpful for developing plans of care for abused youth.

Throughout the United States, Children's Advocacy Centers (CACs) are an integral community resource for assessing incidents of sexual abuse of children and adolescents, and they provide integrated care and advocacy for over 250,000 victims annually (personal communication, Troy Price, National Children's Alliance, February 3, 2010). The standards of care for

accredited CACs include facilitating access for victims of abuse to multi-disciplinary child-friendly health care services, mental health services, and coordinated case investigations (Jackson, 2004; National Children's Alliance, 2009). One of the benefits of Child Advocacy Centers is their ability to address both the physical and mental health sequelae of sexual abuse, and to help prevent the long-term negative outcomes of sexual violence during childhood and adolescence. This is especially relevant for adolescents, as the likelihood of sexual violence, sexual abuse and sexual exploitation increases during adolescence. According to the U.S. National Developmental Victimization Survey, the one-year incidence of any sexual victimization is 3 times higher among adolescents age 13 to 17 than among children 6 to 12 years old (Finkelhor, Ormrod, Turner & Hamby, 2005). Yet adolescents are currently underrepresented among those assessed at CACs; for example, in 2010, fewer than 70,000 13- to 17-year-olds received sexual abuse assessments at CACs compared with nearly 200,000 infants and children up to age12 (personal communication, Tony Price).

In recent years, a few CACs, such as the Midwest Children's Resource Center (MCRC) in St. Paul, Minnesota, have begun accepting referrals to routinely evaluate runaways for possible sexual abuse or assault, given the higher risk of sexual violence among runaways that has been documented in the literature, yet this is by no means a universally accepted practice. Our study offers an opportunity to examine the relevance of runaway status as a referral criterion to CACs for evaluation and treatment of possible sexual abuse. At the same time, MCRC incorporated questions about protective factors in their assessments of adolescents who are referred for evaluation. Drawing upon cases of all adolescent girls who had been evaluated at MCRC for possible sexual abuse from 2008 to 2011 (n = 489), we sought to answer two primary questions: 1) are there differences in severity of abuse experiences, presence of related risk factors or trauma responses, or levels of protective factors between runaways and non-runaways? and, 2) among sexually abused youth in either group, what readily assessed protective factors are associated with lower odds of common trauma responses to sexual abuse, i.e., self-harm behaviors, suicide attempts, and problem substance use? We hypothesized that runaway youth will report more severe forms of abuse and repeat victimizations, and will have higher rates of health-compromising behaviors or traumatic responses than non-runaway youth. We also expected that runaways would report lower levels of protective factors, but youth with higher levels of protective factors in either group would have lower odds of self-harm, suicide attempts, or problem substance use.

Methods

Procedures

MCRC is an urban hospital-based CAC that provides care routinely to children and adolescents. The clinic is staffed by a team of physicians, nurse practitioners, and clinic nurses who conduct comprehensive interviews about abuse, health assessments, immediate access to reproductive health care, and recommendations for on-going health and psychological care. The CAC accepts referrals from police, child protection, schools, parents, health care providers and advocates for adolescents who may have experienced abuse. These assessments are often precursor to child protection system (CPS) involvement; indeed our forensic team works closely with CPS and prosecutors on cases. Since 2006, they have also offered forensic examinations and sexual abuse assessments for runaways, and their Runaway Intervention Project has provided long-term intensive services for sexually assaulted and exploited young runaways (Edinburgh & Saewyc, 2009).

At the time of the initial CAC visit, all adolescents are asked to complete a self- assessment of risk and protective health behaviors and attitudes as part of their examination. This assessment has been clinic practice since 2006. The self-assessment was adapted from the Minnesota Student Survey, a school-based population survey administered to 6th, 9th, and 12th graders every three years throughout the state (Minnesota Student Survey, 2007). The adolescents also had health histories, forensic interviews, physical exams and appropriate laboratory data obtained by the CAC provider. For this secondary data analysis, we included all female adolescents who presented to the CAC for evaluation of possible sexual abuse/assault between January 1, 2008 and December 31, 2012 (n = 489). Institutional Review Board

approval to undertake this study was obtained from Children's Hospital of Minnesota and the University of Minnesota.

Variables

Case information was extracted by an advanced practice nurse from examination chart records and self-assessment data for each case. Data included demographic information, types and severity of sexual abuse, intra-familial physical abuse, runaway status, substance use and sexual risk behaviors. We also collected a measure of current emotional distress, based on a scale used in population health surveys involving 4 items assessing past month level of stress, anxiety, sadness, and hopelessness; however, this scale has not been directly linked to diagnostic criteria for PTSD or other mental health problems. The data from charts also included protective factors identified in existing literature, such as supportive relationships, school connectedness, and involvement in community activities. Biological data included results of sexually transmitted infection screening and pregnancy tests. Key variables and scale psychometrics are described in Table 1. The three scales in the data (emotional distress, school connectedness, and other adults care) were evaluated within this sample using internal consistency reliability (Cronbach's alpha) and principal components analyses to evaluate unidimensionality of the scale.

Outcome variables. To examine potential protective factors that may lower the odds of traumatic responses, three health-compromising behavior variables were chosen for age-adjusted logistic regressions: self-harm (cutting) behavior, suicide attempts, and problem substance use. Self-harm and suicide attempts are defined in Table 1. Problem substance abuse was a score created from a series of items asking about problems associated with drug or alcohol use, worded to allow for a cut-off score based on the DSM-IV diagnostic criteria; the scale was validated by Fulkerson, Harrison and Beebe (1999) using data from more than 70,000 youth participating in the 1995 Minnesota Student Survey. These three health-compromising behaviors were chosen because they are mental health sequelae that can be identified during clinical visits and referred for intervention.

Data Analyses

All analyses were performed using Stata 11.0 (Stata Corp, 2010). Univariate frequencies were first analyzed for all variables, with particular attention paid to addressing missing data; variables with more than 20% missing data were excluded from further analysis. Demographic characteristics, abuse type and other categorical variables were analyzed via cross-tab tables comparing runaways and non-runaways. Chi-square tests were performed with Fishers Exact Test to offer both parametric and nonparametric results when cell sizes were marginal; in all statistical tests, p-values were congruent for both tests. For continuous variables and scales, standard t-tests (with unequal variances assumed) were used to compare means by group. Given longstanding recommendations to include effect sizes along with significance testing (p-values) in reporting results (Kirk, 2001), we also included Cohen's d results for continuous measures, and Cramer's phi for categorical comparisons of percentages. Results of comparisons between runaways and non-runaways are displayed in Table 3.

Among adolescents who were diagnosed with sexual abuse (n = 394), age-adjusted logistic regression analyses, conducted separately for runaways and non-runaways, were used to determine if severity of abuse or recent emotional distress increased the odds of the three trauma responses (self-harm, suicide attempt, or problem substance use), and if any of the protective factors lowered the odds of these trauma responses. Results of logistic regressions are shown in Table 4.

Results

Demographics and abuse experiences between runaways and non-runaways

Demographic characteristics and the prevalence of different types of abuse experiences are compared between the runaway and non-runaway groups in Table 2. The sample of runway and non-runaway youth ranged in age from 9 to 17; the runaway group was slightly older on average compared to the non-runaways. There was a significantly greater percentage of Hmong (A Southeast Asian refugee population that is largely concentrated in California, Minnesota & North Carolina) girls who were runaways compared with

Table 1. Description of Measures

Measures	Example item content	Response options (score range)
Severe sexual assault	Three category codes: High severity = prostitution, gang rape, stranger rape, or multiple perpetrators (alone or in combination with any other SA) Medium severity = intra-familial SA + a single perpetrator (once or multiple occurrences) Low severity = intra-familial SA, a single perpetrator (once or multiple occurrences)	0-3 range
Emotional stress in past 30 days (composite of 4 items)	Ex During the past 30 days, have you felt ... *- sad?* *- under any stress or pressure?* *- discouraged or hopeless?* *- nervous, worried or upset?*	None of the time to all of the time, or 'Not at all' to 'Extremely so, to the point that I have almost given up' (0-4)
Suicidal thoughts (1 item)	*Have you ever thought of killing yourself?*	Yes/No
Tobacco use (1 item)	*During the last 30 days, how many days did you smoke a cigarette, cigar, or another tobacco product?*	Recoded as Never/Yes
Alcohol use (1 item)	*During the last 30 days, how many days did you drink even a sip of alcohol?*	Recoded as Never/Yes
Marijuana use (1 item)	*During the last 30 days, how many days did you smoke marijuana or hashish?*	Recoded as Never/Yes
Methamphetamine use (1 item)	*Have you ever used methamphetamine?*	Never/Yes
Ectasy use (1 item)	*Have you ever used Ecstasy?*	Never/Yes
Any illicit drug use (1 item)	*Have you ever used other illicit drugs, including prescription drugs to get high?*	Never/Yes
Problem substance use diagnosis	13 items based on DSM-IV criteria for a diagnosis of problem substance use: cut-off score dichotomized to yes/no	Yes/No
Self-harm/cutting behavior (1 item)	*Have you ever bruised, cut, or burned self?*	Never/Yes
Suicide attempt (1 item)	*Have you ever tried to kill yourself?*	Never/Yes
Condom use at last sex	[Clinical interview]	Yes/No
Biologically pregnant	[Clinical interview]	Yes/No
Chlamydia + screen	[Clinical interview]	Yes/No
Parent caring (1 item)	How much do your parents care about you?	'Very much' to 'not at all' (0-4)
Maternal communication (1 item)	Can you talk to mom about problems?	'Most of the time' to 'none of the time' (0-4)
Paternal communication (1 item)	Can you talk to dad about programs?	'Most of the time' to 'none of the time' (0-4)
Other adult caring (4 items)	How much do teachers or other adults at school care about you? ... other adult relatives? ... other adults in your community?	'Very much' to 'not at all' (0-4)
School connectedness (4 items)	Ex. How do you feel about going to school? How many of your teachers are interested in you as a person?	0 - 4 range
Likes school (1 item)	How much do you like school?	'Hate school' to 'like very much' (0-5)
School plans (1 item)	Which of these options best describes your school plans?	'Quit school as soon as I can" to "Attend graduate or professional school" (0-4)
Music lessons (1 item)	During the last 12 months, how often have you participated in private music lessons?	Recoded as One or more hours a week/Less
School sports (1 item)	During the last 12 months, how often have you participated in school sports teams?	"
School clubs (1 item)	During the last 12 months, how often have you participated in school sponsored activities or clubs?	"
Community clubs / program (1 item)	During the last 12 months, how often have you participated in community clubs or programs?	"
Mentoring programs (1 item)	During the last 12 months, how often have you participated in a mentoring program?	"
Religious attendance (1 item)	During the last 12 months, how often have you participated in church, synagogue, mosque or youth groups?	"

non-runaways, and a smaller proportion of Hispanic and White girls. Fewer runaways reported they had an individual education plan, which is an indirect measure of learning or other disabilities. Runaways were significantly more likely to report receiving free or reduced lunch at school. In general, living

Table 2. Characteristics of runaways and non-runaway girls (n = 489)

	Runaway n=269	Non-runaway n=220	t-test / x2 test
	Mean (SD) / %	Mean (SD) / %	
Age	14.6 (1.47)	13.8 (1.58)	4.98***
Grade	9.02 (1.46)	8.36 (1.61)	4.68***
Ethnicity:			
White	17.1%	29.1%	4.07
African American	25.0%	22.0%	0.25
Hmong/Asian	29.7%	5.9%	19.51***
Hispanic/Mexican	9.7%	17.3%	2.10
American Indian	1.5%	2.7%	0.21
Multi-ethnic	14.1%	17.7%	0.60
Do not know	3.0%	5.5%	1.05
Individual education plan	28.3%	39.4%	5.86***
Free / reduced lunch	77.7%	68.8%	4.62**
Living on the street	6%	4%	13.6***

* p < 0.05 ** p < 0.01 *** p < 0.001

Table 3: Abuse experiences of runaways and non-runaways adolescents screened at a Child Advocacy Centre

	Runaway, n=269	Non-runaway, n=220	X^2 test	Cramer's phi
	%	%		
Any type of sexual abuse	75.1%	78.2%	0.64	0.04
Intra-familial abuse	26.8%	50.0%	28.0***	0.24
Extra-familial abuse by one abuser, only once	23.1%	17.3%	2.48	0.07
Extra-familial abuse by one abuser, multiple times	18.2%	15.5%	0.65	0.04
Extra-familial abuse by multiple abusers	22.3%	6.0%	25.6***	0.23
Gang rape	3.7%	0.50%	5.86**	0.11
Stranger rape	0.74%	0.45%	0.17	0.02
Prostitution	5.20%	0.50%	9.18***	0.14
Intra-familial abuse + at least one other SA type	15.2%	11.8%	1.20	0.05
Intra-familial physical abuse	23.7%	16.4%	4.10*	0.09

* p < 0.05 ** p < 0.01 *** p < 0.001

situations did not differ by runaway status, except that a significantly higher percent of runaways indicated living on the street.

Youth differed significantly in the type and severity of abuse disclosed by runaway status (Table 2). Nearly one in three runaway youth experienced the most severe forms of sexual abuse, such as being sexually exploited or prostituted, gang raped, or assaulted multiple times by different non-family abusers over a period of time. A greater percent of runaway youth reported intra-familial sexual abuse plus an additional episode of extra-familial sexual abuse. Physical abuse was also more likely to be reported by runaway youth. Intra-familial sexual abuse without any other form of abuse was more prevalent among the non-runaway youth, perhaps because the community protocol is to refer all intra-familial sexual abuse cases to this CAC as soon as reported to child protection.

Comparison of health characteristics and protective factors by runaway status

The majority of sexually-abused youth in both groups exhibited relatively high levels of emotional distress within the previous month. Runaway teens, however, had higher levels of emotional distress than non-runaways, were more likely to indicate self-harm behaviors including cutting or burning themselves, and were more likely to report having made an actual suicide attempt in the past year.

There were significant differences between runaway and non-runaway teens in reported use of tobacco, alcohol, marijuana and other drugs (Table 3), with

Table 4. Comparisons of social assets and health or risk behaviours by runaway status

	Runaway Mean/%	Non-runaway Mean/%	t-test / X2 test	Cohen's d/Cramer's phi
Sexual assault severity (0-3)	1.43	1.01	-4.87***	0.42
Emotional distress in past 30 days (0-4)	2.19	1.86	-3.11***	0.29
Suicidal thoughts	51.2%	35.4%	11.4***	0.16
Smoking/tobacco use	43.4%	12.9%	45.21***	0.34
Drinking	49.3%	19.3%	39.5***	0.31
Marijuana use	40.9%	13.8%	36.7***	0.29
Methamphetamine use	16.1%	2.6%	17.3***	0.22
Ecstasy use	16.1%	2.6%	17.3***	0.22
Any illicit drug use	20.1%	3.9%	10.17***	0.23
Problems substance use diagnosis	23.0%	3.8%	33.9***	0.27
Self-harm/cutting behaviors	58.2%	41.6%	12.4***	0.16
Suicide attempt	24.7%	13.7%	8.48**	0.14
Condom use at last sex (% yes)	34.3%	43.0%	2.1	0.08
Pregnancy screen + (% yes)	5.6%	2.3%	3.26	0.08
Chlamydia + screen (% yes)	20.6%	3.2%	32.4***	0.26
Parent caring (0-4)	2.67	3.44	6.88***	0.60
Maternal communication (0-4)	2.07	2.48	4.17***	0.44
Paternal communication (0-4)	1.65	1.85	2.12*	0.20
Other adult caring (0-14)	1.94	2.61	7.07***	0.62
School connectedness (0-4)	2.28	2.63	4.21***	0.38
Likes school (0-4)	2.29	2.55	2.24*	0.21
School plans (0-4)	3.34	3.56	1.65	0.15
Self esteem	1.57	1.87	3.53***	0.39
Music lessons[a]	20.3%	37.2%	15.6***	0.19
School sports[a]	12.5%	23.3%	8.72***	0.14
School clubs[a]	5.8%	11.0%	3.92	0.10
Community clubs / programs[a]	7.9%	12.6%	2.56	0.08
Mentoring program[a]	9.2%	8.7%	0.03	0.01
Religious attendance[a]	13.2%	15.8%	0.57	0.04

* p < 0.05 ** p < 0.01 *** p < 0.001 [a] At least once a week v. monthly or less

runaways more likely to report a history of alcohol or illicit drug use. One in three runaways met the DSM IV diagnostic criteria for problem substance use, compared to less than one in ten non-runaways. Similarly, although the majority of both groups exhibited symptoms of emotional distress, runaway teens were more likely to have evidence of self-harm behaviors, including cutting or burning oneself, suicidal ideation, and actual suicide attempts. There were significant differences and effect sizes ranged from moderate to large.

Although there were no differences in self-reported condom use at last intercourse between the two groups, laboratory results for sexually transmitted infections but not for pregnancy were significantly different. Four times as many runaways had positive chlamydia tests as non-runaways. Overall few girls were found to be pregnant during their CAC health care assessment, and while a higher percent of runaways had positive pregnancy tests, it was not a statistically significant, and effect sizes were small.

In general, protective factors were less common among runaways; they were less likely than non-runaways to feel that their parents cared about them, or that they could talk to parents or other adults. Runaway youth were significantly less likely than non-runaways to report liking school, and they had lower levels of school connectedness. Runaways were less likely to be involved in extra-curricular activities such as sports, clubs or music lessons. However, there were no statistically significant differences in the educational aspirations between the two groups.

Risk or protective factors linked to self-harm, suicide attempts, problem substance use

For runaways who had been sexually abused,

Table 5. Risk and protective factors for trauma responses by runaway status (age-adjusted odds)

Protective and risk factors	Self harm/cutting behaviour AOR (95% CI)	Suicide attempt AOR (95% CI)	Problem substance use AOR (95% CI)
Runaway adolescents			
Severe sexual abuse	**1.55 (1.11-2.16)**	**1.45 (1.04-2.05)**	**1.43 (1.00-2.05)**
Emotional distress in last 30 days	**1.80 (1.33-2.43)**	**1.98 (1.39-2.82)**	**1.40 (1.00-1.95)**
Parent caring	**0.74 (0.58-0.93)**	**0.50 (0.38-0.65)**	0.89 (0.70-1.13)
Maternal communication	**0.65 (0.45-0.95)**	**0.43 (0.29-0.66)**	**0.55 (0.36-0.85)**
Paternal communication	0.86 (0.62-1.20)	**0.59 (0.39-0.90)**	1.06 (0.73-1.53)
Other adult caring	**0.67 (0.51-0.89)**	**0.43 (0.31-0.61)**	**0.77 (0.57-1.04)**
School connectedness	0.82 (0.59-1.15)	**0.52 (0.35-0.76)**	**0.51 (0.34-0.77)**
Likes school	0.90 (0.70-1.15)	**0.76 (0.58-0.99)**	**0.62 (0.46-0.83)**
School plans	0.86 (0.69-1.06)	**0.71 (0.57-0.88)**	**0.70 (0.56-0.88)**
Music lessons	1.68 (0.75-3.80)	1.18 (0.54-2.60)	0.34 (0.11-1.05)
School sports	0.51 (0.21-1.27)	2.21 (0.89-5.51)	0.57 (0.18-1.81)
School clubs	0.52 (0.14-1.86)	0.26 (0.03-2.09)	0.31 (0.04-2.53)
Community clubs/programs	0.67 (0.24-1.91)	0.34 (0.07-1.54)	1.01 (0.30-3.42)
Mentoring program	1.35 (0.49-3.70)	0.64 (0.20-2.01)	0.32 (0.07-1.49)
Religion attendance	1.52 (0.60-3.86)	0.74 (0.28-1.98)	0.96 (0.35-2.63)
Non-runaway adolescents			
Severe sexual abuse	1.35 (0.81-2.25)	1.26 (0.68-2.32)	2.06 (0.83-5.11)
Emotional distress in last 30 days	**2.00 (1.40-2.84)**	**2.26 (1.35-3.68)**	2.77 (0.99-7.81)
Parent caring	0.79 (0.57-1.09)	0.80 (0.54-1.19)	1.18 (0.47-2.97)
Maternal communication	0.89 (0.58-1.36)	0.76 (0.44-1.30)	0.53 (0.23-1.20)
Paternal communication	0.94 (0.69-1.28)	0.68 (0.41-1.11)	0.74 (0.31-1.73)
Other adult caring	**0.60 (0.41-0.89)**	0.75 (0.45-1.27)	0.65 (0.24-1.80)
School connectedness	0.74 (0.49-1.11)	1.00 (0.59-1.74)	0.67 (0.25-1.80)
Likes school	0.84 (0.64-1.09)	1.06 (0.73-1.54)	**0.38 (0.18-0.83)**
School plans	0.85 (0.67-1.08)	0.94 (0.68-1.31)	0.76 (0.46-1.28)
Music lessons	0.98 (0.49-1.95)	1.16 (0.45-2.96)	0.38 (0.04-3.40)
School sports	0.86 (0.37-1.99)	1.36 (0.43-4.28)	--
School clubs	0.99 (0.31-3.19)	0.91 (0.18-4.69)	--
Community clubs/programs	**0.33 (0.11-0.99)**	1.28 (0.37-4.41)	--
Mentoring program	**0.28 (0.07-1.09)**	0.82 (0.16-4.18)	--
Religion attendance	0.56 (0.22-1.44)	1.32 (0.42-4.21)	0.79 (0.08-7.37)

NOTE. Missing AORs indicate too few cases in predictor variable for calculation; statistically significant AORs in bold.

severity of abuse was linked to all three trauma responses; youth having the most severe abuse experiences were up to 1.55 times as likely to report self-harm, a suicide attempt, or to meet DSM-IV criteria for problem substance use. Likewise, recent emotional distress increased the odds of self-harm and suicide attempts by almost 2 times. However, among runaways, several of the connectedness factors significantly decreased the odds of these three health problems. For example, feeling cared for by parents or by other adults, and being able to talk to your mother about your problems, all decreased the odds of self-harm behavior, suicide attempt, and problem substance use, while being able to talk to your father about problems only reduced the odds of suicide attempts. School–related protective factors, such as liking school, school connectedness, and post-secondary educational were not linked to self-harm, but significantly lowered the odds of suicide attempts and problem substance use. None of the extracurricular activities were associated with lower odds of any of the three trauma responses for sexually abused runaways.

While non-runaway youth were less likely to exhibit self-harm, suicide attempts or problem substance use, high levels of emotional distress in the past 30 days still significantly predicted self-harm behaviors and suicide attempts (but not problem substance use). Severity of sexual abuse was not a significant risk factor for any of the three responses. In addition, far fewer protective factors were associated with reduced odds of any of the three trauma responses. The only potential protective factors associated with lowered odds of self-harm were high levels of feeling other adults cared, being involved in a mentoring program at least once a week, or being involved in a community organization or a club. Liking school was the only factor that significantly reduced the odds of problem substance use, and none of the potential protective

factors was linked to suicide attempts.

Discussion

In order to examine whether runaway status is a relevant and useful criterion for referral to CACs for evaluating possible sexual abuse, this study compared characteristics of runaway and non-runaway girls evaluated in an urban, hospital-based CAC, including abuse experiences, risk behaviors, and potential supportive assets or protective factors in their lives that might reduce traumatic responses. We found runaway girls referred to the program reported more severe types of abuse experiences, including gang rape, sexual exploitation, and repeated victimization by multiple perpetrators. They reported higher prevalence of risk behaviors associated with trauma, and fewer supportive resources, such as caring adults in their families, schools or other settings. Runaways were also more likely to have a sexually transmitted infection at their initial CAC assessment.

Although they may have had fewer supportive adults in their lives, consistent with a resiliency model, when they did have higher levels of these protective factors, those caring and connected relationships with family members and other adults appear to reduce the odds of self-harming behavior and suicide attempts among runaways, and in some cases, problem substance use. This suggests that even though runaways leave home, for some of them, their connections to caring adults in the family or beyond remain critically important protective factors that should be fostered. Our results are similar to those found in other studies in North America (Saewyc et al., 2006; Trickett et al., 2011). Intervention studies have further documented this relationship: one intervention program that is designed to reconnect runaways to family, school, and other adults, and foster improved relationships, has shown significant improvement over time in both these protective factors and in such traumatic responses as self-harm, suicidality, substance abuse, and risky sexual behaviors (Saewyc & Edinburgh, 2010).

Since most runaways return home on their own (Milburn, et al., 2007) and do not necessarily interact with police, child protection, CACs or health care providers, they are often not assessed for abuse that might have occurred while 'on the run', or prior to the runaway episode. For runaways who are reported to the police as missing, a standardized protocol of questions that asks about victimization experiences, substance use, family support and safety at home has demonstrated that teens will disclose abuse and sensitive information to law enforcement during routine screening (Edinburgh, Huemann, & Saewyc , 2012). A screening intervention with clear referral pathways for further evaluation at a CAC would offer distinct benefits in early identification and intervention for sexually abused adolescent runaways.

Current guidelines by the American Academy of Pediatrics recommend that youth experiencing sexual abuse receive a physical exam and appropriate testing and treatment for sexually transmitted infections (Kaufman & the Committee on Adolescence, 2009). A physical exam and access to health care provide opportunities to reduce the spread of STIs through testing and treatment, assess for other physical and psychological health problems, provide health education, and ensure access to reproductive health care. Hospital-based CAC's have demonstrated that youth treated in their facilities were more likely to receive health care than youth who have their sexual abuse disclosure investigated by the police outside a CAC. (Edinburgh,, Saewyc, & Levitt, 2008).

Limitations

One limitation that should be considered is that the data are from a single hospital-based CAC. In this CAC model, the forensic interviews are completed by nurses, advanced nurse practitioners and pediatricians and occur at the same time as the physical exam, and this may not be the process at other CACs. Another limitation is the source of data for this study, i.e., retrospective review of data from self-reports and laboratory tests for sexually transmitted infections and pregnancy; when the self-assessment screen was not completed by the teen, or the lab results or exam findings were not charted, the information was coded as missing. Because of the legal use of medical records from CACs in prosecutions, MCRC provides regular training updates and monitoring of charting to ensure quality, so this may be less of a concern than with retrospective medical chart reviews generally. It should also be noted that only physical and sexual

abuse were assessed in this study; therefore, the extent to which runaways also experience neglect or family violence and how these might influence their outcomes is unclear and an area for future study.

Implications

Given the high frequency and severity of abuse seen in runaways, the CAC is a logical site for providing assessment and care for adolescents who run away from home. CACs can be a resource in the community for forensic interviewing, providing medical care, assessing resiliency and providing follow-up psychological treatment for runaway adolescents who have been sexually abused, assaulted while on the run, or sexually exploited. Cases involving multiple perpetrators, multiple police jurisdictions, and occurring over different time periods require the multi-disciplinary team approach that CACs already provide to other maltreated child victims (Cross, Jones, Walsh, Simone, & Kolko, 2007). Additionally, a coordinated response using a model of care such as the Runaway Intervention Program where different systems come together to treat sexually exploited youth, many of whom are runaways, saves money (Martin, Lotspeich, & Stark, 2012). A focus on runaway status as a criterion for referral to a CAC is likely to increase the identification and treatment of sexually abused and a coordinated response to treatment would save money and potentially reduce the short and long-term harm to adolescents.

Similarly, incorporating routine screening of potential protective factors, especially supportive relationships at home and at school, may help providers identify possible resources to reduce trauma responses or recognize areas for further intervention. Providers within the CAC can provide education and support to parents who may be struggling to parent their adolescent runaway who has experienced sexual abuse. Meeting with parents in the CAC environment outside of the juvenile justice or child protection system can be beneficial to help frame the young person's risk and abuse experiences within the family, encourage an environment in which concerns can be voiced, and generate possible strategies, actions steps and follow-up for fostering protective factors and reducing traumatic responses.

Runaway adolescents are a group at high risk for sexual abuse and exploitation, and CAC's should consider including running away as a routine referral criterion for increasing identification and early treatment of sexual abuse among adolescents. Likewise, routinely assessing for positive supports or protective factors in addition to health problems as part of the comprehensive health exam for abused youth may provide cues for interventions to reduce traumatic responses.

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International Journal of Child and Adolescent Resilience

Surveillance Data: Foundations for Interventions

Barbara Fallon[1], Nico Trocmé[2], and John Fluke[3],

1 Factor-Inwentash Faculty of Social Work, University of Toronto, Canada
Corresponding author: barbara.fallon@utoronto.ca

2 Centre for Research on Children and Families, McGill University, Canada

3 University of Denver, CO, USA

Abstract:

The Canadian Incidence Study of Reported Child Abuse and Neglect (CIS) research team is very pleased to include four papers in this inaugural issue of the *International Journal of Child and Adolescent Resilience*. Services provided to children, youth, and families from Child Protective Services or child welfare systems can range to address adult vulnerabilities (mental health problems, substance abuse), child needs for learning, health, and well-being needs, and context needs (housing supports). Ongoing service provision is one potential resilience vehicle via promoting child safety, family stability, and child permanency, when removed from family care. Each of the papers examines the decision to provide child welfare services at the conclusion of a maltreatment investigation. The four CIS analyses reveal important differences in the service decisions to four distinct populations identified by the CIS: (1) caregivers who are non-English/non-French speaking; (2) infants; (3) youth with delinquency behaviours and/or involved in the youth criminal justice system; and, (4) children who have been exposed to intimate partner violence. The findings from the CIS highlight the importance of surveillance data as a type of research evidence that can be utilized to inform important policy and practice initiatives. The lives of the children, youth, and families documented in the CIS studies are complex, and it is the responsibility of researchers to document and understand these complexities so as to support children and families in a timely, effective and ethical manner.

Keywords:

Infant maltreatment, child welfare services, interventions, surveillance data

This inaugural issue of the International Journal of Child and Adolescent Resilience represents a unique and important contribution to the resilience literature, providing a peer-reviewed format for the dissemination of resilience scholarship. Child maltreatment is a robust childhood adversity where resilience effort is critical to prevention works in the areas of maltreatment-related impairment and violence re-victimization. Resilience, the positive, healthful adaptation from adversity involves access to resources, where the child welfare system is one key player in the identification, provision, and

co-navigation of resources in the context of child maltreatment. It is valuable to consider the full gamut of interventions that may potentiate resilience, from mandated reporting to the supporting young adults as they exit the child welfare system (Goldstein, Faulkner & Wekerle, 2013; Tonmyr & Wekerle, 2013; Wekerle, 2013; Wekerle, Waechter, & Chung, 2011). In prior work on resilience, Fallon, Chabot, Fluke, Blackstock, MacLaurin and Tonmyr (2013) highlight the complex nature of child welfare services, and the need to investigate the resilience value of these services, in identifying higher out-of-home placement decisions at the conclusion of the child welfare investigation, where the child was of Aboriginal status. Further work questioned whether lower resources to child welfare agencies with high Aboriginal caseloads were at issue (Chabot et al., 2013). Thus, operationalizing resilience within the child welfare system context is an opportunity to examine agency-worker-family processes to better assess the "what-when-for whom" characteristics supporting child and youth resiliency.

The Canadian Incidence Study of Reported Child Abuse and Neglect (CIS; www.cwrp.ca) research team is very pleased to include four studies in this issue. Each of the papers examines the decision to provide child welfare services to families and children at the conclusion of a maltreatment investigation. There are two overarching goals for any child that has been reported to a mandated child welfare service: (1) to prevent the recurrence of maltreatment, and (2) to prevent or address the negative effects of maltreatment. The decision to provide child welfare services to a family is an important one, as it represents an allocation of scarce resources, an opportunity to prevent further suffering, as well as to promote the ability for people to positively interact with their environments, and protect children against the further deleterious influence of identified risk factors. The CIS studies serve as a surveillance system of reported child abuse and neglect in Canada, with a focus on the initial investigation phase of child welfare system involvement. Surveillance systems collect, analyze, and disseminate data related to health and safety in a systematic way (Wolfe & Yuan, 2001), and can inform policy analysts, practitioners, system administrators and researchers, of trends to assist in program development and prevention initiatives (Hammond, 2003; Jack, 2010; Nsubuga et al., 2006; Smith et al., 2011; Wolfe & Yuan, 2001). Child welfare systems are one of the fastest growing social service delivery sectors in Canada (Trocmé, Esposito, Laurendeau, Thomson, & Milne, 2009), and the CIS provides critical information about the decisions associated with these services.

The four CIS analyses included in this issue reveal important differences in the service decisions to four distinct populations identified by the CIS: (1) caregivers who are non-English/non-French speaking (Ma, Van Wert, Lee, Fallon & Trocmé, this issue); (2) infants (Fallon, Ma, Allan & Trocmé, this issue); (3) youth with delinquency behaviours and/or involved in the youth criminal justice system (Van Wert, Ma, Lefebvre & Fallon, this issue); and, (4) children who have been exposed to intimate partner violence (Lefebvre, Van Wert, Black, Fallon, and Trocmé, this issue). In the first examination of non-English/non-French speaking primary caregivers investigated by child welfare authorities using CIS data, Ma and her colleagues found that investigations where the primary caregiver's primary language was "other," a proxy for primary caregiver immigration status, were more likely to involve alleged physical abuse and less likely to be transferred to ongoing services at the conclusion of an investigation, when controlling for the clinical concerns of the case. These findings, along with earlier analyses done by Trocmé and his colleagues (in press) regarding the high rate of case closure after physical abuse investigations, clearly demonstrate the need for the development of public education programs tailored to address attitudes and practices related to discipline and corporal punishment.

Changing parenting practices requires an intervention grounded in an understanding of the unique experiences and needs of these families (Lewig, Arney & Salverson, 2010). Unfortunately, the investigatory process of the child welfare system results in a substantiation finding, but not an offer of services, minimizing the potential resilience role that child welfare resources can provide to the family. Resilience requires tailored resource support. As applied to the immigrant family, child welfare agencies must ensure that appropriate interpreter services are available to facilitate communication between social

service professionals and non-English/non-French speaking clients, and also must examine practice approaches, to ensure equitable support in service negotiation and navigation (Maiter & Stalker, 2011). As Ma and her colleagues note, interventions that promote resilience in these families must also consider the higher rates of social isolation and adult intimate partner violence (IPV) noted in these immigrant families, as compared to English/French primary language caregivers. Individuals are embedded in their environments and, therefore, social and cultural factors are significant aspects of the context of resiliency promotion (Bottrell, 2009).

Infants are clearly the most vulnerable child group for serious injury and mortality from child maltreatment, and resilience means dedicated effort to intervene early and effectively (Wekerle, 2013). The need for specific, evidence-based interventions is apparent when looking at the discrete clinical profiles of infants and their caregivers post-investigation. Fallon and colleagues (this issue) found that across the four main referral sources for infants to child welfare services (police, hospital, community and social services, and non-professionals), primary caregiver functioning concerns were the strongest predictor of the decision to transfer a case to ongoing services. However, the issues documented for these families are complex. Caregivers of infants who come to the attention of child welfare services are challenged by a wide range of issues, such as cognitive impairment, IPV, few social supports, or struggling with drug or solvent abuse, or mental health issues.

Further work is needed to better understand what resilience-supporting programs are for caregivers dealing with these or a combination of these issues. Ameliorating the impact of these potential risk factors on infants requires the development of support and treatment services that address the specific concerns for the caregivers, as well as the developmental, social, and cognitive needs of the infant. Meeting the needs of latency age and adolescent children with delinquency related behaviours is the focus of Van Wert and her colleagues' analyses. These children face an array of behavioural, emotional, academic and cognitive issues. While eight to eleven year olds with delinquency-related issues have an increased likelihood of receiving child welfare services, involvement in the Youth Criminal Justice system is not a predictor of service provision for 12 to 15 year olds. While the CIS does not provide any data to evaluate whether these are clinically appropriate decisions, it does provide important information about the system's response to these vulnerable youths. It may be that the child welfare system intervenes earlier with younger children presenting with delinquent behaviours, and may not continue as strong a service commitment once another formal system is involved. What is very clear in this study is that children presenting with behavioural issues need treatment and support during this crucial developmental period in order to improve their well-being and facilitate a healthy and positive trajectory into adulthood.

There has been an explosion of intimate partner violence investigations in the child welfare system since 1998 (Trocmé et al., 2001; Trocmé, Fallon, & MacLaurin, 2011; Trocmé et al., 2010). These investigations have very high rates of substantiation, but relatively low rates of service provision, when compared to other types of maltreatment-related investigations. In the context of intimate partner violence, resilience is generally conceptualized as resources available to a child that provide protection from the violence, facilitate adaptation, or promote recovery (Margolin, 2005). The impact of children of witnessing violence between caregivers is considered to be similar to the direct forms of sexual, physical, and emotional abuse and neglect (Emery, 2011; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). It remains unclear as to how to best place support to families in these situations within the child welfare context. Perhaps other social service systems, such as health care, are important partners in detecting and responding to IPV (MacMillan et al., 2009). The CIS data have been helpful in documenting the low rate of out-of-home placement of children involved in these investigations (Black, Trocmé, Fallon, & MacLaurin, 2008; Trocmé et al., 2010).

vIn order to support resilience in families struggling with intimate partner violence, child welfare agencies receiving referrals regarding these situations should focus on identifying opportunities to prevent

recurrence, and support all victims identified in the investigation. Data from the CIS have informed recent child welfare policy initiatives focused on re-defining the child protection system to utilize differential response, a practice model that emphasizes a flexible approach to assessment and service delivery, with the intention of improving child and family well-being (Waldfogel, 2008). The delivery of differential response varies considerably across jurisdictions, although these services typically involve at least two streams, one of which focuses on a traditional forensic investigation approach, and one designed for lower-risk families that mainly involves voluntary services (Merkel-Holguin, Kaplan, & Kwak, 2006; Shusterman, Hollinshead, Fluke, & Yuan, 2005). In part, this shift toward differential response acknowledges that a forensic investigative approach to child welfare practice may not be helpful in addressing the adversities or risks documented by the CIS, such as parental mental health or poverty (Daniel, 2010). When the child welfare system accurately identifies risk, there is the opportunity to prevent actual negative outcomes for children (Daniel, 2010; Segal, Opie, & Dalziel, 2012). There is some evidence that child abuse prevention efforts have shifted from directly improving the individual skills of parents to promoting environments that facilitate positive parenting in the lived environment (Daro & Dodge, 2009).

Social service systems are increasingly recognizing the impact of the ecological context on parenting, the opportunity for communities to support parents, and the possibility that it is most cost effective to invest in community-based strategies. Helpful strategies to address a broad array of issues may include implementing new social services in a community, improving current service delivery, or promoting collaboration among service providers in diverse fields (Daro & Dodge, 2009). Community-based initiatives may allow community members to act as natural supports for each other, as well as important practical resources for problem-solving in parenting, and may also promote a positive social context within which more formal services can be delivered (Korbin & Coulton, 1996).

The resilience of young people and their families will likely be bolstered if communities offer a package of formal and informal resource options, tailored to the ecological context (Daro & Dodge, 2009; Gewirtz & Edleson, 2007). Intervention programs must be high quality, have a strong theoretical foundation (Segal et al., 2012), and be operated by well-trained staff (Scott, 2010). Numerous factors may influence the success of a program in promoting resilience, preventing child abuse and neglect, and addressing the consequences of maltreatment. Service delivery should focus on multiple levels of the ecological context, and must be tailored to meet the unique needs of clients (Ungar, Liebenberg, & Ikeda, 2012). Multiple sectors, such as child welfare, health and mental health, education, and youth justice, should coordinate service delivery in order to promote continuity and consistency (Ungar et al., 2012). Interventions informed by evidence and implemented through collaboration among researchers, administrators, advocates, and service providers will likely be most successful (Toth & Manly, 2011). While it is true that child welfare services that respond to a broad array of family strengths and needs, including structural constraints such as poverty, continued resilience scholarship in child welfare populations is needed to optimize the safety and well-being of children. As with most research, these CIS findings generate more questions, and encourage further work in understanding the practice and process of child welfare service provision. The findings from the CIS highlight the importance of surveillance data as a type of research evidence that can be utilized by policy makers at all levels of government and across multiple sectors in order to inform important initiatives.

The lives of the children, youth, and families documented in the CIS studies are complex, and it is the responsibility of researchers to document and understand these complexities so as to support children and families in a timely, effective and ethical manner. Moving forward, we must use research evidence in order to inform our efforts in protecting and enhancing the well-being of young people and their families, and to continue to build the bridge to resilience for families (Littell & Shlonsky, 2010). Finally, all researchers should consider ways to disseminate their findings in order to impact policy and practice, and that is why the CIS research team is so pleased to support this important journal and congratulate its editors for their initiative and insight.

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Non-English/non-French Speaking Caregivers Involved with the Canadian Child Welfare System: Findings from the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008)

Jennifer Ma[1], Melissa Van Wert[1], Barbara Lee[1], Barbara Fallon[1], and Nico Trocmé[2],

1 Factor-Inwentash Faculty of Social Work, University of Toronto, Canada
Corresponding author: Jennifer Ma, jenn.ma@utoronto.ca

2 Centre for Research on Children and Families, McGill University, Canada

Abstract:

Objective: The objective is to provide a profile of non-English/non-French speaking families investigated by child welfare, with primary caregiver language acting as a proxy for immigration. This analysis examines the impact of language on service disposition. **Methods:** Multivariate analysis was conducted to determine whether primary caregiver language impacts the decision to transfer a case to ongoing services at the conclusion of the investigation, after controlling for clinical factors. **Results:** Investigations involving non-English/non-French speaking caregivers were more likely to identify physical abuse as the primary maltreatment form, more likely to indicate the caregiver has few social supports and is a victim of domestic violence, and more likely to report no primary source of income than investigations involving non-immigrant caregivers. When controlling for clinical factors, investigations involving these caregivers were significantly less likely to be transferred to ongoing services. However, when controlling for language and clinical factors, investigations of physical abuse were significantly less likely to be opened for ongoing services than investigations of all other maltreatment types. **Conclusions and Implications:** The findings suggest that there is an interaction between primary caregiver language and maltreatment type in predicting transfers to ongoing services. Given the lower risk profiles of non-English/non-French speaking families, although concerns of social isolation and domestic violence were more likely to be noted, a possible explanation is that these families are overrepresented in investigations of physical abuse. The potential utility of parenting education programs tailored immigrant families as one avenue to address the problem of abusive discipline, merits research attention.

Keywords:

Non-English/non-French speaking caregivers, child welfare, immigrant families, cultural parenting practices, family resilience

Immigrant children and families represent one of the largest and growing populations in high-income countries. Statistics Canada (2007) reported that in 2006, approximately 6.2 million individuals were born outside of Canada, representing one fifth (19.8%) of the overall population. This is the highest ratio

reported in 75 years. In 2006, 223,200 newcomers were children under the age of 15, representing one fifth (21%) of the foreign-born population in Canada. Nearly 1.1 million recent immigrants came to Canada between 2001 and 2006, increasing Canada's foreign-born population by 13.6%, an increase that was four times higher than that of the Canadian-born population (3.3%). There is, however, a lack of empirical knowledge on the intersection of immigration and child welfare. Child welfare systems may be more involved with children and families from diverse racial/ethnic backgrounds with a wide array of values and beliefs, although information about this important sub-population is relatively lacking (Alaggia & Maiter, 2006). In Canada, many physical abuse investigations arise from a context of corporal punishment (Trocmé & Durrant, 2003), and are more likely to involve visible minority families who may use corporal punishment as a disciplinary strategy (Lavergne, Dufour, Trocmé, & Larrivee, 2008). It is noteworthy that these investigations come to the attention of the Canadian child welfare system in the absence of any public education on community standards in positive parenting, parenting alternatives to corporal punishment, and a confusing special provision in the Canadian Criminal Code that allows individuals in authority to use "force by way of correction" (Durrant, Trocmé, Fallon , Milne, & Black, 2009).

Acculturation is defined as the adjustment process of individuals who are new to a culture (Lakey, 2003). Children in immigrant families may be at higher risk of maltreatment due to adversities stemming from familial stress involved in the migration and acculturation experience, as well as country-of-origin traumatic experiences, as with extreme poverty, war, and victimizations (Dettlaff, Vidal de Haymes, Velazquez, Midell, & Bruce, 2009; Pine & Drachman, 2005; Roer-Strier, 2001; Segal & Mayadas, 2005). For these families, new challenges may include stress related to differences in culture, language and traditions (Dettlaff, 2010), feelings of isolation and discrimination (Alaggia & Maiter, 2006), and adjustment to new informal and formal help systems (Alaggia & Maiter, 2006). Immigrant families are at increased risk of poverty due to a greater likelihood of unemployment and underemployment following settlement (Beiser, Hou, Kaspar, & Noh, 2000). High levels of acculturative stress are associated with an increased risk for family conflict and violence (Cunradi, Caetano, & Shafer, 2002).

Research has examined the intersection of diverse cultural values and beliefs and child welfare involvement (i.e., Chang, Rhee, & Weaver, 2006; Dettlaff, 2010; Reisig & Miller, 2009; Rhee, Chang, Weaver, & Wong, 2008; Maiter, Alaggia, & Trocmé, 2004; Maiter, & Stalker, 2010; Maiter, Stalker, & Alaggia, 2009). Studies indicate that differential cultural values and beliefs regarding parenting practices are prevalent among immigrant families involved with child welfare (e.g., Dettlaff, 2010; Reisig & Miller, 2009). One study found that immigrant Korean families were more likely than non-immigrant families to be substantiated for physical abuse, however most children (70.6%) were not placed out-of-home (Chang, Rhee, & Weaver, 2006). Immediate child welfare response, cases referred by police, repeated incidences of abuse, single- or step-parent households and biological mothers identified as the perpetrator significantly predicted out-of-home placements. Similarly, another study indicated that allegations of physical abuse were most prevalent among investigations of immigrant Chinese families (Rhee et al., 2008). Approximately 26.4% of substantiated cases were placed out-of-home. Police referrals and emergency response at intake significantly predicted out-of-home placements. A Canadian study found that South Asian parents do not differ from the overall population in their reported attitudes about appropriate parenting practices (Maiter et al., 2004). While the results of the study are non-representative, the findings indicate that the parents considered persistent and excessive use of physical discipline to be inappropriate, as well as endorsing the need for proper supervision of children. In addition, parents reported that parenting practices that may have negative emotional consequences for children were inappropriate.

Research has questioned a contribution of racial bias to the identification and reporting of suspected maltreatment to child welfare services, in addition to decisions about the substantiation of investigated maltreatment (Lavergne et al., 2008). A recent

Canadian study compared child maltreatment investigations among Caucasian, Aboriginal, and other visible minority children in Canada in 2003 (CIS-2003). Asian children were reported more often for physical abuse, comprising 14% of the investigations. This proportion is 1.6 times greater than their representation in census data. Moreover, Asian children were also substantiated more often for physical abuse. An examination of characteristics of the caregivers of Asian children and household profiles as noted by child welfare workers indicated that the identified risk factors of child maltreatment among the caregivers and household concerns were significantly less of a burden in comparison to Aboriginal and Caucasian caregivers. As such, other factors such as racial bias and divergent parenting practices may contribute to the observed disproportion of Asian families identified and reported to the child welfare system.

While research has found that workers did not identify child functioning or caregiver concerns as critical factors impacting child welfare involvement (e.g. Lavergne et al., 2008), other research has demonstrated that these factors are the most important predictors of case substantiation (e.g. Trocmé, Knoke, Fallon, & MacLaurin, 2009). Perhaps child functioning or caregiver concerns are less documented among particular populations. As such, further research is needed to examine the assessment of reports of suspected child maltreatment, worker understanding of child and caregiver concerns, worker-client relationship, and barriers to service as workers may not have a comprehensive understanding of the complex issues that immigrant caregivers may be experiencing. Workers may conduct an assessment of reported incidents of suspected child maltreatment without examining the context of the caregivers' situation. This includes difficulties in attaining employment, underemployment, not working in their profession, working long hours at precarious work, financial and economic hardship, language barriers, and mental and physical health issues (Maiter et al., 2009).

There is a demonstrated need for support and social services for immigrant families. Immigrant caregivers involved with the Canadian child welfare system expressed feelings of isolation, betrayal and hopelessness, financial and economic hardship, language difficulties, and a struggle to provide for their families due to problems related to employment, discrimination and childcare (Earner, 2007; Maiter et al., 2009). Moreover, the loss of resources, threats to a sense of competence, and challenges to self-esteem were identified as factors impacting family life and parenting practices. Immigrant caregivers reported that unfamiliar culture and norms impacted their sense of competence, while low proficiency in English led to difficulties in communication which further exacerbated their adjustment struggles and challenges in interacting with the child welfare system (Maiter et al., 2009). Furthermore, South Asian immigrant caregivers involved with child welfare in Canada expressed the need to be more informed about the purposes of child welfare involvement and expectations from the worker and agency (Maiter & Stalker, 2010). These parents reported experiences of mutual cultural misunderstanding with their worker and language barriers to services. While the theoretical and research literature suggests that several factors influence child welfare involvement among immigrant families, limited research has examined which factors determine service provision at the conclusion of maltreatment related investigations. Given the complexity of issues experienced by immigrant families, their distinct needs must be reflected in the child welfare system to facilitate the provision of effective services and, in turn, to promote positive outcomes. In order to address the dearth in the literature, this study uses a national child welfare dataset to examine the profile of Canadian child maltreatment investigations involving caregivers whose primary language (language spoken at home) is neither of Canada's two official languages, English or French, with language acting as a proxy for immigration and settlement. Language has previously been used as a proxy measure for acculturation among immigrants (e.g., English, Kharrazi, & Guendelman, 1997; Lee, Nguyen, & Tsui, 2011; Yu, Huang, Schwalberg, Overpeck, & Kogan, 2003). The 2011 Census (Statistics Canada, 2012) defines 'immigrant languages' as languages (other than English, French and Aboriginal languages) whose presence in Canada is originally due to immigration. Furthermore, in

2006, 70.2% of the foreign-born population reported a language other than English or French as their mother tongue (Statistics Canada, 2007).

The aim of the proposed research is to examine the case characteristics and service disposition of child maltreatment-related investigations involving non-Aboriginal primary caregivers whose primary language is neither English nor French, in comparison to English speaking primary caregivers involved with child welfare. This study provides a basis for exploring the experiences of immigrant families involved with child welfare. The objectives of the proposed study include (1) to provide knowledge on the characteristics and trajectories of non-English/non-French speaking caregivers and their children in comparison to English-speaking families involved with the child welfare system as a foundation for further research and (2) to determine whether caregiver language influences child welfare service disposition at the conclusion of a child maltreatment related investigation.

Methods

Secondary analysis of the third cycle of the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008; PHAC, 2010) dataset was conducted to address the research questions. This unique dataset contains information about key clinical factors collected during the course of a child maltreatment investigation (Trocmé et al., 2010a). Its primary objective was to produce a national estimate of the incidence of child maltreatment in Canada in 2008 (Trocmé et al., 2010a). Using a multi-stage sampling design, a representative sample of 112 child welfare sites was selected from 412 child welfare service areas in Canada (Trocmé et al., 2010b). A stratified cluster sampling design was used to select a representative sample of child welfare offices and then to sample cases within these offices. Cases opened for service at the randomly selected sites between October 1st and December 31st were eligible for inclusion (Trocmé et al., 2010b). Three months was considered to be the optimum period to maintain participation and compliance with study procedures. The final sample selection stage involved identifying children who had been investigated as a result of concerns related to possible maltreatment. Maltreatment related investigations that met the criteria for inclusion in the CIS include situations where there were concerns that a child may have already been abused or neglected, as well as situations where there was no specific concern about past maltreatment but risk of future maltreatment were being assessed. In most jurisdictions, cases are open at the family level, which meant that procedures were developed to determine which specific children in each family had been investigated for maltreatment related reasons. In jurisdictions outside of Québec, children eligible for inclusion in the final study sample were identified by having child welfare workers indicate on the data collection instrument which children were being investigated because of maltreatment-related concerns (i.e., investigation of possible past incident(s) of maltreatment or assessment of risk of maltreatment). In Québec, the identification of maltreatment-related investigations was completed by including all "retained" cases with maltreatment-related case classification codes.

Sample

These procedures yielded a final sample of 15,980 children aged 0 to 15 investigated because of maltreatment related concerns. In the current analysis, the language of the primary caregiver is the focus because it is most likely that these caregivers, as opposed to a secondary caregiver, would be interacting directly and most often with the child protection system. Information was missing about primary caregiver language in 299 cases, and therefore these cases were not included in the analysis. Child maltreatment related investigations from Québec were excluded from the analysis, as the child welfare system in Québec has a distinct approach to service delivery and therefore would skew the results, reducing the sample to 14,351 investigations. Investigations involving primary caregivers whose primary language was French were excluded from the analysis, as the number of these investigations (n=452) was too small. Investigations involving Aboriginal caregivers were excluded from the present analysis due to differing service options, reducing the sample by 3,250 (n=10,334). This study focused on investigations involving primary caregivers whose primary language was not English or French (n=1,006), the official

languages in Canada, in comparison to English-speaking primary caregivers investigated by child welfare (n=9,328). Two sets of weights are applied in order to derive national annual estimates. First, results are annualized to estimate the volume of cases investigated by each study site over the whole year. To account for the non-proportional sampling design, regional weights are then applied to reflect the size of each site relative to the child population in the region from which the site was sampled. CIS estimates cannot be unduplicated because annualization weights are based on unduplicated service statistics provided by the study sites. Therefore, estimates for the CIS refer to child maltreatment investigations. The final weighted sample for child maltreatment investigations involving a non-Aboriginal, non-English/non-French speaking primary caregiver is 13,862. The final weighted sample for investigations involving a non-Aboriginal, English speaking primary caregiver is 156,604.

Measures

The information was collected using a three-page data collection instrument. Data collected by this instrument included the following: type of investigation (maltreatment or risk only), functioning concerns for the children and their caregivers, income, number of moves, household hazards, and information about short-term service dispositions. Workers were asked to specify the primary language of the caregiver(s) in the home at the time of the investigation. This included a primary caregiver and may have included a second caregiver. Workers could indicate that the primary caregiver spoke English, French, or "Other".

Outcome variable

Transferred to Ongoing Services: Workers were asked to indicate whether the investigation would be opened for ongoing child welfare services at the conclusion of the investigation. The decision to transfer a case to ongoing services is a dichotomous variable.

Predictor Variables

Key clinical variables representing an ecological model of child maltreatment were included in the model to determine the relative contribution of clinical variables. Clinical variables were chosen based on empirical literature of factors related to child maltreatment or risk of child maltreatment. These included child functioning concerns, caregiver risk factors, and household characteristics. The operational definitions and codes used in the analysis are provided in Table 1 (following page).

Analysis Plan

All analyses were conducted using SPSS, version 20.0. Descriptive analyses were conducted to explore the characteristics of child welfare investigations involving non-Aboriginal caregivers whose primary language is neither English nor French, in comparison to English speaking families investigated by child welfare. Pearson chi-squares were conducted to examine bivariate associations between the predictor variables and service disposition. All bivariate analyses tests of significance were done using the sample weight, which adjusts for inflation of the chi-square statistic by the size of the estimate, by weighting the estimate back down to the original sample size. Logistic regression was conducted to determine the impact of language and significant predictors in the decision to transfer a case to ongoing services at the conclusion of the investigation. Unweighted data were used in the multivariate model. Only significant predictor variables at the bivariate level ($p<.05$) were included in the multivariate model. The choice of cutoff point for the decision to provide ongoing services was set at 0.23, which reflects the proportion of investigations transferred to ongoing services for this sample.

Results

The results revealed important descriptive information about the characteristics of child welfare investigations in Canada (excluding Québec) in 2008, involving non-English/non-French speaking caregivers and their families, in comparison to English speaking caregivers and their families. Non-English/non-French speaking caregivers belonged to a variety of ethno-racial groups in comparison to English speaking caregivers. The caregiver was identified as white in 88% of the investigations involving an English speaking primary caregiver (an estimated 137,133 investigations). A minority of caregivers was identified as Black (7%, an estimated 10,393 investigations).

Table 1. Variable Definitions

Outcome Variable	Measurement	Description
Transferred to Ongoing Service	Dichotomous variable Transfer to ongoing service (1) Close case (0)	Workers were asked to indicate whether the investigation would be opened for ongoing child welfare services at the conclusion of the investigation
Predictor Variables		
Primary Caregiver	Dichotomous variable English (0) Non-English or Non-French (1)	Workers were asked to specify the primary language of the primary caregiver
Primary Caregiver Age	Categorical variable 18 years and under (1) 19 to 21 years (2) 22 to 30 years (3) 31 to 40 years (4) 41 years and up (5)	Workers were asked to indicate the age category of the primary caregiver
Primary Caregiver Ethno-racial Group	White (1) Black (2) Latin American (3) Arab/West Asian (e.g., Armenian, Egyptian) (4) South Asian (e.g., East Indian, Pakistani) (5) Chinese (6) Southeast Asian other than Chinese (e.g., Filipino, Indonesian) (7) Other (8)	Workers were asked to note the ethno-racial group of the primary caregiver, from a list of eight categories
Primary Caregiver Risk Factors	Dichotomous variable	Workers could note up to nine risk factors for the factors for the primary caregiver. Risk factors included: alcohol abuse, drug/solvent abuse, cognitive impairment, mental health issues, physical health issues, few social supports, victim of domestic violence, perpetrator of domestic violence, and history of foster care/group home. Caregiver functioning variables were dichotomous variables with a suspected or confirmed concern coded as 'noted' and no and unknown coded as 'not noted'.
Child Functioning	Dichotomous variable Suspected or confirmed concern (1) No or unknown (0)	Workers could note up to eighteen functioning concerns for the investigated child, indicating whether the concern had been confirmed, suspected, was not present or it was unknown to the worker. For this analysis, these functioning concerns included: attachment issues, intellectual/developmental disability, failure to meet developmental milestones, FAS/FAE, positive toxicology at birth, and physical disability.
No Second Caregiver in the Home	Dichotomous variable No second caregiver in the home (1) Second caregiver in the home (0)	Workers were asked to describe up to two caregivers in the home. If there was only one caregiver described there was no second caregiver in the home
Primary Income	Categorical variable Full time employment (1) Part time/seasonal employment (2) Other benefits/unemployment (3) No income (4)	Workers were asked to indicate the primary source of the primary caregiver's income
Household Hazards	Dichotomous variable At least one household hazard (1) No household hazards (0)	Workers were asked to note if the following hazards were present in the home at the time of the investigation: accessible weapons, accessible drugs, production/trafficking of drugs, chemicals/solvents used in drug production, other home injury hazards, and other home health hazards
Household Regularly Runs out of Money	Dichotomous variable Noted (1) Not Noted (0)	Workers were asked to note if the household regularly runs out of money
Number of Moves	Categorical variable No moves (0) One move (1) Two or more moves (2)	Number of moves reflects the number of moves the household had experienced in the past six months.
Maltreatment Type	Physical abuse (1) Sexual abuse (2) Neglect (3) Emotional maltreatment (4) Exposure to intimate partner violence (IPV) (5) Risk (6)	Workers could indicate up to three forms of investigated maltreatment on the data collection instrument, from 32 possible maltreatment codes as defined in the CIS-2008 Study Guidebook. This analysis focused on the primary maltreatment concern of the investigation. The maltreatment codes were collapsed into five categories. Risk was added as a sixth maltreatment category
Level of Substantiation	Categorical variable Unsubstantiated (1) Suspected (2) Substantiated (3)	Workers were asked to indicate the level of substantiation at the conclusion of the investigation.

In investigations involving non-English/non-French speaking caregivers, 21% of investigations (an estimated 2,969 investigations), the primary caregiver was South Asian, and in 18% (an estimated 2,493), the primary caregiver was Latin American. Primary caregivers were identified as Arab or West Asian in 15% (2,013) of investigations, Chinese in 11% (1,496) of investigations, and Southeast Asian other than Chinese in another 11% (1,508) of investigations. In 9% of investigations (an estimated 1,189), the primary caregiver was Black. In investigations involving non-English/non-French speaking caregivers, the most common caregiver functioning concern identified was few social supports (38% of caregivers, an estimated 5,279). The next most common caregiver functioning concern identified was victim of domestic violence (31% of caregivers, an estimated 4,302). Mental health issues were noted in 14% of investigations (an estimated 1,895). The investigating worker rarely identified alcohol or drug abuse as a concern in primary caregivers, nor did they frequently identify cognitive impairment or history of foster care/group home. Investigations involving non-English/non-French speaking primary caregivers, compared to investigations involving English speaking primary caregivers, were more likely to indicate few social supports and victim of domestic violence.

At least one child functioning concern was identified in 27% of investigations involving a non-English/non-French speaking caregiver (an estimated 3,775), with the most common functioning concern identified as academic difficulties (13% of investigations, or an estimated 1,789). Investigating workers identified depression, anxiety, or withdrawal as a child functioning issue in 9% of investigations (1,189), and intellectual or developmental disability as an issue in 8% of investigations (1,049). Aggression was identified in 7% of investigations (estimated 983). Workers were less likely to identify a child functioning concern in investigations involving non-English/no-French speaking caregivers in comparison to English speaking caregivers. Of the investigations involving a non-English/non-French speaking caregiver, 23% of investigations (estimated 3,173) involved families with a lone caregiver. In a small minority of investigations, the worker identified at least one hazard present in the household (3% or an estimated 371 investigations) or identified that the household regularly ran out of money (6% or an estimated 699). Most investigations involved families that had not moved in the past six months (65% or 6,325). Approximately 37% of the investigations involved caregivers with no reported source of income. Investigations involving English-speaking caregivers were more likely to involve single-parent homes. At least one household hazard was reported more frequently for these investigations.

Of all investigations involving non-English/non-French speaking caregivers, physical abuse was identified as the overriding concern in almost half of cases (36%, or an estimated 4,976). Exposure to IPV was identified as the primary concern in almost one quarter of investigations (19%, or an estimated 2,669), and neglect was the primary concern in 17% of investigations (2,300). In a small proportion of maltreatment investigations in this sample, the overriding concern was emotional maltreatment (4%), or sexual abuse (3%). In approximately 21% of the investigations (an estimated 2,965), the primary concern was risk. Allegations of child maltreatment were substantiated in almost half of the investigations (46% or an estimated 341). In 17% of investigations (an estimated 2,292), the case was transferred to ongoing services. Investigations involving non-English/non-French speaking primary caregivers, compared to investigations involving English speaking primary caregivers, were more likely to identify physical abuse as the primary maltreatment form. There were no differences found in substantiation between investigations involving non-English/non-French speaking primary caregivers in comparison to investigations involving English speaking primary caregivers. The results of bivariate analysis indicate that non-English/non-French speaking primary caregivers were significantly less likely to be transferred to ongoing services when compared to English speaking primary caregivers. (See Table 2 for full results on the clinical concerns of investigations involving non-English/Non-French primary caregivers in comparison to English speaking primary caregivers.)

The logistic regression models are presented in Table 3. Only clinically relevant and statistically significant predictors associated with the decision to transfer an

Table 2. Clinical Concerns of Maltreatment-Related Investigations Involving non-English/non-French and English Speaking Caregivers in Canada (excluding Québec) in 2008 (n = 10,334)

	Non-English/Non-French		English	
	Frequency	**%**	**Frequency**	**%**
Child Functioning Concerns				
Depression/Anxiety/Withdrawal	1,189	8.6%	21,658	13.8%
Suicidal Thoughts	307	2.2%	4,648	3.0%
Self-Harming Behaviour	203	1.5%	4,716	3.0%
ADD/ADHD	648	4.7%	16,408	10.5%
Attachment Issues	552	4.0%	14,818	9.5%
Aggression	983	7.1%	20,807	13.3%
Running (Multiple Incidents)	149	1.1%	5,286	3.4%
Inappropriate Sexual Behaviour	196	1.4%	5,492	3.5%
Youth Criminal Justice Act Involvement	147	1.1%	3,203	2.0%
Intellectual/Developmental Disability	1,049	7.6%	15,622	10.0%
Failure to Meet Developmental Milestones	569	4.1%	8,747	5.6%
Academic Difficulties	1,789	12.9%	28,111	18.0%
FAS/FAE	-	-	2,486	1.6%
Positive Toxicology at Birth	-	-	1,177	0.8%
Physical Disability	212	1.5%	2,465	1.6%
Alcohol Abuse	-	-	3,500	2.2%
Drug/Solvent Abuse	133	1.0%	4,949	3.2%
At Least One Child Functioning Concern	3,775	27.2%	58,169	37.1%
Primary Caregiver Risk Factors				
Alcohol Abuse	163	1.2%	16,289	10.4%
Drug/Solvent Abuse	-	-	16,303	10.4%
Cognitive Impairment	224	1.6%	8,320	5.3%
Mental Health Issues	1,895	13.7%	34,713	22.2%
Physical Health Issues	624	4.5%	12,311	7.9%
Few Social Supports	5,279	38.1%	45,417	29.0%
Victim of Domestic Violence	4,302	31.0%	45,193	28.9%
Perpetrator of Domestic Violence	741	5.3%	11,130	7.1%
History of Foster Care/Group Home	-	-	8,289	5.3%
At Least One Functioning Concern	7,551	54.5%	93,081	59.4%
No Second Caregiver in the Home	3,173	22.9%	61,136	39.0%
Primary Income				
Full-time	4,255	30.7%	57,133	36.5%
Part-time/Seasonal	1,465	10.6%	19,212	12.3%
Other Benefits/Unemployment	2,999	21.6%	49,808	31.8%
No Income	5,143	37.1%	30,452	19.4%
At Least One Household Hazard	317	2.7%	10,580	6.8%
Household Regularly Runs Out of Money	699	6.1%	14,994	11.0%
Number of Moves				
No Moves	6,325	4.68%	81,553	65.1%
One Move	2,688	27.5%	32,711	26.1%
Two or More Moves	754	7.7%	11,803	8.8%
Type of Maltreatment				
Physical Abuse	4,976	35.9%	30,642	19.6%
Sexual Abuse	355	2.6%	6,528	4.2%
Neglect	2,300	16.6%	39,202	25.0%
Emotional Maltreatment	598	4.3%	11,199	7.2%
Exposure to Intimate Partner Violence	2,669	19.3%	28,591	18.3%
Risk	2,965	21.4%	40,443	25.8%
Level of Substantiation	4,743	43.5%	50,501	43.5%
Unfounded	1,115	10.2%	13,299	11.4%
Suspected	5,039	46.2%	52,361	45.1%
Substantiated				
Transferred to Ongoing Services	2,292	16.6%	37,325	23.8%

Estimates under 100 are not reported because they are too small to be reliable

Table 3. Logistic Regression Predicting Transfers to Ongoing Services at the Conclusion of a Maltreatment-Related Investigation Involving Non-English/Non-French and English Speaking Primary Caregivers in Canada (Excluding Québec) in 2008 (n = 10,334)

Predictor	B	SE	Adj. OR
Model 1			
Non-English/Non-French primary language	-0.36***	0.10	0.70
Model 2			
Non-English/Non-French primary language	-0.30**	0.10	0.74
At least one child functioning concern	0.78***	0.05	2.18
Model 3			
Non-English/Non-French primary language	-0.30**	0.10	0.74
At least one child functioning concern	0.74***	0.05	2.09
At least one caregiver risk factor	1.59***	0.07	4.90
Model 4			
Non-English/Non-French primary language	-0.23*	0.10	0.80
At least one child functioning concern	0.74***	0.05	2.10
At least one caregiver risk factor	1.40***	0.07	4.05
Primary source of income (full-time)			
Part-time/seasonal	0.26**	0.09	1.30
Other benefits/unemployment	0.42***	0.07	1.52
No income	0.08	0.09	1.08
No second caregiver in the home	-0.20**	0.06	0.82
Number of moves (none)			
One move	0.13*	0.06	1.14
Two or more moves	0.47***	0.09	1.59
At least one household hazard	0.87***	0.09	2.38
Model 5			
Non-English/Non-French primary language	-0.20	0.10	0.82
At least one child functioning concern	0.77***	0.06	2.15
At least one caregiver risk factor	1.38***	0.07	3.96
Primary source of income (full-time)			
Part-time/seasonal	0.26**	0.09	1.30
Other benefits/unemployment	0.41***	0.07	1.50
No income	0.07	0.09	1.07
No second caregiver in the home	-0.21*	0.06	0.81
Number of moves (none)			
One move	0.13*	0.06	1.13
Two or more moves	0.45***	0.09	1.57
At least one household hazard	0.85***	0.09	2.35
Maltreatment type (Physical Abuse)	- 0.21**	0.08	0.81

	Model 1	Model 2	Model 3	Model 4	Model 5
- 2LL Model	9477.46	9241.36	8566.44	8370.29	8362.51
Model Chi Square	15.57***	251.67***	926.59***	1122.74***	1130.52***
df	1	2	3	10	11
Nagelkerke R Square	0.003	0.04	0.16	0.19	0.19
Classification Rate					59.2%

* p < 0.05 ** p < 0.01 *** p < 0.001

investigation to ongoing services were entered into the models. The final model (R2=0.19) correctly classified 59% of the investigation. The results of models one through four indicate that when controlling for child, caregiver, and household variables, investigations involving non-English/non-French speaking primary caregivers were significantly less likely to be transferred to ongoing services when compared to investigations involving English speaking primary caregivers. However, the results of the final model revealed that when controlling for child, caregiver, household, and maltreatment type, the effect of primary caregiver language as a predictor was diminished and investigations of physical abuse were significantly less likely to be opened for ongoing services.

Discussion

According to Cunradi et al. (2002), high levels of acculturative stress are associated with an increased risk for family conflict and violence. This

is observed in the primary type of maltreatment identified in the current study. Similar with Chang et al. (2006) and Rhee et al. (2008), physical abuse was the overriding concern in a majority of the cases (36% of investigations, or an estimated 4,976 investigations), and exposure to IPV was the primary concern in almost one fifth of investigations (19% of investigations, or an estimated 2,669 investigations) in the current study. Thirty eight percent (an estimated 5,279 investigations) of primary caregivers were noted to lack social supports, and 23% of investigations (estimated 3,173 investigations) involved families with a lone caregiver. Consistent with the literature about acculturation, the families in the current study have stressors that include limited social support, financial challenges, and child academic difficulties in the presence of family violence. Disjointed social supports may be consequence of migratory displacements and/or family separation due to complicated and prolonged immigration processes. Furthermore, the effects of lost social supports and fragmented family members may contribute to challenging financial circumstances. Immigrants have been identified as one of five groups most likely to experience persistent poverty in Canada (Hatfield, 2004). With 17% of investigations (an estimated 2,300 investigations) in the current study identifying neglect as the primary concern, it is crucial that child welfare considers and carefully examines the underlying sources for this type of maltreatment, and calls into question what is being assessed to differentiate poverty versus harm of omission that is classified as neglect.

According to Euser, van IJzendoorn, Prinzie, and Bakermans-Kranenburg (2011), immigrant families of low socioeconomic status and associated with low parental education were at increased risk for child maltreatment. The educational attainments of the caregivers are not measured, however, the most common child functioning concern identified in the current study is academic difficulties (13% of investigations, or an estimated 1,789 investigations). This is a concern for the social mobility of young children and adolescents that may not be granted opportunities otherwise, through education and knowledge obtainment. In addition, parent-child conflict that may arise as a result of high parental expectations of academic success and child academic difficulties has not been examined in these child welfare cases. The linguistic barriers are even more pronounced when we consider that the majority of child welfare workers are White (94%) and identify English as their primary language (97%) (Fallon, MacLaurin, Trocmé, & Felstiner, 2003). The interventions of child welfare providers need to be sensitive to these differences, particularly with in communication with families. According to Maiter and Stalker (2010), South Asian immigrant parents involved with the child welfare system expressed the need to be more informed about the purposes of child welfare involvement and expectations from the worker and agency. This need for information is particularly important in the transfer to ongoing services. The cultural-linguistic gaps may be exponentially experienced given the reduction in federal government funding to settlement programs ("Immigrant Settlement Funds Cut for Ontario", 2010). Families involved in the child welfare system may experience greater difficulties in understanding and navigating the complexities of social service and court involvement. These results suggest that there is an interplay between primary caregiver language and maltreatment type in predicting transfers to ongoing services. Non-English/Non-French speaking primary caregivers were significantly less likely to be opened for ongoing services, even when controlling for child functioning, caregiver risk factors, and household characteristics.

When controlling for primary caregiver language and child, caregiver, and household characteristics, investigations where the primary form of maltreatment is identified as sexual abuse, neglect, emotional maltreatment, exposure to intimate partner violence, and risk were 1.25 times more likely to be opened for ongoing services, than investigations where the primary form of maltreatment is identified as physical abuse. The hypothesis that non-English/non-French speaking families are overrepresented in investigations of physical abuse involving corporal punishment merits further consideration. Child welfare statutes define physical abuse as caregiver actions that physically harm a child or that are very likely to harm a child. However, the difference between corporal punishment and physical abuse requiring a child welfare report is not clearly

established (Lavergne, et al., 2008; Tirosh, Shechter, Cohen, & Jaffe, 2003), particularly when immigrant caregivers do not understand the purpose of child welfare involvement and expectations of them as caregivers (Maiter & Stalker, 2010). This potential confusion may explain, to some extent, the over-representation of visible minorities. Much more needs to be explored to further understand their experiences and how to provide socio-cultural-linguistically appropriate services to meet the needs of this population. There is a dearth of literature on immigrant families in the Canadian child welfare system and the current study is an attempt to begin to address the gap in the available empirical research literature. The findings in this study offer much needed research in the intersecting area of immigration and child welfare.

Limitations

The CIS-2008 did not explicitly collect information on migration, and therefore language of the primary caregiver was used as a proxy measure for newcomer/immigrant status. Primary caregiver language may not be an adequate proxy measure for immigrant. As such, the results of this study cannot be generalized to all immigrant children and families living in Canada. There were no data collected on the specific languages spoken at home by caregivers. The CIS-2008 did not collect data on languages spoken by children subject of the investigation or the ethno-racial groups of the children. Data from the CIS-2008 were collected directly from the investigating worker and were not independently verified. These data only represent the concerns that presented during the initial investigation, which usually lasts an average of six weeks. Additional concerns for the child and the caregiver could arise after the initial investigation. The analysis used a proxy measure of poverty. No educational data was collected in the CIS-2008.

Implications

The current study described the profile of caregivers whose primary language is neither English nor French, as a proxy measure for immigration and settlement. The results are indicative of the extant literature on the impact of migration and acculturation on immigrant children and families. Families were mostly investigated for concerns of family violence and neglect. However, the impact of language appears to have been diminished in the decision to provide ongoing services when maltreatment type was considered. Physical abuse cases were significantly less likely to be opened in comparison to investigations of all other maltreatment types. Primary caregivers lack social support and experience financial challenges, however most of the cases were closed at the conclusion of the investigation. Investigations involving a non-English/non-French speaking caregiver were less likely to be opened for ongoing service even when considering child, caregiver and household risk factors.

Much more needs to be explored to further understand their experiences and how to provide socio-cultural-linguistically appropriate services to meet the needs of this population. The findings of this study provide a foundation for professionals among various systems who work directly or indirectly with immigrant families in Canada. This study highlights the need for interventions that promote resiliency among newcomer and immigrant caregivers and their children involved with the child welfare system. The need for parenting education programs designed to change attitudes and practices related to abusive discipline warrant consideration. There is a dearth of literature on immigrant families in the Canadian child welfare system and the current study is an attempt to begin to address the gap in the available empirical research literature.

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Child Maltreatment-Related Investigations Involving Infants: Opportunities for Resilience?

Barbara Fallon[1], Jennifer Ma[1], Kate Allen[1], Nico Trocmé[2], and Andreas Jud[2]

1 Factor-Inwentash Faculty of Social Work, University of Toronto, Canada
Corresponding Author: Jennifer Ma, jenn.ma@utoronto.ca

2 Centre for Research on Children and Families, McGill University, Canada

Abstract:

Objective: To examine child welfare cases involving infants (less than 1 year old) and identify factors predicting service provision at the conclusion of a maltreatment-related investigation. **Method(s):** This study involves a secondary analysis of the 2008 Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2008). Bivariate and multivariate analyses were conducted to identify the profile of investigations involving infants (n=538) and the factors predictive of the decision to transfer a case to ongoing services at the conclusion of the investigation, rather than close the case post-investigation. **Results:** Primary caregiver functioning concerns emerged as the strongest predictor of the decision to transfer a case to ongoing service across different case referral sources. These included: cognitive impairment, victim of intimate partner violence (IPV), few social supports, drug/solvent abuse, mental health issues, and caregivers under the age of 21. Infant functioning (e.g., attachment issues, developmental delay) and investigation type (maltreatment or risk of maltreatment) did not predict ongoing service provision. **Conclusions and Implications:** The functioning of the caregiver is the strongest determinant of ongoing child welfare involvement with infants, with different caregiver vulnerabilities emerging as more salient depending on the type of referral sources (hospital; police; social services; non-professional community). Infant investigations involve mostly young primary caregivers who struggle with poverty, single-parenthood, lack of social supports, mental health issues, and intimate partner violence. Implication: Given the multi-problem experience of caregivers, prevention of maltreatment recurrence need to reflect multi-sector collaboration in order to promote infant health and caregiver resiliency. Infant functioning may be an under-considered domain among workers investigating maltreatment and may, therefore, limit the opportunity for resilience, including developmental recovery and issue-specific interventions.

Keywords:

infant maltreatment; child welfare services; caregiver vulnerabilities; family resilience

Attachment begins to form during the first year of life (Bowlby, 1969, 1973, 1980, 1982), reflecting the innate psychobiological system (the attachment behavioral system) that motivates infants to seek proximity, comfort, and support from protective others in times of need. The attachment behavioral system is gradually shaped and altered by the infant's particular accumulated social experiences, resulting eventually in fairly stable individual differences in attachment style – a systematic pattern guiding future relationships, relationship-related emotions and relationship-relevant behaviors. Maternal sensitivity and responsiveness are important elements to be fostered and supported in the development of infant attachment (Morton & Browne, 1998). Good parental bonding and child attachment are the primary focus in early infancy, and represent building blocks in resiliency (Hill, Stafford, Seaman, Ross, & Daniel, 2007). The definition of resilience is understood as a dynamic state of response to adverse circumstances (Benzies & Mychasiuk, 2008; Rutter, 2011). Children under one year of age are the most vulnerable subset of the child welfare population due to their reliance on a caregiver to meet all of their daily needs, and their inability to protect themselves from any form of physical or emotional harm (Klein & Harden, 2011; Wekerle, 2013; Williams, Tonmyr, Jack, Fallon, & MacMillan, 2011).

Research shows that maltreated infants are more likely to display insecure attachments than infants in control groups (e.g., Crittenden, 1992; Ward, Kessler, & Altman, 1993). Cicchetti, Rogosch, and Sheree (2006) found that the capacity of mothers of infants from maltreating families to form secure attachment relationships with their infants was substantially lower than those of non-maltreating families. Given the potential resilience value of services provided by child welfare, it would seem important that attachment, and the factors related to it, be considered as relationships are recognized as a key conduit of resiliency among maltreatment children and youth (Wekerle, 2013; Wekerle, Waechter, & Chung, 2011). With the exception of permanent removal of the child and termination of parental rights, attachment issues remain salient to consider with any level of child-parent contact. However, the child welfare context is that attachment is not evaluated by caseworkers as it would be in attachment-focused clinical assessments or in research settings. Yet, the decision to provide relationship-related ongoing services after a child maltreatment investigation has concluded may be important for fostering resiliency in both the parent and infant.

Service provision for at-risk families with young children has typically consisted of parenting programs with many initiatives and few with long-term impact on rates of maltreatment. MacMillan and colleagues (2005), in a randomized controlled trial of a home visiting intervention, failed to find any program effects in terms of re-reported maltreatment among families with the index child having experienced physical abuse and/or neglect. Maher, Marcynyszyn, Corwin, and Hodnett (2011) found a dose-dependent correlation with fewer maltreatment investigations when parents attended the Nurturing Parent Program, such that children whose parents participated in more sessions were less likely to have had a maltreatment investigation at 6-month follow-up. At the two-year follow-up, this dose-response relationship no longer held. The SafeCare Parenting Program was also found to have limited long-term benefit. Silovsky et al. (2011) found that program participants self-reported improved parenting behaviors. However this did not translate into fewer maltreatment investigations with one exception: families whose previous maltreatment investigations involved IPV had fewer re-referrals to child welfare after participation in the program. At 6-month follow-up, there were no differences in the number of maltreatment investigations for children whose parents had participated in the program and those whose parents had not. Given the lack of positive findings with child welfare families with infants, more empirical work describing how these cases are handled within the system is a first step to better tailoring to child needs. Initial efforts in Canada have been made in the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS).

The Ontario Incidence Study of Reported Child Abuse and Neglect (OIS) The Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2008) identified that the rate of maltreatment-related investigations more than doubled from 21.32 to 54.05 investigations per 1,000 children between the 1993

and 2008 data cycles (Fallon et al., 2010). In the last three cycles of the OIS (1998, 2003 & 2008), infants were consistently more likely to be the subject of a maltreatment-related investigation than any other age group (Fallon et al., 2010). In 1998, the rate of investigation per 1,000 infants was 43.31, while in 2003 that rate increased to 65.71 investigations per 1,000 infants (Fallon et al., 2010). In the 2008 cycle of the OIS, as reflective in Ontario law, a risk category was added to the case categorization in order to differentiate between investigations in which no specific concern of past maltreatment existed but where there was a substantial risk of future maltreatment ("risk"), and investigations involving a substantiated allegation of past maltreatment ("substantiated"). In this cycle, the rate of investigation was 70.25 investigations per 1,000 infants, a non-significant increase in incidence rate from 2003 (Fallon et al., 2010). Most of the available data point to changes in detection, reporting, and investigation practices rather than an increase in the number of infants being abused or neglected.

There are four key reasons for the increase in reported maltreatment: (1) an increase in reports made by professionals; (2) an increase in reports of emotional maltreatment and IPV exposure; (3) a larger number of children investigated in each family, and (4) an increase in substantiation rates. These changes are consistent with changes in legislation and investigation standards in Ontario where statutes and regulations have been broadened to include more forms of maltreatment and investigation standards require that siblings of reported children be systematically investigated (Fallon et al., 2010). The majority of the increase in maltreatment-related investigations occurred between the 1998 and 2003 cycles of the OIS that may be partly attributed to amendments to The Child and Family Services Act (CFSA) enacted into legislation in 2000. These changes included lowering the threshold of "risk of harm" to the child to permit investigations in instances where an incident of maltreatment had not yet occurred, or was not substantiated, but where the child was deemed at risk of future maltreatment (Fallon et al., 2010). It is likely that these changes have led to the increased identification of vulnerable infants to the child welfare system. Infants are most often referred to a child welfare agency by professionals, with health professionals being the most common referral source followed by police (Palusci, 2011;Williams et al., 2011). There is clear evidence that caregiver functioning concerns including substance use, lack of social support, parental mental health issues, young parenthood and IPV are risk factors for infant maltreatment (Harden & Klein, 2011; Putnam-Hornstein & Needell, 2011; Wu et al., 2004; Zhou & Chilvers, 2010). Palusci (2011) found that caregivers of infants are more likely to have a drug, alcohol, learning or medical problem than caregivers of older children, as well as to be experiencing IPV. Indeed, in a study by Williams et al. (2011), the second most common source of infant referral was the police, a likely indication that there is a concern for infant safety when police attend an intimate partner violence dispute.

The introduction of federally-mandated developmental screening for children under three at first contact with the child welfare system in the United States has revealed that children who become involved with the child welfare system in infancy present developmental delays more often than infants within the general population (Casaneuva, Cross, & Ringeisen, 2008). However, in 93% of Canadian child welfare investigations involving infants, workers did not endorse the presence of a developmental delay, positive toxicology at birth, or substance abuse birth defects (Tonmyr, Williams, Jack, & MacMillan, 2011). It is unclear whether this information is systematically sought in all child cases or whether workers are well positioned to note concerns in these areas. Several studies have shown that there is an under-diagnosis of mental health issues for children in care of the child welfare system (Administration for Children and Families, 2007; Casanueva, Cross, & Ringeisen, 2008; McCrae, Cahalane, & Fusco, 2011). This study involves a secondary analysis of the 2008 Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2008) with the goal of describing the profile of investigations involving infants and to identify the factors predictive of the decision to transfer a case to ongoing services at the conclusion of the investigation, rather than close the case post-investigation.

Methods

A secondary analysis of the Ontario Incidence Study of Reported Child Abuse and Neglect (Fallon et al., 2010; OIS-2008) dataset was conducted. This dataset contains information about key clinical factors collected during a child maltreatment investigation (Fallon et al., 2010). The OIS-2008 is the fourth provincial study examining the provincial estimate of the incidence of reported child maltreatment in Ontario in 2008. A multi-stage sampling design was used to select a representative sample of 23 child welfare agencies from a list of 53 child welfare agencies in Ontario and then a sample of cases was selected from within these agencies (Fallon et al., 2010). Agencies were stratified by size, region, and Aboriginal status (Fallon et al., 2010). Cases opened for service at the randomly selected sites during a three-month sampling period in 2008 were eligible for inclusion (Fallon et al., 2010). Children not reported to child welfare services, screened-out reports, or new allegations on cases open at the time of case selection were not included in the OIS-2008. Three months was considered to be the optimal period for participation and compliance with study procedures. The last sample selection stage included identifying children who had been investigated due to concerns related to possible maltreatment. Maltreatment-related investigations included in the OIS-2008 include reports of concerns that a child may have already been abused or neglected as well as situations where there is no specific concern about past maltreatment but where the risk of future maltreatment is being assessed.

Data Collection Instruments

The information was collected using a three-page data collection instrument. Data collected included: referral source; type of investigation (maltreatment or risk only); type of abuse and neglect investigated; level of substantiation; functioning concerns for the children and their caregivers; income source; housing information; and information about short-term service dispositions. Key clinical variables were included in the analysis in order to reflect an ecological model (Ungar, 2011) and to determine the relative contribution of clinical variables to the decision to provide ongoing services.

Study Sample

These procedures yielded a final sample of 7,471 children investigated because of maltreatment-related concerns. This excludes children over the age of 15, siblings who were not investigated, and children who were investigated for non-maltreatment concerns. The current study examines investigations involving children under the age of one year (n=538), and whether or not they were transferred to ongoing services at the conclusion of the investigation. Two sets of weights were applied to derive provincial annual estimates. First, results are annualized to estimate the volume of cases investigated by each agency in 2008. To account for the non-proportional sampling design, regional weights are then applied to reflect the size of each agency relative to the child population in the region from which the site was sampled, resulting in a weighted sample of 128,748. OIS estimates cannot be unduplicated because annualization weights are based on unduplicated service statistics provided by the study sites. Therefore, estimates for the OIS refer to child maltreatment investigations. The final weighted sample for child maltreatment investigations involving children under the age of one was 9,286.

Measures

Outcome variable: Transferred to Ongoing Services. Workers were asked to indicate whether the investigation would be opened for ongoing child welfare services at the conclusion of the investigation. The decision to transfer a case to ongoing services is a dichotomous variable.

Predictor Variables: Key clinical variables representing an ecological model of child maltreatment were included in the model to determine the relative contribution of clinical variables. Clinical variables were chosen based on empirical literature of factors related to child maltreatment or risk of child maltreatment. These included child functioning concerns, caregiver risk factors, and household characteristics. The operational definitions and codes used in the analysis are provided in Table 1.

Analysis Plan

All analyses were conducted using SPSS, version 20.0. Descriptive analyses were conducted to explore

Table 1. Variable Definitions.

Outcome Variable	Measurement	Description
Transfered to Ongoing Service	Dichotomous variables:	Workers were asked to indicate whether the investigation would be opened for ongoing child welfare services at the conclusion of the primary caregiver
Predictor Variables		
	Categorical variable: 18 years and under (1) 19 to 21 years (2) 22 to 30 years (3) 31 to 40 years (4) 41 years and up (5)	Workers were asked to indicate the age category of the primary caregiver
Primary Caregiving Functioning	Nine dichotomous variables: Suspected or confirmed concern (1) No or unknown (0)	Workers could note up to nine functioning concerns for the primary caregiver. Concerns were: alcohol abuse, drug/solvent abuse, cognitive impairment, mental health issues, physical health issues, few social supports, victim of domestic violence, perpetrator of domestic violence, and history of foster care/ group home. Caregiver functioning variables were dichotomous variables with a suspected or confirmed concern coded as 'noted' and no and unknown coded as 'not noted'.
Child Functioning	Six dichotomous variables: Suspected or confirmed concern (1) No or unknown (0)	Workers could note up to eighteen functioning concerns for the investigated child, indicating whether the concern had been confirmed, suspected, was not present or it was unknown to the worker. For this analysis, these functioning concerns included: attachment issues, intellectual/developmental disability, failure to meet developmental milestones, FAS/FAE, positive toxicology at birth, and physical disability.
No Second Caregiver in the Home	Dichotomous variable: No Second caregiver in the home (1) Second caregiver in the home (0)	Workers were asked to describe up to two caregivers in the home. If there was only one caregiver described there was no second caregiver in the home
Primary Income	Categorical variable: Full time employment (1) Part time/seasonal employment (2) Other benefits/ unemployment (3) No income (4)	Workers were asked to indicate the primary source of the primary caregiver's income
Household Hazards	Dichotomous variable: At least one household hazard (1) No household hazards (0)	Workers were asked to note if the following hazards were present in the home at the time of the investigation: accessible weapons, accessible drugs, production/trafficking of drugs, chemicals/solvents used in drug production, other home injury hazards, and other home health hazards
Household Regularly Runs Out of Money	Dichotomous variable Noted (1) Not Noted (0)	Workers were asked to note if the household regularly runs out of money
Number of Moves	Categorical variable No moves (0) One move (1) Two or more moves (2)	Number of moves reflects the number of moves the household had experienced in the past six months.
Referral Source		
Source of Allegation/Referral	Nine dichotomous variables Noted (1) Not Noted (0)	Workers were asked to indicate all sources of referral that were relevant for each investigation. This includes separate and independent contact with the child welfare agency. Workers could note up to nineteen referral sources for the investigation. Referral source variables were collapsed into nine categories: non-professional referral sources (custodial parent, non-custodial parent, relative, neighbour/friend), community or social services (social assistance worker, crisis service/shelter, community/recreation centre, community health nurse, community physician, community mental health professional, community agency), hospital, school, other child welfare service, day care centre, police, anonymous, and other

the characteristics of investigations involving children under the age of one year (infants). Multivariate analyses were conducted to understand the profile of investigations involving infants (n=538) and which predictors were significant in the decision to transfer a case to ongoing services at the conclusion of the investigation. Classification and Regression Trees (CART) were conducted to examine the relationship between the outcome and predictors. Unweighted data were used in all multivariate models. For the Classification and Regression Trees (CART) analysis, the objective was to understand which predictors (caregiver, child, household, and case characteristics) determine the decision to transfer a case to ongoing services. Through recursive partitioning, the CART methodology develops hierarchical binary classification trees (Steinberg & Colla, 1997). All variables were included in the CART analysis given the possibility that a predictor variable may be significantly related to the outcome variable for a subset of the sample regardless of that predictor's relationship with the outcome variable for the whole sample (Steinberg & Colla, 1997). To attain a more comprehensive understanding of the predictors of transfers to ongoing services among investigations involving infants, four models were developed based on the four main sources of referrals for infants. The sample was further divided into four categories of referral sources: hospital referrals; police referrals; non-professional referrals (reports from custodial and non-custodial parents, relatives, and/or neighbours/friends); and community or social services referrals (reports from social assistance worker, crisis service/shelter, community/recreation centre, community health nurse, community physician, community mental health professional, community agency). As such, the first model examined infant investigations referred to the child welfare system from hospitals, the second model examined investigations referred by the police, the third model examined investigations referred by non-professional referral, and the fourth model examined investigations referred by community or social services. All of the models included caregiver characteristics (age and caregiver functioning), child characteristics (child functioning), household characteristics (no second caregiver, income, household hazards, household regularly runs out of money, and number of moves), and case characteristics (type of investigation). All models were developed to determine how caregiver, child, household, and case characteristics interact to predict transfers to ongoing services. The minimum size for parent node (n=50) and child node (n=20) were specified prior to analyses in order to decrease the likelihood of over-fitting the data. Furthermore, cross-validation was completed to assess the generalizability and stability of the final tree models (Steinberg & Colla, 1997). A ten-fold cross-validation procedure was conducted, in which the sample was randomly divided into ten subsamples and ten models were produced which alternately excluded one of the subsamples. The cross-validation process determines an average risk estimate across models. A comparison risk estimate of the final model against the average risk estimate indicates how close the final model is to other potential models and determines whether the final model is a good representation of the available data (Steinberg & Colla, 1997).

Results

Almost a quarter of investigations involving infants were referred by hospital personnel (2,099 investigations, 22.6%). Similarly, 21.6% of these investigations were referred by the police (2,004 investigations). Non-professional referral sources comprised 20.7% of investigations involving infants. Approximately 16.5% of the infant investigations were referred by community or social services (1,534 investigations). A small number of investigations

Table 2. Referral Sources of Maltreatment-Related Investigations Involving Infants in Ontario in 2008 (n = 9,286)

	Frequency	%
Non-Professional	1,924	20.7%
Community or Social Services	1,534	16.5%
Hospital (any personnel)	2,099	22.6%
School	481	5.2%
Other Child Welfare Service	607	6.5%
Day Care Centre	20	0.2%
Police	2.004	21.6%
Anonymous	718	7.7%
Other	144	1.5%

were referred by schools (481, 5.2%), other child welfare services (607, 6.5%), and day care centres (20, 0.2%). The referral sources of maltreatment-related investigations involving infants are presented in Table 2.

Most primary caregivers were under the age of 30 years. Approximately 15% (1,380) of the caregivers were 18 years old and under and 19.7% (1,829) were between the ages of 19 and 21 years old. Almost half (3,839, 41.4%) of the caregivers were 22 to 30 years old. About 20% (1,918) of the caregivers were 31 to 40 years old. A minority (305, 3.3%) of the caregivers were 41 years old or older. At least one caregiver functioning concern was noted in 72.6% (6,739) of infant investigations. The most common caregiver functioning concern identified was victim of domestic violence, with 3,174 (34.2%) primary caregivers experiencing domestic violence. The next most common caregiver functioning concern identified was few social supports (3,044, 32.8%) followed by mental health issues (2,577, 27.8%). Drug/solvent abuse (1,871, 20.1%) and alcohol abuse (1,299, 14.0%) were noted concerns for some of the caregivers. Investigating workers also identified history of foster care/group home (1,004, 10.8%), cognitive impairment (961, 10.3%), and physical health issues (681, 7.3%) as concerns. Of the relevant child functioning concerns noted for infants the most common concern was positive toxicology at birth (521 investigations, 5.6%). Investigating workers identified failure to meet developmental milestones as a child functioning issue in 217 investigations (2.3%), and attachment issues as a concern in 196 investigations (2.1%). Physical disability was identified as a concern in 153 investigations (1.7%). Intellectual or developmental disability was a child functioning concern in 125 investigations (1.3%). FAS/FAE was identified in 104 investigations (1.1%). Table 3 presents the characteristics of children involved in infant investigations. Approximately a third of investigations involved families with a lone caregiver (2,758 investigations, 29.7%). Over half of the primary caregivers involved in infant investigations relied on other benefits or unemployment as their primary source of income (5,715 investigations or 61.5%). About 25% (2,212 investigations) had no income source reported. Some of the primary caregivers had full-time employment, (864 investigations, 9.3%) while a minority had part-time or seasonal employment (495 investigations, 5.3%). In a small proportion of investigations, the worker identified at least one hazard present in the household (807 investigations, 8.7%) or identified that the household regularly ran out of money (1,094 investigations, 11.8%). Most investigations involved families that had not moved in the past six months (3,306 investigations or 35.6%) or moved once in the past six months (2,902 investigations or 31.3%). Of all the investigations involving infants, 5,096 represented a maltreatment investigation (54.9%) and 4,190 represented a risk investigation (45.1%). Of all maltreatment investigations in this sample (n=5,096), neglect (2,233 investigations, 24.0%) and IPV exposure (1,998 investigations, 21.5%) were most commonly identified as the primary concern, In a small proportion of maltreatment investigations, the concern was physical abuse (543 investigations, 5.8%), emotional maltreatment (306 investigations, 3.3%), or sexual abuse (17 investigations, 0.2%). In the minority (3,698 investigations, 39.8%), the case was transferred to ongoing services. The clinical characteristics of infant maltreatment-related investigations are reported in Table 3.

CART analysis was conducted to determine how child welfare workers decided which families received ongoing services at the conclusion of investigations using all characteristics which included: caregiver characteristics (age and caregiver functioning), child characteristics (child functioning), household characteristics (no second caregiver, primary income, household hazards, household regularly runs out of money, and number of moves), and case characteristics (type of investigation). Four models were developed to examine the predictors of transfers to ongoing services among hospital referrals, police referrals, non-professional referrals, and community or social services. Cross-validation was conducted using all characteristics to assess the generalizability and stability of the final CART model. Of the infant investigations referred to by hospital personnel, primary caregiver cognitive impairment is the best predictor of the provision of ongoing services. Of the investigations where caregiver cognitive impairment was not noted, the next best predictor of being transferred to ongoing services was the identification

Table 3. Clinical Concerns of Maltreatment-Related Investigations Involving Infants in Ontario in 2008 (n = 9,286)

	Frequency	%
Primary Caregiver Age		
18 years and under	1,380	14.9%
19 to 21 years	1,829	19.7%
22 to 30 years	3,839	41.4%
31 to 40 years	1,918	20.7%
41 years and up	305	3.3%
Primary Caregiver Risk Factors		
Alcohol Abuse	1,299	14.0%
Drug/Solvent Abuse	1,871	20.1%
Cognitive Impairment	961	10.3%
Mental Health Issues	2,577	27.8%
Physical Health Issues	681	7.3%
Few Social Supports	3,044	32.8%
Victim of Domestic Violence	3,174	34.2%
Perpetrator of Domestic Violence	488	5.3%
History of Foster Care/Group Home	1,004	10.8%
At Least One Functioning Concern	6,739	72.6%
Child Functioning Concerns		
Attachment Issues	196	2.1%
Intellectual/Developmental Disability	125	1.3%
Failure to Meet Developmental Milestones	217	2.3%
FAS/FAE	104	1.1%
Positive Toxicology at Birth	521	5.6%
Physical Disability	153	1.7%
Second Caregiver in the Home		
Yes	6,528	70.3%
No	2,758	29.7%
Primary Income		
Full-time	864	9.3%
Part-time/Seasonal	495	5.3%
Other Benefits/Unemployment	5,715	61.5%
No Income	2,212	23.8%
At Least One Household Hazard	807	8.7%
Household Regularly Runs Out of Money		
Noted	1.094	11.8%
Not Noted	7,103	76.5%
Unknown	1,087	11.7%
Number of Moves		
No Moves	3,306	35.6%
One Move	2,902	31.3%
Two or More Moves	996	10.7%
Unknown	2,082	22.4%
Types of Maltreatment		
Physical Abuse	543	5.8%
Sexual Abuse	17	0.2%
Neglect	2,233	24.0%
Emotional Maltreatment	306	3.3%
Exposure to Intimate Partner Violence (IPV)	1,998	21.5%
Risk	4,190	45.1%

of the primary caregiver as a victim of domestic violence. Among investigations where caregiver cognitive impairment and victim of domestic violence were not noted, primary caregiver few social supports was a predictor of being transferred to ongoing services. While the risk estimate of the cross-validation analysis of .304 indicates that the category predicted by the model is wrong for 30.4% of the cases, the classification table indicates that the model classifies 77.0% of the investigations correctly. Figure 1 shows the results of the CART analysis of hospital referred infant investigations.

Among investigations involving infants referred to by police, primary caregiver noted as having few social supports is the only significant predictor of transfers to ongoing services at the conclusion of maltreatment-related investigations. The risk estimate of the cross-validation analysis of .429 indicates that the category predicted by the model is incorrect for 42.9% of the cases. However, the classification table indicates that the model correctly classifies 64.7% of the investigations. The results of the CART analysis of police referred infant investigations are presented in Figure 2.

For infant investigations referred by non-professional referral sources, primary caregiver drug/solvent abuse is the best predictor of transfers to ongoing services at the conclusion of an investigation. Where drug/solvent abuse was not noted, primary caregivers with few social supports was a significant predictor of an investigation being transferred. The risk estimate of the cross-validation analysis of .394 demonstrates that the category predicted by the model is incorrect for 39.4% of the cases while the results of the classification analysis show that the model classifies 68.7% of the investigations correctly. Figure 3 presents the results of the CART analysis for non-professional referral sources.

Of the investigations involving infants referred by social services, primary caregiver mental health issues is the best predictor of transfers to ongoing services. When mental health issues were not noted, primary caregiver age is a significant predictor of ongoing services. Infant investigations involving caregivers under the age of 21 years were more likely to be opened for ongoing services. While the risk estimate of the cross-validation analysis of .274 indicates that the category predicted by the model is wrong for 27.4% of the cases, the classification table indicates that the model classifies 72.6% of the investigations correctly. Figure 4 presents the results of the CART analysis for community or social services referrals.

Overall, several primary caregiver characteristics (dominantly the mother) did not emerge as significant

Figure 1. Transfers to Ongoing Services Among Police Referred Investigations Involving Infants in Ontario in 2008 (Classification Rate = 64.7%)

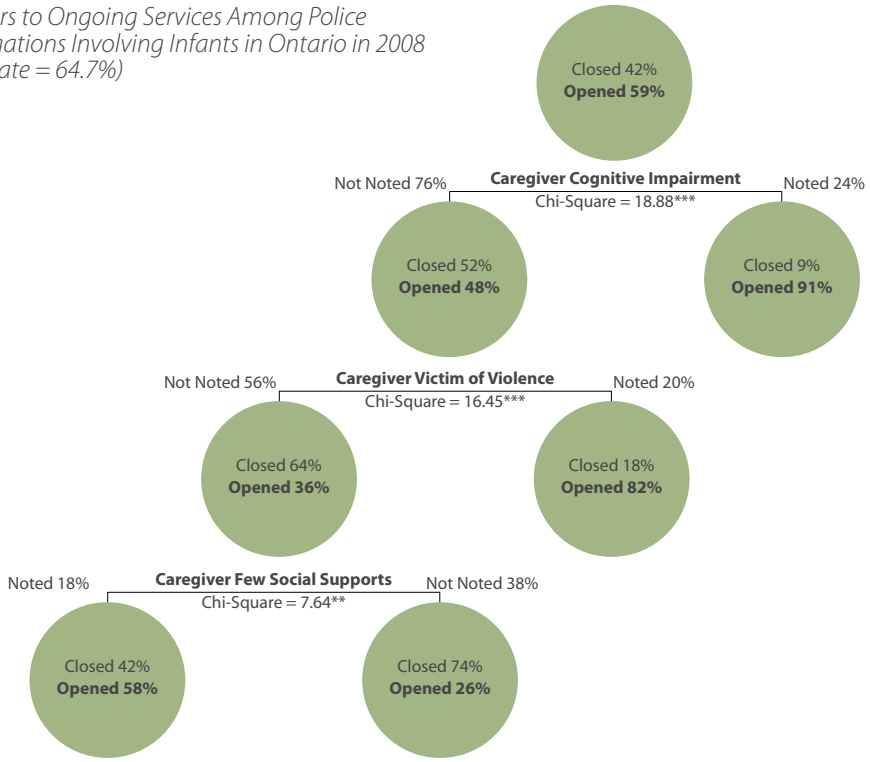


Figure 2. Transfers to Ongoing Services Among Police Referred Investigations Involving Infants in Ontario in 2008 (Classification Rate = 64.7%.)

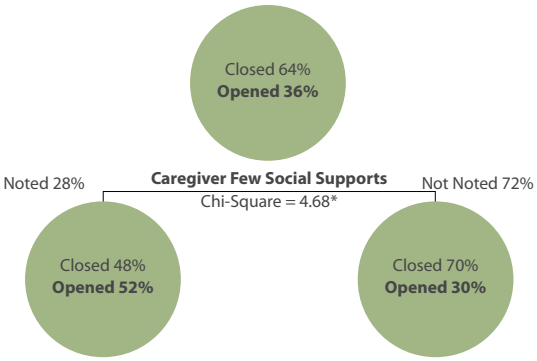


Figure 3. Transfers to Ongoing Services Among Non-Professional Referred Investigations Involving Infants in Ontario in 2008 (Classification Rate = 68.7%)

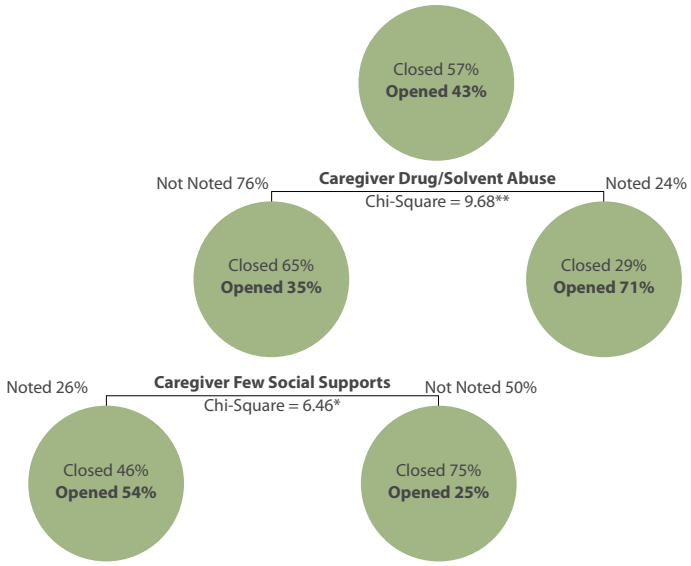
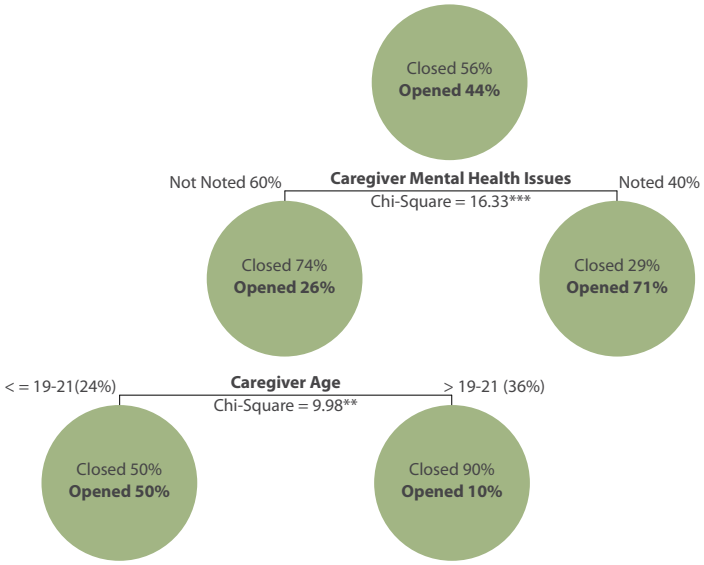


Figure 4. Transfers to Ongoing Services Among Social Services Referred Investigations Involving Infants in Ontario in 2008 (Classification Rate = 72.6%)



predictors (caregiver physical health issues, caregiver perpetration of IPV, caregiver history of foster care/ group home living), while few social supports emerged in a number of the models. The main predictor varied by the referral source. Child functioning did not predict the decision to keep the case for ongoing services, which could involve referral for in-depth assessment, court petitions for child removal, referrals for caregiver intervention, and casework with the family. It remains unclear from this dataset as to whether infant functioning is well-considered in the context of the investigation of new cases, requiring further empirical attention

Discussion

This study used a Canadian provincial child welfare dataset to examine the profile of infants and their families who are the subject of maltreatment-related investigations in order to identify which factors determine service provision at the conclusion of the investigation. Several findings have significance to the child welfare field. The OIS collects data about up to 19 potential sources of referral. For investigations involving infants, there were four main sources of referral: hospitals, police, non-professionals and social services. In an analysis of the decision to provide ongoing services by referral source, only caregiver functioning concerns were predictive of service provision. No child functioning concerns, including attachment issues and developmental delay were related to service provision. While the concerns noted for caregivers predict service provision, there are different clinical profiles for infant maltreatment-related investigations that emerge depending on the source of referral. Hospital referrals have a high rate of being opened for ongoing child welfare service (59%), and whether or not the caregiver has a cognitive impairment is the strongest predictor of service provision. For police referrals, which dominantly involve investigations of intimate partner violence, the only predictor of service provision is the level of social support that the primary caregiver has in the community. The strongest predictor of service provision for infant investigations originating from a non-professional referral source is the drug or solvent use of the caregiver, followed by few social supports. Finally, infant investigations referred from community or social services involve an assessment of the mental health of caregiver and their age. The results of the current analysis are consistent with the findings of previous studies which indicate that concerns relating to caregiver functioning such as, substance use, lack of social support, parental mental health issues, young parenthood and domestic abuse are risk factors for infant maltreatment (Belsky, 1980; Cicchetti et al., 2006; Harden & Klein, 2011; Zhou & Chilvers, 2010;) and worker substantiation decisions (Wekerle, Wall, Leung, & Trocmé, 2007). This study extends the knowledge to the type of referral source and potential assessment specialization and capacities (e.g., hospitals – growth measurement and injury assessment).

Implications

Early identification of families with caregiver risk factors provides the opportunity for the child welfare system to identify strengths and challenges within the family system in order to promote caregiver and infant resiliency and prevent maltreatment. Resilience involves the moderation or mitigation of the impact of risk factors through the fostering of protective factors (Benzies & Mychasiuk, 2008; Hill et al., 2007). The ability to effectively and, differentially, address caregiver concerns as early

as possible has important implications for child outcomes specifically for the parent-child attachment relationship. This demonstrates the need for the early identification of vulnerable families and the provision of early intervention services in order to mitigate the impact of caregiver risk factors and promote protective factors to improve the developmental outcomes of the child. Families of infants referred to the child welfare system have differing concerns, many of which will be evident at initial referral, requiring a reliable assessment strategy and, in accordance, a varied service response. Parents facing stressors are able to cope better when they have access to supportive relationships outside the home. In cases where informal supports do not exist, the accessibility to professionals and external programs can also be beneficial to a parent's ability to manage when faced with difficult life circumstances (Benzies & Mychasiuk, 2008). Programs that take into account parental concerns and expertise tend to be viewed more positively by parents (Hill et al, 2007). Interventions that focus on the needs of parents tend to have the most profound impact on the family system, as parents, and primary caregivers in particular, have the greatest influence on family interactions (Hill et al., 2007). While early preventive interventions have been found to be effective in enhancing paternal sensitivity and infant attachment security among maltreating families and families with and without multiple problems (Bakermans-Kranenburg, van IJzendoom, & Juffer, 2003; Cicchetti et al., 2006), the lack of success of broad-based parenting programs in preventing future maltreatment among families with infants indicates the need for interventions that target the family's unique clinical profile with emphasis on particular areas of concern for the caregiver including cognitive issues, substance abuse issues, mental health issues, domestic abuse and limited social supports.

With the introduction of the Child Welfare Transformation Agenda in 2006, the child welfare system in Ontario has begun to shift towards differential response options which take into account the clinical needs of families as early as the point of initial referral (Ontario Ministry of Children and Youth Services, 2007), which can only be as good as the assessment strategy allows for. Given the need for developmental supports for young children in high risk families and the questionable effectiveness of parenting programs, a focus on providing an intervention that is targeted, focused and tailored to the needs of the family, with an emphasis on bolstering the parent-infant relationship (e.g., Galanter, Self-Brown, Valente, Dorsey, Whitaker, Bertuglia-Haley, & Prieto, 2012; Silovsky et al., 2011;), may be the optimal approach to ensure the protection of young children (Suchman, Pajulo, DeCoste, & Mayes, 2006). There are also a number of measurement issues to consider for this study. Data from the OIS-2008 are collected directly from the investigating worker and are not independently verified. These data only represent the concerns that present during an average 6-week investigation period. Additional concerns for the child and the caregiver could arise after the initial investigation. Weighted estimates do not account for seasonal variation in maltreatment typologies. The OIS collects information for six child functioning concerns relevant to the infant population. It is difficult to determine whether the infrequent documenting of concerns for infants compared to other age groups in the OIS reflects: 1) the early developmental stage of the child; 2) a lack of appropriate measures in the OIS data collection instrument; or 3) a lack of understanding or assessment concerning the needs of infants. In future research, it would be important to establish the assessment process for infants identified to the child welfare system, given the opportunity to prevent negative trajectories.

This study described the decision to provide ongoing child welfare services to infants, focusing on the different clinical profiles that emerge depending on the referral source for the investigation. It found that caregivers of infants are struggling with a number of issues including mental health, violence, cognitive impairment and few social supports. The functioning of the caregiver is the strongest determinant of child welfare involvement. Preventative strategies, implemented early in key areas, such as attachment, the partner relationship, caregiver supports and referrals, could improve the outcomes for infants and their families, potentially enhancing family resiliency. Continued efforts in identifying effective interventions across the stages of infancy (newborn;

mobile infant etc.) are needed. The opportunity to target interventions for the different clinical profiles of the families that emerge for this very vulnerable population is evident. Struggling with the demands of a mental health issue or experiencing violence while becoming a parent requires a multi-faceted approach to intervention including increasing social support, drug and alcohol treatment programs, and housing.

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An Examination of Delinquency in a National Canadian Sample of Child Maltreatment-Related Investigations

Melissa Van Wert[1], Jennifer Ma[1], Rachael Lefebvre[1], and Barbara Fallon[1]

1 Factor-Inwentash Faculty of Social Work, University of Toronto, Canada
Corresponding Author: Melissa Van Wert, melissa.vanwert@utoronto.ca

Abstract:

Objectives: To examine factors associated with delinquency/youth justice system involvement in a national sample of child welfare investigations and explore whether delinquency/justice system involvement predict child welfare service provision. **Methods:** Secondary analysis was conducted using data from the Canadian Incidence Study of Reported Child Abuse and Neglect, 2008 (CIS-2008), specifically examining a weighted sample of 57,601 pre-adolescents (age 8-11), and 58,641 adolescents (age 12-15). Delinquency was examined in pre-adolescents and youth justice system involvement was examined in adolescents. Descriptive analysis was conducted and is reported as frequencies. After identifying significant bivariate relationships between delinquency/justice system involvement and youth, household, case, and service characteristics, logistic regressions were used to determine whether the presence of delinquency/justice system involvement predicted the investigation being transferred to ongoing child welfare services. **Results:** For pre-adolescents, delinquency increased the likelihood that a case would be transferred to ongoing child welfare services. For adolescents, youth justice system involvement did not increase the likelihood of case transfer. **Conclusions and Implications:** The results provide important information about delinquency/youth justice system involvement in a national sample of Canadian child welfare investigations. **Implications:** Future research should continue to explore this area to determine how to best meet the needs of vulnerable young people with both delinquency/justice system involvement and involvement in the child welfare system.

Keywords:

Adolescents, delinquency, child welfare, child maltreatment, youth justice

Longitudinal and cross-sectional studies point to the elevated risk for violent behaviour, delinquency, and justice system involvement among children and youth who have been maltreated (e.g., Brezina, 1998; Brown, 1984; Chapple, Tyler, & Bersani, 2005; Crooks, Scott, Wolfe, Chiodo, & Killip, 2007; Fagan, 2005; Gover, 2002; Haapasalo, 2000; Hamilton, Falshaw, & Browne, 2002; Herrenkohl, Huang, Tajima, & Whitney, 2003; Hollist, Hughes, & Schaible, 2009; Lemmon, 2006). Certain factors appear to place maltreated youth at higher risk for involvement in delinquency, including male gender (Crooks et al., 2007; DeGue & Widom, 2009; Jonson-Reid, 2002), experiences of maltreatment at older ages (Bright & Jonson-Reid, 2008; Haapasalo, 2000), and learning disabilities, emotional disturbances, and depression (Bright & Jonson-Reid, 2008; Postlethwait, Barth, & Guo, 2010). Young people who experience maltreatment and live in poverty appear to be at particular risk for criminal behaviour and justice system involvement (Bright & Jonson-Reid, 2008; Fagan, 2005).

Child welfare services are intended to mitigate the negative consequences of child maltreatment by improving safety and stability in the lives of children (DeGue & Widom, 2009). Research has examined the impact of child welfare services (e.g., out-of-home placement) on later delinquency (e.g., DeGue & Widom, 2009; Lemmon, 2006), with mixed results. However, few studies have focused on delinquency as a predictor of child welfare decision making and service delivery. Child functioning concerns, caregiver or household risks (e.g., financial issues, household moves), and a risk of future maltreatment tend to signal a need for support and in turn increase the odds that child welfare services will be provided (Jud, Fallon, & Trocmé, 2012). It is unclear whether delinquency and youth justice involvement increase the chances that child welfare services are delivered, above and beyond the influence of other risk factors.

The present analysis will use the Canadian Incidence Study of Reported Child Abuse and Neglect, 2008 (CIS-2008) to first explore factors that are associated with delinquency/youth justice system involvement in a representative sample of child welfare investigations and then to determine if delinquency/youth justice system involvement predict child welfare service provision. Given that there is little Canadian research in this area, this analysis is exploratory in nature and examines a wide range of variables collected as part of the CIS-2008. The specific objectives of this analysis include to:

(1) Describe the characteristics (youth, household, case, and service) of maltreatment related investigations of youth age 8-15 in Canada in 2008.

(2) Examine factors associated with delinquency related behaviour/youth criminal justice system involvement.

(3) Determine if delinquency related behaviour/youth criminal justice system involvement impact the decision to transfer a case to ongoing child welfare services.

This analysis will contribute to our understanding of whether child welfare workers attend to delinquent and criminal behaviours above and beyond other issues and difficulties in the lives of youth, and if these behaviours uniquely influence the decisions they make. Child welfare services have the potential to improve the well-being and life trajectories of youth displaying delinquent or criminal behaviours. A first step in understanding if child welfare services are reaching this potential is to determine whether or not consideration of these behaviours forms part of the routine decision making of child welfare workers.

Methods

The primary objective of the CIS-2008 was to obtain national estimates of the scope and characteristics of child maltreatment related investigations in Canada. The CIS-2008 collected information directly from child protection workers in every province and territory in Canada during a three month sampling period in the fall of 2008. The resulting dataset is unique and comprehensive, and contains clinical information collected during routine child maltreatment related investigations.

The CIS-2008 used a multi-stage sampling design. First, a stratified cluster sampling strategy was employed to select a representative sample of 112 child welfare agencies from 412 child welfare service areas in Canada (Trocmé et al., 2010b). Child welfare

agencies are those social service agencies mandated to conduct child protection investigations. Within the 112 agencies, cases opened for investigation between October 1st and December 31st, 2008[1,2] were eligible for inclusion in the study (Trocmé et al., 2010b). In most jurisdictions in Canada, child welfare cases are opened at the level of the family, implying that each case in the agency records is counted as an entire family. However, the unit of analysis in the CIS-2008 is the investigation of one child, and therefore, procedures were developed to determine which specific children in each family were investigated for maltreatment related concerns. For jurisdictions that open child welfare investigations at the level of the child, these procedures were not necessary.

The CIS-2008 tracked *maltreatment related investigations* to include both *maltreatment investigations* and *risk assessments*. Maltreatment investigations focus on an incident of maltreatment that is alleged or suspected to have occurred, whereas risk assessments focus on the risk that maltreatment will occur in the future. Child welfare services are mandated to investigate situations in which a child may have already been abused or neglected (Trocmé et al., 2010b). The mandates of child welfare services can also apply in situations where a child is at risk of maltreatment in the future, even if no past incident of maltreatment is suspected or alleged (Trocmé et al., 2010b).

The sampling procedures yielded a final sample of 15,980 children aged zero to 15 investigated because of maltreatment related concerns. The present research focuses exclusively on investigations involving two age groups: eight to 11 years (n=3,934) and 12 to 15 years (n= 3,908). Although individuals age eight to 11 are ineligible for justice system involvement, certain behaviours displayed in this period may represent risk factors for later involvement in the youth and/or adult justice systems. For this reason, a derived variable was created to reflect "delinquency related behaviours," and this variable was examined in youth age eight to 11. At age 12, young people are eligible to be served by the youth criminal justice system in Canada, and therefore formal justice system involvement was assessed for this age group. Child welfare statutes vary across provinces, with some extending services to young people under age 16, and others extending services to young people under age 19 (Trocmé et al., 2010a). To obtain a national picture of child welfare investigations involving adolescents, only investigations of young people between the ages of 12 and 15 were included for analysis, as this was the lowest common age cut for child welfare services across Canada.

Two sets of weights were applied to the data in order to derive national annual estimates. First, results were annualized to estimate the volume of cases investigated by each study site over the whole year. To account for the non-proportional sampling design, regional weights were then applied. CIS estimates cannot be unduplicated because annualization weights are based on unduplicated service statistics provided by the study sites (Trocmé et al., 2010b). Therefore, estimates for the CIS refer to child maltreatment related investigations. The weighting procedures resulted in a final weighted sample of 57,601 maltreatment related investigations involving young people age eight to 11 years, and 58,641 maltreatment related investigations involving young people age 12 to 15 years.

Information for the CIS-2008 was collected from child protection workers using a three page data collection instrument. Workers completed the instrument at the end of their initial investigation. This instrument collected information on the youth, their caregivers, and their households, as well as the short-term child welfare services provided to the youth and their families. Variables included in the present research are described in Table 1.

Analysis Plan

All analyses were conducted using SPSS version 20. Univariate descriptive analyses were conducted and are reported as frequencies. Bivariate analyses were conducted to examine youth, household, and case factors associated with delinquency related behaviours in eight to 11 year olds and youth criminal justice system involvement in 12 to 15 year olds. Chi-square statistics were used to determine statistically

1 In several Aboriginal jurisdictions, the dates of the three month period varied due to late enrollment.

2 Three months was considered to be the optimal period to maintain participation and compliance with study procedures.

significant relationships[3]. The youth, household, and case factors were included based on the existing literature and the availability of variables in the CIS-2008 dataset.

Binary logistic regressions were then conducted to determine whether the presence of delinquency related behaviours in eight to 11 year olds and youth criminal justice system involvement in 12 to 15 year olds predicted ongoing child welfare service provision. The regressions controlled for variables at the youth, household, and case levels. All predictors were significantly associated with the outcome variable (i.e., ongoing service provision) at the bivariate level.[4]

3 When conducting chi-square analysis, different weighting procedures were applied in order to prevent inflation of significance.

4 Results of this analysis are not presented because of space limitations.

Table 1. Definitions of Variables Examined in Analysis

Variable	Definition
Youth Characteristics	
Sex	Male or Female
Delinquency Related Behaviors (for youth age 8-11)	If at least one of the following functioning concerns was noted by the investigating worker, the investigation was grouped into the delinquency related behaviors group: aggression, multiple incidents of running, inappropriate sexual behavior, alcohol abuse, or drug abuse. If the worker did not note any of these concerns, the investigation was grouped into the no delinquency group.
Youth Criminal Justice Act involvement (for youth age 12-15)	One of the youth functioning concerns the worker could note included YCJA involvement.
Youth Functioning Concerns	The CIS-2008 collected information about functioning concerns. This analysis examined the most common concerns noted for older youth, as these were the most age-appropriate concerns to focus on. For eight to 11 year olds, the most common concerns (i.e., more than 10% of sample identified with the concern) noted by the worker included: academic difficulty, depression/anxiety/withdrawal, aggression, ADD/ADHD, intellectual/developmental disability, and attachment issues. For 12 to 15 year olds, the most common concerns (i.e., more than 10% of sample identified with the concern) noted by the worker included: academic difficulties, depression/anxiety/withdrawal, aggression, attachment issues, intellectual/developmental disability, ADD/ADHD, multiple incidents of running, self-harming behavior, drug/solvent abuse, and alcohol abuse.
Household Characteristics	
Primary Caregiver Functioning Concerns	Workers could note up to nine functioning concerns for the primary caregiver to the youth, including alcohol abuse, drug abuse, cognitive impairment, mental health issues, physical health issues, few social supports, victim of domestic violence, perpetrator of domestic violence, or history of foster care or group home. This analysis examined whether or not the investigating worker noted at least one of these concerns.
Household Income Source	Workers noted the primary source of income for the household from the following options: full time, part time, or other.
Housing Type	Workers indicated the type of housing the youth and their families lived in from the following options: owned home, rental housing, public housing, other.
Overcrowding	Workers were asked to identify whether or not the youth and their families lived in overcrowded housing conditions.
Number of Moves in Past Year	Workers were asked to indicate the number of times the youth and their families had moved in the past year. Workers could note no moves or one or more moves.
Case Characteristics	
Case Previously Opened	Workers were asked to indicate if the case had been opened for child welfare services in the past, and could note that the case had never been previously opened, opened once before, or opened two or more times.
Maltreatment Related Allegation	Workers identified the primary maltreatment related concern investigated from a list of five maltreatment categories (physical abuse, sexual abuse, neglect, emotional maltreatment, exposure to intimate partner violence [IPV]) and one risk category (risk of future maltreatment).
Substantiation	For maltreatment related investigations, workers indicated the substantiation level for the case as a result of the investigation. Workers could indicate that the investigation was unfounded (balance of evidence implied that the maltreatment did not occur or there was no risk of future maltreatment); suspected/unknown (that there was not enough evidence to confirm that maltreatment had occurred, but maltreatment could not be ruled out/the risk of future maltreatment was unknown); or substantiated (balance of evidence implied that the maltreatment occurred or that there was a confirmed risk of future maltreatment.)
Short Term Service Disposition Characteristics	
Transferred to Ongoing Services	For maltreatment related investigations, workers indicated whether or not the case would be transferred to ongoing child welfare services.

Estimates under 100 are not reported because they are too small to be reliable. The CIS-2008 had excellent item completion rates with a 98% completion rate on most items, therefore missing data was not a significant issue in this analysis. For the regression analyses, missing values were excluded listwise in SPSS.

Results

Table 2 provides univariate descriptive statistics for all maltreatment related investigations involving youth age eight to 11 and age 12 to 15. Young people age 12 to 15 struggled with relatively more functioning

Table 2. Descriptive Statistics for Maltreatment and Risk Investigations involving Youth Age 8-15

	8-11 year olds		12-15 year olds	
	Estimate	**%**	**Estimate**	**%**
Youth Characteristics				
Youth sex				
Female	26,217	45.5%	32,242	55.0%
Male	31,384	54.5%	26,399	45.0%
Youth Functioning				
Academic difficulties	14,371	24.9%	19,569	33.4%
Depression/anxiety/withdrawal	9,383	16.3%	16,940	28.9%
Aggression	8,934	15.5%	12,839	21.9%
Attachment issues	5,807	10.1%	8,761	14.9%
Intellectual/developmental disability	6,640	11.5%	8,101	13.8%
Drug/solvent abuse	402	.7%	7,520	12.8%
ADD/ADHD	7,435	12.9%	7,293	12.4%
Running (multiple incidents)	1,174	2.0%	7,123	12.1%
Self-harming behavior	2,331	4.0%	6,058	10.3%
Alcohol abuse	175	.3%	5,535	9.4%
YCJA involvement	-	-	4,559	7.8%
Delinquency-related concerns	10,402	18.1%	-	-
Household Characteristics				
At least one caregiver concern	33,977	59.0%	33,919	57.8%
Household Income Source				
Full time	33,222	61.0%	35,563	64.5%
Part time	5,440	10.0%	5,350	9.7%
Other	15,764	29.0%	14,256	25.8%
Housing type				
Own home	22,484	41.1%	26,295	47.6%
Rental	21,254	38.8%	19,117	34.6%
Public housing	9,204	16.8%	8,652	15.7%
Other	1,768	3.2%	1,178	2.1%
Home overcrowded				
No	51,704	93.1%	51,429	91.8%
Yes	3,820	6.9%	4,583	8.2%
Number of moves				
0	32,984	70.0%	34,451	72.7%
1+	14,168	30.0%	12,948	27.3%
Case Characteristics				
Case previously opened	19,536	34.4%	18,908	32.8%
Never	10,484	18.4%	10,555	18.3%
1 time	26,838	47.2%	28,257	49.0%
2+ times				
Maltreatment-Related Allegation				
Physical abuse	12,462	21.6%	14,633	25.0%
Sexual abuse	2,405	4.2%	3,581	6.1%
Neglect	14,668	25.5%	14,438	24.6%
Emotional maltreatment	3,472	6.0%	4,470	7.6%
Exposure to IPV	9,514	16.5%	7,059	12.0%
Risk	15,079	26.2%	14,459	24.7%
Substantiation				
Unfounded/no risk	28,040	48.7%	27,069	46.2%
Suspected/unknown	6,775	11.8%	6,751	11.5%
Substantiated/confirmed risk	22,785	39.6%	24,820	42.3%
Short Term Service Disposition				
Transferred to ongoing services	13,485	23.4%	15,540	26.5%
Total	57,601		58,641	

Table 3. Delinquency Related Behavior in Maltreatment-Related Investigations involving Youth Age 8-11

	No Delinquency		Delinquency		
	Estimate	%	Estimate	%	Pearson X^2
Youth Characteristics					
Youth sex					82.90***
Female	23,094	48.9%	3,123	30.0%	
Male	24,105	51.1%	7,279	70.0%	
Youth Functioning					
Academic difficulties	8,449	17.9%	5,922	56.9%	469.32***
Depression/anxiety/withdrawal	5,456	11.6%	3,926	37.7%	289.84***
Attachment issues	2,924	6.2%	2,884	27.7%	294.67***
Intellectual/developmental disability	3,988	8.4%	2,653	25.5%	165.39***
ADD/ADHD	3,371	7.1%	4,064	39.1%	523.96***
Self-harming behavior	1,261	2.7%	1,069	10.3%	85.61***
Household Characteristics					
At least one caregiver concern	27,394	58.0%	6,583	63.3%	6.52*
Household Income Source					
Full time	27,593	62.2%	5,629	55.9%	9.58**
Part time	4,258	9.6%	1,181	11.7%	
Other	12,496	28.2%	3,268	32.4%	
Housing type					
Own home	18,787	42.2%	3,697	36.4%	8.66*
Rental	17,100	38.4%	4,154	40.9%	
Public housing	7,321	16.4%	1,883	18.6%	
Other	1,356	3.0%	412	4.1%	
Home overcrowded					7.15**
No	42,902	93.6%	8,802	90.7%	
Yes	2,918	6.4%	902	9.3%	
Number of moves					9.53**
0	27,113	71.2%	5,871	64.8%	
1+	10,980	28.8%	3,188	35.2%	
Case Characteristics					
Case previously opened					20.43***
Never	16,770	35.9%	2,765	27.2%	
1 time	8,539	18.3%	1,944	19.1%	
2+ times	21,372	45.8%	5,466	53.7%	
Maltreatment-Related Allegation					74.93***
Physical abuse	9,087	19.3%	3,375	32.4%	
Sexual abuse	1,904	4.0%	501	4.8%	
Neglect	11,992	25.4%	2,676	25.7%	
Emotional maltreatment	2,862	6.1%	610	5.9%	
Exposure to IPV	8,289	17.6%	1,225	11.8%	
Risk	13,064	27.7%	2,014	19.4%	
Substantiation					36.95***
Unfounded/no risk	23,986	50.8%	4,054	39.0%	
Suspected/unknown	5,554	11.8%	1,221	11.7%	
Substantiated/confirmed risk	17,658	37.4%	5,127	49.3%	
Short Term Service Disposition					
Transferred to ongoing services	9,695	20.6%	3.790	36.5%	81.61***
Total	57,601		58,641		

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

concerns than their younger counterparts, with 33% of investigations of 12 to 15 year olds noting academic difficulties, 29% noting depression/anxiety/withdrawal, 22% noting aggression, and 15% noting attachment issues. Academic difficulties, depression/anxiety/withdrawal, and aggression were the most common functioning concerns for youth age eight to 11 as well. In approximately 18% of investigations of youth age eight to 11, the worker noted a delinquency related functioning concern. In 8% of investigations involving youth age 12 to 15, the worker noted involvement in the youth justice system.

The majority of investigations for both eight to 11 year olds (59%) and 12 to 15 year olds (58%) noted at least one functioning concern for the primary

caregiver. For both age groups, the majority of families were financially supported by a full-time income and most did not live in overcrowded housing conditions. In 30% of investigations of eight to 11 year olds and 27% of investigations of 12 to 15 year olds, the family had moved at least once in the past year.

In the majority of investigations for both age groups, the worker noted at least one previous child welfare case opening (66% of eight to 11 year olds; 67% of 12 to 15 year olds). For the eight to 11 year old group, the most commonly investigated maltreatment related allegations were risk of future maltreatment and neglect (26% of investigations each), followed by physical abuse (22%). The most common allegations investigated for 12 to 15 year olds included physical abuse, risk, and neglect (25% of investigations each). Sexual abuse was the least common maltreatment related allegation for both eight to 11 year olds (4%) and 12 to 15 year olds (6%). Almost half of all maltreatment related investigations were unfounded (49% for eight to 11 year olds, 46% for 12 to 15 year olds). The substantiation rate was similar for the two age groups, with 40% of investigations involving eight to 11 year olds substantiated and 42% of investigations involving 12 to 15 year olds substantiated. In a small proportion of investigations, the worker determined that the maltreatment was suspected or the future risk of maltreatment was unknown. In approximately one quarter of investigations of eight to 11 year olds (23%) and 12 to 15 year olds (27%), the case was transferred to ongoing child welfare services at the conclusion of the investigation.

Table 3 displays the bivariate analysis for maltreatment related investigations involving youth age eight to 11. Male youth were more likely to be identified with delinquency related behaviours than female youth. Investigations noting delinquency related concerns were significantly more likely to note additional functioning concerns as well. The most common concerns noted were academic difficulties, depression/anxiety/withdrawal, attachment issues, intellectual/developmental disability, and ADD/ADHD. Investigations involving youth with delinquency related behaviours were more likely to note at least one caregiver functioning concern, less likely to note that the family was supported by a full time income or owned their own home, and more likely to note overcrowded or transient housing conditions.

Youth with delinquency related concerns were more likely to be investigated for physical abuse and less likely to be investigated for exposure to intimate partner violence, and the investigation was more likely to be substantiated. Young people identified with delinquency related concerns were also more likely to have a previous case opening with the child welfare system, and were more likely to have their case transferred to ongoing child welfare services.

Table 4 depicts the bivariate analysis for maltreatment related investigations involving youth age 12 to 15. Similar to the analysis of younger children, more males than females were identified with justice system involvement. Also similar to the previous analysis, those investigations involving youth with justice system involvement were more likely to note other youth functioning concerns as well, most commonly, academic difficulties, aggression, drug/solvent abuse, depression/anxiety/withdrawal, and multiple incidents of running. Interestingly, there were no significant differences in the household characteristics of youth with and without formal justice system involvement. At the case level however, there were significant differences. Youth with justice system involvement were significantly more likely to have previous contact with child welfare, with 62% of investigations noting two or more previous child welfare openings. Compared to those without involvement, youth with justice system involvement were more likely to be investigated for neglect and risk, and were slightly more likely to be involved in a substantiated or suspected investigation. Youth with justice system involvement were significantly more likely to be involved in an investigation that was transferred to ongoing child welfare services at the bivariate level.

Table 5 displays the results of a binary logistic regression predicting transfers to ongoing child welfare services in maltreatment related investigations involving youth age eight to 11. Predictors were added in four blocks, beginning with youth characteristics, and then adding household characteristics, case characteristics, and lastly delinquency related behaviour. The final model correctly classified 66.2% of investigations. The presence of delinquency related

Table 4. YCJA Involvement in Maltreatment-Related Investigations involving Youth Age 12-15

	No YCJA		YCJA		
	Estimate	**%**	**Estimate**	**%**	**Pearson X²**
Youth Characteristics					
Youth Sex					42.72***
Female	30,547	56.5%	1,695	37.2%	
Male	23,535	43.5%	2,864	62.8%	
Youth Functioning					
Academic difficulties	16,603	30.7%	2,966	65.1%	151.16***
Depression/anxiety/withdrawal	14,968	27.7%	1,972	43.3%	34.15***
Aggression	10,002	18.5%	2,837	62.2%	317.34***
Attachment issues	7,428	13.7%	1,333	29.2%	53.21***
Intellectual/developmental disability	6,885	12.7%	1,215	26.7%	45.55***
ADD/ADHD	5,904	10.9%	1,389	30.5%	99.56***
Running (multiple incidents)	5,166	9.6%	1,957	42.9%	299.28***
Self-harming behavior	4,918	9.1%	1,140	25.0%	77.17***
Drug/solvent abuse	5,074	9.4%	2,445	53.6%	500.75***
Alcohol abuse	3,789	7.0%	1,746	38.3%	324.10***
Household Characteristics					
At least one caregiver concern	31,225	57.7%	2,694	59.1%	0.26
Household Income Source					0.38
Full time	32,872	64.6%	2,691	62.9%	
Part time	4,930	9.7%	420	9.8%	
Other	13,091	25.7%	1,165	27.2%	
Housing type					7.83
Own home	24,552	48.1%	1,742	41.1%	
Rental	17,364	34.0%	1,753	41.3%	
Public housing	7,963	15.6%	689	16.2%	
Other	1,118	2.2%	-	-	
Home overcrowded					1.24
No	47,370	91.7%	4,059	93.5%	
Yes	4,302	8.3%	281	6.5%	
Number of moves					1.65
0	31,756	72.4%	2,695	76.1%	
1+	12,102	27.6%	846	23.9%	
Case Characteristics					
Case previously opened					23.81***
Never	17,857	33.6%	1,051	23.1%	
1 time	9,888	18.6%	667	14.7%	
2+ times	25,433	47.8%	2,824	62.2%	
Maltreatment-Related Allegation					23.54***
Physical abuse	13,504	25.0%	1,129	24.8%	
Sexual abuse	3,328	6.2%	254	5.6%	
Neglect	13,028	24.1%	1,411	30.9%	
Emotional maltreatment	4,129	7.6%	341	7.5%	
Exposure to IPV	6,867	12.7%	193	4.2%	
Risk	13,227	24.5%	1,232	27.0%	
Substantiation					8.60*
Unfounded/no risk	25,274	46.7%	1,795	39.4%	
Suspected/unknown	6,046	11.2%	705	15.5%	
Substantiated/confirmed risk	22,761	42.1%	2,059	45.2%	
Short Term Service Disposition					
Transferred to ongoing services	13,719	25.4%	1,822	40.0%	30.68***
Total	58,641				

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

behaviour significantly increased the odds that the case would be transferred to ongoing services (*OR*=1.469, *p*=.001). However, the final model accounted for only 22% (Nagelkerke R^2=0.22) of the variance in the decision to transfer the case to ongoing services, with the addition of delinquency related behaviours contributing less than one percent to the overall explained variance. The final model also

Table 5. Logistic Regression Predicting Transfers to Ongoing Service Provision in Maltreatment-Related Investigations involving Youth Age 8-11

	-2 Log Likelihood	Nagelkerke R2	% Classified Correctly	B	SE	Wald	Sig	OR
Youth Characteristics	3,248.56	0.09	65.90%					
Youth sex				-0.066	0.094	0.491	0.484	0.936
Youth Functioning								
Academic difficulties				0.492	0.104	22.424	0.000	1.636
Depression/anxiety/withdrawal				0.824	0.111	54.852	0.000	2.279
Household Characteristics	2,991.53	0.21	65.40%					
At least one caregiver functioning concern				1.309	0.122	114.944	0.000	3.704
Household Income Source								
Full time								
Part time				0.107	0.151	0.505	0.477	1.113
Other				0.54	0.111	23.815	0.000	1.716
Housing type								
Own home								
Rental				-0.368	0.118	9.774	0.002	0.692
Public housing				-0.164	0.147	1.249	0.264	0.849
Other				-0.097	0.266	0.132	0.717	0.908
Home overcrowded				0.526	0.15	12.376	0.000	1.692
At least one move				0.222	0.102	4.723	0.030	1.248
Case Characteristics	2,964.18	0.22	65.50%					
Case previously opened								
Never								
1 time				0.312	0.137	5.146	0.023	1.366
2+ times				0.368	0.112	10.77	0.001	1.445
Maltreatment-Related Allegation								
Physical abuse								
Sexual abuse				0.09	0.266	0.116	0.734	1.095
Neglect				0.05	0.142	0.123	0.725	1.051
Emotional maltreatment				0.656	0.199	10.876	0.001	1.928
Exposure to IPV				0.191	0.154	1.535	0.215	1.21
Risk				-0.038	0.147	0.067	0.796	0.963
Delinquency-related Behavior	2,954.06	0.22	66.20%					
Delinquency				0.384	0.12	10.254	0.001	1.469

Total = 57,601

revealed other important predictors of transfers to ongoing services, including the presence of at least one caregiver functioning concern (*OR*=3.704, *p*<.001), a primary maltreatment related concern of emotional maltreatment (*OR*=1.928, *p*=.001), youth depression/anxiety/withdrawal (*OR*=2.279, *p*<.001) and academic difficulties (*OR*=1.636, *p*<.001), household income from sources other than full- or part-time employment (*OR*=1.716, *p*<.001), and overcrowded housing conditions (*OR*=1.692, *p*<.001).

Table 6 depicts the results of a binary logistic regression predicting transfers to ongoing child welfare services in maltreatment related investigations involving 12 to 15 year olds. Again, predictors were entered in four blocks: youth characteristics, household characteristics, case characteristics, and finally, formal youth justice system involvement. The final model explained only approximately 19% (Nagelkerke R^2=0.189) of the variance in the decision to transfer the case to ongoing services, and classified 65.6% of cases correctly. Youth justice system involvement did not contribute to the explained variance or percentage of cases correctly classified, and did not significantly increase the likelihood of case transfer (*OR*=1.24, *p*=.175). The strongest

Table 6. Logistic Regression Predicting Transfers to Ongoing Service Provision in Maltreatment-Related Investigations involving Youth Age 12-15

	-2 Log Likelihood	Nagelkerke R2	% Classified Correctly	B	SE	Wald	Sig	OR
Youth Characteristics	3,352.85	0.08	63.80%					
Youth sex				-.003	.091	.001	.972	.997
Youth Functioning								
Academic difficulties				.027	.101	.072	.788	1.028
Depression/anxiety/withdrawal				.781	.098	63.360	.000	2.184
Aggression				.477	.113	17.710	.000	1.612
Household Characteristics	3,167.13	0.162	65.70%					
At least one caregiver functioning concern				.977	.107	84.036	.000	2.656
Household Income Source								
Full time								
Part time				-.174	.155	1.253	.263	.840
Other				.122	.110	1.231	.267	1.129
Housing type								
Own home								
Rental				-.062	.111	.314	.575	.940
Public housing				.178	.141	1.588	.208	1.194
Other				.457	.292	2.453	.117	1.579
Home overcrowded				.267	.154	3.011	.083	1.307
At least one move				.214	.104	4.244	.039	1.238
Case Characteristics	3,106.28	0.188	65.70%					
Case previously opened								
Never								
1 time				.316	.136	5.394	.020	1.372
2+ times				.443	.111	15.880	.000	1.557
Maltreatment-Related Allegation								
Physical abuse								
Sexual abuse				.536	.219	5.978	.014	1.709
Neglect				.656	.132	24.532	.000	1.928
Emotional maltreatment				.568	.180	9.982	.002	1.765
Exposure to IPV				.395	.161	5.989	.014	1.485
Risk				.019	.139	.018	.892	1.019
Youth Justice System Involvement	3,104.45	0.189	65.60%					
YCJA involvement				.216	.159	1.842	.175	1.241

Total=58,641

predictors of case transfer in the final model included the presence of at least one caregiver functioning concern (*OR*=2.656, *p*<.001), youth depression/anxiety/withdrawal (*OR*=2.184, *p*<.001), and a primary maltreatment related concern of neglect (*OR*=1.928, *p*<.001).

Discussion

The findings from this analysis add to our knowledge of the interrelationships among child maltreatment, child welfare involvement, delinquency, and youth justice system involvement in Canada. Consistent with the literature, the findings indicated that delinquency related behaviours and justice system involvement were associated with factors such as being male (Crooks et al., 2007; DeGue & Widom, 2009; Jonson-Reid, 2002) and struggling with learning disabilities, emotional disturbances, and depression (Bright & Jonson-Reid, 2008; Postlethwait et al., 2010). Overall, the youth displaying delinquency related behaviours and involvement in the justice system in this sample appear to struggle with numerous issues such as ADHD, depression, anxiety, self-harm, attachment issues, and intellectual or developmental disabilities. This is consistent with other literature in this area (e.g., Brezina, 1998; Gover, 2002).

Youth displaying delinquency related behaviours or justice system involvement were more likely to be involved in substantiated investigations and to have had two or more previous child welfare openings. These young people may be experiencing chronic victimization and/or family functioning problems. Other research suggests that persistent maltreatment and child welfare involvement increases the likelihood of criminal behaviour and justice system involvement (Ireland et al., 2002; Jonson-Reid, 2002).

Youth age eight to 11 who displayed delinquent behaviours were more likely to live in overcrowded and transient housing conditions, less likely to live in an owned home, and less likely to live in a household supported by full time income. Poverty has been identified as a risk factor for both maltreatment and delinquency (Smith & Thornberry, 1995). Young people living in poor socioeconomic conditions often do not have access to proper nutrition, health care, and social stimulation, and their caregivers may be unable to provide appropriate support and stimulation due to these same stressors (Bigelow, 2006). There are numerous mechanisms through which poverty may be connected to maltreatment, child welfare involvement, delinquent behaviour, and justice system involvement.

Whereas youth age eight to 11 were more likely to receive ongoing child welfare services when delinquency related behaviour was noted, young people age 12 to 15 were not more likely to receive ongoing services as a result of formal justice system involvement. Perhaps child welfare services are identifying risk factors in the younger group and responding with a more intrusive response. Alternatively, youth with formal justice system involvement may be already connected with ancillary services as a result of their involvement, and therefore child welfare services may not be necessary. These are simply hypotheses and further research is needed to determine how child welfare services contact, assess, and respond to young people displaying delinquent and criminal behaviours.

Considerations and Limitations

The CIS-2008 is a cross-sectional national study that reflects a point in time picture of children and families contacting the child welfare system. The present analysis therefore cannot examine the complex trajectories that bring individuals into contact with the child welfare and youth justice systems or examine the long term outcomes associated with child welfare service provision. Cross-sectional research also cannot untangle the direction of the relationship between maltreatment and delinquency/criminality nor can it accurately reflect variations across the life course in the frequency, severity, and duration of both experiences of maltreatment and criminal behaviours.

The objective of the CIS-2008 was not to specifically collect information about criminality. A derived variable reflecting delinquency related behaviours was used in the present analysis, and this may not truly reflect delinquency.

The CIS-2008 is limited to reports of child maltreatment that are investigated, and does not capture information about cases of maltreatment that are never brought to the attention of child welfare authorities, nor does it capture information about reports of maltreatment that are screened out and never investigated. The information used in the CIS-2008 was collected from child protection workers and was not independently verified.

Conclusion

Overall, these findings imply that youth who contact the child welfare system and also display delinquency and criminality are particularly vulnerable. Understanding these vulnerabilities can help child welfare and other service providers in developing and implementing intervention strategies to meet the complex needs of these young people. More research is needed to clearly determine the complex sequences that connect child and adolescent maltreatment, child welfare intervention, and justice system involvement (Jonson-Reid, 2004), particularly in the Canadian context. Many families served by child welfare and youth justice are engaged with other service systems as well, and therefore multi-systemic research is necessary in order to understand the pathways of children and families through various systems (Jonson-Reid, 2004). Understanding the child welfare response to youth displaying delinquent and/or criminal behaviour will help us understand these complex pathways.

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A Profile of Exposure to Intimate Partner Violence Investigations in the Canadian Child Welfare System: An Examination Using the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008)

Rachael Lefebvre[1], Melissa Van Wert[1], Tara Black[1], Barbara Fallon[1], and Nico Trocmé[2]

1 Factor-Inwentash Faculty of Social Work, University of Toronto, Canada
Corresponding Author: Melissa Van Wert, melissa.vanwert@utoronto.ca

2 Centre for Research on Children and Families, McGill University, Canada

Abstract:

Objectives: To provide a profile of the incidence and characteristics of substantiated exposure to intimate partner violence (IPV) investigations in Canada in 2008. **Methods:** Bivariate analyses were conducted examining four types of substantiated investigations in order to better understand the response of the child welfare system to IPV investigations: (i) investigations in which exposure to IPV was the single substantiated form of maltreatment; (ii) investigations in which another type of maltreatment (physical abuse, sexual abuse, neglect, or emotional maltreatment) was the single substantiated form of maltreatment; (iii) investigations in which exposure to IPV co-occurred with at least one other form of maltreatment; (iv) investigations in which there were co-occurring forms of maltreatment that did not include IPV. **Results:** 41% of substantiated investigations involved exposure to IPV, with 31% of investigations involving single form IPV and 10% of investigations involving IPV that co-occurred with another form of maltreatment. A total of 51% of investigations were substantiated for a single form of other maltreatment (physical abuse, sexual abuse, neglect or emotional maltreatment) and 8% of investigations were substantiated for co-occurring forms of these four types of maltreatment. The investigations were compared on family, child, case, and service characteristics. **Conclusions and Implications:** Exposure to IPV is a complex issue and demands an equally complex response that includes cross sector collaboration. Child welfare agencies receiving referrals regarding intimate partner violence should aim to identify opportunities to prevent recurrence and support the victims identified in the investigation.

Keywords:

Child welfare, child maltreatment, chidl welfare investigations, intimate partner violence, domestic violence

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Introduction

Exposure to intimate partner violence (IPV) has become a central focus of the Canadian child welfare system. It was the largest category of substantiated maltreatment in Canada in 2008 (Trocmé et al., 2010c). In this paper, we describe the profile of IPV investigations substantiated by child welfare agencies in Canada in 2008 using data from the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008). This paper provides an update on the work of Black, Trocmé, Fallon and MacLaurin (2008) which examined the response of the Canadian child welfare system to child maltreatment investigations substantiated for exposure to domestic violence (DV)[1] using data from 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2003).

The specific objectives of this paper are to:

(1) Provide an updated profile of the incidence and characteristics of substantiated exposure to IPV investigations;

(2) Examine the differences between substantiated maltreatment investigations involving IPV and other types of substantiated investigations. Four types of substantiated investigations in the CIS-2008 were compared: (i) investigations in which exposure to IPV was the single substantiated form of maltreatment ("single form IPV"); (ii) investigations in which another type of maltreatment (physical abuse, sexual abuse, neglect, or emotional maltreatment) was the single substantiated form of maltreatment ("single form other maltreatment"); (iii) investigations in which exposure to IPV co-occurred with at least one other form of maltreatment ("co-occurring IPV"); (iv) investigations in which there were co-occurring forms of maltreatment that did not include IPV ("co-occurring other maltreatment"). These investigations will be compared on family, child, case, and service characteristics.

1 Throughout this paper, the terms domestic violence (DV) and intimate partner violence (IPV) will be used interchangeably. In the CIS-2003 the term DV was utilized and the CIS-2008 utilized the term IPV.

Literature Review

Before the 1990's, DV was perceived as a social phenomenon primarily impacting women (Friend, Shlonsky, & Lambert, 2008; Jaffe, Sudermann, & Geffner, 2000). In recent years, evidence has emerged pointing to the harmful effects of exposure to DV for children (Friend et al., 2008). There is no consensus on how to define IPV, as is evident in the varying definitions utilized in legislation, practice, and research literature (Black, 2009). Schecter and Edleson (1999) define IPV as "a pattern of assaultive and/or coercive behaviours, including physical, sexual, and emotional abuse, as well as economic coercion, that adults use against their intimate partners to gain power and control in that relationship" (p. 9). Children may be exposed to or impacted by IPV in various ways, including by visually or audibly witnessing the violence or its aftermath (e.g., physical or emotional trauma to the victim, caregiver stress, damage to home), and by coming into contact with child welfare workers, law enforcement, and hospital personnel (Carpenter & Stacks, 2009).

Child welfare agencies have become one of the key service providers for addressing the needs of children exposed to DV (English, Edleson, & Herrick, 2005). In their analysis of child welfare legislation in each state, province, and territory in the United States, Canada, and Australia, Mathews and Kenny (2008) found that although many jurisdictions did not expressly include exposure to DV, detailed definitions of abuse and neglect existed that were extended to the consequences of DV. Interestingly, Ontario is one of the few provinces/territories in Canada that does not explicitly address exposure to IPV in child welfare legislation, however, there is a high rate of exposure to IPV investigated and substantiated by child welfare authorities in Ontario. The 2008 Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2008) (Fallon et al., 2010) found that 6.33 per 1,000 children in the population were involved in a substantiated exposure to IPV investigation, a rate that is higher than any other form of maltreatment. This finding highlights the differences that exist between legislation and front line child welfare practice.

This paper provides an updated profile of substantiated exposure to IPV investigations, using the

approach adopted by Black and her colleagues (2008). Using data from the CIS-2003, Black et al. (2008) found that 34% of substantiated child maltreatment investigations involved some form of exposure to DV; 25% involved exposure to DV as the single form of maltreatment and 9% involved exposure to DV co-occurring with another form of maltreatment. Signs of mental or emotional harm were noted in 12% of substantiated investigations involving exposure to DV. In contrast, mental or emotional harm was more common in both substantiated investigations of co-occurring exposure to DV (31%), and substantiated investigations of other forms of maltreatment (22%). Children were placed in out-of-home care in 2% of investigations involving substantiated exposure to DV as the single form of maltreatment, compared to 10% of substantiated investigations of co-occurring exposure to DV, and 10% of substantiated investigations of other forms of maltreatment. Even when controlling for other case and family characteristics, Black and colleagues (2008) found that child welfare investigations involving exposure to DV as the single form of substantiated maltreatment were less likely than the other substantiated investigations to result in a child welfare placement.

Prevalence of IPV

The 2004 General Social Survey (GSS) reported that 7% of Canadians over 15 experienced spousal violence in the preceding five years in a marital or common-law relationship, with those under age 25 more likely than older individuals to have been victimized in the past 12 months (Mihorean, 2005). The 2004 GSS also found that one-third (33%) of spousal violence victims reported that children saw or heard this violence (Beattie, 2005). In addition, a person other than the spouse was harmed or threatened in 11% of spousal assaults, of which 44% were children under the age of 15 (Beattie, 2005).

Impact of Exposure to IPV

A large body of literature exists which examines the impact of exposure to IPV. According to the meta-analysis conducted by Wolfe, Crooks, Lee, McIntyre-Smith and Jaffe (2003), children exposed to DV experience more internalizing and externalizing difficulties than their peers. However, these authors note that few studies controlled for the possibility that these children had been exposed to other forms of maltreatment, so these findings should be interpreted with caution. However, in a more recent study, Emery (2011) found that child abuse was strongly correlated with IPV, and that IPV was associated with internalizing and externalizing problems in children, even after controlling for violence against the child. The results of another meta-analysis conducted by Kitzmann, Gaylord, Holt and Kenny (2003) indicated that 63% of child witnesses of DV were functioning more poorly than non-witnesses, in terms of a range of behavioural, social, and academic problems. It is important to remember that conversely, 37% of the child witnesses in this meta-analysis experienced outcomes that were similar to, or better than, those of non-witnesses. These authors note that studies using methods to control for the presence of other stressors produced smaller effects sizes. Other research with infants (Carpenter & Stacks, 2009) and adolescents (Garrido, Culhane, Petrenko, & Taussig, 2011) also suggests that IPV can have serious psychosocial consequences. Taken together, these findings suggest that the impact of exposure to IPV on outcomes is likely complex and dependent on a broad range of individual, family, and contextual factors (Wolfe et al., 2003).

Children may show positive outcomes despite experiencing exposure to IPV. One study suggested that these children have similar levels of empathy and pro-social behavior to a reference group of non-clinical children (Georgsson, Almqvist, & Broberg, 2011), and another study indicated that resiliency (i.e., high competence, low adjustment problems) in these children may be bolstered by good maternal mental health and parenting skills (Graham-Bermann, Gruber, Howell, & Girz, 2009). There is also research to suggest that women who experience IPV are able to parent as effectively as women with no experience of IPV (Casanueva, Martin, Runyan, Barth & Bradley, 2008).

Service Responses to IPV

Many families who come into contact with child welfare services may struggle with issues of IPV (Hazen, Connelly, Kelleher, Landsverk & Barth, 2004). Coohey (2007) examined whether child welfare workers applied a recognizable set of criteria to determine whether exposure to DV had occurred,

concluding that workers considered whether the perpetrator or victim of DV was a caregiver, whether a child was exposed to the violence or harmed, and whether the child was protected during the incident. Variables that appeared less important to workers in their substantiation decisions included the mental health status of the victim of DV, police involvement, and the arrest of the perpetrator. LaLiberte, Bills, Shin, and Edleson (2010) sought to explore the impact of adult DV and child involvement in this violence on child welfare workers' assessments of risk. In an online survey, 152 child welfare professionals were asked to rate how important certain items would be in their professional decision making. These items related to type of violence or child involvement in violence. Overall, items related to child involvement were more influential in worker risk assessments than the type of violence present.

In a study examining child welfare service responses to DV (English et al., 2005), DV was identified as a risk factor in almost 40% of cases receiving a more intensive standard of investigation. If a DV-indicated case was classified as moderate to high risk after the investigation, it was highly likely to be opened for services. However, the worker's rating of the level of DV did not predict re-referral or placement one year later. Kohl, Edleson, English and Barth (2005) also examined the influence of DV on child welfare decision making using data from the United States' National Survey of Child and Adolescent Well-Being (NSCAW). They reported that DV alone did not appear to influence the decision to remove the child from the home, but other factors, such as high risk of injury to the child, substance abuse by the main parental figure, and the total number of risk factors in the family environment were predictive. Lavergne and colleagues' (2011) study of 1,071 substantiated child maltreatment reports revealed similar findings. Using multivariate analysis, these authors concluded that exposure to DV – whether it co-occurred with another form of maltreatment or not – was not a factor in decisions to provide ongoing child welfare services, nor a factor in placement decisions. In this study, parental factors played a larger role in decision making.

There is a need for child welfare services to collaborate with other sectors including criminal justice, health, and mental health, in order to effectively respond to DV and children's exposure to this violence (Cross, Mathews, Tonmyr, Scott, & Ouimet, 2012). Different and competing understandings of DV and child maltreatment have created an unfortunate service landscape that is not necessarily meeting the complex needs of victims of DV, exposed young people, and perpetrators of DV (Friend et al., 2008). Some research suggests that families struggling with IPV do not have positive experiences when contacting child welfare services. Hughes, Chau and Poff (2011) conducted in depth interviews with 64 Canadian women in order to examine the impact of child protection practices on women who experienced IPV and were involved in the child protection system. In many cases, IPV was only one among many issues identified, including mental health difficulties, substance misuse, poverty, stress, social isolation and the trauma of past child maltreatment. The women in this study reported that the child welfare services they were provided did not address the underlying issues they were struggling with, particularly current IPV and the trauma of past abuse. Other Canadian research suggests that addressing IPV in the context of child welfare is problematic in several ways, specifically because it may increase the surveillance and blaming of mothers while removing accountability from the perpetrator, and it also may inhibit disclosure for marginalized women (Allagia, Jenney, Mazzuca, & Redmond, 2007).

Methods

Analysis of the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008; PHAC, 2010) dataset was conducted in order to address the objectives of this paper. This dataset contains information about key clinical factors collected during the course of a child maltreatment investigation. The CIS-2008's primary objective was to produce a national estimate of the scope and characteristics of child maltreatment investigated by child welfare organizations in Canada in 2008 (Trocmé et al., 2010a). Using a multi-stage sampling design, a representative sample of 112 child welfare sites was first selected from 412 child welfare service areas in

Table 1. Definitions of Variables Examined in Analysis

Variable	Definition
Maltreatment Category	Workers could identify up to three forms of investigated maltreatment from a list of 32 codes. These 32 codes were collapsed into five major maltreatment types: physical abuse (e.g., hit with hand), sexual abuse (e.g., fondling), neglect (e.g., poor hygiene), emotional maltreatment (e.g., verbal abuse or belittling), and exposure to IPV (e.g., direct witness to physical violence). For each form of maltreatment, workers indicated the substantiation level for the investigation: unfounded (i.e., balance of evidence implied that the maltreatment did not occur); suspected (i.e., not enough evidence to confirm that maltreatment had occurred, but maltreatment could not be ruled out); or substantiated (i.e., balance of evidence implied that the maltreatment occurred). This analysis only included substantiated investigations. Four maltreatment categories were derived for the purpose of this analysis: (i) investigations in which exposure to IPV was the single form of substantiated maltreatment; (ii) investigations in which another category of maltreatment (i.e., physical abuse, sexual abuse, neglect, or emotional maltreatment) was the single form of substantiated maltreatment; (iii) investigations in which substantiated exposure to IPV co-occurred with substantiated physical abuse, sexual abuse, neglect, and/or emotional maltreatment; and, (iv) investigations in which substantiated "other" maltreatment (i.e., physical abuse, sexual abuse, neglect, or emotional maltreatment) co-occurred with an additional form of "other" maltreatment.
Age of Victim	Age of the child subject of the investigation as a categorical variable: under one year old, one to three years old, four to seven years old, eight to 11 years old, 12 to 15 years old.
Case Previously Opened	Workers were asked to indicate if the case had been opened for child welfare services in the past and could note that the case had never been previously opened, opened once before, or opened two or three times before, opened more than three times before, or that they did not know.
Duration of Maltreatment	Workers were asked to indicate the duration of substantiated maltreatment as either a single incident or multiple incidents.
Physical Harm	Workers indicated whether or not there was physical harm as a result of the investigated maltreatment.
Emotional or Mental Harm	Workers indicated whether or not there were signs of emotional or mental harm as a result of the investigated maltreatment.
Child Functioning Concerns	The following child functioning concerns were examined as part of this analysis: internalizing behaviors, externalizing behaviors, intellectual/developmental disability, failure to meet developmental milestone, fetal alcohol syndrome/fetal alcohol effects, positive toxicology at birth and physical disability. Workers could note multiple child functioning concerns.
Primary Caregiver Risk Factors	This analysis examined the following caregiver risk factors: alcohol abuse, drug/solvent abuse, cognitive impairment, mental health issues, physical health issues, few social supports, and history of foster care or group home. Workers could note multiple risk factors.
Housing Type	Workers indicated the type of housing the child and family lived in from the following options: owned home, rental housing, public housing, band housing, hotel/shelter, other, or unknown.
Overcrowding	Workers were asked to identify whether or not the child and family lived in overcrowded housing conditions.
Runs out of Money	Workers indicated whether the family regularly runs out of money for basic necessities.
Number of Moves in Past Year	Workers were asked to indicate the number of times the child and family had moved in the past year. Workers could note no moves, one move, two or more moves, or unknown.
Household Hazards	Workers indicated if there was at least one household hazard (e.g., home injury or health hazards).
Ongoing Child Welfare Services	Workers indicated whether or not the case would be transferred to on-going child welfare services.
Referral to Outside Services	Workers could indicate referrals that had been made for any family member to programs designed to offer services beyond the parameters of "ongoing child welfare services". These referrals included: parent support group, in-home family/parent counseling, other family or parent counseling, drug or alcohol counseling, welfare or social assistance, food bank, shelter services, domestic violence services, psychiatric or psychological services, special education placement, recreational services, victim support program, medical or dental services, child or day care, culture services, or other.
Out-of-home Placement	Workers indicated whether a placement was required and if so, the type of placement (informal kinship, kinship foster care, family foster care, group home or residential secure treatment facility).
Court	Workers were asked to indicate whether an application to child welfare court was considered or made.

Canada, then cases opened between a three month period from October 1st, 2008 to December 31st, 2008 within these selected sites were sampled (Trocmé et al., 2010b). The final sample selection stage involved identifying child investigations that met the CIS study criteria (Trocmé et al., 2010b). Maltreatment related investigations that met the criteria for inclusion in the CIS included situations where there were concerns that a child may have already been abused or neglected as well as situations where there was no specific concern about past maltreatment but where the risk of future maltreatment was being assessed.

Please see Table 1 for a complete description of variables used in this specific analysis.

These procedures yielded a final sample of 15,980 children investigated because of maltreatment related concerns. The data collected for the CIS-2008 were weighted in order to derive national annual incidence estimates, first by applying a composite regionalization weight and then by applying an annualization weight. CIS estimates cannot be unduplicated because annualization weights are based on unduplicated service statistics provided by the study sites. Therefore, estimates for the CIS refer to child maltreatment investigations.

Results

Table 2 provides a breakdown of the types of substantiated child maltreatment investigations in Canada in 2008. Forty one percent of substantiated investigations involved exposure to IPV, with 31% of investigations involving single form IPV and 10% of investigations involving IPV that co-occurred with another form of maltreatment. A total of 51% of investigations were substantiated for a single form of other maltreatment (only physical abuse, only sexual abuse, only neglect or only emotional maltreatment) and 8% of investigations were substantiated for co-occurring forms of these four types of maltreatment.

Table 3 outlines several case characteristics of the four categories of substantiated child maltreatment investigations examined in this analysis. Almost two thirds of investigations for single form IPV (63%) and more than half of investigations for co-occurring IPV (54%) involved children under the age of 8, with the largest proportion of investigations involving

Table 2. Types of estimated substantiated child maltreatment investigations n Canada in 2008

	Sample	
Type of child maltreatment	**Estimated number of investigations**	**Percentage (%)**
Single form of maltreatment: exposure intimate partner violence	26,230	31%
Single form of other maltreatment	43,620	51%
Physical abuse only	12,635	15%
Sexual abuse only	2,065	2%
Neglect only	23,641	28%
Emotional maltreatment only	5,279	6%
Co-occurring exposure to intimate partner violence	8,687	10%
Physical abuse and exposure intimate partner violence	1,484	2%
Sexual abuse and exposure to intimate partner violence	-	-
Neglect and exposure to intimate partner violence	3,773	4%
Emotional maltreatment and exposure to intimate partner violence	2,367	3%
Physical abuse, neglect, and exposure intimate partner violence	102	<1%
Physical abuse, emotional maltreatment, and exposure to intimate partner violence	375	<1%
Sexual abuse, neglect, and exposure to intimate partner violence	-	-
Neglect, emotional maltreatment, and exposure to intimate partner violence	460	1%
Physical abuse, sexual abuse, and exposure to intimate partner violence	-	-
Co-occurring other maltreatment	6,903	8%
Physical abuse and sexual abuse	190	<1%
Physical abuse and neglect	977	1%
Physical abuse and emotional maltreatment	2,281	3%
Sexual abuse and neglect	358	<1%
Sexual abuse and emotional maltreatment	-	-
Neglect and emotional maltreatment	2,295	3%
Physical abuse, sexual abuse, and neglect	-	-
Physical abuse, sexual abuse, and emotional maltreatment	-	-
Physical abuse, neglect, and emotional maltreatment	567	1%
Sexual abuse, neglect, and emotional maltreatment	146	<1%
Total	85,440	100%

Table 3. Characteristics of substantiated child maltreatment investigations in Canada in 2008

	Type of child maltreatment investigation								
	Single-form IPV		Single-form other maltreatment		Co-occurring IPV		Co-occurring other maltreatment		Chi-Square
Age of victim									
<1 year	2,563	10%	2,364	5%	661	8%	186	3%	324.92***
1-3 years	6,941	26%	6,213	14%	1,679	19%	802	12%	
4-7 years	7,173	27%	10,513	24%	2,316	27%	1,415	20%	
8-11 years	5,689	22%	10,364	24%	2,202	25%	1,900	28%	
12-15 years	3,865	15%	14,165	32%	1,829	21%	2,600	38%	
Case previously opened									
Never	11,049	42%	15,767	36%	3,490	40%	2,077	30%	71.21***
Once	5,018	19%	8,519	20%	1,219	14%	1,545	22%	
Two to three times	5,321	20%	8,779	20%	1,596	18%	1,115	16%	
More than three times	4,614	18%	10,036	23%	2,272	26%	2,093	30%	
Unknown	228	1%	482	1%	100	1%	46	1%	
Duration									
Single Incident	12,060	46%	18,851	43%	2,209	25%	1,905	28%	114.13***
Multiple Incidents	13,962	53%	24,222	56%	6,265	72%	4,893	71%	
Physical Harm									
Yes	152	1%	5,065	12%	760	9%	1,091	16%	218.05***
No	26,026	99%	38,415	88%	7,857	90%	5,783	84%	
Emotional or mental harm evident									
No emotional harm	19,439	74%	32,322	74%	4,721	54%	3,219	47%	239.19***
Signs of mental or emotional harm	6,396	24%	10,603	24%	3,798	44%	3,626	53%	
Child functioning concerns									
Internalizing behaviors	3,984	15%	13,024	30%	2,719	31%	3,496	51%	274.80***
Externalizing behaviors	4,311	16%	17,684	41%	2,609	30%	3,918	57%	416.34***
Intellectual/ developmental disability	1,523	6%	5,675	13%	964	11%	1,644	24%	132.89***
Failure to meet developmental milestones	1,194	5%	4,170	10%	859	10%	1,285	19%	98.84***
FAS/FAE	176	1%	2,130	5%	371	4%	500	7%	73.95***
Positive toxicology at birth	-	-	505	1%	-	-	237	3%	41.16***
Physical disability	322	1%	815	2%	121	1%	170	2%	5.28
Primary caregiver risk factors									
Alcohol abuse	4,379	17%	8,626	20%	3,366	39%	1,975	29%	147.13***
Drug/solvent abuse	2,592	10%	7,886	18%	2,429	28%	1,448	21%	122.70***
Cognitive impairment	863	3%	3,121	7%	657	8%	901	13%	66.96***
Mental health issues	5,501	21%	10,992	25%	3,587	41%	2,910	42%	152.70***
Physical health issues	1,561	6%	4,479	10%	1,045	12%	1,302	19%	76.54***
Few social supports	8,939	34%	16,682	38%	4,442	51%	3,173	46%	64.57***
History of foster care/group home	1,913	7%	3,002	7%	1,130	13%	668	10%	28.88***
Total	26,230		43,620		8,687		6,903		

***p<.001

Table 4. Household characteristics in substantiated child maltreatment investigations in Canada in 2008

	Type of child maltreatment investigation								
	Single form IPV		Single form other maltreatment		Co-occurring IPV		Co-occurring other maltreatment		Chi-Square
Housing									125.65***
Own home	8,549	33%	13,371	31%	2,727	31%	2,212	32%	
Rental	12,638	48%	17,955	41%	3,705	43%	2,939	43%	
Public housing	2,451	9%	5,298	12%	1,070	12%	854	12%	
Band housing	387	1%	3,031	7%	412	5%	322	5%	
Hotel/Shelter	667	3%	516	1%	123	1%	103	1%	
Other	541	2%	1,014	2%	357	4%	244	4%	
Unknown	997	4%	2,435	6%	293	3%	230	3%	
Home overcrowded									
Yes	1,359	5%	4,989	11%	867	10%	1,024	15%	
No	24,338	93%	37,387	86%	7,525	87%	5,712	83%	
Unknown	466	2%	1,207	3%	295	3%	167	2%	
House regularly runs out of money for basic necessities									73.70***
Yes	2,694	10%	6,945	16%	2,339	27%	1,850	27%	
No	20,136	77%	29,469	68%	5,140	59%	3,453	50%	
Unknown	3,401	13%	7,178	16%	1,197	14%	1,600	23%	
Number of moves									189.34***
No moves	12,697	48%	21,123	48%	4,140	48%	3,411	49%	
One move	5,701	22%	8,020	18%	1,851	21%	1,516	22%	
Two or more moves	2,406	9%	4,340	10%	1,404	16%	706	10%	
Unknown	5,358	20%	10,120	23%	1,239	14%	1,269	18%	
At least one household hazard									51.40***
Yes	1,189	5%	6,360	15%	1,644	19%	1,393	20%	
No	25,042	95%	37,259	85%	7,043	81%	5,510	80%	
Total	26,230		43,620		8,687		6,903		162.21***

children aged 4 to 7 (27% in both types). In contrast, the majority of single form other maltreatment investigations (56%) and co-occurring other maltreatment investigations (66%) involved 8-15 year olds. The majority of all four types of investigations were previously opened by child welfare services. Single form IPV investigations were the least likely to have been previously opened (58%) followed by co-occurring IPV investigations (60%), single form other maltreatment investigations (64%) and co-occurring other maltreatment investigations (70%).

With regard to duration of maltreatment, investigations of single form IPV were the least likely of the four maltreatment categories to involve multiple incidents (53%) compared to single other maltreatment (56%), co-occurring other maltreatment (71%), and co-occurring IPV (72%). Very few investigations of single form IPV resulted in physical harm to the child (1%), while 12% of single other maltreatment investigations noted physical harm as a result of maltreatment. Co-occurring IPV investigations had the second lowest proportion of physical harm (9%). Co-occurring other maltreatment investigations had the highest level of physical harm noted (16%). Emotional or mental harm was evident in 24% of both single form IPV and single form other maltreatment investigations. Emotional or mental harm was reported more frequently in investigations of co-occurring other maltreatment (53%) and co-occurring IPV (44%).

Child functioning concerns were noted less frequently in investigations of single form IPV with

Table 5. Child welfare service dispositions in substantiated child maltreatment investigations in Canada in 2008

	Type of child maltreatment investigation								
	Single form IPV		Single form other maltreatment		Co-occurring IPV		Co-occurring other maltreatment		Chi-Square
Ongoing child welfare services									
Case to be closed	17,651	67%	24,246	56%	3,355	39%	2,657	38%	222.32***
Case to stay open	8,572	33%	19,263	44%	5,332	61%	4,235	61%	
Referral to outside services									
Referral made	18,370	70%	27,783	64%	7,186	83%	5,628	82%	125.84***
No referral made	7,860	30%	15,837	36%	1,501	17%	1,275	18%	
Out-of-home placement									
No placement required	24,703	94%	35,321	81%	6,779	78%	4,682	68%	306.05***
Informal kinship care	917	3%	3,221	7%	719	8%	754	11%	
Kinship foster care	160	1%	878	2%	290	3%	476	7%	
Family foster care (non kinship)	417	2%	3,194	7%	877	10%	790	11%	
Group home or residential secure placement	-	-	843	2%	-	-	169	2%	
Child welfare court									
No court considered	22,377	92%	31,920	84%	5,317	70%	4,558	73%	206.45***
Application considered	1,083	4%	1,762	5%	711	9%	510	8%	
Application made	962	4%	4,108	11%	1,564	21%	1,176	19%	
Total	26,230		43,620		8,687		6,903		

only 15% of these investigations noting internalizing behaviours and 16% noting externalizing behaviours. In single other maltreatment investigations, 30% note internalizing issues and 41% note externalizing issues. Almost one third of co-occurring IPV investigations noted externalizing behaviours, and about one-third noted internalizing behaviours. Co-occurring other maltreatment investigations noted high rates of both internalizing and externalizing issues (51% and 57% respectively).

For primary caregiver risk factors, alcohol abuse was most likely to be a noted primary caregiver concern in investigations of co-occurring IPV (39%), followed by co-occurring other maltreatment investigations (29%), single other maltreatment investigations (20%) and single form IPV investigations (17%). This same pattern exists for drug/solvent abuse where it is a noted concern in 28% of co-occurring IPV investigations, 21% of co-occurring other maltreatment investigations, 18% of single other maltreatment investigations, and 10% of single form IPV investigations. The proportion of investigations where mental health issues are noted is similar for single form IPV and single other maltreatment (21% and 25%). Forty-one percent of co-occurring IPV investigations note mental health issues which is similar to co-occurring other maltreatment investigations where 42% note this primary caregiver functioning concern. Many investigations noted few social supports (34% of single form IPV, 38% of single other maltreatment, 46% of co-occurring other maltreatment, and 51% of co-occurring IPV investigations).

A person who contacted the child welfare site regarding a child or children was counted as a referral source (not included in tables). Single form IPV investigations as well as co-occurring IPV investigations were most likely to be referred to child

Table 6. Referral(s) for services for substantiated child maltreatment investigations in Canada in 2008

	Type of child maltreatment investigation								
	Single-form IPV		Single-form other maltreatment		Co-occurring IPV		Co-occurring other maltreatment		Chi-Square
Type of referral									
Parent support group	2,457	9%	5,431	12%	1,283	15%	1,335	19%	29.09***
In-home family parent counseling	2,460	9%	7,481	17%	1,869	22%	1,794	26%	100.52***
Other family or parent counseling	8,552	33%	10,930	25%	3,455	40%	2,363	34%	21.82***
Drug or alcohol counseling	3,573	14%	5,806	13%	3,363	39%	1,383	20%	163.55***
Welfare or social assistance	1,430	5%	1,799	4%	665	8%	205	3%	12.27**
Food Bank	870	3%	2,229	5%	684	8%	328	5%	18.25***
Shelter Services	2,201	8%	802	2%	823	9%	335	5%	111.37***
Domestic Violence Services	10,988	42%	1,590	4%	3,077	35%	430	6%	1239.06***
Psychiatric or psychological services	2,502	10%	5,301	12%	1,479	17%	1,310	19%	26.82***
Special education placement	169	1%	979	2%	217	2%	175	3%	21.43***
Recreational services	388	1%	1,250	3%	192	2%	376	5%	22.58***
Victim support program	3,315	13%	1,122	3%	910	10%	294	4%	184.22***
Medical or dental services	413	2%	2,004	5%	530	6%	436	6%	41.21***
Child or day care	916	3%	2,079	5%	305	4%	380	6%	11.67**
Cultural services	917	3%	939	2%	302	3%	117	2%	8.56*
Other	1,615	6%	4,179	10%	602	7%	740	11%	34.89***
Total	26,230		43,620		8,687		6,903		

*p<.05 **p<.01 ***p<.001

protection sites by police (66% and 43% respectively). In contrast, school personnel were the most likely to refer both single other maltreatment investigations (31%) and co-occurring other maltreatment investigations (27%).

Table 4 outlines household characteristics for the four categories of substantiated child maltreatment investigations examined in this analysis. Housing type is very similar across the four types of investigations with the majority of all investigations renting their home. Number of moves was also comparable across the four categories with just under half of all investigations noting no moves in the past year. Single form IPV investigations were the least likely to have home overcrowding (5% of investigations) and household hazards (5% of investigations) reported. These investigations were also the least likely to have noted that the house regularly runs out of money for basic necessities (10% of investigations).

Table 5 outlines the child welfare services involved with these investigations. Single form IPV investigations were the least likely to remain open for ongoing child welfare services (33%) followed by single other maltreatment investigations (44%). Sixty-one percent of both co-occurring IPV investigations and co-occurring other maltreatment investigations were to remain open for ongoing child welfare services at the end of the investigation. A referral to outside services was made in a majority of all types of investigations; 64% of single other maltreatment, 70% of single form IPV, 82% of co-occurring other maltreatment and 83% of co-occurring IPV.

There were very few single form IPV investigations which required a formal out-of-home placement for the child (3%), compared to 11% of single other maltreatment investigations, 13% of co-occurring IPV investigations, and 20% of co-occurring other maltreatment investigations. Similarly, an application

to child welfare court was least likely to be made for single form IPV investigations with no child welfare court considered in 92%. In contrast, a court application was made in 21% of co-occurring IPV investigations, 19% of co-occurring other maltreatment investigations and 11% of single other maltreatment investigations.

Table 6 presents the types of referrals that were made to programs designed to offer services beyond the parameters of "ongoing child welfare services". As expected, in both types of IPV investigations, a large proportion were referred to DV services. Investigations in all categories were commonly referred to other family or parent counselling services. Single other maltreatment, co-occurring other maltreatment, and co-occurring IPV investigations were also often referred to in-home family or parent counselling. Co-occurring IPV investigations were also very likely to be referred to drug or alcohol counselling (39%).

Discussion

This paper described the profile of IPV investigations substantiated by child welfare agencies in Canada in 2008 using data from the CIS-2008. With 41% of substantiated investigations involving exposure to IPV, this maltreatment type is undeniably a central focus of the Canadian child welfare system. Investigations substantiated for single form IPV and co-occurring IPV appeared similar in some respects. These two categories of substantiated investigations were more likely to involve younger children. It could be that families with young children are reported to child welfare authorities more often for IPV related concerns because it is perceived that these children are more vulnerable than older children and youth. Or perhaps, child welfare authorities are more likely to respond to reports of IPV in families with young children, because of the clear opportunity for early intervention. Alternatively, it may be that families with young children are more likely to struggle with IPV concerns. Future research should explore these possibilities. Families substantiated for single and co-occurring exposure to IPV were also similar in that they were least likely to have previous involvement with child welfare authorities, suggesting that maltreatment concerns may not have arisen in the past. However, this finding could also reflect the younger children involved in these investigations, as there is less time for these children to come into contact with child welfare compared to older children.

Investigations of single form IPV were the least likely of the four maltreatment categories to involve multiple incidents, result in physical harm to the child, note child functioning concerns and note caregiver risk factors. Compared to other maltreatment categories, these investigations had the lowest rates of case openings for ongoing services, out-of-home placements, and court applications. Some studies highlight the concern that families investigated by child welfare for exposure to IPV have a high rate of case substantiation but are then closed without referrals for needed services unless IPV co-occurs with another substantiated form of child maltreatment (e.g., Hughes et al., 2011). In our analysis, we found that investigations of single forms of IPV were more likely than single forms of other maltreatment to be referred to an internal or external service. This may represent a strong protective factor for families struggling with IPV, as the child welfare system may act as a point of contact to stream these families toward more specialized and less intrusive services.

In several ways, substantiated investigations of single form exposure to IPV were similar to investigations of single form other maltreatment (physical abuse, sexual abuse, neglect, emotional maltreatment). Rates for duration of substantiated maltreatment, caregiver mental health and social supports, and emotional harm were comparable between single form IPV investigations and single form other maltreatment investigations.

Additionally, substantiated investigations of co-occurring exposure to IPV were similar in many ways to investigations of co-occurring other maltreatment. These two distinct types of investigations were similar in terms of duration of maltreatment, emotional harm as a result of maltreatment, socioeconomic factors (housing type, running out of money, household hazards), as well as service dispositions including case transfer, referrals, and court applications. This may suggest that the profile of investigations involving multiple co-occurring forms of substantiated maltreatment is similar across maltreatment

typologies. It may be that the cumulative number of forms of maltreatment is more important in classifying cases than the type of maltreatment. Future studies should examine this possibility.

Substance misuse appears to play an important role in families with co-occurring exposure to IPV. In 39% of these investigations, alcohol abuse was identified as a primary caregiver risk factor and in 28% drug/solvent abuse was identified as a risk. Referrals to drug and alcohol counseling were common in these investigations (39%) suggesting that workers were often identifying this as a need. The co-morbidity of IPV and addictions issues highlights the complexity of the needs of these families. Collaboration across numerous social service sectors may be an important next step in improving services to these families.

In 2003 (Black et al., 2008), 34% of substantiated investigations involved some form of exposure to DV. In 2008, the percentage of substantiated investigations involving exposure to IPV increased to 41%. This increase is primarily accounted for by the number of investigations involving exposure to IPV as the single form of maltreatment (25% in 2003 versus 31% in 2008). In 2008, workers were more likely to identify that the child or youth was displaying emotional or mental harm as a result of substantiated single form exposure to IPV and substantiated co-occurring exposure to IPV. Whereas in 2003, workers identified emotional harm in 12% of substantiated single form DV investigations, in 2008, workers identified emotional harm in almost one quarter of substantiated single form IPV investigations. Likewise, 31% of substantiated co-occurring exposure to DV investigations noted emotional harm in 2003, compared to 44% in 2008. It could be that in 2008, child welfare workers were better trained in IPV issues and therefore better able to detect and identify emotional or mental harm in children exposed to this violence. Alternatively, it may be that more children experienced emotional or mental harm in 2008. Placement rates were similar for single and co-occurring IPV investigations in 2008 and 2003. The comparisons between the 2008 and 2003 cycles must be tested to asses if any differences in findings are statistically significant. The CIS Research Team will publish future papers on this topic.

This analysis provides important information about families who struggle with IPV and other forms of maltreatment. A large number of families come into contact with the Canadian child welfare system due to issues of IPV. This identification presents as a potential opportunity to offer support and services to families who may need them as a result of a stressful and traumatic event. Resilience in the context of exposure to IPV is generally conceptualized as resources available to a child that provide protection from the violence, facilitate adaptation, or promote recovery (Margolin, 2005). To support resilience in young people exposed to IPV and their families, child welfare agencies should identify opportunities to prevent recurrence and support the victims identified in the investigation. Young people and their families may benefit most from a continuum of support that ranges in formality, from natural supports within the family or community to more formal interventions offered by child welfare and other social service sectors (Gerwitz & Edleson, 2007).

More research is needed to understand factors that promote resilience in children and youth exposed to IPV. Protective or resilience variables to explore could include social competence, intelligence, self-esteem, temperament, strong sibling relationships, strong peer relationships, and supportive adult relationships (Carlson, 2000; Edleson, 1999; Hughes, Graham-Bermann, & Gruber, 2001). Further research is also needed to determine what the specific role of the child welfare system should be in responding to IPV and also the most effective ways to help families in need.

Limitations

CIS estimates do not include (1) incidents that were not reported to child welfare, (2) reported cases that were screened out by child welfare before being fully investigated, (3) new reports on cases already opened by the child welfare sites, and (4) cases that were investigated only by the police. This specific analysis did not include cases that were investigated only because of concerns about future risk of maltreatment. There were slight methodological changes across cycles of the CIS and therefore comparisons should be made with this in mind. Three limitations to the weighting estimation method should be noted. The agency size correction uses child population as a proxy

for agency size; this does not account for variations in per capita investigation rates across agencies in the same strata. The annualization weight corrects for seasonal fluctuation in the volume of investigations, but it does not correct for seasonal variations in types of investigations conducted. Finally, the annualization weight includes cases that were investigated more than once in the year as a result of the case being re-opened following a first investigation completed earlier in the same year. Accordingly, the weighted annual estimates represent the child maltreatment-related investigations, rather than investigated children. There are also specific limitations in conducting research on exposure to IPV. For example, defining "exposure" to IPV is difficult and confounded by IPV simply occurring in a family with children. Also, emotional harm that results from exposure to IPV may not appear until long after the exposure, which limits the interpretation of cross-sectional research like the CIS.

Conclusions and Implications

Exposure to IPV is a complex issue and demands an equally complex response that includes cross sector collaboration. It is important for the child welfare field to engage in knowledge sharing with other sectors in order to learn how to best respond to families in need of support. Knowledge of available child welfare services should be shared with families and communities, so that when families need help with IPV they can view child welfare services as a potential source of support.

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The Role of School Connectedness in the Link Between Family Involvement with Child Protective Services and Adolescent Adjustment

Hayley A. Hamilton[123], Christine Wekerle[14], Angela Paglia-Boak[1], and Robert E. Mann[12]

1 Centre for Addiction and Mental Health, Toronto, Ontario, Canada
Corresponding Author: Hayley Hamilton, hayley_hamilton@camh.net

2 Dalla Lana School of Public Health, University of Toronto, Canada

3 Department of Psychiatry, University of Toronto, Canada

4 Department of Pediatrics, McMaster University,Canada

Abstract:

Objective: The objective of this study was to examine the role of school connectedness in the association between a history of family involvement with child protective services (CPS) and symptoms of psychological distress and delinquency among youth. **Methods:** Data were gathered from 3181 participants within the 2009 cycle of the Ontario Student Drug Use and Health Survey, a province-wide school-based survey of 7th to 12th grade students. The survey employed a two-stage cluster design, and the analyses reported include adjustments for this complex sample design. **Results:** Analyses indicated that the association between CPS involvement and psychological distress varied with school connectedness. CPS involvement was more strongly associated with psychological distress among students with low school connectedness than students with high school connectedness. School connectedness did not significantly moderate the link between involvement with CPS and delinquency. **Conclusions and Implications:** Results suggest that fostering school connectedness may be one way to protect youth with a history of family involvement with CPS and, along with effective mental health services, reduce the accumulation of risks as youth transition into adulthood.

Keywords:

Child protective services, psychological distress, school connectedness, delinquency, adolescence

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Involvement with Child Protective Services (CPS) usually arises because of suspicions of neglect or abuse, domestic violence in homes with children present, or when nutrition, housing and other basic needs for children are inadequate (Ontario Child and Family Services Act, 1990). Thus, involvement with CPS is often an indication that a child or family has had a negative experience with respect to caregiver neglect or dysfunction that may place a child at increased risk for emotional and behavioral problems. Research on child maltreatment, has supported a link to psychological and behavioral problems among children and youth (Buckner, Beardslee, & Bassuk, 2004; Burge, 2007; Burns et al., 2004; Fergusson & Lynskey, 1997; Fleming, Offord, & Boyle, 1989; Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004; Harman, Childs, & Kelleher, 2000; Hussey, Chang, & Kotch, 2006). School is a central context for resiliency, given its potential for delivering targeted interventions and resource linkage, yet, relatively little research has examined the role of school connectedness in the association between maltreatment and psychological and behavioral problems. Childhood adverse events, such as maltreatment, have been shown to have long-term effects on psychological distress and risk behaviors (Falci, 2008; Hazel, Hammen, Brennan, & Najman, 2008). Maltreatment is a significant risk factor for psychological distress (Buckner et al., 2004; Burge, 2007; Burns et al., 2004; Harman et al., 2000; Hussey et al., 2006), as well predictive of delinquency among youth (Crooks, Scott, Wolfe, Chlodo, & Killip, 2007; Herrenkohl, Huang, Tajima, & Whitney, 2003; Stouthamer-Loeber, Loeber, Homish, & Wei, 2001; Teicher, Samson, Polcari, & McGreenery, 2006). In addition, the adverse family circumstances that may lead to CPS involvement may not only affect a single child, but may extend to other children and youth within the household. Even less serious circumstances that result in CPS involvement can be persistent, and may have the capacity to affect youth over the long term. Thus, a broader approach that examines a history of family involvement with CPS, rather than solely the presence or absence of maltreatment, or sampling only CPS rather than the broader youth population, may further highlight the link with psychological distress and delinquency among youth. This is evident in research indicating that youth with a history of family involvement with CPS were more likely to experience psychological distress (Hamilton, Paglia-Boak, Wekerle, Danielson, & Mann, 2011) and bullying victimization in adolescence (Mohapatra, Irving, Paglia-Boak, Wekerle, Adlaf, & Rehm, 2010).

CPS Involvement and School Connectedness

Beyond family communication, schools are the main source of socialization for children and youth and, in this role, may provide resources to serve protective functions to reduce risk for psychological and behavioral problems. An aspect of school that is increasingly recognized as an influential factor in child outcomes is school connectedness. School connectedness is the belief among students that teachers and other adults within the school care about them as individuals and about their learning (Wingspread Declaration on School Connections, 2004). Despite the use of a variety of different terms within the literature, including school connectedness, school attachment, school climate, school environment, or school bonding, the underlying concern is with perceptions of the social and learning environment. Much of the research on school connectedness has emphasized its relationship with academic outcomes (Anderman & Freeman, 2004; Shochet et al., 2006), and is grounded in early findings that it is an important factor in school completion or early school leaving (Wehlage, Rutter, Smith, Lesko, & Fernandez 1989). More recent research has indicated that a child's connection to school is also related to other aspects of child adjustment, in that stronger school connectedness is associated with fewer psychological and behavioral problems (Anderman, 2002; Jacobson & Rowe, 1999; Resnick et al., 1997). Additional longitudinal studies have found that school connectedness predicted psychological and behavioral outcomes in children (Kuperminc, Leadbetter, & Blatt, 2001; Shochet, Dadds, Ham, & Montague, 2006). School connectedness may be particularly important for youth with experiences of adversity at home, including histories of family involvement with CPS. Such youth may lack a strong sense of belonging to their immediate families, and so positive and stable connections to school may be of significant value,

both psychologically and socially (Gilligan, 1998; 2000; Wehlage et al., 1989). As experiences of adversity accumulate and the range of problem areas expands, the negative effects on future outcomes become probabilistically more likely (Rutter, 1990). Regular, repeated small encouragements and attachments may play a large protective role, in their provision of positive predicable environments (e.g., supportive social networks, routines, structured environments, and positive role models). Schools are a practical alternative for youth seeking connections and a sense of belonging (Gilligan, 2000). Youth with a stronger sense of connection to school may be provided with greater opportunities for positive development that can reduce the accumulation of further risks. In contrast, youth with weaker school connectedness may have fewer opportunities for positive growth and may continue to accumulate health risk behaviors (Catalano & Hawkins, 1995). For example, school connectedness was found to have a protective effect on smoking susceptibility in a Canadian national survey of grade 6 to 8 students (Azagaba & Asbridge, 2013). Little research has examined the association between adversities such as maltreatment and school connectedness. Research examining school variables tend to focus on academic performance and find, for example, that maltreated children tend to have poorer academic achievement (e.g., grade point average, test scores) and more frequent school absences and disciplinary referrals (Eckenrode, Laird, & Doris, 1993; Leiter & Johnsen, 1994). Maltreated children are likely to be prone to isolation and distrust of adults, which may interfere with their ability to integrate into schools and form positive relationships with teachers (Leiter & Johnsen, 1994). Thus, such isolation and distrust may extend into poor academic performance and poor school connectedness. The objective of this study is to examine the moderating role of school connectedness in the association between a history of family involvement with CPS and psychological and behavioral problems among youth. Analyses will control for adolescent age, sex, and parent or family structure, research indicates that such characteristics are significantly associated with aspects of adolescent adjustment, including psychological distress and delinquency (e.g., Dornbusch, 1989; Hamilton, Noh, & Adlaf, 2009; McLanahan & Sandefur, 1994). Parental education and adolescent academic performance are also controlled for, because of associations with school connectedness and adolescent adjustment (e.g., Anderman & Freeman, 2004; Voelkl, 1995; Zingraff, Leiter, Johnsen, & Myers, 1994). It is hypothesized that the association between CPS involvement and adolescent adjustment will vary with school connectedness.

Materials and Methods

Sample

Data for this study were derived from the 2009 cycle of the Ontario Student Drug Use and Health Survey (OSDUHS), a province-wide survey of 7th to 12th grade students (Paglia-Boak, Mann, Adlaf, & Rehm, 2009). OSDUHS, the longest ongoing school study of adolescents in Canada, has been conducted since 1977, and employs a two-stage cluster design (school, class). The survey monitors substance use, gambling, mental health, physical health, and delinquent behavior. The total sample in 2009 was 9112 students from 47 school boards, 181 schools, and 573 classrooms. The survey had a student participation or response rate of 65%. Absenteeism (13%) and unreturned forms or lack of parental consent (22%) were the main reasons for non-participation among students (Paglia-Boak et al., 2009). Analyses to be presented were based on a random half sample of 4851 students because specific items important to this study (e.g., CPS involvement) were only asked of a random half sample. A total of 13 respondents less than 12 or older than 19 years of age were excluded from the present study. Characteristics of the sample used for analysis are outlined in Table 1. One-half of the students were female and students had a mean age of 15.3 years. Approximately two-thirds of the sample resided in households with two biological or adoptive parents, and almost one-half had parents with a university degree.

Measures

A measure of psychological distress was based on responses to the 12-item General Health Questionnaire (GHQ12), a composite measure used to assess depressed mood, anxiety, and general psychological distress (Goldberg, 1972). The GHQ is a validated screener for psychological distress in general population samples of adults (Goldberg et

Table 1. Variable means/percentages, overall and by history of family involvement with CPS

	CPS Involvement n=487	No Involvement n=2694	Overall Sample n=3181
Age	15.3 (1.8)1	15.3 (1.8)	15.3 (1.8)
Female	51.2%	50.2%	50.3%
Two parent household	36.4%	71.3%	65.8%
Parental education			
High school or less	30.4%	19.1%	20.9%
Some college/university	34.0%	32.1%	32.4%
University degree	35.6%	48.8%	46.7%
Average school grade of A	34.8%	49.6%	47.2%
School connectedness	3.2 (0.8)	3.3 (0.7)	3.3 (0.7)

1 Standard deviation in brackets.

al., 1997). Adolescents tend to interpret the GHQ12 in a similar manner to adults (French & Tait, 2004), but relatively few GHQ validation studies have been conducted with adolescents (Tait, Hulse, & Robertson, 2002). There is, however, evidence that it can be used as a valid screener for anxiety and mood disorders in adolescents (Banks, 1983; Mann et al., 2011; Tait, Hulse, & Robertson, 2002; Tait, French,& Hulse, 2003). For example, Mann and colleagues (2011) found that reports of five or more of the GHQ12 symptoms provided estimated prevalence rates of 19.3% for anxiety and mood disorders, which is similar to 12-month prevalence rates in other recent research (Roberts, Stuart, & Lam, 2008; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001). Within the current study, participants were asked to report on their health "over the last few weeks" and respond to each of the 12 items that form the GHQ on a 4-point scale. Responses were dichotomized such that a code of 1 represented either of the two response choices signifying worse health, and a code of 0 represented either of the two choices indicating better health than usual. Individual responses to six or more of the 12 items were averaged to construct an index, with higher scores indicating greater symptoms of psychological distress. Within the current study, a test of reliability of the 12-item measure indicated a Cronbach's alpha of .87. Delinquency was a count of the number of delinquent acts in which adolescents have engaged. The survey listed 14 delinquent acts including damaged property, theft, assault, breaking and entering, and carrying a weapon. Individual responses were dichotomized such that a code of 1 signified that an individual engaged in a particular activity at least once over the 12-month period prior to the survey, and a code of 0 indicated that they did not engage in the activity. These dichotomized responses were then summed to form a measure representing a count of the number of delinquent acts. CPS involvement was based on the survey question, "Have you or your family ever been involved with any Children's Aid Society?" Children's Aid Society is the agency that administers child protective services within Ontario. Response choices were "yes", "no", and "don't know". School connectedness was based on responses to two items: (1) "I feel close to people at this school" and (2) "I feel like I am part of this school". These items are part of a social belonging measure developed by Bollen and Hoyle (1991). Responses were provided on a 4-point scale ranging from strongly agree to strongly disagree. Items were reverse coded such that higher numbers reflected greater school connectedness. The index showed good reliability with a Cronbach's alpha of .70.

Control Variables

Several measures were treated as control variables within the regression models. Age was a continuous variable ranging from 12 to 19 years. Sex was a dichotomous measure reflecting females (1) and males (0). Parent structure reflects current living arrangement and was based on a question that asked students to indicate the adults they currently live with in their main home. Parent structure was a dichotomous variable that represented living with two biological or adoptive parents (1) and living in other parental structures including foster, single-parent, and step-parent (0). Approximately one percent of students indicated they were living with a foster parent and thus were included within the "other"

parent category. Parental education was constructed by combining two questions that asked the highest levels of fathers' and mothers' education. Responses were combined to form a 4-category measure that reflected the educational level of the parent with the highest level of education: high school or less, some college or university, university degree, and don't know. Academic performance was based on responses to a question asking youth what marks they usually got in school on average. Responses were provided in the form of letter grades (A, B, C, D, less than D) and were reduced to a dichotomous measure representing an average grade of A (1) versus less than A (0) for analysis purposes.

Analytic Strategy

Given a complex survey sample design, point estimates, unbiased variances and standard errors were computed using Stata 11 and included adjustments for design effects, specifically clustering, stratification, and unequal weights (StataCorp, 2009). Ordinary least squares (OLS) regression models were utilized for analyses involving symptoms of psychological distress. Hurdle regression models were used for analyses involving delinquency because the variable is a count measure with a large proportion of zeros. The hurdle model combined a logit model to predict zeros and a zero-truncated negative binomial (ZTNB) model to predict counts among those with nonzero delinquent acts. ZTNB, rather than zero-truncated Poisson, was deemed appropriate for the non-zero component because of over-dispersion within the delinquency variable (Cameron & Trivedi, 1986; Long & Freese, 2006). The moderating effects of school connectedness on the association between a history of CPS involvement and psychological distress and delinquency were examined through the inclusion of two-way interactions in the models. School connectedness was centered on its sample mean to reduce the risk of multicollinearity (Aiken & West, 1991). In the present study, 1279 individuals who did not know whether or not they had histories of family involvement with CPS and 317 individuals who did not know their parents' level of education were excluded from analyses. Those excluded individuals tended to be younger (14.3 vs. 15.3) and had university educated parents (54% vs. 47%). Respondents who did not know their parents' educational level were also excluded from analyses. Youth who responded "don't know" to parental education tended to be significantly younger (age 14.0 vs. 15.3 years) than those who knew their parents' highest level of education.

Results

Results of analyses to examine the association between a history of involvement with child protective services (CPS) and symptoms of psychological distress, and the moderating role of school connectedness are outlined in Table 2. Results indicate a significant association between CPS involvement and symptoms of psychological distress. Youth with histories of family involvement with CPS reported greater symptoms of psychological distress than youth without histories of CPS involvement, controlling for age, gender, family structure, parental education, and academic performance (Model 1). Greater school connectedness was significantly associated with fewer symptoms of psychological distress. Earlier analysis not presented in the tables had indicated that youth with histories of family involvement with CPS had significantly lower school connectedness (b=-.177, s.e.=.05, p<.001), compared to youth with no involvement with CPS. Results from the test of interaction between CPS involvement and school connectedness are presented in Model 2. The association between CPS involvement and psychological distress was found to vary significantly with level of school connectedness. The moderating effect is illustrated in Figure 1, which shows that differences in the psychological distress of youth with family histories of involvement with CPS and youth without such family histories declined as the level of school connectedness increased.

Figure 1. Psychological distress by CPS involvement and school connectedness (mean and mean ±1 standard deviation)

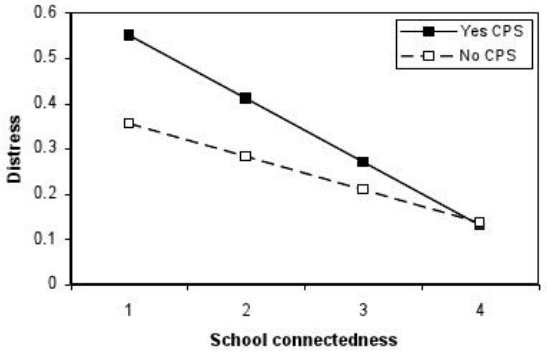

Table 2. Psychological distress regressed on history of family involvement with CPS and controlling for socio-demographic factors

	Model 1	Model 2
Involvement with CPS	.049* (.019)	.041* (.019)
Age	.014*** (.003)	.015*** (.003)
Female	.113*** (.009)	.114*** (.010)
Two parent household	-.029* (.013)	-.030* (.013)
Parental education (ref. = university degree)		
High school or less	.016 (.016)	.017 (.016)
Some college/university	.022 (.012)	.023 (.014)
Avg. school grade of A	-.005 (.013)	-.003 (.013)
School connectedness (centered)	-.088*** (.010)	-.073*** (.011)
CPS involve X School connectedness		-.067** (.023)
Constant	-.086	-.089
R2	.154	.160

N=3152; standard errors in brackets ***p<.001, **p<.01, *p<.05.

Results of the hurdle regression model to examine the association between family involvement with CPS and delinquency are presented in Table 3. The logit component of the model represents the odds of no delinquent acts and compares youth with zero delinquent acts to those with at least one delinquent act. The zero- truncated negative binomial (ZTNB) component of the model represents the count or rate of delinquent acts among youth who reported engaging in delinquency. Results of the logit component indicate that youth with family involvement with CPS had significantly lower odds of no delinquency (OR=0.62, 95% CI=0.46-0.83) than their counterparts with no family involvement with CPS, controlling for age, gender, family structure, parental education, academic performance, and school connectedness. School connectedness was associated with greater odds of no delinquency (OR=1.20, 95% CI=1.04-1.40). Results from the ZTNB component of the model indicate that youth with family involvement with CPS reported greater numbers of delinquent acts than youth with no history of involvement with CPS (IRR=1.51, 95% CI=1.11-2.03). Specifically, youth with family involvement with CPS reported rates of delinquency that were 1.51 times that of youth without family involvement with CPS. Greater school connectedness was associated with greater odds of no delinquency, and smaller rates of delinquency among youth who engaged in delinquency. An examination of the moderating effect of school connectedness on the association between family involvement with CPS and youth delinquency found no significant effect.

Discussion

Not all youth with histories of adversity, including maltreatment, experience psychological distress and engage in delinquency, suggesting that there are factors that enhance or reduce risk among youth. Despite the importance of schools in the lives of youth, little research has focused on the role of school connectedness in the link between histories of family involvement with CPS and youth outcomes. This study focused on examining whether or not school connectedness significantly moderated the association between CPS involvement and adolescent adjustment. Findings from this study were consistent with findings of other studies that link involvement with CPS to psychological distress (e.g., Buckner et al., 2004; Burge, 2007; Burns et al., 2004; Hamilton et al., 2011; Harman et al., 2000; Hussey et al., 2006) and delinquency (e.g., Stouthamer-Loeber et al., 2001; Crooks et al., 2007) among youth. Youth with histories of family involvement with CPS reported greater symptoms of psychological distress and greater rates of delinquency compared to youth without such histories. The present study expands the literature by highlighting school connectedness as a protective factor for youth with histories of family involvement with CPS. At low levels of school connectedness, youth with CPS involvement had greater psychological distress than youth without CPS involvement. Such differences in psychological distress, however, disappeared when youth reported higher levels of school connectedness. This finding suggests that youth with a strong sense of connection

Table 3. Delinquency regressed on history of family involvement with CPS and controlling for socio-demographic factors

	Logit model (no delinquency)		Zero-truncated negative binomial model (count)	
	OR	95% CI	IRR	95% CI
Involvement with CPS	.62**	.46-.83	1.51**	1.11-2.03
Age	.87***	.82-.93	1.09**	1.03-1.16
Female	1.88***	1.56-2.27	.72**	.58-.90
Two parent household	1.02	.80-1.30	.94	.75-1.18
Parental education (ref. = university degree)				
High school or less	1.04	.76-1.43	.87	.67-1.13
Some college/university	1.07	.84-1.36	.88	.66-1.18
Average school grade of A	1.59***	1.30-1.94	.65***	.51-.82
School connectedness	1.20*	1.04-1.40	.77***	.66-.89
N	3170		1233	

***p<.001, **p<.01, *p<.05; OR = Odds ratio; IRR = Incidence-rate ratio

to school may be able to reduce the long-term risk of psychological distress that can accompany CPS involvement. The significance of school connectedness as a protective factor for youth with CPS involvement did not extend to delinquency. In contrast to findings for psychological distress, the connections and sense of belonging that youth experience within schools did not significantly decrease the risk of delinquency among youth with CPS involvement. This suggests that school connectedness may have a stronger protective role against internalizing rather than externalizing behaviors. Other school-related factors are worth investigating to determine their role in associations between CPS involvement and delinquency. The potentially long-term implications of involvement with CPS are evident in that the significant associations were between any history of family involvement with CPS and current symptoms of psychological distress and delinquency. These findings within a community sample, rather than a sample of youth currently within CPS, also highlights the need for CPS to consider the mental health service needs of children and youth early in the care process to reduce further accumulation of risks as individuals' transition through developmental stages. Results also highlight the need for CPS to consider youth connections to schools and to facilitate the continuity of positive connections when making care decisions. Stronger school connectedness appears to promote resilience and may help to protect youth from cumulative risks (Gilligan, 2000) associated with histories of involvement with CPS. Despite the strengths of the current study, several study limitations are worth noting. First, the nature of involvement with CPS is unknown because no survey question directly asked about abuse or neglect and there was no access to administrative records within CPS. A direct question was not asked because the large-scale nature of the study, complex sample design, and ethical requirements to report cases of abuse prevented detailed questions on maltreatment. Given that involvement with CPS usually signals some concern about child maltreatment (Trocmé et al., 2001), there is an assumption that some level of maltreatment led to CPS involvement. The reason for involvement, however, could have been unrelated to maltreatment or may have been due to unsubstantiated allegations. The question also asked about history of family involvement with CPS, which not all respondents may be aware of and could account for "don't know" responses. Respondents who did not know if there was a history of family involvement with CPS were dropped from analysis, which might have led to some bias. Second, non-participants or adolescents whose parents failed to provide consent for participation may have been more likely to have a history of maltreatment, thus biasing the sample. However, as maltreatment was not the main focus of the survey, the likelihood of the latter was reduced. Third, the sample was restricted to students within the regular school systems and, therefore, does not represent approximately seven percent of students in alternate

types of schools and in remote communities (Paglia-Boak et al., 2009). Fourth, no information was available on the race/ethnicity of respondents and thus it could not be controlled within the analyses. Fifth, a standardized measure of school connectedness was not available within the survey. The items used, however, reflect an aspect of school belonging and have good reliability. Finally, the study was based on cross-sectional data and therefore temporal order could not be determined. The exact time when CPS involvement occurred was unknown. To develop into successful adults, youth with histories of family involvement with CPS need to receive effective services for any emotional and behavioral problems that arise. The results of this study indicate that schools may also be an important foundation from which to target interventions aimed at youth with family adversity. Strengthening the connections that youth with CPS involvement have to schools may contribute significantly to reducing the risks of negative outcomes. Youth who sense that adults within schools care about them and who feel that they are a part of a particular school are likely to do well in school. Success in school is likely to promote a positive dynamic of increasing opportunities that can place youth on a path to future success rather than greater risk and negative outcomes (Glover, Burns, Butler, & Patton, 1998) Youth with histories of family involvement with CPS include those who experienced out-of-home placements, those who remained within the home, and those whose families were part of an investigation only. There are still many more children and youth who experience adversities, but do not come in contact with CPS (MacMillan, Jamieson, & Walsh, 2003). This suggests that strengthening connections to schools among youth on a broader scale combined with effective mental health services may be rewarded with reductions in negative outcomes among youth.

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International Journal of Child and Adolescent Resilience

Pursuing Human Rights for Community-Level Resilience: The Jordan's Principle Case, Process, and Initiative as Resilient Community Action

Cindy Blackstock and Andrea Auger
First Nations Child and Family Caring Society of Canada

Corresponding Author: aauger@fncaringsociety.com

Abstract:

The United Nation's Convention on the Rights of the Child (CRC) is a globally-adopted initiative to ensure the best interests of the child remain at the forefront of competing agendas. Calls for concrete actions to be taken by a particular CRC signatory country to ensure a child's non-negotiable human rights. In Canada, concerns persist in the context of health disparities within First Nations communities, where the process has moved from child rights violation to planful community action. Jordan's Principle is a child-first principle, passed in the Canadian House of Commons in 2007, to ensure that a First Nations child's health and social services are provided commensurate with the "best interests" of the child. The principle is named in memory of Jordan River Anderson who died in hospital waiting for his needs to take precedence. His tragic death spoke to the need for jurisdictional disputes to be resolved after the needs of the child are met. Jordan's Principle reflects the active community-level resilience within First Nations and Aboriginal communities, (King, 2012), where action has a reciprocal relationship to resilience, thereby creating a community action-community resilience relationship with real, practical implications for resilience at the family and child levels.

Keywords:

Aboriginal Peoples, jordan's principle, UN convention on rights of the child, first nations, child welfare

Note:

First Nations, Métis and Inuit are the three Aboriginal groups in Canada, with many distinct communities, languages and cultures within each group. In this context, the authors speak to the experience of First Nations children.

Resilience is increasingly applied to research and practice regarding Aboriginal populations to consider the multi-level pathways to health. The First Nations Child and Family Caring Society of Canada (Caring Society; www.fncaringsociety.com) is committed to evidence-informed solutions that address the causal problems of systemic disadvantage for First Nations children. The Caring Society uses a reconciliation-based framework to engage First Nations and other peoples to ensure First Nations children have an equitable opportunity to grow up safely with their families, go to good schools, be healthy and proud of who they are. Consistent with the UN Committee on the Rights of the Child and the United Nations Declaration on the Rights of Indigenous Peoples, as well as community driven problem identification, community and research-based solution development, implementation and evaluation are cornerstones to the Caring Society approach. "Indigenous families, communities, and leaders are taking action to counter the forces of neoliberalism, assert their rights, and demand better for their children" (King, 2012, p. 37).

This paper outlines how a First Nations child, Jordan River Anderson, brought attention to systemic denials or delays in the receipt of government services by First Nations children across Canada, and inspired a national policy solution called Jordan's Principle. First Nations children and youth deserve the same chance to succeed as all other children. As set upon by the UN Convention on the Rights of the Child (UNCRC) and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), Indigenous children have the right to adequate health and to culturally based health services and without discrimination (UNCRC, Article 2, 24; UNDRIP, Article 21, 24). However, First Nations children and youth often experience a reality that includes poverty, poor drinking water and lack of access to proper healthcare among other health discrepancies, leaving First Nations children and youth at a social, economical, and developmental disadvantage, compared to most Canadian children (Blackstock, 2011a; King, 2012). These daily challenges are often rooted in Canada's colonial history, and further amplified by government policies and procedures. There continues to be a national failure in addressing the large-scale challenges for First Nations peoples, such as poverty, which exacerbate poor health conditions, and programs and services that do not reflect the distinct needs of First Nations children and families. Further, the Canadian Government provides inequitable health, child welfare and education services, and funding undermining the rights, safety and well-being of First Nations children (Royal Commission on Aboriginal Peoples [RCAP], 1996; Auditor General of Canada, 2008; Office of the Provincial Advocate, 2010, see www.fncaringsociety.com). Despite these challenges to health, First Nations communities are taking steps of redress to promote healthy outcomes for the children and youth and the generations to come.

Jordan's Principle

Jordan's Principle is a child-first principle to resolving jurisdictional and funding disputes between and within the federal and provincial/territorial governments preventing First Nations children living on reserves from accessing government health services on the same terms as other children. It was named in memory of Jordan River Anderson of Norway House Cree Nation in the Canadian province of Manitoba. Jordan was born in the large city centre of Winnipeg, Manitoba with complex medical needs and had to remain in hospital care until he was well enough to go home. Although the doctors said that Jordan was well enough to go home, he lived unnecessarily in hospital for over two years while the Province of Manitoba and the Government of Canada fought over who should pay for his at home care because he was a First Nations child whose family lived on a reserve. Jordan passed away five years old, never having spent a day in his family home.

Consistent with the non-discrimination rights in the CRC, "Jordan's Principle" was passed in the House of Commons in 2007. Jordan's Principle calls on the federal and provincial/territorial governments of first contact to pay for a First Nations child's services immediately, and jurisdictional issues can be resolved later. However since that time, the federal Government and provincial/territorial governments have failed to properly implement Jordan's Principle. The Canadian Paediatric Society (CPS) Report (2012) rates the status and implementation of Jordan's Principle across the country in 2009 and then in 2011. Out of the 13

provinces and territories in Canada, 8 have not yet introduced Jordan's Principle. Of the five provinces that have adopted Jordan's Principle, only the province of Nova Scotia was rated 'good', meaning that the province/territory has a dispute resolution process with a child-first principle for resolving jurisdictional disputes involving the care of First Nations children and youth (MacDonald, 2012). Although some may see this as progress, Nova Scotia has not fully implemented Jordan's Principle, meaning that First Nations children may continue to wait for services and not have access to the necessary medical services they need due to lengthy dispute resolution processes.

Although Jordan's Principle was passed in the House of Commons in 2007, not one of the provinces or territories has fully implemented it. According to the CPS, the status of Jordan's Principle remains stagnant from 2009 to 2011 across all provinces and territories. Surprisingly, the Government of Canada gave its staff an award for its work on Jordan's Principle despite the poor implementation scoring on the CPS report card, as well as the numerous cases of jurisdictional disputes similar to that of Jordan. To illustrate that Jordan's situation is not an isolated incident, Vandna Sinha, professor at McGill University, states in an interview with the Aboriginal Peoples Television Network that "it [is] clear that there are a lot of Jordan's Principle cases out there that aren't being addressed under the terms of the federal definition because they've tried to re-define and narrow Jordan's Principle in some way" (APTN, 2012). The number of cases that exists has yet to be determined however the *Wende report* (Blackstock, Prakash, Loxley & Wien, 2005)estimated the number of cases in 12 First Nations child and family service agencies to be approximately 400 in the span of a year.

On June 24, 2011, Pictou Landing First Nation and Maurina Beadle launched a Federal Court case against the Government of Canada alleging that Canada's failure to fully honor Jordan's Principle in her son Jeremy's case was discriminatory. Maurina Beadle is a loving First Nations mother caring for her son, Jeremy, who was born with extremely high special needs. After suffering a double stroke, Maurina needed assistance with Jeremy's physical care so she approached the Pictou Landing First Nation. Hoping to be reimbursed, the First Nation paid for Jeremy's immediate at-home costs, due to delays resulting from provincial and federal disputes over who would cover the costs. Pictou Landing First Nation continues to struggle with the costs to support Maurina and Jeremy and may not be able to continue to pay for Jeremy's at home care. The Province of Nova Scotia wanted to move Jeremy out of home and into care outside of the province (CBC, 2011). Canada supported this idea and suggested that if Pictou Landing First Nation was unable to continue to provide the in home support Jeremy needed, child welfare could intervene and the government would pay for that. Since Maurina was not prepared to lose her son to an institutional setting or child welfare, she and the Pictou Landing First Nation decided to file the case against Canada to access the services that Jeremy needs and deserves. Cross-examination documents (Pictou Landing First Nation v. Attorney General of Canada, 2011a, 2011b) in the Beadle case show that the case may have not been necessary since the Canadian Government and Government of Nova Scotia both said that Jeremy was entitled to a fixed amount per month for care, and refused to provide more support, even though Jeremy's needs could not be met for the proposed fixed amount. Both governments minimized a prior court decision [Nova Scotia (Community Services) v. Boudreau] successfully challenging the fixed amount and a government policy that allowed for additional funding in exceptional circumstances such as Jeremy's. (Blackstock, 2011b). The Boudreau case indicated that services in Nova Scotia should be based on child need and not on arbitrary cut-offs in government. In limiting Jeremy to a fixed amount of care that is inadequate to his needs and circumstances, Canada is clearly not adopting the normative standard of care as set out by the Supreme Court of Nova Scotia. If the Beadle case is successful, it could set a precedent in Canadian law which would mean more First Nations children being helped by Jordan's Principle, and less First Nations children's well-being and health being put on hold due to governments fighting over who should pay If Canada were fully honouring its obligations under the UNCRC or the UN Declaration of Indigenous Peoples, Jeremy along with many other First Nations children and youth would not be in positions of receiving inadequate healthcare,

and having an overall disadvantage compared to non-indigenous children and youth (MacDonald, 2012). Community action is one process that may be facilitative for community-level resilience and, in the context of human rights violations, ongoing community action is critical for ongoing resilience promotion. Resilience is part of an overall change process, and Jordan's Principle is one vehicle for pioneering for change to enhance the resilience of under-served groups. Contexts of resiliencies are at least equally important as contexts of adversities. Sadly, an individual child's resilience potential ends if they have lost their life, as did Jordan. All our children deserve that option to showcase their resilience, with the resources and support of the family, community, and nation.

Note: For more information on Jordan's Principle and other community based initiatives for change, see the 7 Ways to Make a Difference for First Nations children, youth and families at: http://www.fncaringsociety.com/7-free-ways-to-make-a-difference.)

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Practical Strategies
Maltreated Adolescents: Social and Health Service Opportunities for Resilience

Christine Wekerle, McMaster University

Email: wekerc@mcmaster.ca

Abstract:

Well-being is well doing. The United Nations Rights on the Convention of the Child (CRC) and the United Nations Development Program Millennium Development Goals (MDGs) target youth health, safety, participation and empowerment as key driver's of living in a social justice context. Health and social services are two streams of resources to at-risk youth and vulnerable caregivers to promote resilience – positive adaptation and development - in adverse contexts. Child maltreatment statistics highlight the critical role of the social safety net. A policy-service gap exists for youth involved in the Child Protective Services (CPS) system. For these youth, violence prevention and personal safety remains a key component of resilience. This practical strategies paper considers youth resilience issues the context of maltreatment. Innovation in adolescent protection is an opportunity for health and social service systems to support resilience, continuity of care and violence prevention. Strategies include transition services for the switch from child to adult services, prevention programming that support mediating the environment, targeting CPS expectant teens for established maltreatment prevention programming, and system changes that recognize the emerging adulthood developmental period.

Keywords:

Adolescence; child abuse prevention; resilience; child protective services; health services; child maltreatment; violence prevention

Over the past few decades, a dysfunctional policy environment has marginalized prevention to the detriment of health outcomes. This has led to staggering rates of obesity, heart disease and diabetes, all preventable. … To deal with this change, we need new modes of distributed healthcare delivery, a health economy based on prevention, and new technological literacies. (Ranck, 2012, p. 8)

… maltreated children are likely to manifest atypicalities in neurobiological processes, physiological responsiveness, emotion recognition and emotion regulation, attachment relationships, self- system development, representational processes, social information processing, peer relationships, school functioning, and romantic relationships. (Cicchetti, 2013, p. 403)

The death of a child is a sentinel event in a community, and a defining marker of a society's policies of safety and health. (Jenny & Isaac, 2006, p. 265)

In its 20th year, the United States' Center of Disease Control and Prevention has named violence and associated injury as the public health issue of the decade (http://www.cdc.gov/injury/about/index.html). A prominent cause of injury, disability, and death is the physical, sexual, and emotional abuse and neglect of minors. The most visible sign of failure of our social safety net is the preventable death of a child abuse fatality. Child abuse fatalities are determined from a variety of sources including death review boards, crime reports, death certificates, and data from child welfare agencies. Research has shown that these sources all lead to under-representation, while combining two sources can lead to 90% ascertainment of cases (Schnitzer, Covington, Wirtz, Verhoek-Oftedahl, & Palusci, 2008), although issues in capturing neglect-related deaths remain (Palusci, Wirtz & Covington, 2010). Jenny and Isaac (2006) enumerate the issues in child maltreatment detection: (1) maltreatment is behavior that perpetrating adults are invested in disguising and is disguisable; (2) suboptimal assessments occur; (3) incomplete information owes to poor collaboration among hospitals, police, and child welfare; (4) consensus on definitions of maltreatment (and maltreatment suspicion thresholds) vary; and (5) child deaths, especially those from neglect, may not be recorded as child abuse deaths.

With these caveats noted, the U.S. child abuse fatality rate is 2.10 children per 100,000 children, or an average of four children per day (Child Welfare Information Gateway, 2013). Primarily, these maltreatment-related deaths are the result of caregivers neglecting and physically abusing their child. In emergency department cases, young children die most often due to blunt force to the infant and toddler's head, and evidence confirms that earlier suspicions are not acted upon according to mandatory reporting requirements (Gilbert et al., 2009; Levi, 2011; Wekerle, 2013). For these youngsters who ultimately die at the hands of their caregivers, healthcare was sought often beyond routine well-baby checks (King, Kiesel, & Simon, 2006; Sieswerde-Hoogendoom, Boos, Spivack, Bilo & van Rijn, 2012; Spivey, Schnitzer, Kruse, Slusher, & Jaffe, 2009; Putnam-Hornstein, Cleves, Licht, & Needell, 2013). The most common circumstances include: households with a non-related adult; the child falling and finding the child unresponsive as presenting complaints; and adults arguing about relationship break-up as precipitating events (Jenny & Isaac, 2006).

Despite attention to youth injury statistics (Pinheiro, 2006), the contribution of caregiver maltreatment and other forms of violence represents a disconnect from statistics to practice: CPS youth are more likely to die by age 18 from maltreatment and "fallout" issues, such as deaths from risk-taking behaviors and suicide (Jenny & Isaac, 2006). According to the Child Maltreatment 2011 report, youth aged 8 to 11 years were represented in 4.6% of abuse fatalities; youth aged 12 to 15 years, 16 and 17 years, and 18 and above years, represented 2.2%, 1.4% and .7%, respectively (Child Welfare Information Gateway, 2013). The health and social service systems have opportunities for resilience that are missed. Prevention should be a common agenda for both services systems; yet, both are event-based (injury, maltreatment episode) in a way that limits prevention practices as a core strategy. The unnecessary loss of a child's life translates into a sizable societal financial loss: over 2 million in annual costs to the United States in lost productivity is estimated for 1,740 child deaths (Fang, Brown, Florence & Mercy, 2012). Extrapolating to the global level, the cost is staggering given that, globally, an estimated 31,000 children die due to homicide (WHO, 2010).

For young children who survive maltreatment, 8.7% exit hospital with pervasive functional impairments (DiScala, Sege, Li & Reece, 2000). One area of research and practice gap is considering the mortality and injuries among adolescents with any level of CPS involvement. To wit, CPS involvement is linked with elevated risks for first presentation to an emergency room (ER) for a suicide attempt (Rhodes et al., 2012), being hospitalized for a suicide attempt (Vinnerljung, Jhern & Linblad, 2006), repeated ER suicide presentations (Stewart, Manion, Davidson, & Cloutier, 2001; Rhodes et al., 2013), and being a

victim of all types of avoidable deaths (i.e., related to substance abuse; unintentional injuries; homicides, avoidable natural causes) (Hjern, Vinnerljung & Lindblad, 2004). Indeed, childhood abuse significantly increases the likelihoods of all types of violence in adolescence (bullying, physical fighting, dating violence, self-mutilatory behavior, suicidality) (Duke, Pettingal, McMorris, & Borowsky, 2010; Hamby, Finkelhor & Turner, 2012). Evidence suggests that a CPS investigation signals a high-risk household (Vaithianthan, Maloney, Putnam-Hornstein, & Jiang, 2013). Taken together, research points to a high need for an on-going violence prevention role for both health and social service systems, with CPS youth as a priority group for resilience programming.

In this practical strategies paper, the linkage (and overlap) in childhood maltreatment and adolescent violent victimization is considered. First, the parameters of the victimization experiences for adolescents are considered; second, the notion of resilience in the contexts of maltreatment and adolescence is discussed; and finally, the evidence-based practical strategies and areas for further empirical attention in resilience for at-risk youth are noted. Resilience is both a process (e.g., negotiation of community resources) and outcome (e.g., personal safety), whereby adaptation is relatively better than others in similar adverse contexts (e.g., maltreatment), and may be commensurate or exceed peers in some domains (e.g., via inoculation effects or post-traumatic growth) (Rutter, 2013). Health and social services coordination and innovation would seem especially salient for promoting resilient pathways at times of developmental transition (i.e., to adolescence; to legal adulthood, to parenting; Wekerle & Wolfe, 1993), as well as in fostering trajectory "turning points" (in living conditions, in the associated psychology or mind-set) from an adverse past (Rutter, 2013). Adolescence may be a sensitive developmental period for post-traumatic growth given the tasks of identity refinement, abstract thinking capacities, and interest in future roles (Myerson, Grant, Carter, & Kilmer, 2011). Post-traumatic growth could include such altered positive self-views as recognizing one's strengths, other-views as empathy for victimization, and worldviews as the value of basic human rights or the importance of some degree of interpersonal caution.

What do we know about maltreatment-related injuries to adolescents?

Adolescence is an important, extended period of development, from early adolescent years to emerging adulthood (the upper limit typically defined as 25 years IOM & NRC, 2013). The adolescent to emerging adulthood period is poised to be of increasing salience by sheer numbers: the U.S. young adult population is expected to reach 34 million or 13% of the population by 2050 (IOM & NRC, 2013). For pediatric populations, health services switch to an adult system typically by age 18, despite recognized gaps for at-risk populations, such as youth with disabilities (Gorter, Stewart, & Woodbury-Smith, 2011) and youth receiving child welfare services (Wekerle, 2013). Caregiver maltreatment of adolescents may not be in the mindset of health services practitioners, where the emphasis may be on younger children. Injuries that may present to emergency rooms or physician offices, or maltreatment that may be occurring for other presentation issues (e.g., mental health, peer-to-peer violence etc.) are relatively unknown statistics.

The research to date on inflicted injuries for the early to late adolescent has focused on those related to sports, work, motor vehicles, as well as alcohol-related and crime-related injuries. In a study of one urban emergency room adolescents, aged 14 to 18 years, were screened consecutively over a three-year period, where child abuse or sexual assault was a screen-out factor. Of the ineligible youth (n=1945), 2.8% were identified as youth victims (Ranney et al., 2013). Van Wert, Ma, Lefebvre and Fallon (2013) examined justice system involvement among 8 to 15 year olds receiving child protective services (CPS). In reporting on the characteristics of these youth, Van Wert and colleagues found that 49% of these cases had two or more prior CPS openings, and that physical abuse (25%) and neglect (25%) of these adolescents were the dominant presenting concerns. These authors note that about 58% of these cases had a caregiver vulnerability issue (mental health, substance abuse, domestic violence etc.) that may contribute to the on-going risk of violence. When caregivers do not have the same perception of maltreatment events, as do their youth, youth report greater levels of impairment (Oransky, Hahn, & Stover, 2013). While

it is known that adolescent self-report yields higher levels of maltreatment than do official reports (e.g., McGee, Wolfe, Yuen, Wilson & Carnochan, 1995), CPS agencies do not typically re-assess childhood maltreatment as cases continue to adolescence or across adolescent years.

Epidemiological studies converge in identifying substantial violence risk to adolescents. In a national U.S. survey, 38% of respondents reported experiencing physical punishment to the point of injury before age 18 (Afifi, Mota, MacMillan & Sareen, 2013), contributing to both their adult physical and mental health problems (Afifi, Mota, Dasiewicz, MacMillan & Sareen, 2012; Afifi et al., 2013). In a national telephone survey, Finkelhor, Turner, Shattuck and Hamby (2013) report that prior year sexual abuse/sexual assault was reported by 10.7% of adolescent females, aged 14 to 17. Young adults followed prospectively reported high levels of maltreatment by grade 6 by a parent or adult caregiver, including repeated (3 or more times) supervision neglect (19.1%); repeated physical assault (14.2%); and contact sexual assault (4.5%) (Hussey, Change & Kotch, 2006). Given their greater strength and size, physical injury and neglect may be less life threatening, but still constitutes maltreatment.

The deleterious impact of maltreatment may manifest differently in each developmental period. For early adolescents (aged 13 to 14 years), adverse childhood events (witnessing domestic violence, physical or sexual abuse) increased the likelihood for concurrent somatic concerns (Flaherty et al., 2013). For adolescents, evidence points greater self-harm and poorer self-care (Byambaa, 2012). Resilience processes confer resistance, over the long-term, to the deleterious effects of stress. Episodic issues may ensue, but the individual develops a recovery strategy that is refined over time, in interaction with a resourced environment.

What is youth resilience in the context of maltreatment?

Resilience - as a successful adaptation over time despite significant adversity – reflects multiple components and processes. The current view is one that considers natural adaptation processes, including self-righting actions, which implies a neuroscience of resilience, founded on the principle of plasticity (Cicchetti, 2013), with genetic contributions continuing to be examined (for a recent review, see Wu et al., 2013). However, a critical feature of resilience for maltreated youth is that violence does not continue to be part of their day-to-day living environment. Mandatory reporting is a potential resilience vehicle to a set age point (typically age 16 for involvement of CPS) (Wekerle, 2013). How to protect vulnerable youth beyond 16 years of age is not a topic of sufficient policy attention.

The United Nations Rights on the Convention of the Child (CRC; http://www.unicef.org/crc/),) and the United Nations Development Program Millennium Development Goals (MDGs) target youth health, safety, participation and empowerment as key driver's of living in a social justice context. They argue that external instrumental support and social conditions need to be consistent features to support resilience development over time. It includes violence prevention and safety, as well as the capacity to function on a day-to-day basis and to enjoy life. Once violence has ceased, and coping with violence is not a direct reflection of the immediate environment, opportunity arises to transform distress (negative stress) to eustress (positive stress) that galvanizes post-traumatic growth. This process may involve a utilization of one's unhappy expertise with violence to empower one's own and others' lives where the maltreatment experience is integrated and the "silver linings" of learning are what are forged and refined. This sort mastery process may take the form of volunteering, advocacy, and other compassionate action, supporting the social connectedness that is a well-established core strategy for resiliency (Rutter, 2013). A case study of sorts is presented in this issue in terms of the advocacy sparked from one child's fatality to human rights advocacy on a national scale. The intersection between health and social services is highlighted in a tragic case of an Aboriginal youngster, Jordan River Anderson, who fell in the cracks in the jurisdictional financial support systems to provide for medically-safe home care in the context of special needs rather than hospital living, and who inspired policy shifts with "Jordan's Principle" (http://www.fncaringsociety.com/jordans-principle) without, however, the expected updated practice standard. The power of one wronged child to galvanize a community

to reach practice guidelines and international expertise is an example of developmental advocacy (Blackstock & Auger, 2013).

Resilience processes may be based on past success strategies, current applications, future reasonable expectations and, for maltreated persons, a concerted effort to address power abuses: "Dreams in which failure is feasible….To never simplify what is complicated or complicate what is simple. … To respect strength, never power" (Roy, 1999, p. 104-105). Glad, Jensen, Holt and Ormhaug (2013) examined post-traumatic growth among adolescents receiving trauma-focused cognitive behavior therapy, wherein a central goal is to de-sensitize to the anxiety-inducing impact of trauma cues, while forming a coherent narrative of the trauma event. Most youth experienced more than one form of trauma (witnessing domestic violence, sexual abuse, sudden loss etc.) and identified adverse effects only at pre-treatment. At post-treatment, a substantial number reported some positive learning in personal and interpersonal areas, and age was predictive of post-traumatic growth. Resilience findings emphasize the importance of personal development processes, such as planning, self-reflection and self-agency, to improved outcomes (Rutter, 2013). Youth with more positive self-views are more likely to show change from pessimism towards greater optimism towards living (Duke, Skay, Pettingel, & Borowsky, 2011). CPS youth who score higher on self-compassion (i.e., the cognitive and affective orientation of viewing failures compassionately and seeing struggles in the larger context) evidenced fewer self-harming behaviors than their lower scoring counterparts (Tanaka, Wekerle, Schmuck, Paglia-Boak & The MAP Research Team, 2011). More generally, self-compassion has been found to contribute to adolescent well-being, over and above other factors, including maternal support (Neff & McGehee, 2010). Little work has been done in terms of compassion programming for CPS youth. One randomized trial provided cognitively-based compassion training to foster care, mid-adolescent females to test whether innate, inflammatory responses to an experimentally-induced stressor would be minimized among the intervention youth relative to wait-list controls (Pace et al., 2012). The intervention consisted of twice weekly, 1-hour sessions that included teaching and practice in meditation, as well as a meditation CD for home practice wherein relaxation, as well as practicing kind/warm thoughts, is the main emphasis. No group effects were noted beyond a trend in a reduction in state anxiety; within group differences were found favoring the number of practice sessions and a reduction in morning salivary cortisol. Given the novelty of this approach for adolescents, and maltreated youth in particular, further inquiry into the parameters of meditation practices for CPS youth to yield demonstrable therapeutic gain as stand-alone interventions would seem useful. Review of the potential utility of such meditative practices support it as promising in addressing indices of stress reactivity in adults (Hoffman, Grossman & Hinton, 2011). Further, there is an emerging literature on technology-based mental health service delivery (for a review, see Zinck et al., 2013). which may be a good fit for the delivery of a mediation-based intervention. The area of resiliency mechanisms among maltreated adolescents remains a research priority for supporting the identification and tailoring of practice strategies.

What are promising practical strategies in resilience for maltreated adolescents?

It has been argued that randomized controlled trials of CPS-level interventions are both ethical and feasible (Tanaka, Jamieson, Wathen, & MacMillan, 2010), and can help pave the way forward for assessing resilience programming from a rigorous standpoint. Such resilience programming may be at a systems level. Systems science has been suggested as applicable to physical health issues, such as pediatric obesity (Black & Hager, 2013) that considers how policies affect the healthcare system, that in turn supports a youth within a family context with environmental resources that are both physical (e.g., community centers) and social (e.g., cultural practices). A continuity of care model seeks to ensure medical resources to optimize youth functioning, energize community resources to support youth continued skill-building, ensure on-going social connectedness over extended periods (e.g., emerging adulthood), and support the transition from prevention to treatment services as needed (Weisz, Sandler, Durlak & Anton, 2005).

The current context is that there has been an increase in the millions of U.S. young adults living at home (IOM & NRC, 2013). At-risk youth from CPS should not be at a greater disadvantage than their non-CPS or non-maltreated counterparts. Particularly when a CPS youth has a corporate parent when a youth is in permanent out-of-home placement, CPS as a social service system *de facto* becomes a healthcare broker. The institutional norms within CPS may not be facilitative of optimizing resilience, especially if caseloads are so high that case management is crisis-driven, rather than building a healthful day-to-day living environment (Toth & Manly, 2011). Given that CPS youth are aged out of social services, dedicated transitional services that have meaningful partnering among health, social, and community services, would seem to be an important area for innovation for continuity of care within a community (Christian & Schwartz, 2011; Gorter et al., 2011).

One specific issue is the adolescent pregnancy and parenting. The expectant adolescent is an important target for resilience programming. Among adolescents who gave birth in California in 2009, 44.9% had been reported for childhood maltreatment, 20.8% had their maltreatment substantiated, and 9.7% had a foster care placement (Putnam-Hornstein, Cederbaum, King, Cleveland, & Needell, 2013). In a Swedish study, CPS-involved youth were more likely to become teen parents than non-CPS youth (Vinnerljung, Franzen, & Danielsson, 2007). The well-established maltreatment prevention programs (Olds et al., 1998; MacMillan et al., 2009) show improvement to the parent, as well as the target child. It may be very appropriate in urban centers to have CPS partner with public health to ensure the receipt of these maltreatment prevention programs as one means of fostering the resilience of the adolescent parent. As Currie (2011) advances, we need to care about the prenatal environment in terms of environmental stressors (adult intimate partner violence, substance use, environmental pollutants) as difficulties come to more costly systems at crisis levels, when the trajectory of dysfunction and disadvantage has an earlier starting point. However, beyond prevention programming in pregnancy, prevention programs that target young adults, especially when risk issues co-occur, are currently limited (IOM & NRC, 2013).

Mental health is developing collaborative, early help models that may be transferable to the CPS context. Access to mental health care is viewed as facilitated by addressing the primary care context, bolstering community engagement, and providing tailored intervention, and recognizing that the potential service recipient is uncertain of help (i.e., when to seek help, where to seek help, help options) (Gask et al., 2012). Following an understanding of candidacy for help, other processes ensue, including resource navigation (e.g., the use of a community health or social worker; continuity of care with interfacing with primary care provider, partnerships with volunteer organizations etc.). As applied to the CPS context, this would involve standard screening in mental health and other health risk issues that could detect sub-clinical, chronic concerns (e.g., level of distress).

One prevention model that may be promising for CPS populations focuses on tailoring intervention to stylistic ways of thinking and responding emotionally (Conrod et al., 2013). Delivered in the school context, a brief (two sessions), group-based cognitive-behavior therapy intervention is offered following screening on risk behavior (alcohol use) and personality vulnerabilities (e.g., depressive; anxiety-sensitive; sensation-seeking; impulsive). To date, promising results h ave been reported in reduced substance use. Resilience programming on healthy relating to oneself and to others as the core therapeutic strategy may have the potential to address a range of adolescent health risk behaviors.

The United States' Centers of Disease Control and Prevention articulate safe, stable, and nurturing relationships (SSNRs) as inoculations to counter violence risk (http://www.cdc.gov/violenceprevention/pdf/cm_strategic_direction--long-a.pdf). Consistently, close relationship networks emerge in resilience reviews (e.g., Afifi & MacMillan, 2011; Cicchetti, 2013; Herman, Stewart, Diaz-Granados, Berger, Jackson, & Yuen, 2011). One broad-scale resource, available in schools or in communities, is the Big Sisters, Big Brothers program, with demonstrated gains in randomized trials (Herrera, Grossman, Kauh, & McMaken, 2011). Such youth mentoring programs can strengthen parental involvement (Spencer, Basualdo-Delmonico & Lewis, 2011). The importance of school

connectedness to buffering psychological symptoms among youth who have received CPS is evident in a population-based study of Ontario students (Hamilton, Wekerle, Paglia-Boak & Mann, 2013). Fostering social connectedness is greatly challenged when youth are multiply challenged, such as housing insecure (Edinburgh, Harper, Garcia & Saewyc, 2013), and with intellectual disability. For example, youth with mild to moderate intellectual disability receiving on-going CPS services fare more poorly than their average IQ counterparts in terms of distress levels and relationship violence, particularly among those reporting a more avoidant approach (Weiss, MacMullen, Waechter, Wekerle & The MAP Research Team, 2011; Weiss, Waechter & Wekerle, 2011). Given the multiple needs of CPS youth, it seems particularly important to address the mediating environment that can carry maltreated youth forward in a way that does not sustain an experience with violent victimization. There are so many service points where the safety net for maltreated children could have provided more support. It seems fundamental to social justice, public health, injury prevention, and good government to ensure that maltreated youth we are aware of and brought into a child protection context are able to transit to emerging adulthood with resilience. Finally, it is a matter of replenishing the social safety net by ensuring financial success with the contribution and workplace engagement of CPS youth as adults (Currie & Widom, 2010).

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