



The impact of COVID-19 on Canadian child maltreatment workers

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ARTICLE INFO

Keywords:

Child maltreatment
Sexual abuse
COVID-19
Child protection
Forensic interviewing

ABSTRACT

As cases of child maltreatment become an increasing concern during the COVID-19 pandemic, the perspectives of those charged with protecting and supporting children and families is an important area of inquiry. We sought to examine the experiences of child maltreatment workers during the first wave of the pandemic (i.e., May–July 2020). We specifically aimed to examine child maltreatment experiences related to the following: (1) their work practices during the pandemic, (2) their perceived safety during the pandemic, and (3) their perceptions on the safety of the children and families with whom they work. A total of 106 child maltreatment investigators and forensic interviewers provided responses to a national survey disseminated across Canada. Using a cross-sectional design, data were collected through a survey management program. The survey combined both open-ended and forced choice questions to gather perspectives on respondents' experiences. More than half (67%) reported a reduction in their caseloads during the pandemic (May–July 2020) and continued in-person interviews, with the use of preventative health measures (i.e., PPE, physical distancing, gloves). Most respondents reported elevated stress levels and similarly high stress levels amongst the children and families to whom they provide services. Overall, our findings highlight both how child maltreatment investigators have adapted to preventative measures and the continuing areas of weakness where further supports are required.

1. Introduction

The Coronavirus (COVID-19) pandemic caused governments across the globe to declared public health emergencies, culminating in the closure of schools and businesses, and resulting in an estimated 2.6 billion people globally adhering to lockdowns or stay-at-home orders (Van Hoof, 2020). Closure of non-essential services meant that children spent most of their time in close quarters with family (Patrick et al., 2020) - with parents working from home - while also isolated from extended family members (Cheng et al., 2021). Canada was no exception to these changes (Government of Canada, 2020) which, like in many other countries, led to concerns regarding the stressors faced by families (Griffith, 2020), including economic and social impacts (e.g., income loss and reduction in social contacts) of the pandemic. These stressors are projected to have a large effect on the short and long-term functioning of children and families (Courtney et al., 2020). Specifically,

researchers have found that parental stress (i.e., health concerns, disruptions in work and child care) and distress related to the COVID-19 pandemic have been associated with increased risk of parental neglect and harsh discipline with children (Connell & Strambler, 2021). As a result, many researchers expressed concerns about risk for family violence (Campbell, 2020; Ertan et al., 2020; Taub, 2020; Usher et al., 2020; Zhang, 2020) and child maltreatment (Eckenrode et al., 2014; Lawson et al., 2020), primarily because caregivers faced job disruptions (Lawson et al., 2020), economic uncertainty (Godinic et al., 2020), reduced childcare availability (Johnston et al., 2020), and increased substance abuse (Boschuetz et al., 2020) - all of which present as risk factors for child maltreatment. Many families are projected to be in crisis throughout the pandemic and afterwards, however empirical research to support these concerns is in the beginning stages.

Concurrent with the likely increased stress on families, government and community support were reduced during the first year of the

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pandemic (2020–2021), primarily due to health guidelines meant to decrease the spread of the virus. Children and families supported by child protection services often represent those with the most high or chronic needs (Rijbroek et al., 2019), however, some health measures may have resulted in these same families being isolated and disconnected from services. Early in the pandemic, the Canadian government declared workers such as those employed in the postal service, grocery stores, and medical settings as essential service providers (Caldwell et al., 2020; Public Safety Canada, 2020), meaning that they continued to interact with the public, with personal protective equipment and increased sanitization. In contrast, social workers who support children who experience maltreatment, were not clearly designated as essential (Caldwell et al., 2020). Given the ambiguous status of their work during the pandemic, we have little information on how those in the child protection community adapted to the restrictions on their work. As a result, the goal of the present study was threefold: (1) to provide a snapshot of how COVID-19 changed maltreatment investigators' work experiences in Canada, (2) to understand how these workers modified their practices, and (3) to assess how these workers coped with changes to work structures, operations, and roles.

1.1. COVID-19 and maltreatment risks

At the beginning of the pandemic (mid-March 2020), schools were closed, and Canadians were encouraged to stay in their homes (e.g., Detsky & Bogoch, 2020). This stay-at-home order led to warnings from researchers (Caldwell et al., 2020) and community agencies (Unicef Canada, 2020) of the potential dangers of lockdowns to children and families, particularly those with risk factors for child maltreatment (Clemens et al., 2020; Lee, 2020). During the COVID-19 lockdowns, children were often sent home to continue school virtually and preschool or daycares may have closed (Aurini & Davies, 2021). Concurrently, many parents also remained at home working or lost their employment (Gadernann et al., 2021). Notably, previous national disasters have shown that child maltreatment increases during school closures resulting from health emergencies (Cluver et al., 2020; Serrata & Hurtado-Alvarado, 2019). Simultaneous to school closures, the pandemic resulted in Canadian families experiencing greater stress and financial hardship (Statistics Canada, 2020a). A recent study found that Canadian parents with school aged children reported less fulfillment of their children's needs (including basic care needs) compared to parents of younger children (Bérubé et al., 2020). The relationship between family stress, economic burden, and increases in child maltreatment rates are well-documented (Drake & Jonson-Reid, 2014) and as such the impact of the lockdowns on neglect and maltreatment (Bérubé et al., 2020; Unicef Canada, 2020) have emerged within the literature (Baron et al., 2020; Lawson et al., 2020). For example, Wu and Xu (2020) outlined the potential stressors caregivers experienced during the COVID-19 pandemic, which contributed to potential maltreatment as: (1) health concerns (i.e., transmission of the COVID-19 virus); (2) economic stress (i.e., job loss as a result of lockdown associated with the COVID-19 virus); (3) childcare and schooling (i.e., homeschooling children, lack of childcare availability); and (4) increases in marital conflict or intensified parent-child relationships (i.e., greater contact with children and partner). In contrast, some recent research highlighted a decrease in overall incidence of child abuse injuries and medical treatment immediately following COVID-19 stay-at-home orders, indicating that perhaps actual rates of maltreatment decreased during periods of the pandemic (Martins-Filho et al., 2020; Storz, 2020). However, many of these same studies have argued that rates of maltreatment likely did not decrease, only the reporting decreased. This is evidenced through increased reports through social media and child protective hotlines during these same periods (Petrowski et al., 2021).

1.2. COVID-19 and maltreatment responding

Not only did COVID-19 measures increase how many children were likely at risk for maltreatment, it also limited our ability to respond to these at-risk children. At the root of this challenge is an observed reduction in both disclosure and identification of child maltreatment. For instance, a child protection agency in one Canadian province noted a 35–40% drop in reports of child abuse during March 2020, relative to March 2019 (Cave, 2020). Similar reductions have been observed in other Canadian provinces (Saunders et al., 2021; Ward, 2020) and in other countries (Cabrera-Hernández & Padilla-Romo, 2020). For instance, Whaling et al. (2020) found that reports of child maltreatment in New York City in March 2020 were down by 50% compared to rates for the month of March in the previous 7-years. Moreover, during the beginning of the pandemic (i.e., March 2020–2021), if children did disclose, the disclosures may not have been reported to the authorities or proper investigative channels. Dead-end disclosures - disclosures made by children of abuse that fail to enact investigations or be reported further - have been documented prior to the COVID-19 pandemic (Malloy et al., 2013). In the case of the COVID-19 pandemic, when children had less contact or fewer opportunities to make disclosures, disclosures may not have been reported as quickly or in the same manner as pre-pandemic.

There are several reasons why a lockdown might contribute to a reduction in disclosures and reports of maltreatment. First, factors such as living with the abusers and increased duration of abuse (Arata, 1998), severity of abuse (Hershkowitz, 2006; Hershkowitz et al., 2007), and fear or uncertainty of family separation/removal from home, have previously been observed to decrease children's willingness to disclose maltreatment. All these conditions and worries intensified during the height of the COVID-19 pandemic (March 2020–March 2021). Second, when children do disclose, they are most likely to disclose to a non-abusive caregiver (e.g., teacher) or peers (Paine & Hansen, 2002). A 2018 review indicated that approximately 33% of all child-maltreatment investigations in the Canadian province of Ontario were a result of school referrals (Fallon et al., 2019). During lockdowns resulting from COVID-19, non-abusive caregivers such as teachers were much less available and/or had reduced face-to-face contact with children. This led to a reduction in the sources of potential information and corroboration of maltreatment evidence that are often needed by investigators. Those who continued to support children and families therefore faced mounting burdens as their contact and decisions regarding potential instances of child maltreatment became increasingly unilateral in nature and the potential for corroborative observations by professionals decreased. However, little research has examined how the effect of both the increased concern regarding child maltreatment and the changes in workers' day-to-day functioning has impacted child maltreatment investigators.

1.3. COVID-19 and workers

1.3.1. COVID-19 and stress of frontline health workers

Since the start of the COVID-19 pandemic, stress and associated mental health issues for frontline medical workers have been documented within the literature (Ayanian, 2020; Cai et al., 2020; Greenberg et al., 2020; Huang et al., 2020; Nyashanu et al., 2020). Frontline medical workers have both lived through the pandemic and provided care to those diagnosed with the COVID-19 virus. This care has been delivered during a time of increased demands and limited protections (i.e., reduced availability of PPE) and has resulted in alarming rates of depression and anxiety for these workers (Labrague & De los Santos, 2020). Notably, Spoorthy et al.'s (2020) review highlighted increases in emotional stress experienced by medical staff (Cai et al., 2020), increases in depressive symptoms (Liang et al., 2020), as well as anxiety and insomnia (Lai et al., 2020). The concern for these workers has led to calls for further mental health support during the pandemic, as well as

for the development of resources in preparation for national disasters of the future. Specifically, the World Health Organization has released guidelines for supporting health care workers' mental health throughout this pandemic and within Canada an app was launched to support frontline workers' mental health (Telus Health, 2020). In contrast, relatively little attention has been paid to the impacts of COVID-19 on child protection workers (i.e., those tasked with the investigation of child maltreatment and the protection of children if maltreatment is suspected) and the stress experienced by this population, despite a history within the field of compassion fatigue (Campbell & Holtzhausen, 2020), secondary trauma (Dane, 2000), and burnout (Anderson, 2000).

1.3.2. Child maltreatment frontline workers

During the pandemic child protection workers have been tasked with supporting families while also adjusting the methods by which they monitor for maltreatment (Abrams & Dettlaff, 2020). Prior to the pandemic, workers in the field experienced high rates of employment-related stress (Figley, 1995; Letson et al., 2019). The potential changes in work protocols, decrease in contact with community partners (i.e., medical, school-based), potential increases in maltreatment rates, and increased concern for the children they work to protect, may also influence their well-being. Research examining the impact of COVID-19 on these workers in Canada is limited. Miller et al. (2020) examined peritraumatic rates among child welfare workers in the United States as a result of COVID-19 and explored relations between demographics, and personal and professional characteristics. Close to half of their sample was experiencing increased levels of distress and significant differences were observed amongst participants' distress levels in relation to demographic and employment characteristics; less stress was experienced with increased age and experience (in supervisory roles vs. not in supervisory roles). Additionally, workers who reported higher levels of physical wellness reported lower levels of stress. However, Miller et al. (2020) did not examine the relationship between employment factors related to COVID-19 (i.e., use of PPE, changes in work environment/functions) and stress. For instance, it is possible that those within a supervisory role reported less stress because they had fewer changes in their work functioning or less face-to-face contact with families and children receiving services. Anecdotal evidence (Abrams & Dettlaff, 2020) has demonstrated the difficult decisions workers face when deciding between providing services to families and children or following health guidelines (i.e., PPE use, physical distancing).

Mental health professionals are most likely to have inadequate supplies of PPE among allied health professionals (i.e., including psychologists and social workers; Coto et al., 2020), however no research has examined the relation between PPE use and stress amongst workers. In the only study to date on child maltreatment workers in the pandemic, Miller and colleagues (2020), did not examine changes to work functions as a result of health measures and lockdowns, nor did they examine how stress impacted workers' perceptions of their job. The present study's aim was to further understand the experience of child protection workers during the pandemic.

No study to date has assessed how COVID-19 has impacted Canadian child protection workers. Given both the potential for learning about common experiences and the substantial differences in how each country has dealt with public health restrictions during the pandemic (i.e., provincial lockdowns, wage top-ups for essential workers), an examination of the impact in Canada is warranted. Additionally, no study has specifically examined the experiences of workers who interview child witnesses and those investigating suspected maltreatment cases and how changes in how they carry out their duties has impacted their perceived stress.

2. Objective and method

Using a nationally distributed survey, this study explored one essential question: How have COVID-19 safety measures (e.g., social

distancing, work from home orders, lockdowns) impacted child maltreatment workers across Canada? Workers for the purposes of this study, included *maltreatment investigators* (i.e., those responding to reports of child maltreatment or involved in the continued support of families at risk of child maltreatment), and *forensic interviewers* (i.e., those who conduct interviews with children, families, and witnesses of child maltreatment; American Professional Society on the Abuse of Children Taskforce, 2012). Given the nature of child maltreatment investigations within the Canadian context, we designed the survey with specific questions for those who conduct forensic interviews of children and for those who investigate child maltreatment. We also provided an opportunity for respondents to provide feedback on their experiences on child maltreatment investigations more generally. The decision to provide a distinction between those who conduct forensic interviews and those involved in maltreatment investigations was based on the CYAC model in Canada (cac-cae.ca, 2021). CYACs in Canada provide a space for forensic interviews to take place when child maltreatment is investigated, however, the organizations also provide other services to children and families, and coordinate with investigators within law enforcement. As such, workers may be involved in child maltreatment investigations while not conducting forensic interviews. Furthermore, forensic interviewers may face unique challenges to their work (i.e., in-person interviewing during physical distancing restrictions) which differ from those conducting maltreatment investigations (i.e., conducting interviews with family members, wellness checks or supervision of children). To make this distinction between the populations, survey respondents self-selected into these groups by responding to specific questions within the survey (i.e., do you conduct forensic interviews with children?). We examined how the COVID-19 pandemic and resulting safety measures changed: (1) the work practices of child maltreatment workers, (2) how child maltreatment workers perceive their own safety, and (3) how child maltreatment workers perceive the safety of the children and families with whom they work. Much of the survey was exploratory given the limited research on the operations of this population during COVID-19. We predicted, based on Miller et al.'s (2020) findings, that those with greater experience (including age and work experience) would report lower levels of stress, as Miller et al. (2020) reported supervisors and older workers experienced less trauma as a result of COVID-19. Overall, our goal was to explore the functioning of Canadian child maltreatment workers during the pandemic and to identify successful adaptive strategies for the future.

2.1. Study design

Using a cross-sectional design, data were collected through a survey management program (i.e., Qualtrics). Ethical clearance was obtained by Brock University (REB#: 19-303-EVANS, April 14, 2020), University of Regina (REB#: 2020-054, April 17, 2020), Thompson Rivers University (REB#: 102447, April 14, 2020) and McGill University (REB #: 20-04-062, April 6, 2020) research ethics boards prior to the start of the survey. The survey was provided in both official languages in Canada: English and French.

2.1.1. Participants

Respondents included 106 maltreatment workers (Most commonly reported age range = 35–44; Most commonly reported years of experience range = 5–10 years) involved in child maltreatment investigation in Canada (see Appendix B for detailed sample description). Of those, 66 identified as maltreatment investigators and 58 identified as forensic interviewers (18 identified as both). Forty percent of respondents indicated 15 or more years of experience in their profession (10–15 years 16%; 5–10 years 15%; 2–5 years 15%; under 2 years 14%). The total sample included the following provincial representations: 24.5% British Columbia, 21.7% Saskatchewan, 17.9% Ontario, Newfoundland and Labrador 14.2%, Alberta 11.3%, 4.7% Nova Scotia, 1.9% Manitoba, and the remaining 4% resided in Prince Edward Island, New Brunswick, or

Quebec. No participants resided in the Yukon or Northwest Territories and < 1% resided in Nunavut. More specific jurisdiction information was not collected from participants (i.e., cities, town of work) to maintain confidentiality.

Email invitations were circulated to all Child Advocacy Centres as well as Child and Youth Advocacy Centers (henceforth referred to as CYACs) listed on Canada's National CYAC website, which provides a list of all operational centres (N = 30) in Canada (<https://cac-cae.ca/organizations/>). Workers in CYACs in Canada typically have a background in social work, psychology, nursing, or other health related fields as well as partnerships with law enforcement (Department of Justice, 2021). In Canada, children may be interviewed at CYACs, however, they may also be interviewed at local, provincial, or federal law enforcement agencies. As such, we attempted to disseminate the survey through CYACs as well as networks of law enforcement. The recruitment email was also distributed by the Department of Justice Canada to all CYACs. Reminders following one month of survey activity were sent out via the researchers as well as through the Department of Justice Canada. Respondents were invited to circulate the recruitment email to colleagues. Respondents were offered a \$10 gift card in remuneration.

2.1.2. Survey design

The survey (see Appendix A) was presented in three sections, following a series of preliminary questions about demographic information.

(a) **Impact on investigators.** This section contained 7 questions that assessed how COVID-19 safety measures influenced or changed how investigators conducted their work. Specifically, respondents were asked a series of yes/no questions regarding their work duties and changes during COVID-19. Multiple choice follow-up questions focused on how investigations were being conducted (i.e., in-person, over the phone). This section was only answered by those who self-identified as child maltreatment investigators (n = 66).

(b) **Impact on forensic interviewers.** This section contained 14 questions and was answered by those who identified as forensic interviewers (n = 58). The questions examined how work practices of forensic interviewers have changed and perceptions of how work changes have affected children and families. Respondents were asked to report on their work practices through force choice questions (i.e., yes/no/unsure/do not know) for the following questions: a) Is your agency prioritizing specific cases; b) Have you conducted in-person forensic interviews; c) Are you wearing masks; d) Are you physically distancing; e) Are you using other precautionary measures during interviews; and f) Are you implementing tele-forensic interviewing as a result of the pandemic?. Additionally, sliding scale questions were used to measure reported decreases or increases in forensic interviews. The section also included multiple choice questions on modifications to interviewing practices, including training and use of tele-forensic or virtual interviewing (cf. in-person). Respondents were also asked open-ended questions regarding further modifications for interviewing during the COVID-19 pandemic, the impact of COVID-19 precautionary measures upon forensic interviewing (i.e., rapport building, disclosures of children), and barriers to tele-forensic interviewing in the future.

(c) **COVID-19 Impact.** This section included 12 questions and was answered by all respondents (N = 106). Questions addressed how COVID-19 impacted workers (i.e., general impact of COVID-19, specific to child maltreatment and forensic interviewers) and included increases and decreases in caseloads, prioritization of caseloads, general compliance with safety measures, perceived safety, stress, satisfaction, and support from employers. We also examined how workers perceived their own safety during the COVID-19 pandemic, with specific focus on perceived stress and worry and mental health support. Finally, we examined how workers perceived stress of children and families. This section included close-ended questions such as changes to caseload and prioritization of cases. Specifically, we included force-choice questions examining changes in caseload (i.e., reduced, increased, stayed the

same), as well as force-choice questions (i.e., yes, no, chose not to answer) on support provided by employers (i.e., mental health support) to themselves and their coworkers, future need of support following COVID-19 measures being lifted, and adherence to recommendations concerning COVID-19 protocols (i.e., use of PPE, use of masks, use of gloves, use of physical distancing). Additionally, the section included Likert scales that asked about the following: (a) safety; (b) satisfaction with employer response; (c) the perceived stress of families and children they work with; (d) perceived stress of the population they work with; and, (e) their own stress relative pre-COVID-19 and their level of worry regarding COVID-19.

The questionnaire was disseminated from May 7 to July 20, 2020 and was accessible via multiple platforms (i.e., mobile device, computer, tablet) and used password protection and captcha technology to authenticate survey respondents. Participants (n = 9) who failed the captcha questions were excluded from the final sample (N = 106) prior to analysis.

2.1.3. Coding of open-ended responses

Following data collection and review of participants' open-ended responses, themes for responses for each question were identified by a primary coder. The primary coder and a second independent coder then reviewed responses to each open-ended response and coded responses within each identified theme. Inter-rater agreement was high and percent agreement ranged from 80% to 97%. Examples of themes are presented throughout the manuscript.

3. Results

Unless otherwise noted, we report findings from the full sample of child maltreatment workers (N = 106). As noted above, not all sections were answered by all respondents, depending on their self-identified role as a child investigator (n = 66) and/or a forensic interviewer (n = 58; 18 identified as both roles). For sections that focused on just one of these roles, the responding sample is noted.

The first section examines the perceived safety, stress and worry, and mental health of child maltreatment workers and relevant related variables such as the use of PPE. Second, we examine child maltreatment workers' perceived safety of children and families. Note that some respondents did not answer all questions (missing data is noted, where applicable).

3.1. How have work practices changed during the COVID-19 pandemic?

3.1.1. Specific impact on child maltreatment investigators (n = 66)

First, we examined the descriptive information provided by respondents who identified as a child maltreatment investigator. Specifically, we examined how those involved in child maltreatment investigations (n = 66) conducted interviews under COVID-19 health measures. Of respondents conducting interviews (n = 65, n = 1 missing), 83% (n = 54) reported continuing conducting interviews with perpetrators, 92% with families (n = 60), and 59% with school officials (n = 38) (see Table 1).

Table 1

Percentage of child maltreatment investigators (n = 66) conducting interviews in-person, via phone, or virtual by interviewee.

Investigator type	In-person		Phone		Virtual	
	n (missing)	%	n (missing)	%	n (missing)	%
Alleged perpetrators	52 (14)	79	23 (43)	35	8 (58)	12
Family members	40 (26)	61	46 (20)	70	11 (55)	17
School officials	9 (57)	14	34 (32)	55	8 (58)	12

Note. Percentages are of respondents who indicated how they conduct interviews as a result of changes due to COVID-19 health measures.

3.1.2. Specific impact of COVID-19 on forensic interviewers ($n = 58$)

Next, we examined the impact of COVID-19 on those who conduct forensic interviews ($n = 58$). All forensic interviewers reported conducting interviews with minors as part of their work. Overall, 55% ($n = 32$ of 58) of forensic interviewers reported a decrease in interviews conducted compared to pre-pandemic reports, 7% ($n = 4$) reported an increase, 29% ($n = 17$) reported no change, and 9% ($n = 5$) reported they did not know if there were changes. The average increase was 38% ($SD = 18.9$, range = 10–50%) while the average decrease was 52% ($SD = 23.37$, range = 15–90%). Of the 58 interviewers, 56 answered questions regarding interviewing methods. Almost all (91%, $n = 51$; $n = 2$ missing) reported continuing to conduct in-person interviews with minors, while 9% ($n = 5$) indicated not continuing in-person interviews. The majority (90%, $n = 46$) reported using precautionary measures when conducting in-person interviews. Another 8% ($n = 4$) reported no modifications while only 2% ($n = 1$) indicated not being sure/not knowing whether they had made modifications ($n = 7$ missing). The majority reported using physical distancing and a minority used masks or gloves during interviews.

When asked whether they felt precautionary measures influenced their ability to build rapport during an interview, 63% ($n = 25$, $n = 18$ missing) of respondents reported a negative impact, while 38% ($n = 15$) reported no effect on rapport building. Furthermore, 44% ($n = 15$) felt that precautionary measures influenced children's willingness to disclose abuse, while 56% ($n = 19$, $n = 24$ missing) reported no such effect. Respondents were also asked an open-ended question regarding how interviews could be modified further during the COVID-19 pandemic to better serve interviewers and interviewees. Respondents indicated a number of themes related to improvements in interviewing during the pandemic: (1) *PPE* (i.e., use of distancing without masks), (2) *set up of interviews* (e.g., use of larger rooms, plexi-glass) and (3) *family support* (e.g., families not coming to centers physically).

Respondents were asked whether they were implementing tele-forensic interviewing as a result of the pandemic. A minority (20%, $n = 11$, $n = 4$ missing) reported beginning to conduct tele-interviews during the pandemic, while 80% ($n = 43$) reported no such change in forensic interviewing practices. Of those conducting tele-forensic interviews, 89% ($n = 8$, $n = 49$ missing) rated them as worse than conducting in-person interviews and 11% ($n = 1$) reported them to be the same as in-person. Of those not conducting tele-forensic interviews, we asked respondents to indicate if they were considering alternative means (i.e., tele-forensic interviews, phone interviews) in the future and what barriers they experienced in implementing alternative means of interviewing. Respondents indicated a variety of themes: (1) *legal or security reasons for in-person interviewing with children* (e.g., importance of in-person interviewing for agency, legal purposes) (2) *technology limitations* (e.g., lack of internet for clients or technology to support interviews) (3) *funding* (e.g., funding limitations or resources), and (4) *rapport building issues* (e.g., difficulty establishing rapport or trust). For those who indicated using tele-forensic interviewing, we asked respondents to provide the types of training they received. Most respondents reported receiving no training, 3 received online/video instruction, 2 received readings, 1 received in-person training, and 1 received an "other" form of training.

3.2. General impact of Covid-19

Next, we examined the impact of the COVID-19 pandemic on all workers. Overall, 45% ($n = 46$) of those involved in child maltreatment investigations reported a reduction in caseload, while 14% ($n = 14$) reported an increase and 41% ($n = 42$) reported their caseloads stayed the same ($n = 4$ missing responses). The average reported reduction was 46.4% ($n = 44$, $SD = 23.3$, range = 0–85%) and the average reported increase was 44% ($n = 14$, $SD = 33.5$, range = 5–100%). Some method of prioritization was used by 56% ($n = 15$), while 44% indicated no prioritization. Reported prioritizing strategies included: (1) *threat level*

(e.g., immediate danger of the child, living in close proximity to abuser), (2) *timing of reporting* (e.g., reports of a more historical nature, older cases of abuse), and (3) *changes to protocols* (e.g., interviewing victims versus interviewing other witnesses). A total of 83% ($n = 85$ of 102, $n = 4$ missing) reported adhering to their agency's COVID-19 guidelines while 17% ($n = 17$) reported adhering somewhat.

3.2.1. How do workers perceive their own safety during the COVID-19 pandemic? ($N = 106$)

The second goal of this research was to identify how COVID-19 influenced maltreatment workers' perceptions of their own safety during the COVID-19 pandemic. We examined *all* child maltreatment workers' ($N = 106$) perceptions of (1) safety, (2) stress and worry, and (3) the need for additional mental health support.

A large majority of respondents 83% ($n = 81$) reported feeling safe (i.e., extremely to moderately) in their job during the pandemic. A small, but notable group of 16% ($n = 17$) of respondents reported feeling not safe or only slightly safe. We were interested in factors related to differences in perceived safety. Research to date has indicated a relation between age and role of workers (i.e., older in age and supervisory level; Miller et al., 2020) as well as availability of PPE and employers' provision of mental health support (i.e., Coto et al., 2020). We thus examined differences in perceived safety as this related to participants' years of experience on the job, their use of PPE, and satisfaction with employers' response to the pandemic.

First, we explored relations between worker experience (categorical variable indicating ranges of years of experience; see Appendix B for worker experience breakdown), and perceived safety (continuous variable, with higher scores indicating greater perceived feelings of safety). A series of t-tests (Bonferroni corrected) revealed no statistically significant relationship ($M_{\text{perceived safety}}$ ranged from 2.88 to 3.75, SD 's ranged from 0.50 to 1.15; all p 's > 0.05). Next, we explored the relationship between the use of PPE during forensic interviews and worker perceived safety (continuous variable, with lower scores indicating greater perceived feelings of safety). A series of t-tests (Bonferroni corrected) revealed two forms of PPE to be related to perceived safety; Those who reported using medical masks and physical distancing (2 meters or more) reported feeling safer (masks: $M = 2.3$, $SD = 1.1$; distancing: $M = 3$, $SD = 0.9$) compared to those who did not report using those PPE (masks: $M = 3.3$, $SD = 0.8$, $t(42) = 3.13$, $p = .003$; distancing: $M = 3.9$, $SD = 0.7$; $t(42) = 2.57$, $p = .014$). No other significant differences were found (all p 's > 0.05).

Lastly, we explored the relationship between worker satisfaction with employer response and perceived safety. The two variables were significantly, positively correlated such that as perceived safety increased, so did satisfaction with employers ($r(98) = 0.53$, $p < .001$).

3.2.2. Perceived stress and worry ($N = 106$)

Next, we examined workers' current stress as well as worry for the future as a result of the pandemic and lifting of health measures. We also assessed relations to perceived stress and worry including years of experience, use of PPE, and workers satisfaction with employers, and perceived safety. We asked workers to report current levels of perceived stress relative to pre-COVID-19 as an indication of present state and perceived worry to reflect future states. We also asked respondents to indicate their current perceived level of worry regarding COVID-19.

Most respondents (67%; $n = 65$) reported higher levels of stress in their workplace relative to pre-COVID-19, while 24.7% ($n = 24$) reported the same level of stress and only 8% ($n = 8$) indicated feeling lower levels of stress. Most respondents (90%) reported some degree of worry (i.e., slightly to extremely worried) about COVID-19, while 10% reported no worry ($n = 97$, 9 missing). When asked about their level of worry for when physical distancing measures were lifted, 83% reported some worry whereas 18% reported no worry ($n = 97$, 9 missing).

Perceived stress and worry were examined as continuous variables, higher mean scores indicating increased feelings of stress and worry. For

perceived levels of stress, we examined worker experience (years of experience), use of PPE during forensic interviews (yes/no), workers' satisfaction with their employer (1 = extremely dissatisfied – 5 = extremely satisfied), how stress related to workers' feelings of safety (1 = not safe at all – 5 = extremely safe) and how stressed they felt in their workplace relative to pre-COVID-19 (1 = much lower – 7 = much higher). For experience of worry (1 = not worried, 4 = extremely worried), we examined the type of PPE used (i.e., masks or gloves) as well as lifting of physical distancing measures.

No relationship was found between worker experience and reported stress ($p > .05$). We did, however, find relationships between PPE use during forensic interviews and perceived stress. Those who reported using medical masks, gloves, and physical distancing reported significantly higher levels of stress (masks: $M = 5.9$, $SD = 1.2$; gloves: $M = 6.3$, $SD = 1.2$; distancing: $M = 5.2$, $SD = 1.3$) compared to those who did not report using those PPEs (masks: $M = 4.8$, $SD = 1.2$, $t(42) = 2.62$, $p = .012$; gloves: $M = 4.8$, $SD = 1.2$, $t(41) = 2.16$, $p = .036$; distancing: $M = 4.1$, $SD = 0.69$, $t(42) = 2.24$, $p = .030$).

We also explored the relationship between satisfaction with employers and perceived stress. There was a significant negative correlation, such that as perceived stress increased, satisfaction with employers decreased, $r(97) = -0.36$, $p < .001$. Lastly, we examined the relationship between perceived stress and feelings of safety. As perceived stress increased, feelings of safety significantly decreased, $r(97) = -0.45$, $p < .001$.

We found a significant relationship between the use of one type of PPE and reported worry about lifting of COVID-19 physical distancing measures. Those who reported using medical masks, reported significantly higher levels of worry ($M = 3.1$, $SD = 1.2$) compared to those who did not report using masks ($M = 2.2$, $SD = 1$, $t(42) = 2.40$, $p = .021$). No other significant relationships were found (all p 's > 0.05).

3.2.3. Mental health support

Over half (64%; $n = 65$, 4 missing) of respondents reported that they had been provided with mental health support by their employer as a result of COVID-19 measures, while 22% ($n = 22$) reported not receiving mental health support, 15% reported support not applying to them ($n = 15$). Over half (61%; $n = 62$, 4 missing) of respondents reported feeling that either themselves or their coworkers required mental health support as a result of COVID-19, 33% ($n = 34$) reported themselves or their coworkers *not* requiring this mental health support, and 6% did not respond to the question ($n = 6$).

We next examined the relations between reported need for mental health support and experienced stress as well as perceived worry for the future when health measures are lifted. First, we explored whether stress was related to the need for mental health support. Again, for this analysis, perceived stress was examined as continuous variables, with higher mean scores indicating higher feelings of stress. Those who felt they needed more support reported higher levels of stress ($M = 5.3$, $SD = 1.1$) compared to those who did not feel they needed additional mental health support (stress: $M = 4.3$, $SD = 1.3$, $t(94) = 4.01$, $p < .000$). Additionally, we found a relationship between a perceived need for mental health support and perceived worry for when COVID-19 physical distancing measures are lifted. Those who felt they needed more support reported higher levels of worry about measures being lifted ($M = 2.9$, $SD = 0.9$) compared to those who did not feel they needed additional mental health support ($M = 2.3$, $SD = 1.2$, $t(94) = 2.88$, $p = .005$).

Next, we examined the relationship between worker experience and perceived need for mental health support from employers and found no relationship $\chi^2(2) = 0.83$, $p = .660$. We did, however, find relationships between use of one type of PPE during forensic interviews and perceived need for support. Specifically, use of physical distancing was related to need for mental health support, $\chi^2(1) = 3.90$, $p = .048$. Those who reported using physical distancing measures were more likely to report a need for mental health support (91%) compared to those who do not use physical distancing (67%; $z = 1.90$, $p = .028$, *Cohen's h* = 0.61). No other

significant relationships were found (all p 's > 0.05).

Lastly, we examined the relationship between satisfaction with employers' response to COVID-19 and perceived need for mental health support. For this analysis, perceived satisfaction with employers was examined as a continuous variable, with higher mean scores indicating decreased feelings of satisfaction. Those who felt they needed more support reported lower levels of satisfaction with employers ($M = 3.7$, $SD = 1.3$) compared to those who did not feel they needed additional support ($M = 4.2$, $SD = 0.7$, $t(94) = 2.29$, $p = .024$).

3.2.4. How do workers perceive stress of children and families?

The third goal of this research was to identify how COVID-19 workers perceive the stress of the children and families with whom they work. Specifically, we examined *all* child maltreatment workers' ($n = 106$) perceptions of (1) child/family stress relative to pre-COVID-19 and (2) their use of PPE in relation to perceptions of children's and families' stress.

First, we asked workers to rate the stress of the children/families relative to pre-COVID-19 (5-point Likert scale, 1 = much lower, 5 = much higher). The majority of respondents ($n = 86$, $n = 8$ missing) reported families to have slightly higher (24%, $n = 23$), moderately higher (38%, $n = 37$) or much higher (27%, $n = 26$) stress relative to pre-COVID-19. While 12% ($n = 12$) reported families and children to be experiencing the same level or slightly lower levels of stress relative to pre-COVID-19. When examining PPE use and child maltreatment workers' perceived stress of the populations they work with, those that use masks or gloves reported significantly higher levels of perceived stress (masks: $M = 6.4$, $SD = 0.8$, $t(42) = 2.29$, $p = .027$; gloves: $M = 7.0$, $SD = 0.0$, $t(41) = 2.30$, $p = .027$) compared to those who do not (masks: $M = 5.6$, $SD = 1.0$; gloves: $M = 5.6$, $SD = 1.0$). There were no significant differences for the use of physical distancing or other forms of PPE.

4. Discussion

Researchers have identified factors related to the increased stress of frontline medical workers (Cai et al., 2020) and allied health professionals (Coto et al., 2020). However, those working to support children who experience maltreatment face unique challenges and therefore the methods by which they have adapted their work practices is an important area of inquiry. This is the first study to examine factors contributing to the stress of child maltreatment workers and is the first to study workers of a Canadian population. Through an online survey, the aim of the current study was to address three main goals outlined below.

4.1. Goal 1: How have work practices changed during the COVID-19 pandemic?

The present results make it clear that the COVID-19 pandemic resulted in significant changes to the functioning and work of child maltreatment investigators. Overall, close to half (45%) of survey respondents reported a decrease in caseloads and 53% of forensic interviewers reported decreases in interviewing. This reduction is unlikely to reflect a decrease in actual cases of child maltreatment. Rather, prior research has indicated many of the pandemic-related stresses are likely to *increase* rates of maltreatment (Cai et al., 2020; Rodriguez et al., 2020). Indeed, domestic violence has increased during the COVID-19 pandemic (Kofman & Garfin, 2020) and self-report data from Canadian parents indicates increased concerns regarding scolding and yelling at their children (Statistics Canada, 2020b). More likely, this reduction is indicative of the limited abilities of workers to provide support to families under the pandemic health directives. COVID-19-related adjustments in service delivery changed or limited how services can be provided to these families and how community partners and other observers are able to notice and alert workers to potential cases of maltreatment (Cabrera-Hernández & Padilla-Romo, 2020), thus likely

leading to a reduction in reporting of child maltreatment and subsequently reducing the caseloads of child protection workers.

4.1.1. *Measured changes in work practices*

Child maltreatment investigators reported changes in how they conduct investigations from pre-pandemic work practices. Notably, investigators continued to conduct in-person interviews, but they also used other methods to interview alleged perpetrators, family members, and school officials with a large proportion of these interviews conducted via phone.

4.1.2. *Perception of changes in work practices*

Those working in child protection had to rapidly adapt their work methods. In the case of forensic interviewers, 62.5% of respondents reported believing that precautionary measures influenced their perceived ability to build rapport and 44.1% reported that these measures influenced children's willingness to disclose abuse. To date, there has been little research on the effect of PPE on children's rapport and disclosures of abuse during interviews. [Forgie et al. \(2009\)](#) examined children's (4–10 years old) ratings of physicians using either face masks or translucent face shields and found children rated both forms of PPE as acceptable, however when given a choice, children showed a preference for face shields over masks ([Forgie et al., 2009](#)). Recently, [Shack et al. \(2020\)](#) surveyed pediatric clinicians working during the COVID-19 pandemic and found that the majority (82%) reported that masks interrupted their work and they perceived children to be fearful of mask-wearing by clinicians. Thus, the current results support observations from medical settings as child protection workers and forensic interviewers reported a perceived limitation of using masks for interviews. These challenges with PPE call for the need to find alternative methods for interviewing children during the pandemic such as tele-forensic interviewing.

A minority of the sample reported using tele-forensic interviews and most conducting tele-forensic interviews reported the medium to be worse than in-person. Respondents' perceptions of tele-forensic interviewing oppose recent research examining the efficacy of interviewing face-to-face compared to tele-forensic approaches. [Dickinson et al.'s \(2021\)](#) experimental comparison of face-to-face and tele-forensic interviewing did not find differences between interviewing delivery methods and accuracy of children's disclosed responses. However, others have highlighted some of the risks (i.e., technology issues, rapport building limitations) as well as benefits of tele-forensic interviewing (i.e., recording of interviews, access to remote locations) ([Brown et al., 2021](#)). Moreover, respondents highlighted several concerns regarding the use of tele-forensic interviewing, such as potential security and legal barriers to the admissibility of tele-forensic interviews conducted (i.e., assurances of no coaching by adults in the room). Security concerns regarding tele-forensic interviewing may be alleviated if clear protocols were adopted when conducting tele-forensic interviews. For instance, [Lundon et al. \(2020\)](#) outlined a procedure using separate rooms and video links which would enable interviewing via cameras while also ensuring security (i.e., conducting interviews in separate rooms in a Child and Youth Advocacy Center or other prescribed settings, rather than in homes). Bringing children and youth to a separate location and still conducting a tele-forensic interview may also address concerns regarding video platform security as well as concerns regarding limits to access.

In addition to structural issues outlined by respondents, many also highlighted the perceived negative aspects of tele-forensic interviewing that may be related to a lack of training, institutional and/or structural support. For instance, many respondents received little training and what training has been provided is didactic and not necessarily ongoing peer-review, which have been empirically supported in the field ([Stolzenberg & Lyon, 2015](#)). Finally, respondents also noted barriers to tele-forensic interviewing given funding (i.e., lack of funding for training), resource issues (i.e., availability of internet) and concerns regarding

confidentiality of tele-forensic interviews (i.e., being conducted in children's homes). However, agencies currently using tele-forensic interviewing have overcome many of these barriers (e.g., conducting interviews in separate rooms in a CYAC). Clear recommendations for conducting tele-forensic interviews must be developed to ensure that interviewers' reservations are addressed.

4.2. *Goal 2: How child maltreatment workers perceive their own safety?*

The second goal of the research was to examine perceptions of safety among those involved in child maltreatment investigations during the pandemic. Overall, the majority of respondents (82.7%) reported feeling safe in their jobs. Notably, many respondents reported increases in present experienced stress and worries for the future. When examining the relation between respondents who reported increased levels of stress compared to pre-COVID-19, we found those experiencing higher stress also reported greater PPE use and physical distancing. Access to PPE and the ability to physically distance for interviews may not be possible for all workers. Previous research with frontline medical staff and allied health professionals has shown that availability of PPE is of concern for many, and lack of supply can contribute to elevated stress ([Coto et al., 2020](#)).

We also found relations between child maltreatment workers' perceived stress, safety, and their satisfaction with their employers' responses to the pandemic. Those with higher levels of stress also felt less safe. Notably, employers may play an important role in supporting workers, as indicated by the relationship between worker satisfaction and perceived stress. Moreover, respondents indicated a greater need for mental health support now, as well as when physical distancing measures are lifted. [Coto et al.'s \(2020\)](#) survey of allied health professionals similarly found that those within the social support field (i.e., psychologists and social workers) placed a high value on the availability of mental health supports during COVID-19. Our study found that many respondents indicated the need for greater mental health support (63.7%).

4.3. *Goal 3: How do workers perceive stress of children and families?*

Not surprisingly, those involved in child maltreatment investigations reported that they perceived the children and families they work with to be experiencing greater stress relative to pre-COVID-19. Furthermore, workers using masks indicated that they perceived the children and families they work with to be more stressed, compared to those workers not using face masks. The direction of this observed relation is unclear: Perhaps workers who are more likely to wear masks are also more likely to perceive stress in others or perhaps workers are wearing masks in response to the stress they perceive in the children and families. Our data do not allow us to speak to either possibility, but the relation is certainly worthy of future investigation.

4.4. *Limitations*

Although the current results present novel and interesting findings regarding the state of Canadian child maltreatment investigators during the COVID-19 pandemic, there are several limitations. First, the current sample size was small, however, Canada has a smaller network of CYACs compared to other countries with more developed networks (i.e., United States). Recruitment for the study was conducted within Canada which has a smaller network of Child and Youth Advocacy centers (i.e., 30 CYAC across the country) compared to other countries with larger populations and more developed networks (i.e., United States). The current sample is still relatively small and may represent those more willing to provide a response to the survey compared to those who did not have time or interest in the survey subject matter. Despite the small size, the current survey provides an important contribution to the literature regarding how child maltreatment workers perceive

maltreatment of children during COVID-19 and the stressors they have experienced during the COVID-19 pandemic. Future research could examine larger scale data or anonymized data directly from CYACs and other agencies supporting child protection across Canada. Such a large-scale approach would allow for a comparison of workers' perceptions and direct service requests during the COVID-19 pandemic. Furthermore, given the large geographic area of Canada, it is very likely that some respondents experienced the COVID-19 pandemic differently (particularly over a more extended time than the one captured in the current survey), future larger scale research may examine response clusters in relation to geographic location and COVID-19 rates or local public health guidelines through a national longitudinal study.

Second, it would be helpful to gather more information on the reductions and increases of maltreatment cases based on the types of abuse experienced. We asked respondents to provide us with a global assessment of their cases, however certain types of maltreatment may have reduced or increased over the course of the pandemic. As a result, it would be helpful to conduct a retrospective chart review to examine fluctuations in maltreatment based upon the type of abuse (i.e., requests for treatment at medical emergency centers, or requests for services in social support centers; Bullinger et al., 2021).

4.5. Future directions

There is evidence that exposure to disasters can increase resiliency and improve organizational functioning (Brooks et al., 2020). Arguments within the medical field have supported the view that despite the distress experienced by front-line medical staff, the pandemic has also provided opportunities for revisions of policy and disaster preparedness. However, as Wong et al. (2020) noted, "rates of health care worker distress are surpassing those reported after Ebola, SARS, and other pandemics." Given this, Canada's response during subsequent lockdowns related to COVID-19 and other future pandemics should include: (1) increased funding and support for research examining adaptive practices (e.g., the effects of tele-forensic interviewing and the effects of PPE use on children's rapport and disclosures); and (2) development of national strategies to provide guidance for how to address future

situations of limited physical contact. These strategies should provide a suite of options that are adaptable to the unique circumstances experienced across a country as diverse in physical and social circumstances as Canada. The current research is also in line with the growing call to reclassify the services provided by child protection workers as an essential service (Caldwall et al., 2020).

5. Conclusion

The current study demonstrates that those involved in child maltreatment investigations continued to provide services to Canadian children and families throughout the COVID-19 pandemic, although their work functions and structures were modified. These workers received some support but also experienced elevated levels of stress and worries for lifted safety measures. Workers also echoed what has been voiced by commentators, policy makers, the media, and researchers - great concern for children and families during the pandemic.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

The authors would like to thank the Department of Justice Canada and Brooke McLardy of Archway Society for Domestic Peace (Oak Centre) for assistance in distribution of the survey throughout Canadian Child and Youth Advocacy Centers. Research funding was provided by the President's Research Fund (Luther College, University of Regina), Internal SSHD Grant (McGill University), CRISS Research Award (Brock University) and Social Sciences and Research Council's Partnership Engagement Grant-COVID-19 Special Initiative (McGill University). We would also like to thank Matthew Baker for his assistance with the final stages of the manuscript.

Appendix A

Demographic section

- 1) **What is your province or territory of employment?** [select one]:
[Alberta...Nunavut; all provinces as territories were an option].
- 2) **Do you work in a predominantly?** [select one]:
Rural area; Urban area.
- 3) **What is your age?** [select one]:
Under 18; 18 – 24; 25 – 34; 35 – 44; 45 – 54; 55 – 64; 65 – 74; 75 – 84; 85 or older.
- 4) **What is your training or schooling? (please only select your highest)**
High School; GED; Technical degree; Bachelor degree; Master's degree; Professional degree; Other.
- 5) **Please select the option which best describes your field of work.** [select one]:
Law Enforcement; Lawyer; Witness Advocate; Social Worker; Marriage and Family Therapist; Counsellor; Psychologist; Psychotherapist Child and Youth Advocate; Child and Youth Worker; Psychoeducator; Physician; Nurse; Crisis Worker; Other (please name below).
- 6) **Do you work in one of these agencies or institutions?** [select all that apply].
Child and Youth Advocacy Center; Municipal Police Department; Provincial Police Department; Hospital; Community Medical Clinic; Youth Protection; Not-for-Profit Organization; Provincial Ministry; Prosecution Office; RCMP; University; Other.
- 7) **Years of experience in your current profession?** [select one]:
less than 1 year; 1 to 2 years; Less than 5 years; 5 to 10 years; less than 15 years; 15 to 20 years; Over 20 years.
- 8) **Please select all of the populations you work with on a consistent basis:** [select all that apply]:
Preschool aged children (1–5); Elementary school aged children (6–11); Youth (12–17); Young Adults (18–25); Adults (26–64); Seniors (65 +).
- 9) **As part of your current work duties are you involved in child maltreatment investigations (i.e., referring or conducting investigations)?** [select one]:
Yes; No.

Impact of investigators section

10) As part of your current work duties do you currently conduct child maltreatment investigations? [select one]: Yes; No; Does not apply to me/ my work.

11) Are you conducting interviews with alleged perpetrators of child maltreatment under COVID-19 precautionary measures? [select one]: Yes; No; Does not apply to me/ my work.

12) How are you conducting interviews with alleged perpetrators of child maltreatment under COVID-19 precautionary measures (select all that apply)? [select one]: In person; Via phone; Virtually; Other (Please explain).

13) Have there been changes in the format of the interviews with perpetrators of child maltreatment as a result of COVID-19 measures? [select one]: Yes; No; Does not apply to me/ my work.

14) Are you currently conducting interviews with extended family members of children who are suspected of being maltreated, under COVID-19 precautionary measures? [select one]: Yes; No; Does not apply to me / my work.

15) Are you currently conducting interviews with school officials (educators, teachers, principals, support staff), under COVID-19 precautionary measures? [select one]: Yes; No; Does not apply to me / my work.

16) How are you conducting these interviews with school officials (select all that apply)? [select one]: In person; Via phone; Virtually; Other (Please explain).

17) Have there been changes in the format of the interviews conducted with school officials as a result of COVID-19 measures? [select one]: Yes; No; Does not apply to me/ my work.

Impact on forensic interviewers section

18) As part of your current work duties, do you conduct forensic interviews with minors? [select one]: Yes; No.

19) Since COVID-19 precautionary measures were put in place by the Canadian government, have the number of forensic interviews conducted in your agency: [select one]: Decreased in frequency; Increased in frequency; Stayed the same/no change in number of interviews; I do not know.

20) You selected your interviews have decreased in frequency, please indicate on the slider by how much your INTERVIEW FREQUENCY has DECREASED? [select one]: 0%.....50%...0.100%.

21) You selected your interviews have increased in frequency, please indicate on the slider by how much your INTERVIEW FREQUENCY has INCREASED [select one]: 0%.....50%...0.100%.

22) You selected forensic interviews have reduced in frequency. Are you or your agency prioritizing specific cases? [select one]: Yes; No.

23) You responded yes to your agency prioritizing specific cases, please describe which cases and how you are prioritizing: [open response].

24) Since the COVID-19 precautionary measures put in place by the Canadian government, have you continued to conduct in-person forensic interviews with children (i.e., person under the age of 18-years old)? [select one]: Yes; No.

25) You indicated that you have continued to conduct in-person interviews with children. Have you made modifications to your forensic interviewing practices because of COVID-19? [select one]: Yes, I have made modifications; No I have not made modifications; I don't know/Not sure.

26) If you have continued to conduct forensic interviews with minors (i.e., persons under the age of 18-years old):

27) Are you wearing medical masks during child forensic interviews?: Yes; No; I Don't Know.

28) Are you wearing gloves during child forensic interviews?: Yes; No; I Don't Know.

29) Are you physically distancing during forensic interviews (2-meters +)?: Yes; No; I Don't Know.

30) Do you think any of the precautionary measures influence your ability to build rapport with children?: Yes; No; I Don't Know.

31) Do you think any of the precautionary measures influence children's willingness to disclose abuse during interviews?: Yes; No; I Don't Know.

32) In your opinion/experience, which COVID-19 precautionary measures are influencing rapport building with children and why? [open response].

33) In your opinion/experience, which COVID-19 precautionary measures are influencing children's disclosures and why? [open response].

34) Has your agency begun using virtual (telehealth / online video platforms) forensic interviews with children? [select one]: Yes; No.

35) You indicated your agency has begun using virtual interviews with children. What kind of training did you receive on conducting virtual (tele-interviewing) forensic interviews with children?: [select all that apply].

36) Peer in-person training; Online training/video instruction; Readings; None; Other (explain).

37) In your experience under COVID-19 precautionary measures, are virtual interviews: [select one]: Better than in-person interviews; Worst than in-person interviews; About the same as in-person interviews; I do not know.

COVID-19 impact section

38) In your opinion, as a result of COVID-19, has your caseload (number of families you follow individually or in a group manner) reduced, increased or stayed about the same? [select one]: Reduced; Increased; Stayed the same.

39) By how much has your caseload increased? [select one]: 0%.....0.50%.....100%.

40) By how much has your caseload decreased? [select one]: 0%.....0.50%.....100%.

41) If you work in the public sector, as a result of COVID-19 measures, have you been provided with any mental health support by your employer? [select one]: Yes; No; Does not apply to me.

42) Do you feel that you and/or your coworkers need mental health support as a result of your work during COVID-19? [select one]: Yes; No; Choose not to answer.

43) Are you adhering to your agency/government/supervisor recommendations around COVID-19? [select one]: Yes; Somewhat; No.

44) In your opinion, how safe do you feel in your job as a result of the COVID-19 pandemic? [select one]: Extremely safe; Very safe; Moderately safe; Slightly safe; Not safe at all.

45) How satisfied do you feel with your agency/employer response to the COVID-19 pandemic? [select one]: Extremely satisfied; Somewhat satisfied; Neither satisfied nor dissatisfied; Somewhat dissatisfied; Extremely dissatisfied.

46) How stressed do you perceive the population you work with to be, relative to pre-COVID-19? [select one]: Much higher; Moderately higher; Slightly higher; About the same; Slightly lower; Moderately lower; Much lower.

47) How stressed do you feel in your workplace, relative to pre-COVID-19? [select one]: Much higher; Moderately higher; Slightly higher; About the same; Slightly lower; Moderately lower; Much lower.

48) How worried are you about COVID-19? [select one]: Extremely worried; Moderately worried; Slightly worried; Not worried.

49) How worried are you for when COVID-19 physical distancing measures are lifted in your area? [select one]: Extremely worried; Moderately worried; Slightly worried; Not worried.

Appendix B

Participant demographic information by investigator type

Demographic characteristic	Child maltreatment investigation involved (n = 106)		Forensic interviewers (n = 58)		Child maltreatment investigators (n = 66)	
	Frequency	%	Frequency	%	Frequency	%
Age						
Under 18	0	0.00	0	0.00	0	0.00
18–24	2	1.90	1	1.72	1	1.52
25–34	26	24.50	16	27.59	22	33.33
35–44	35	33.00	23	39.66	25	37.88
45–54	27	25.50	15	25.86	14	21.21
55–64	13	12.30	3	5.17	4	6.06
65–74	3	2.80	0	0.00	0	0.00
75–84	0	0.00	0	0.00	0	0.00
85 or older	0	0.00	0	0.00	0	0.00
Education						
High School	4	3.80	4	6.90	5	7.60
GED	2	1.90	1	1.70	1	1.50
Technical degree	2	1.90	2	3.40	1	1.50
Bachelor degree	51	48.10	30	51.70	37	56.10
Master's degree	30	28.30	11	19.00	13	19.70
Professional degree	8	7.50	3	5.20	3	4.50
Other (please describe your training below)	9	8.50	7	12.10	6	9.10
Experience in Current Profession						
less than 1 year	4	3.77	3	5.20	4	6.06
1 to 2 years	11	10.38	2	3.40	5	7.58
Less than 5 years	16	15.09	10	17.20	12	18.18
5 to 10 years	16	15.09	9	15.50	12	18.18
less than 15 years	17	16.04	12	20.70	12	18.18
15 to 20 years	21	19.81	15	25.90	14	21.21
Over 20 years	21	19.81	7	12.10	7	10.61
Profession						
Law Enforcement	30	28.30	30	51.70	28	42.40
Lawyer	0	0.00	0	0.00	0	0.00
Witness Advocate	1	0.90	0	0.00	0	0.00
Social Worker	33	31.10	19	32.80	26	39.40
Marriage and Family Therapist	0	0.00	0	0.00	0	0.00
Counsellor	3	2.80	0	0.00	0	0.00
Psychologist	2	1.90	0	0.00	0	0.00
Psychotherapist	2	1.90	1	1.70	0	0.00
Child and Youth Advocate	5	4.70	2	3.40	1	1.50
Child and Youth Worker	4	3.80	1	1.70	2	3.00
Psychoeducator	0	0.00	0	0.00	0	0.00
Physician	3	2.80	0	0.00	0	0.00
Nurse	3	2.80	0	0.00	1	1.50
Crisis Worker	4	3.80	0	0.00	2	3.00
Other (please name below)	16	15.10	5	8.60	6	9.10
Province						
Ontario	19	17.90	8	13.80	7	10.60
Quebec	1	0.90	1	1.70	0	0.00
Nova Scotia	5	4.70	2	3.40	2	3.00
New Brunswick	1	0.90	0	0.00	0	0.00
Manitoba	2	1.90	2	3.40	1	1.50
British Columbia	26	24.50	17	29.30	16	24.20
Prince Edward Island	1	0.90	0	0.00	1	1.50
Saskatchewan	23	21.70	13	22.40	15	22.70
Alberta	12	11.30	8	13.80	9	13.60
Newfoundland and Labrador	15	14.20	7	12.10	15	22.70
Yukon	0	0.00	0	0.00	0	0.00

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(continued)

Demographic characteristic	Child maltreatment investigation involved (n = 106)		Forensic interviewers (n = 58)		Child maltreatment investigators (n = 66)	
	Frequency	%	Frequency	%	Frequency	%
Northwest Territories	0	0.00	0	0.00	0	0.00
Nunavut	1	0.90	0	0.00	0	0.00
Geographic Area						
Rural area	31	29.20	12	20.70	18	27.30
Urban area	75	70.80	46	79.30	48	72.70
Agency/Institution Employed						
Child and Youth Advocacy Center	40	26.49	25	32.47	23	26.74
Municipal Police Department	14	9.27	12	15.58	13	15.12
Provincial Police Department	4	2.65	3	3.90	3	3.49
Hospital	10	6.62	1	1.30	2	2.33
Community Medical Clinic	5	3.31	0	0.00	1	1.16
Youth Protection	7	4.64	3	3.90	6	6.98
Not-for-Profit Organization	21	13.91	3	3.90	5	5.81
Provincial Ministry	15	9.93	12	15.58	13	15.12
Prosecution Office	2	1.32	0	0.00	0	0.00
RCMP	10	6.62	11	14.29	10	11.63
University	1	0.66	0	0.00	0	0.00
Other (please describe your agency or institution of work below)	22	14.57	7	9.09	10	11.63
Population (age in years)						
Preschool aged children (1–5)	93	20.62	52	20.97	61	21.25
Elementary school aged children (6–11)	104	23.06	56	22.58	65	22.65
Youth (12–17)	101	22.39	54	21.77	63	21.95
Young Adults (18–25)	67	14.86	38	15.32	42	14.63
Adults (26–64)	62	13.75	36	14.52	42	14.63
Seniors (65 +)	24	5.32	12	4.84	14	4.88

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