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International Journal of Child and Adolescent Resilience
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Introduction: IJCAR – 2022 Issue

Dear readers,

I am pleased to introduce the 2022 Issue of the International Journal of Child and Adolescent Resilience (IJCAR). This issue includes: six regular articles on varying aspects of hardships and resilience in different populations; three scoping review papers on trauma and maltreatment; two clinical interventions surrounding the COVID-19 pandemic; and one brief report on implementing trauma informed care.

In particular, the six regular articles shed light on hardships experienced by differing populations and their resilience. Firstly, Blais et al. examined experiences of family victimization of sexual and gender minority adolescents and emerging adults, and the factors promoting well-being and resilience. Secondly, Drawson and colleagues implemented a measurement tool that was used to assess the well-being of First Nations children. Thirdly, Langevin and colleagues investigated the role of family relationships and psychological distress in relation to four child maltreatment subtypes, as well as child abuse potential in young mothers in their prospective longitudinal study. Fourthly, Mueller et al. aimed to examine children and adolescents' emotional and mental experiences after enduring a sport-related concussion, with intentions to help athletes during their recovery. Fifthly, Romano and Stenason emphasized two in-service training programs to help provide support to resource parents for their work as caregivers. Finally, Summers and Van Camp aimed to gain insight into young adults' experiences during adolescence with education on sexual consent and coercion, with intentions to obtain their perceptions and provide possible curriculum improvement.

Furthermore, the 2022 issue of IJCAR also includes three scoping review papers that examined trauma and maltreatment. This section focused on bridging gaps in the literature related to: identifying theoretical or conceptual frameworks which have been utilized when explaining victim-to-victim cycles of maltreatment (Marshall et al.); exploring youth with adverse childhood experiences (Wei et al.); and determining the relationship between self-compassion and psychological distress, and how this differs across child maltreatment types (Wong et al.).

The current issue further denotes the impacts of the COVID-19 pandemic with two clinical intervention studies. Berthelot and colleagues evaluated the acceptability of the STEP-COVID program, which is an online synchronous prenatal intervention to support wellness, mentalization, and resilience during the pandemic. Santavicca and colleagues emphasized an intervention focused on mitigating COVID-19 vaccine tension in schools, while also proposing prevention and interventions for conflicts surrounding COVID-19 vaccination.

Finally, the issue ends with a brief report by Huartson et al., regarding the implementation of a pilot trauma-informed care initiative with intentions to foster resilience in a maternity care clinic, which focused on determining barriers and facilitators for family physicians, when questioning patients about their adverse childhood experiences. Thus, we encourage you to read these various articles to obtain rich information about ongoing research in the field of resilience.

I wish to also take this opportunity to sincerely thank all the members of the IJCAR team for their continuous and dedicated work in the editing and publishing process. Particularly, I wish to thank our associate editors, Dr. Tara Black, Dr. Delphine Collin-Vézina, Dr. Isabelle Daigneault, and Dr. Rachel Langevin; managing editor, Catherine Moreau; layout editor, Manon Robichaud; and senior copyeditors, Andréanne Fortin and Teresa Pirro, all of which have done a

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terrific job in their varying roles. I also want to take this opportunity to welcome Dr. Nicole Racine as a new associate editor. We hope you enjoy reading the current issue!

This is also a friendly reminder to prepare your manuscripts for the next issue. Please submit your manuscripts in English, or in French, and feel free to forward this information to colleagues and students who may be interested. We look forward to your manuscripts and to the next issue of IJCAR.

Happy reading!

Martine Hébert, Editor-in-Chief

International Journal of Child and Adolescent Resilience
Revue internationale de la résilience des enfants et des adolescents

Introduction : RIREA – Volume 2022

Chers lecteur.trice.s,

J'ai le plaisir de vous présenter le numéro 2022 de la Revue internationale de la résilience des enfants et des adolescents (RIREA). Ce numéro comprend : six articles réguliers portant sur des aspects variés des difficultés et de la résilience au sein de différentes populations; trois articles de recension sur le trauma et la maltraitance; deux articles sur les interventions cliniques relatives à la pandémie de COVID-19; et un article bref sur l'implantation de soins fondés sur les traumas.

Plus spécifiquement, les six articles réguliers mettent en lumière les difficultés rencontrées par différentes populations et leur capacité de résilience. Premièrement, Blais et ses collègues ont examiné les expériences de victimisation familiale chez les adolescent.es et adultes émergents issus de minorités sexuelles et de genre, ainsi que les facteurs favorisant le bien-être et la résilience. Deuxièmement, Drawson et ses collègues ont implanté un instrument de mesure permettant d'évaluer le bien-être des enfants des Premières nations. Troisièmement, Langevin et ses collègues ont étudié le rôle des relations familiales et de la détresse psychologique en relation avec quatre sous-catégories de maltraitance chez les enfants, ainsi que le potentiel de maltraitance chez les jeunes mères dans le cadre de leur étude longitudinale prospective. Quatrièmement, Mueller et ses collègues se sont intéressés aux expériences émotionnelles et mentales des enfants et des adolescent.es à la suite d'une commotion cérébrale causée par le sport, avec l'intention d'offrir des pistes pour aider les athlètes durant leur convalescence. Cinquièmement, Romano et Stenason ont mis l'accent sur deux initiatives de formation destinées à soutenir les parents dans leur rôle. Finalement, Summers et Van Camp ont tenté de mieux comprendre les expériences des jeunes adultes au cours de leur adolescence en matière d'éducation au consentement sexuel et à la coercition sexuelle dans la perspective recueillir leurs perceptions et d'apporter d'éventuelles améliorations au programme d'éducation sexuelle.

De plus, le numéro 2022 de la RIREA comprend également trois articles de recension qui portent sur le trauma et la maltraitance. Cette section vise à bonifier la littérature concernant : l'identification des cadres théoriques ou conceptuels utilisés pour expliquer les cycles de maltraitance de victime à victime (Marshall et al.); l'exploration des jeunes ayant vécu des expériences négatives durant l'enfance (Wei et al.); et l'analyse de la relation entre la compassion envers soi-même et la détresse psychologique, et la manière dont elle diffère selon les types de maltraitance chez les enfants (Wong et al.).

Le numéro actuel souligne également les impacts de la pandémie de COVID-19 par le biais de deux études décrivant des interventions cliniques. Berthelot et ses collègues ont évalué l'acceptabilité du programme STEP-COVID, qui est une intervention prénatale synchrone en ligne visant à soutenir le bien-être, la mentalisation et la résilience pendant la pandémie. Santavicca et ses collègues ont mis en évidence une intervention visant à atténuer les tensions liées au vaccin COVID-19 dans les écoles, tout en proposant des mesures de prévention et d'intervention pour les conflits entourant la vaccination COVID-19.

Finalement, le numéro se termine par un article bref présenté par Huartson et ses collègues sur l'implantation d'une initiative pilote de soins fondés sur les traumas dans le but de favoriser la résilience dans une clinique de soins de maternité, qui s'est concentrée à déterminer les barrières et les facteurs facilitant la pratique des médecins de famille lorsqu'ils questionnent leurs patients sur les expériences négatives vécues au cours de leur enfance. Nous vous

encourageons donc à lire ces différents articles pour obtenir des informations sur les recherches en cours dans le domaine de la résilience.

Je souhaite également profiter de cette occasion pour remercier sincèrement tous les membres de l'équipe de la RIREA pour leur travail continu et dévoué dans le processus d'édition et de publication. Je tiens à remercier tout particulièrement nos rédactrices associées, Dre Tara Black, Dre Delphine Collin-Vézina, Dre Isabelle Daigneault et Dre Rachel Langevin; la directrice de la rédaction, Catherine Moreau; la responsable de la mise en page, Manon Robichaud; et les éditrices d'épreuve seniors, Andréanne Fortin and Teresa Pirro, qui ont toutes effectué un travail formidable dans leurs différents rôles. Je profite également de l'occasion pour souhaiter la bienvenue à Dre Nicole Racine en tant que nouvelle rédactrice associée. Nous espérons que vous prendrez plaisir à lire le présent numéro !

Nous vous rappelons cordialement de préparer vos manuscrits pour le prochain numéro. Veuillez soumettre vos manuscrits en anglais ou en français, et n'hésitez pas à transmettre cette information à vos collègues et étudiant.es qui peuvent être intéressé.es. Nous attendons avec impatience vos manuscrits et le prochain numéro de la RIREA.

Bonne lecture !

Martine Hébert, rédactrice en chef

International Journal of Child and Adolescent Resilience
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Family Victimization Among Canadian Sexual and Gender Minority Adolescents and Emerging Adults

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Abstract

Objectives: This paper examines family victimization, well-being, and resilience among sexual and gender minority (SGM) adolescents and emerging adults aged 15 to 29 years.

Methods: Self-reported data were collected online (2019-2020) from 1,971 Canadian SGM youths. We used logistic regression to estimate the odds of: (a) having experienced family victimization over the past 12 months; (b) reporting well-being across the various frequencies of family victimization; and (c) thriving (i.e., flourishing despite having experienced family victimization).

Results: About 36% of participants experienced family victimization within the previous 12 months, with 13% reporting recurrent family victimization. Recurrent victimization was more prevalent among trans and nonbinary youths as compared to cisgender men, and was also more prevalent among socioeconomically disadvantaged participants. Recurrent victimization was significantly associated with higher odds of reporting internalized heterosexism, efforts to conceal gender and sexual orientation, languishing mental health, social anxiety, loneliness, and post-traumatic stress symptoms. Thriving participants were less likely to experience activity restrictions or to live with at least one parent, and more likely to score higher on authenticity scales, to report proactive norms against violence within their family, and to have food and economic security.

Conclusion: Despite recent advances in SGM rights and acceptance, SGM youths still face family victimization and compromised well-being.

Implications: These findings underline the importance of screening for family violence among SGM youths, particularly among trans youths and those of lower socioeconomic status. Findings also underline the importance of providing SGM youth both a safe family environment and material security.

Keywords: Family victimization; sibling bullying; LGBT; sexual and gender minority (SGM); adolescents; emerging adults.

Introduction

Parents' primary role is caring for and protecting their children (deLara, 2022); yet, when it comes to sexual and gender minority (SGM) youth, many families fall short of these obligations. Up to 80% of SGM individuals have experienced childhood adversity and lifetime family victimization (Friedman et al., 2011; Katz-Wise & Hyde, 2012; McGeough & Sterzing, 2018). While there is no consistent definition of family victimization across studies, common definitions refer to abuse or neglect by a family member, including parents or siblings, or an abuse of power meant to hurt and control a trusting and dependent person.

A meta-analysis of data collected from over 500,000 lesbian, gay, and bisexual (LGB) individuals (mostly adults) revealed high rates of verbal (35% to 43%) and physical (29% to 40%) family abuse (Katz-Wise & Hyde, 2012). Another meta-analysis of school-based studies found that about one-third of sexual minority women and a quarter of sexual minority men experienced parental physical abuse before 18 years of age (Friedman et al., 2011). Almost half of sexual minority youths experienced homophobic or transphobic slurs (e.g., "sissy") from their parents during childhood (D'Augelli et al., 2006). About 10% of Canadian LGBTQ2+ youths have experienced physical abuse by a family member over a one-year period (Taylor et al., 2020).

According to deLara (2022), frequent parental abuse is very similar to what would otherwise be called bullying (e.g., repeated, intentional verbal or physical abuse from someone with greater strength). Experiences of bullying are further complicated and amplified when the perpetrator is someone with whom the victim resides or on whom they rely for basic needs (i.e., parents, extended family, siblings). Due to its repetitive nature, bullying was considered an appropriate conceptual framework for this study. Data also suggests that family violence extends beyond parental victimization, as siblings and other relatives have also been identified as perpetrators of violence toward SGM individuals (deLara, 2022; Martinez & McDonald, 2021; Stoddard et al., 2009). Such findings highlight the importance of also examining immediate and extended family in victimization or bullying research conducted among SGM youth.

Family Violence Across SGM Youths' Personal and Sociodemographic Characteristics

Family victimization is unevenly reported among sexual minority groups, as people who identify as bisexual, pansexual, queer, questioning, or "other" tend to report higher rates and more frequent microaggressions, assault, and childhood maltreatment by a family member than those identifying as gay or lesbian (Friedman et al., 2011; Gartner & Sterzing, 2018; Sterzing et al., 2019). Family victimization rates also vary across gender, with women and individuals whose gender identities do not conform to their assigned sex at birth being the most likely to report higher rates, frequency, and diversity of victimization, including within the family, compared to cisgender men (Friedman et al., 2011; Gartner & Sterzing, 2018). They also report higher rates of sibling emotional abuse, physical assault and coercion, and childhood maltreatment.

Family victimization often aims to reprimand SGM children for their sexual or gender role nonconformity, non-normative sexual orientations, and outness (Gartner & Sterzing, 2018; McGeough & Sterzing, 2018). This might be especially the case for children with identities that are not as widely recognized (e.g., queer, pansexual, asexual), less understood, or perceived as ambiguous or unstable (Burke & LaFrance, 2016; Katz-Wise & Hyde, 2012; Prior, 2021).

Children with disabilities or activity restrictions constitute another group of youths at risk for family victimization, as they often need to rely on family members for care in ways that differ from those of their non-disabled peers. As well, family members caring for a youth with disabilities may feel an increased strain on their emotional, physical, or economic resources (Hibbard et al., 2007). Despite growing research on disabilities among SGM youths (Ingram, 2020; Maroney & McGinley, 2020), there is a dearth of information on family violence against SGM youths with disabilities and activity restrictions. Similarly, few studies have examined the impact of financial stress and neighborhood economic deprivation on family violence (e.g., Jackson et al., 2018; Monahan, 2020).

SGM youth of colour (Li et al., 2017) and Two-Spirit youths (Ferlatte et al., 2019; Ristock et al., 2019) are also likely to report family abuse, ranging from microaggressions to physical abuse. Cultures of silence surrounding sexual and gender diversity, misconceptions regarding sexual and gender diversity, cultural homonegativity, and religious objections to LGBTQ identities coupled with complex colonial issues are important contributing factors to the victimization of SGM youth of colour and Two-Spirit youths (Sadika et al., 2020). However, little research has examined differences in family victimization rates across sexual identities, gender, and race/ethnicity (McGeough & Sterzing, 2018).

Mental Health and Relational Outcomes of Family Violence

Negative family relationships have been linked to poor mental health and relational outcomes among SGM individuals (Andersen et al., 2015; Rothman et al., 2012; Ryan et al., 2009). For example, studies have found that family victimization and rejection can lead to the development of a negative self-image, self-criticism, low self-esteem, shame, and social anxiety among SGM individuals (Chan & Leung, 2021; deLara, 2022; Roberts et al., 2011; Willoughby et al., 2010), as these fuel fears of rejection, disappointment, and relationship deterioration. Family rejection is also a major cause of loneliness and is particularly high among trans youths compared to their cisgender peers (Yadegarfard et al., 2014). While recent studies have explored how minority stressors (e.g., experiences of SGM-based discrimination) are associated with social anxiety among sexual minority individuals (Mahon et al., 2021), specific data linking family victimization to social anxiety and loneliness among SGM youths are scarce.

To protect themselves from further violence and stigma (Bry et al., 2017; Carastathis et al., 2017), SGM youths may conceal their identity, particularly in high-stigma contexts (Pachankis & Bränström, 2018). Indeed, data suggest that youths who had not disclosed their sexual orientation to their parents report less verbal abuse (D'Augelli et al., 2010). Yet, concealment also imposes a significant psychological burden on individuals, such as feelings of inauthenticity or living a lie, along with various cognitive, affective, and behavioural difficulties (Goh et al., 2019; Pachankis, 2007; Pachankis et al., 2020).

Flourishing Despite Experiencing Family Victimization: Resilience, Authenticity, and Socioeconomic Resources

As childhood trauma has been negatively associated with poor mental health outcomes (Peter et al., 2011), SGM youths facing family victimization are likely to suffer languishing mental health, defined by Keyes (2002) as a state of emptiness, stagnation, and quiet despair. Yet, some youths bounce back from adversity and manage to thrive despite the violence they face (Yoon et al., 2020). While strengthening SGM youths' abilities and opportunities to thrive despite adversity is crucial, data on how to do so remain scarce. Thus, studying SGM youths who flourish despite experiencing family victimization is important. Flourishing is a state of mental health that encompasses emotional, psychological, and social well-being (Keyes, 2002, 2006). It is achieved with a combination of internal and external resilience factors.

Based on the data we have, authenticity is one of the internal resilience factors that has been significantly associated with the well-being of sexual minority individuals (Riggle et al., 2017). As SGM individuals face social pressures often forcing them to choose between being authentic or being socially included and supported (Catalpa & McGuire, 2018; Levitt et al., 2016), authenticity appears as a particularly relevant internal resource for resilience and their ability to thrive.

When it comes to external resilience resources, socioeconomic indicators are commonly used as proxies, as they speak not only of material resources (e.g., adequate living conditions, food, transportation), but also of psychosocial assets that are affected by material factors, such as access to family support and opportunities (Cannas Aghedu et al., 2022; Khanlou & Wray, 2014; Kroenke, 2008). Among trans people, poverty and food insecurity have been shown to erode physical and mental health as well as support systems (Russomanno et al., 2019), which indicates how the lack of such external resilience factors can have serious consequences – a common outcome in contexts of family victimization experienced by SGM youth.

The Current Study

This study aimed to examine family victimization among Canadian SGM youths, aged 15 to 29, over the past 12 months, and to explore characteristics associated with flourishing despite having experienced family victimization. We expected family victimization to be more prevalent and more recurrent among trans participants than cisgender ones, as well as for participants living in economically disadvantaged environments. We also hypothesized that family victimization, both sporadic and recurrent, would be associated with negative self-evaluative, behavioural, cognitive, and affective outcomes. As family victimization is often associated with extra-familial victimization (McGeough & Sterzing, 2018), we controlled for concurrent victimization experienced in school, in the workplace, and in sports to better isolate the influence of family victimization on the outcome variables. Finally, we examined whether participants' characteristics as well as their internal and external resources (authenticity and socioeconomic status) were associated with flourishing, despite having experienced family victimization.

Method

Sampling

The present study's self-reported, correlational data were drawn from a web-based survey (online from September 2019 to May 2020) accessible via any web-enabled device (e.g., computer, tablet, smartphone). The survey was available in English and French and took approximately 30 to 60 minutes to complete. Eligibility criteria included self-identifying as Two-Spirit, lesbian, gay, bisexual, transgender, queer, or another SGM identity (2SLGBTQ+), being between 15 and 29 years of age, and residing in Canada. Participants' location was confirmed by the reported residential postal code and IP addresses captured by the web survey platform. The survey was promoted via Canadian 2SLGBTQ+ focused and allied community-based organizations, online communities, and social media (e.g., Instagram, Facebook, Twitter). This study was reviewed and approved by the institutional research ethics boards of the following Canadian universities: Université du Québec à Montréal (Quebec), Dalhousie University (Nova Scotia), Université Laval (Quebec), University of Toronto (Ontario), Toronto Metropolitan University (Ontario), University of Saskatchewan (Saskatchewan), and University of Victoria (British Columbia).

The survey registered 4,121 entries, of which 1,725 were excluded because the participants were ineligible (e.g., younger than 15 years old or older than 29 years of age, or were both heterosexual and cisgender), did not consent to the study terms, exited the survey after providing consent, did not provide key data on their gender modality (i.e., cisgender or transgender) or sexual orientation or identity, or failed the attention check questions. This paper focuses on the subset of participants who provided data on their family victimization experiences ($n = 1{,}971$).

Variables

Demographic Information

We collected data on: gender modality (i.e., cisgender or transgender) and identity (men, women, nonbinary); sexual orientation and identity (e.g., gay, lesbian, bisexual, queer, pansexual); age; education; migration trajectory; living arrangement (i.e., living with at least one parent or not); racialized or visible minority status (i.e., non-white or non-Caucasian); and activity restriction (see Table 1 for coding). Activity restriction was measured using four questions (e.g., "Do you have any difficulty hearing, seeing, communicating, walking, climbing stairs, bending over, learning, reading or writing, or doing any similar activities?"). Response anchors were "never," "sometimes" or "often." Those who replied "often" to at least one question were classified as having "frequent activity restrictions" (Grondin, 2016).

Family Victimization

Family victimization was assessed with a general question from the Forms of Bullying Scale (Shaw et al., 2013), which we adapted to explicitly refer to the family context:

Bullying is when one or more of the following things happen AGAIN and AGAIN to someone who finds it hard to make it stop. Bullying is when a person or a group of people, in person or online (internet, social media, e-mail, etc.), makes fun of or teases someone in a mean and hurtful way, tells lies or spreads nasty rumours about someone to try to make others not like them, leaves someone out on purpose or doesn't allow them to join in, hits, kicks or pushes someone around, deliberately damages, destroys or steals someone's things, threatens to hurt someone, or makes them feel afraid

Table 1. Participant Characteristics ($n = 1{,}971$)

	%	(n)
Gender identity, by gender modality		
Cisgender	56.3	(1,109)
Men	16.6	(327)
Women	39.7	(782)
Trans	43.7	(862)
Men	9.6	(190)
Women	2.4	(48)
Nonbinary	31.7	(624)
Sexual orientation		
Gay/lesbian	30.9	(608)
Bi/pansexual	44.0	(867)
Queer	16.3	(321)
Questioning	4.0	(78)
Asexual (not classified in the above)	4.9	(97)
Age group		
15-17	22.9	(452)
18-20	21.5	(423)
21-23	19.7	(389)
24-26	17.8	(351)
27-29	18.1	(356)
Education (missing = 7)		
< High school diploma	20.8	(409)
High school diploma	22.0	(430)
College certificate/diploma	30.7	(603)
Post-secondary degree	26.6	(522)
Living with at least one parent		
No	49.4	(973)
Yes	50.6	(998)
Frequent activity restrictions	30.5	(602)
Race		
White	76.7	(1,512)
Indigenous	9.5	(188)
Visible minority	13.8	(271)
Migration trajectory (missing = 4)		
First-generation immigrant (born abroad)	11.1	(219)
Second generation	16.9	(333)
Third generation or more	72.0	(1,416)

of getting hurt. It is NOT bullying when teasing is done in a friendly, playful way, or when two equally strong people argue or fight. Using the above definition, please state whether you have been bullied in your immediate or extended family over the last 12 months.

Five response anchors were provided: "no", "yes, but rarely", "yes, several times per month", "yes, several times per week", and "yes, almost daily". Responses were trichotomized: no family victimization ("never"), sporadic family victimization ("yes, but rarely"), and recurrent family victimization ("yes, several times per month" or more). The same item was adapted for the workplace, sports, and school, and the three answers were combined into a dichotomous (yes/no) "exposure to bullying in other life domains" variable that was included as a control variable in the regression models.

Forms of Victimization

Consistent with other research, we explored six broad forms of bullying among those who answered yes to the first, general question: verbal violence ("You are called names, insulted, teased, harassed, verbally intimidated, or yelled at"); social exclusion ("You, your opinions or your ideas are ignored, excluded, despised or looked upon with contempt"); reputational damage ("Someone spreads rumours, gossip, false accusations against you, or revealed personal or hurtful information about you"); physical violence ("You are physically intimidated, beaten, pushed, hit, shoved, slapped, spit on, tripped, or have had your hair pulled or objects thrown at you, or someone threatened your physical safety"); vandalism ("Someone deliberately destroys or vandalizes your personal property or steals from you"); and expressions of contempt and prejudice ("Someone expresses prejudice or derogatory remarks toward you or your community, or acts as if they are better than you, as if they are afraid of you, or as if they think you are dishonest"). The response anchors were: (0) "never/not applicable"; (1) "rarely"; (2) "less than half of the time"; (3) "more than half of the time", and (4) "every time or almost every time". The six items had an adequate scale reliability score ($\alpha = .79$), with factor loadings varying from .55 to .70.

Self-Stigma

We explored negative self-evaluative outcomes through SGM self-stigma scales. Sexual orientation self-stigma was measured using four items adapted from two internalized homonegativity scales (Mayfield, 2001), replacing the word "homosexuality" with "sexual orientation" so that participants of all sexual orientations could answer. Prior focus groups and pilot testing informed the selection and wording of the four items: "I sometimes resent my sexual orientation"; "I hate myself because of my sexual orientation"; "I feel ashamed of my sexual orientation"; and "When I think of my sexual orientation, I feel depressed". Response options were rated on a five-point Likert scale and ranged from (1) "strongly disagree" to (5) "strongly agree". The factor loadings varied from .78 to .82 and the scale's internal consistency was excellent ($\alpha = .92$). Responses were dichotomized to distinguish participants who rejected (< 3; coded as 0) or endorsed self-stigma (≥ 3; coded as 1). The same items were used to measure self-stigma regarding gender identity and expression, replacing "sexual orientation" with "gender expression or identity". We provided the following definitions: "By 'gender identity,' we mean the gender that is yours or that you feel is yours. By 'gender expression,' we mean the way you express your gender, your masculinity, or your femininity (e.g., through accessories, makeup, nail polish, etc.)". Factor loadings ranged from .74 to .83 and the scale's internal consistency was very good ($\alpha = .89$).

We explored concealment efforts as a behavioural outcome using two questions adapted from the Nebraska Outness Scale (Meidlinger & Hope, 2014): "How often do you avoid talking about topics related to or otherwise indicating your sexual orientation (e.g., not talking about your significant other, changing your mannerisms) when interacting with… Your immediate family (e.g., parents and siblings)?" To assess concealment efforts with regard to gender, we used the same question, but replaced "sexual orientation" with "gender identity or expression or your trans status". Response anchors were "never", "rarely", "half the time", "most of the time", and "all the time". The score was dichotomized so that participants concealing most of the time or all the time were coded as 1, and the others as 0.

Distress and Well-Being

Social anxiety. We assessed social anxiety using the 13-item Social Anxiety Scale for Adolescents – Short Form (SAS-A; La Greca & Lopez, 1998). The SAS-A is comprised of three subscales covering cognitive (e.g., preoccupations), affective (e.g., anxiety, distress), and behavioural (e.g., avoidance) dimensions: (1) fear of negative evaluation (e.g., "I worry about what others say about me"; $\alpha = .90$); (2) social avoidance and distress in new social situations or with unfamiliar peers (e.g., "I get nervous when I meet new people"; $\alpha = .71$); and (3) general or pervasive social avoidance and distress (e.g., "I get nervous when I talk to peers I don't know very well"; $\alpha = .82$). The five-point response anchors

vary from (0) "never" to (4) "always". The mean score was dichotomized at the cut-off value of ≥2.8, so that 1 reflects high social anxiety and 0, lower social anxiety. The overall scale shows excellent internal consistency (α = .93).

Loneliness. As an affective outcome, loneliness was measured using the three-item version of the UCLA Loneliness Scale (Hughes et al., 2004; Russell et al., 1980). The scale assesses how often participants felt a lack of relational connectedness ("You lack companionship"), collective connectedness ("Left out"), and general isolation ("Isolated from others"). Responses (0) "hardly ever", (1) "some of the time", and (2) "often" were summed and dichotomized, scores higher than 4 indicating great loneliness. Internal consistency was adequate (α = .78).

Flourishing and Languishing Mental Health. We used Keyes' Mental Health Continuum Short Form to measure flourishing and languishing mental health (Keyes, 2006). The items were preceded by the general instruction: "In the past month, how often did you feel…". The questions covered emotional well-being ("... satisfied with your life?"), psychological well-being ("… that you are having experiences that make you grow and become a better person?") and social well-being ("… that society is becoming a better place for people like you?"). The response options were: (0) "never"; (1) "once or twice"; (2) "about once a week"; (3) "about two or three times a week"; (4) "almost every day"; and (5) "every day". The "flourishing" variable was coded as 1 for participants who had experienced at least one of the three emotional well-being items (i.e., happy, interested in life, or satisfied) and six of the nine psychological or social well-being items every day or almost every day, and coded 0 for all other participants. The "languishing" variable was coded as 1 for participants who had experienced at least one of the emotional well-being items (i.e., happy, interested in life, or satisfied) and six of the psychological or social well-being items never or once or twice (all other participants were coded as 0). The overall scale showed excellent internal consistency (α = 0.92).

Post-Traumatic Stress Symptoms. The five-item Primary Care Post-Traumatic Stress Disorder Screen for DSM-5 (PC-PTSD-5) measured post-traumatic stress symptoms: intrusive thoughts, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity. Respondents were asked to answer "yes" or "no" to all items. Yeses were summed and dichotomized at three yeses or more (1), as this number is suggestive of probable post-traumatic stress disorder (Prins et al., 2016). The scale had excellent internal consistency (α = 0.90).

Authenticity. The Authenticity Scale was used to measure a tripartite conception of authenticity (Wood et al., 2008), comprising self-alienation (e.g., "I feel out of touch with the 'real me'"), authentic living (e.g., "I am true to myself in most situations"), and accepting external influence (e.g., "I always feel I need to do what others expect me to do"). The response anchors ranged from (0) "does not describe me at all" to (4) "describes me very well". Some items were reverse-coded so that higher scores reflect higher authenticity, and the mean score was with high authenticity defined as a score of 3 or more. The global scale had good internal consistency (α = 0.86).

Proactive Family Norms Against Violence. Participants were invited to rate their family's reactions toward violence ("Thinking about the situations related to bullying and intimidation that have just been described, would you say that in your family this kind of situation is…") along three six-point continuums created for this study. The continuums ranged from "always acceptable" to "always unacceptable", from "always discouraged" to "always encouraged", and from "always punished" to "never punished". Family norms were considered proactive against violence if participants responded that the items were often or always unacceptable, discouraged, or punished on at least two of the three items. The scale had acceptable internal consistency (α = 0.78).

Socioeconomic Stressors

Three variables captured socioeconomic stressors: food insecurity, financial stress, and neighbourhood material deprivation. Food insecurity was measured using a single item adapted from the Health Behavior in School-aged Children study (Currie et al., 2009): "Some people go to school, work, or bed hungry because there is not enough food at home. How often does this happen to you"? The word "work" was added in our question since the initial questionnaire was intended for children. Seven response options were provided: "every day", "several times a week", "about once a week", "several times a month (less than once a week)", "about once a month", "less than once a month", and "never". A dichotomous indicator was created: (0) never or less than once a month, and (1) about once a month or more. To assess financial stress, we measured both personal financial stress (five items, e.g., "You do not have enough money to pay your regular bills"; α = 0.83; Hamby et al., 2015) and family financial stress (five items, e.g., "Your family is having problems because your parents/guardians do not have enough money to buy things they need or want"; (α = .87); Mistry et al., 2009). Response anchors were: (0) "never true"; (1) "rarely true"; (2) "sometimes true"; (3) "often true"; (4) "always true"; and (recorded as missing data) "does not apply" with higher scores indicating greater financial stress.

Means were calculated and transformed into z-scores, which were then averaged and transformed into quintiles (five stress categories, each containing 20% of the sample). The neighbourhood material deprivation information was based on the material deprivation index, which combines information on education, employment, and income in the neighbourhood based on participants' postal codes (Pampalon et al., 2012).

Statistical Analysis

First, descriptive statistics for participants' characteristics were computed using Stata 17 (StataCorp, 2021). Second, we estimated the crude and adjusted odds ratios (ORs) for having experienced sporadic and recurrent family victimization (compared to none) across participants' demographic and socioeconomic characteristics using multinomial regression models. Third, we estimated both crude and adjusted ORs for experiencing negative outcomes across family victimization levels. These models were estimated with Mplus 8.2 (Muthén & Muthén, 2017), and missing data on independent and control variables were treated using full information maximum likelihood estimation. Fourth, we performed Firth's penalized logistic regression models using SAS 9.4 (Allison, 2012) to estimate crude and adjusted ORs for reporting flourishing mental health (compared to not) among the participants who experienced family victimization.

As family relationships are likely to vary depending on whether one lives with their parents or not, we compared participants who were living with at least one parent to those who did not on all variables using Cramér's *V* (Cramér, 1999) to estimate the effect size of their association. As all effect sizes were small or negligible (< 0.11; see Rea & Parker, 2014, p. 219, for Cramér's *V* cut-offs), and to maximize statistical power (Peduzzi et al., 1996), statistical analyses were performed on the complete analytic sample. Adjusted models included sociodemographic variables and relevant variables as a step in identifying potentially confounding variables for future causal modeling.

Results

Sample Characteristics

The sample was composed of both cisgender (56.3%; with a predominance of cisgender women, 39.7%) and trans participants (43.7%; 9.6% trans men, 2.4% trans women, and 31.7% nonbinary), who were mainly gay or lesbian (30.9%), bisexual or pansexual (44%), and queer (16.3%). They were aged between 15 and 29 years ($M = 21.7$, $SD = 4.3$). Less than half of the sample had a high school diploma or less (about 44.4%), and over half were living with family members, mainly with both parents or with a single parent. About one-third reported often experiencing at least one activity restriction in their everyday lives (e.g., in hearing, seeing, communicating, walking, climbing stairs, etc.). Most were white (76.7%), while 9.5% were Indigenous, and 13.8% were members of visible minority groups (i.e., non-Caucasian or non-white). Most were born in Canada from parents born in Canada (72.0%), while 16.9% were born in Canada from immigrant parents, and 11.1% were born abroad.

Over one-third of the sample (35.8%) reported family victimization over the previous year, and 12.9% experienced it several times a month or more (see Table 2). Regarding forms of victimization, 32.8% reported social exclusion, verbal violence (29.5%), or expressions of contempt and prejudice (28.5%). About one out of five reported some reputational damage (18.7%), while about one out of ten experienced vandalism (10.6%) or physical violence (10%). Detailed frequencies are shown in Table 2.

Among participants who reported having experienced violence, parents were identified as perpetrators by 71.6%, while extended family (e.g., aunts, uncles, grandparents, cousins) and siblings were also identified as perpetrators by 42.8% and 33.2% of participants, respectively. Victimization occurred mostly in person (66.2%), or both in person and online (29.1%), with only a minority reporting online victimization only (4.7%). About half (47.5%) considered that they were specifically targeted for victimization due to their SGM status. Exposure to both sporadic and recurrent family victimization was explored across participant, family, and environmental characteristics (see Table 3). In the adjusted model, sporadic family victimization was more likely among cisgender women and trans individuals compared to cisgender men, as well as among those with frequent activity restrictions in everyday life, those living with extended family (compared to living in non-family-based arrangements), and those experiencing higher financial stress and monthly food insecurity. Recurrent family victimization was higher among trans participants compared to cisgender men, and among those experiencing higher financial stress and monthly food insecurity.

Table 2. Family Victimization Frequency in the Last 12 Months ($n = 1,971$)

	None	Rare family victimization	Several times per month	Several times per week	Almost daily	Overall prevalence
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
Any form	64.2 (1,265)	23.0 (452)	7.3 (143)	3.7 (72)	2.0 (39)	35.8 (706)

	Never	Rarely	Less than half of the time	More than half of the time	Every time or almost every time	Overall prevalence
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
Specific forms						
Social exclusion	67.2 (1,318)	6.5 (128)	9.6 (188)	9.0 (177)	7.6 (149)	32.8 (642)
Verbal violence	70.5 (1,381)	11.1 (217)	8.1 (159)	6.1 (119)	4.2 (83)	29.5 (578)
Expressions of contempt and prejudice	71.5 (1,397)	8.5 (167)	7.3 (143)	7.0 (137)	5.7 (111)	28.5 (558)
Reputational damage	81.3 (1,590)	7.8 (152)	4.7 (92)	3.5 (68)	2.8 (55)	18.7 (366)
Vandalism	89.4 (1,745)	6.5 (127)	1.9 (37)	1.6 (32)	0.6 (11)	10.6 (207)
Physical violence	90.1 (1,755)	5.9 (115)	2.3 (44)	1.4 (27)	0.4 (8)	10.0 (194)

Note. Seven participants (0.36%) who reported having experienced family victimization did not report experiencing any of the specific forms listed above.

Table 3. Family Victimization Across Participant, Family, and Environmental Characteristics ($n = 1,971$)

	Sporadic (vs. none) ($n = 452$)				Recurring (vs. none) ($n = 254$)			
	Crude OR	(95% CI)	aOR	(95% CI)	Crude OR	(95% CI)	aOR	(95% CI)
Age								
15-17	2.70	(1.70, 4.54)	2.25	(1.30, 4.45)	1.05	(0.73, 1.44)	0.89	(0.57, 1.34)
18-20	2.78	(1.72, 4.77)	2.41	(1.38, 4.58)	1.13	(0.82, 1.56)	0.99	(0.66, 1.47)
21-23	2.25	(1.36, 3.95)	1.81	(1.05, 3.30)	1.13	(0.79, 1.59)	0.95	(0.63, 1.41)
24-26	1.55	(0.87, 2.70)	1.53	(0.83, 2.86)	1.05	(0.72, 1.49)	1.00	(0.66, 1.45)
27-29 (ref. cat.)	1.00		1.00		1.00		1.00	
Gender modality and identity								
Cis men (ref. cat.)	1.00		1.00		1.00		1.00	
Cis women	2.66	(1.59, 5.40)	2.06	(1.16, 4.40)	1.34	(0.98, 1.89)	1.28	(0.88, 1.87)
Trans women	5.44	(1.83, 14.51)	5.81	(1.70, 17.89)	2.68	(1.21, 5.37)	2.58	(1.06, 5.78)
Trans men	7.76	(4.17, 16.89)	4.50	(2.21, 10.08)	2.72	(1.72, 4.24)	2.19	(1.30, 3.61)
Nonbinary	5.01	(3.05, 10.03)	3.15	(1.76, 6.95)	2.05	(1.49, 2.91)	1.65	(1.11, 2.47)
Sexual orientation								
Gay/lesbian (ref. cat.)	1.00		1.00		1.00		1.00	
Bi/pansexual	1.85	(1.31, 2.69)	1.09	(0.74, 1.69)	1.31	(1.03, 1.66)	0.99	(0.74, 1.30)
Queer	1.69	(1.06, 2.66)	0.96	(0.57, 1.64)	1.52	(1.09, 2.12)	1.06	(0.73, 1.57)
Questioning	2.69	(1.23, 4.94)	1.72	(0.76, 3.21)	1.17	(0.58, 2.01)	0.94	(0.48, 1.67)
Asexual	1.57	(0.75, 3.00)	0.89	(0.37, 2.03)	0.68	(0.31, 1.13)	0.50	(0.23, 0.84)
Race								
White (ref. cat.)	1.00		1.00		1.00		1.00	
Indigenous	2.44	(1.64, 3.53)	1.34	(0.81, 2.04)	1.50	(1.01, 2.13)	1.10	(0.73, 1.56)
Visible minority	1.48	(0.99, 2.15)	1.64	(1.07, 2.44)	1.26	(0.91, 1.67)	1.35	(0.95, 1.81)
Frequent activity restrictions								
No (ref. cat.)	1.00		1.00		1.00		1.00	
Yes	3.97	(3.03, 5.19)	2.52	(1.89, 3.49)	2.45	(1.95, 3.04)	1.91	(1.51, 2.44)
Living arrangement								
Not living with at least one parent (ref. cat.)	1.00		1.00		1.00		1.00	
Living with at least one parent	1.18	(0.92, 1.55)	0.87	(0.58, 1.29)	1.02	(0.83, 1.26)	1.04	(0.78, 1.38)
Financial stress								
Q1 Lowest financial stress (ref. cat.)	1.00		1.00		1.00	1.00	1.00	1.00
Q2	2.01	(1.18, 3.44)	1.76	(1.03, 3.05)	1.48	(1.00, 2.15)	1.38	(0.94, 2.06)
Q3 Moderate financial stress	2.05	(1.23, 3.72)	1.44	(0.83, 2.68)	1.91	(1.33, 2.73)	1.56	(1.07, 2.28)
Q4	2.90	(1.85, 5.34)	1.96	(1.19, 3.65)	2.61	(1.85, 3.76)	2.06	(1.42, 3.06)
Q5 Highest financial stress	8.13	(5.29, 13.90)	4.83	(3.04, 8.63)	2.95	(2.02, 4.34)	2.16	(1.44, 3.29)

Note. aOR = Odds ratio adjusted for all other variables in the model.

Table 3. Family Victimization Across Participant, Family, and Environmental Characteristics ($n = 1,971$) (suite)

	Sporadic (vs. none) ($n = 452$)				Recurring (vs. none) ($n = 254$)			
	Crude OR	(95% CI)	aOR	(95% CI)	Crude OR	(95% CI)	aOR	(95% CI)
Monthly food insecurity (ref. cat. "Never")	4.78	(3.40, 6.72)	2.51	1.7, 3.81)	2.81	(2.08, 3.79)	1.97	(1.41, 2.75)
Neighbourhood material deprivation								
Q1 Most privileged (ref. cat.)	1.00		1.00		1.00		1.00	
Q2	1.43	(0.90, 2.28)	1.18	0.72, 1.98)	1.13	(0.81, 1.59)	1.09	(0.76, 1.56)
Q3 Moderately deprived	1.88	(1.18, 3.06)	1.50	(0.90, 2.52)	1.34	(0.94, 1.87)	1.24	(0.85, 1.76)
Q4	1.76	(1.11, 2.83)	1.21	(0.73, 2.04)	1.31	(0.96, 1.85)	1.15	(0.82, 1.62)
Q5 Most deprived	2.10	(1.28, 3.47)	1.62	(0.97, 2.83)	1.36	(0.94, 1.93)	1.19	(0.80, 1.72)

Note. aOR = Odds ratio adjusted for all other variables in the model.

Self-Evaluative, Cognitive, Affective, and Behavioural Implications of Family Victimization

Sexual orientation self-stigma and social anxiety only reached significance with recurring family victimization, while gender identity and expression self-stigma did not reach significance at either sporadic or recurring levels (see Table 4). Loneliness and languishing mental health increased with both levels of family victimization, and post-traumatic stress symptoms were more common among those who experienced recurring family victimization (compared to those who experienced it less often).

Table 4. Self-Evaluative, Behavioural, Cognitive, and Affective Implications of Family Victimization Over the Past 12 Months

		Sporadic (vs. none)		Recurring (vs. none)	
	n	aOR	(95% CI)	aOR	(95% CI)
SGM concealment efforts (most of or all the time)	1971	1.24	(0.95, 1.59)	1.44	(1.05, 1.98)
Sexual orientation self-stigma	1971	1.26	(0.94, 1.70)	1.93	(1.34, 2.78)
Gender identity and expression self-stigma (among gender minority participants)	862	1.30	(0.80, 2.06)	1.42	(0.94, 2.11)
Social anxiety	1971	1.21	(0.95, 1.52)	1.73	(1.26, 2.36)
Loneliness	1971	1.41	(1.06, 1.81)	2.43	(1.65, 3.23)
Languishing mental health	1971	1.60	(1.17, 2.16)	2.87	(1.95, 3.94)
Post-traumatic stress symptoms (among those victimized)	706	1.00†		3.19	(1.98, 4.82)

Note. aOR = odd ratios adjusted for age, gender identity and modality, sexual orientation, living arrangement, race, frequent activity restriction, financial stress, food insecurity, neighbourhood material deprivation, and exposure to bullying in the workplace, in sports, and at school. † Sporadic victimization is the reference category, as participants who were not victimized did not complete the post-traumatic stress symptoms checklist.

Flourishing Despite Family Victimization Experiences

Table 5 explores the likelihood of reporting flourishing mental health at the time of the study despite having experienced family victimization in the previous year across participants' characteristics. Both crude and adjusted results revealed that flourishing was lower among cisgender women as well as trans and non-binary participants (compared to cisgender men), those who lived with at least one parent, those who reported frequent activity restrictions, and those who experienced monthly food insecurity. However, flourishing despite family victimization was more likely to occur among participants reporting high authenticity scores and proactive family norms against violence. Sexual orientation and racialization were not significantly associated with flourishing despite family victimization.

Table 5. Characteristics of Flourishing Participants (Compared to Those Not Flourishing) Among Those Victimized ($n = 699$)

	Distribution of participant characteristics				Flourishing, by participant characteristics					
	Not flourishing ($n = 633$)		Flourishing ($n = 66$)							
	n	(%)	n	(%)	%	(95% CI)	Crude OR	(95% CI)	aOR	(95% CI)
Gender modality and identity										
Cisgender men	54	(8.53)	17	(25.76)	23.94	(14.61, 35.54)	1.00		1.00	
Cisgender women	222	(35.07)	23	(34.85)	9.39	(6.04, 13.75)	0.33	(0.17, 0.66)	0.31	(0.14, 0.71)
Trans and non-binary participants	357	(56.40)	26	(39.39)	6.79	(4.48, 9.79)	0.23	(0.12, 0.45)	0.26	(0.11, 0.60)
Sexual orientation										
Gay/lesbian	158	(26.12)	23	(34.85)	12.71	(8.23, 18.45)	1.00		1.00	
Bi/pansexual	300	(49.59)	32	(48.48)	9.64	(6.69, 13.33)	0.73	(0.41, 1.28)	1.30	(0.64, 2.62)
Queer	119	(19.67)	9	(13.64)	7.03	(3.27, 12.93)	0.54	(0.24, 1.19)	0.98	(0.40, 2.44)
Questioning	28	(4.63)	2	(3.03)	6.67	(0.82, 22.07)	0.59	(0.15, 2.36)	1.30	(0.29, 5.85)
Missing	28		0							
Racialization										
White	450	(71.09)	52	(78.79)	10.36	(7.83, 13.36)	1.00		1.00	
BIPOC	183	(28.91)	14	(21.21)	7.11	(3.94, 11.64)	0.68	(0.37, 1.25)	0.62	(0.32, 1.22)
Frequent activity restrictions										
No	332	(52.45)	53	(80.30)	13.77	(10.48, 17.62)	1.00		1.00	
Yes	301	(47.55)	13	(19.70)	4.14	(2.22, 6.98)	0.28	(0.15, 0.52)	0.40	(0.21, 0.76)
Living arrangement										
Do not live with parents	300	(47.92)	43	(65.15)	12.54	(9.22, 16.51)	1.00		1.00	
Live with at least one parent(s)	326	(52.08)	23	(34.85)	6.59	(4.22, 9.72)	0.50	(0.29, 0.84)	0.50	(0.26, 0.97)
Missing	7		0							
Monthly food insecurity										
Less than once a month or never	478	(75.51)	61	(92.42)	11.32	(8.77, 14.30)	1.00		1.00	
At least monthly	155	(24.49)	5	(7.58)	3.13	(1.02, 7.14)	0.28	(0.11, 0.67)	0.37	(0.15, 0.91)
Authenticity										
Low	523	(83.95)	36	(55.38)	6.44	4.55, 8.80)	1.00		1.00	
High	100	(16.05)	29	(44.62)	22.48	(15.60, 30.66)	4.21	(2.48, 7.17)	3.29	(1.83, 5.90)
Missing	10		1							
Proactive family norms against violence										
No	523	(85.18)	46	(71.88)	8.08	(5.98, 10.64)	1.00		1.00	
Yes	91	(14.82)	18	(28.13)	16.51	(10.09, 24.84)	2.28	(1.27, 4.09)	2.02	(1.06, 3.87)
Missing	19		2							

Note. aOR = coefficients adjusted for all other variables and age (continuous). Missing values are excluded.

Discussion

This study sought to examine family victimization among Canadian SGM youths and its association with negative self-evaluative, behavioural, cognitive, and affective implications. We also explored the correlates of flourishing despite having experienced family victimization. We found that over one-third of respondents had experienced repeated family victimization in the past year, and about half of those reported perceiving that it was motivated by their SGM status. To our knowledge, there is no data on family bullying, as defined in this study, in Canada. Clément et al. (2015) found that about 50% of mothers reported repeated family violence toward their children over a one-year period. However, the children in their study were much younger (aged 0 to 18 years old), which is usually associated with higher rates of family victimization.

Despite greater societal acceptance of homosexuality (Ayoub & Garretson, 2017; Roberts, 2019), family acceptance may still be lagging. For example, some parents maintain negative attitudes toward sexual and gender diversity and struggle with their children's SGM identity (Chrisler, 2017; Katz-Wise et al., 2016; Pullen Sansfaçon et al., 2020). Furthermore, we found that SGM youths living with extended family members tend to experience more family victimization than those living with immediate family. A likely explanation is that youths who live with extended family may suffer from a generally unstable environment within their immediate family, which forces them to live away from their parents and siblings. Youths living with extended family may also be exposed to generational differences in understanding and acceptance of sexual and gender diversity.

Adjusted results showed that compared to cisgender men, cisgender women, trans men, trans women, and nonbinary participants reported higher sporadic victimization prevalence rates, while recurring victimization was higher among trans and nonbinary respondents. These results suggest that gender nonconformity is more often punished, causing trans and non-binary individuals to continue to face victimization in cis-heteronormative contexts. It is possible that sexual identities lesser known by the general population, such as queer or pansexual, do not benefit from the same societal acceptability or visibility than the more widely represented gay and lesbian sexual orientations. Bisexual, pansexual, uncertain and questioning individuals also suffer from specific stigma (e.g., the belief that bisexuality is a phase of denial, transition, or experimentation; Burke & LaFrance, 2016; Diamond, 2008; Prior, 2021).

As for gender diversity categories and terminology, many have not yet gained the same levels of societal acceptability or recognition as those related to sexual diversity. Moreover, when it comes to their children, many parents experience discomfort toward gender nonconformity (Chrisler, 2017; Katz-Wise et al., 2016; Pullen Sansfaçon et al., 2020). Probabilistic surveys from the Quebec government revealed that, while societal acceptance of LGBT people improved from 2013 to 2017 (Giner & Perron, 2017), the population's comfort with sexual and gender diversity varied across subgroups (colleagues, teachers, health professionals, etc.). Respondents felt the greatest discomfort at the idea of their own children being LGBT, with bisexual and trans children prompting the most discomfort. Our findings indicate that this apparent discomfort can have serious implications, leading to higher levels of parent-perpetrated victimization.

This study is among the first to explore family violence experienced by SGM youths with disabilities or activity restrictions. Crude and adjusted analyses revealed that sporadic, but not recurring, family victimization was more common among participants with frequent activity restrictions (e.g., difficulties in hearing, communicating, walking, etc.). Among possible explanations are families' ableist expectations of youth and a lack of understanding and accommodation for the youths' needs and abilities. These youths may also be more dependent on family members, which can exacerbate stress that may be conducive to violence. These hypotheses, however, need to be explored in future research.

Our findings also show that reduced access to economic and material resources, including food, is associated with family victimization in SGM youths. These factors likely heighten unpredictability and psychological distress, compromise family members' availability to provide care, or disrupt positive parenting practices, all of which can increase the risk of family violence (Jackson et al., 2018; Monahan, 2020).

Family Victimization and Well-Being

The present findings also extend those of minority stress research conducted with adult populations, which demonstrate that anti-SGM violence, including childhood bullying, is associated with adult psychological distress and reduced well-being (Hart et al., 2018; Lehavot & Simoni, 2011; Schwartz et al., 2016). In the present study, recurrent family victimization was associated with negative self-evaluation and overall compromised interpersonal functioning, as evidenced by results showing higher levels of self-stigmatization, social anxiety, and loneliness among victims. SGM youths' concealment efforts could potentially be a protective strategy to prevent them from experiencing violence, or they could constitute a form of resistance and resilience. However, as the results suggest, such efforts could also reflect or lead to social anxiety, which manifests as fear of negative evaluation by others as well as avoidance of and distress in social situations. Loneliness and languishing mental health were positively associated with both sporadic and recurrent family victimization. The more often SGM youths experienced family victimization, the more likely they were to self-isolate or to feel excluded and to report languishing mental health. Consistent with previous studies (McGeough & Sterzing, 2018), SGM youths who experienced recurring family victimization were also more likely to report probable post-traumatic stress disorder, a common occurrence among trauma victims (Chan et al., 2021). This mental health profile and its association with family victimization in SGM youths remained significant even after accounting for concurrent victimization in other important life domains, confirming the crucial role of families of origin in SGM youths' development and psychosocial (mal)adjustment.

Flourishing Despite Family Victimization

Finally, we described the characteristics of the participants who were thriving (i.e., reporting flourishing mental health) despite experiencing family victimization. The results revealed how cisgender women as well as trans and nonbinary participants (compared to cisgender men) and those who report frequent activity restrictions were less likely to thrive. One possible explanation is that these groups might already experience other challenges relating to their

gender identity and modality (e.g., cisnormativity), or to their disability status (e.g., ableism) that can further burden them and reduce their ability to thrive.

As the results suggest, such ability is significantly supported by specific internal and external resources. Among SGM youths, the capacity to stay true to oneself and to resist external influence and pressures on self-definition emerged as an inner resource that supported thriving. This finding confirms previous results showing that greater authenticity is associated with better mental health, even after controlling for stressful life events (Ryan et al., 2005), higher hopes, and less intense post-traumatic stress disorder symptoms (for a review, see Wood et al., 2008). Among SGM youths, affirmation of authentic gender or sexual orientation is of particular importance in thriving (Pachankis et al., 2020; Pullen Sansfaçon et al., 2021).

Yet, SGM youths must find a balance between affirmation and safety (Pullen Sansfaçon et al., 2021). This study found specific circumstances relating to security that were associated with thriving, such as living away from one's parents, which likely makes it easier to distance themselves from them when things get heated, and having a family where violence is actively discouraged and condemned, which can be seen as supportive and comforting. Experiencing monthly food insecurity was negatively associated with flourishing, which is not surprising as food insecurity is a mentally and emotionally damaging experience that generates uncertainty and elevates stress (Weaver & Hadley, 2009). As food insecurity is also a common proxy for low socioeconomic status (Weaver & Hadley, 2009), this result confirms that economic security also plays a significant role in flourishing mental health (Gilmour, 2014), although we did not have sufficient information to establish whether it affects SGM youths' ability to thrive through the material resources or the psychosocial assets it provides (or both).

Limitations

The present findings should be considered in light of the study's limitations. First, data collection overlapped with the beginning of the COVID-19 pandemic. This uncertain time and the repeated and extended periods of home confinement likely increased the emotional and financial stress experienced by participants and their families – factors that have also been shown to be associated with family violence (Every-Palmer et al., 2020; Humphreys et al., 2020). Second, our victimization measure, which is drawn from the bullying literature and based on a single all-encompassing screening item, departs from more common approaches to assess family maltreatment and neglect. Thus, this approach likely underestimated family victimization exposure among participants. Third, because the data are self-reported, they are susceptible to recall bias and social desirability bias. Fourth, the findings are based on convenient sampling, which is prone to self-selection and prevalence estimation biases (e.g., participants may have been more likely to be victims than non-participants, or those who were victims could have avoided the survey in order to not have to remember such experiences). Lastly, the study's cross-sectional design does not allow for inference of causality nor directionality of the observed associations. However, despite its limitations, this study shows that recurrent family victimization is associated with negative self-evaluative, behavioural, cognitive, and affective implications among SGM youths.

Implications for Intervention

To reduce or prevent family victimization, we need to increase families' acceptance of sexual and gender diversity. As Dickson et al. (2019) suggested, parents need to be educated about the potential long-term harm resulting from parental belittling, ridicule, and sarcasm, and they need to better understand the importance of supporting their SGM children. Support groups that are affirmative of sexual and gender diversity and workshops that foster affirmative parenting practices have been shown to be promising (Austin et al., 2021; Newhook et al., 2018), particularly for economically struggling families (Maguire-Jack & Font, 2017).

At the policy level, child protection services, schools, and healthcare providers working with SGM youths and their families all play a significant role in family victimization screening and in educating parents and caregivers about SGM-affirming parenting practices. This should be a priority for service providers, particularly those working with trans and nonbinary youths. Another important step is to have evidence-based interventions that assess, intervene in, and reduce family violence (Newcomb et al., 2019; Spivak et al., 2021) and that also include SGM-specific content.

While it is crucial to change SGM youths' hetero-cisnormative environment, it is also necessary to approach family violence victims from a multidisciplinary standpoint (Mooney, 2017; Musicaro et al., 2019). They need to receive adequate support to build strong internal and external resources to cope with family trauma. Our exploration of SGM youths who are flourishing despite their family victimization experience reveals the importance of balancing

authenticity with safety within the family, as well as ensuring food and economic security to sustain their ability to thrive.

The present study also suggests that preventing family victimization may prevent its many social and mental health costs among SGM youths (e.g., post-traumatic stress disorder). As such, interventions should also target perpetrators and the insidious forms that victimization can take within families. Future research should investigate best practices to support SGM youths' families to help stop the violence and bring about change.

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Conflict of interest

The authors have no conflict of interest to disclose.

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The Development of the First Nations Children Wellbeing Measure

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Abstract

Objectives: The overall goal of this project was to implement a measurement tool intended to assess the wellbeing of First Nations children within the Robinson Superior Treaty Area.

Methods: A community-based participatory research approach was utilized, which included a research advisory composed to employees from the organization that was partnered with. Both interviews and focus groups were held with members of the communities within the Robinson Superior Treaty Area, and the content of these was examined to determine indicators of wellbeing for children in these communities. The indicators that arose from this analysis made up the pilot version of the measure, which was administered to the parents or caregivers of children ($n = 91$) who were seen through the intake service for the organization. They were also administered the Child and Adolescent Needs and Strengths measure (Lyons et al., 1999).

Results: A principal components analysis was performed, which yielded three factors: (1) General Wellbeing, (2) Traditional Activities, and (3) Social Engagement.

Discussion: Involvement in traditional activities and engagement in culture were cited as fundamental indicators of wellbeing of First Nations children, which is consistent with the majority of the literature. The instrument that was created and evaluated represents one of few valid tools available to assess this.

Implications: The measure and process of creating this measure contributes to the literature on the significance of traditional activities for the wellbeing of Indigenous people.

Keywords: Wellbeing, Indigenous, resilience, traditional activities, culture.

Introduction

Wellbeing is an important consideration when addressing the health of all persons, including children. In an attempt to improve health status, clinicians may utilize empirically-validated measures to determine both current indicators of wellbeing and also evaluate the success of any intervention. When working with Indigenous children, this pursuit is complicated by two factors: the differences in Indigenous definitions of wellbeing (as compared to Western definitions), and the focus of measures of the wellbeing of children on family dynamics or outcomes in adolescence (as opposed to current functioning; Amerijckx & Humblet, 2014; Ben-Arieh, 2007). Further, few researchers have examined the unique factors that contribute to the wellbeing of Indigenous children from the perspective of Indigenous peoples. Given these gaps in the literature and current measurement tools, our team set out to create a tool to measure the wellbeing of children in the Robinson-Superior Treaty District that was grounded in Indigenous knowledge and created in partnership with those who serve this population.

Conceptualizations of Wellbeing in First Nations Communities

While acknowledging diversity amongst Indigenous cultures, many promote a worldview that belonging or connectedness, cleansing, balance, empowerment, and discipline can improve mental health (CIHI, 2009). Belonging or connectedness refers to relations with family, culture, nature, the land, and spirits, while cleansing often refers to the healthy expression of emotions (CIHI, 2009). Balance can be exemplified by the medicine wheel structure and the harmony of the mental, physical, emotional, and spiritual dimensions of oneself (Adelson, 2005; CIHI, 2009; King et al., 2009; Reading & Wien, 2013). Within this understanding, health and illness do not only relate to biological functioning, but reflect the stability and coordination (or lack thereof) of the physical, emotional, mental, and spiritual aspects of oneself. In this conceptualization, one domain of health cannot be separated from another (Vukic et al., 2011). For example, the Anishinabek term "mno bmaadis", and the Cree term "miyupimaatisiiun", both roughly translate to "being alive well", but serve to represent the construct of health (Adelson, 1998; King et al., 2009). The Obijway term "aakozi" has been translated into English as 'sick,' but better understood as "out of balance" (Burgess, 2006; Fortier & Norrgard, 2002). Additionally, a person can experience "aakozi" within the individual physical, emotional, mental, and spiritual domains (Burgess, 2006; Fortier & Norrgard, 2002). As a result of these broader definitions, many Indigenous theories of wellness do not fit into a Western framework (Adelson, 2005).

Due to these differences, it is possible that objective indicators of wellbeing for majority culture (i.e., mainstream Canadian culture) do not accurately measure the wellbeing of Indigenous peoples in Canada, including those used in psychological assessments (Kant et al., 2014; Le Grande et al., 2017; Mushquash & Bova, 2007). Problematic language and inherent cultural biases in items are also issues (McShane & Hastings, 2004). Even "culture-free" tests often have components that require some understanding of the culture in which they were created, and were also created in Western constructions of mental health.

The Measurement of the Wellbeing of Indigenous Children in Canada

To date, there has been little research done in the measurement of Indigenous child wellbeing in Canada. Specifically, Jongen et al. (2019) conducted a review of measures of resilience in Indigenous youth used in Canada, Australia, New Zealand, and the United States, and found that only 5 of the 20 included measures evaluated cultural resilience.

One study was completed with children from Wikwemikong First Nation in Southern Ontario that resulted in The Aboriginal Children's Health and Well-Being Measure (ACHWM; Young et al., 2013). The authors of the original measure have published two additional studies using the ACHWM to refine the measure and improve use (Wabano et al., 2019; Young et al., 2017). Although not purported to be a measure of wellbeing or mental health, the Cultural Connectedness Scale (CCS; Snowshoe et al., 2015) is of measure of First Nations youths' identification with their culture. The authors suggest that the CCS is useful for research and as a tool, in order to link positive health outcomes to cultural identity for First Nations youth (Snowshoe et al., 2015).

Taken together, it is evident that measuring the wellbeing of Indigenous children is challenging. Tools validated for use with Western populations do not fully capture the construct of wellbeing for Indigenous populations and there are few measures created specifically for use with Indigenous children. Further, context-specific discrepancies may also render these tools less helpful when used with populations outside of the original sample. Therefore, it was determined that a measure created specifically for the measurement of wellbeing of First Nations children in the Robinson-Superior Treaty Area, in Ontario, Canada, was needed. This was accomplished through two studies with

unique objectives. The goal of Study I was to gather data from general community members and key informants regarding First Nations' definitions of child wellbeing; the purpose of this data collection was to inform item development for the measure. The goal of Study II was to utilize the indicators of wellbeing established through Study I to create a measure of wellbeing with this population, as well as validate this measure.

Method

Reflexivity

We are a large research team composed of both Indigenous and non-Indigenous individuals, including clinicians, faculty members, and administrators. All authors had some degree of involvement with the partner organization prior to the commencement of this project; this involvement ranged from student placements to full-time employment.

Study I

The qualitative data was collected in a manner that respected the preferences of the communities and individuals involved. The approach of the research team truly embodied the spirit of community-based participatory research (CBPR). This approach is recommended by the First Nations Information Governance Centre, which drafted the principles of Ownership, Control, Access, and Possession (OCAP™). The hallmarks of CBPR are the prioritization of community preferences, community control, and the dissemination to relevant parties (Drawson et al., 2017). Research ethics board approval was also obtained from the main institution associated with the project.

A set of 11 open-ended questions were developed for use in both the focus group with the general community and one-on-one interviews with key informants. These informants were often identified by the community contact people, and often considered to have some expertise or wisdom regarding children. Five additional open-ended questions were developed for use in only the one-on-one interviews.

Participants. Fifteen participants completed a one-on-one interview and, one focus group with 24 participants was facilitated. Across all participants, seven First Nations were represented.

Data collection. A qualitative approach was used during the interviews and focus group. All audio was recorded and transcribed from the interviews, with the exception of the focus group, since all participants did not consent to this. Both researchers also took process notes during data collection. The interviews and focus group were conducted in English (interpreters were offered, but not necessary) in a community setting, according to community norms and customs. A second set of meetings with interviewees and focus group participants was held, at a later date, to review results and verify themes that emerged in the data analysis. No changes to the data were made following these additional meetings and the results related to indicators of wellbeing were verified by the participants.

Qualitative analysis. To ensure that the tool accurately reflected the participants' contributions, the most inductive approach possible was chosen. A combined approach of thematic analysis and grounded theory was selected to analyze the qualitative data. Grounded theory would necessitate that the researchers were free of preconceptions about the wellbeing of the Anishinabek children in the Robinson-Superior Treaty Area (Charmaz, 2014). As the researchers are heavily immersed in both clinical work and research with Indigenous peoples in Canada (including Anishinabek people in the Robinson-Superior Treaty Area), this was not possible.

The inherent flexibility, the opportunity to explore overarching patterns/themes, and the atheoretical nature of thematic analysis made it appropriate for the current project (Braun & Clarke, 2014). Further, the goal of this analysis was not to develop a comprehensive theory or framework based on the data, but to create items for the measurement tool based on the themes. The approach outlined by Clarke and Braun (2014) was utilized and has six steps: (1) familiarizing yourself with the data and identifying items of potential interest; (2) generating initial codes; (3) searching for themes; (4) reviewing potential themes; (5) defining and naming themes; and (6) producing the report.

Study II

Generating items. Based on the themes from Study I, a pilot version of the First Nations Children's Wellbeing Measure to assess the mental wellbeing of First Nations children was created.

Participants. From March 2017 to October 2017, mental health intake workers at the partner organization administered the First Nations Children's Wellbeing Measure to the parents or caregivers of 91 children (ages 4 through 18) who were referred for mental health services. Prior to administration, the workers read aloud a script to children's parents or caregivers and verbal consent was obtained. If the child referred for service was 16 years or older, they were able to consent independently. These 91 children formed the convenience sample for the quantitative analysis.

The sample was nearly evenly split between genders (50.5% male), while the average age of the sample was 9.7 years (*SD* = 6.42). The vast majority of the sample identified as First Nations; one child was identified as Caucasian.

Results

Scale Development

Indicators of wellbeing were derived from focus groups and interviews: Traditional Activities (*n* = 45), Physical Activity *(n* = 18), Expression/Communication (*n* = 17), Social Engagement (*n* = 17), Self-Worth/Value/Esteem (*n* = 16), Positive Role Models (*n* = 12), Healthy Appearance (*n* = 11), History and Culture (*n* = 11), Mental Health as All-Encompassing (*n* = 11), Support (*n* = 11), Healthy Home Environment (*n* = 11), Structure and Routine (*n* = 10), Connection (*n* = 9), Spirituality (*n* = 9), Coping Skills (*n* = 8), Smiling/Laughing (*n* = 7), Safety (*n* = 6), Healthy Community (*n* = 3), Stability (*n* = 3), Well-Behaved (*n* = 3), Cooperative (*n* =2), Creativity (*n* = 2), Positive Outlook (*n* = 2), Purpose (*n* = 2), Responsibility (*n* = 2), Following Values (*n* = 1), Helpful (*n* = 1), Independence (*n* = 1), Insight (*n* = 1), and Thinking Through Consequences (*n* = 1). Based on the indicators that emerged in analysis and expertise of the research team, the focus of items was limited to 11 themes, which are conceptualized as domains of wellbeing: Traditional Activities; Physical Activity; Expression and Communication; Social Engagement; Self-Worth and Self-Esteem; Positive Role Models; Healthy Appearance; History and Culture; Structure and Routine; Spirituality; and Coping Skills.

Traditional activities. Many of the participants focused on the importance of traditional activities, and cultural ways of being and doing across all facets of a child's life:

> *It's a traditional aspect, so when I see a child who is able to, say, go to a pow-wow and dance, whether you have regalia or not, there's a reason why you're doing that. Also, they're connected and they have respect for the Creator. They're thankful for what they have, whether it be, you know, having dinner with your family or, um… like, they're humble, also having respect for your animals and, um, the trees, those kind of things.*

This code was broken down further into several sub-codes: Teachings (sub-codes Balance and the Seven Grandfather Teachings), Ceremony, Crafts, and Land-based Activities.

Teachings. Participants described teachings as an all-encompassing philosophy and way of life, as opposed to a simple practice. One participant stated that through instruction in teachings and traditional activities, the children of the community are "learning who they are as Anishinaabe kids".

Another participant spoke about how teachings are often not transferred from parents to children:

> *Sometimes our basic principles of life aren't taught on a day-to-day basis when you're living in crisis, because it's more important to… to wonder what we're going to eat today, because that's the sad reality is that we don't all have food in our cupboards on a day-to-day basis.*

Balance. The medicine wheel and the balance of the physical, mental, emotional, and spiritual domains of oneself was often brought up by participants:

> *We've done this with our kids where we've printed out blank medicine wheels. OK, how does your wheel look? If… if one of your wheels is… there's not a lot into it that… we look at it like a flat tire where you're stuck in the mud, and it may not feel like a big deal but it is; because if we're unbalanced, physically, mentally, emotionally, spiritually, we… we… we'll always be stuck until your… your circle is balanced, and that circle needs to go all the time, because every stage of our life we're learning something and we're not meant to stay idle.*

Seven Grandfather Teachings. Participants noted that the Seven Grandfather Teachings are utilized to ensure that children learn skills necessary for success in life: "Well, there are… our Seven Teachings says it all. Um, that's the ones that I… I use when teaching my kids life skills".

Respect. One participant highlighted that, "I think respect is the big one". Another also discussed not only respect for others, but respect for the self:

> *Um, respect is a big one, but it's not only, um, for other people. I think more importantly it's for yourself, and they need to… they need to know that how important they are and they need to… I guess they need to feel respected, um, in order to give that respect to other people.*

Humility. The importance of humility was emphasized as a key factor in maintaining relationships:

> *You know, those values right there I think should be embodied by… by everyone. You know, to me, I… when I think of the Seven Grandfather Teachings, I just… I think it's like kind of a set of values of how to treat other people; you know, by having that humility.*

Ceremony. This theme was viewed by participants as essential in the facilitation of personal growth: "And to go out and then do that ceremony and for them to receive their name, and… and then that's their foundation. That's their foundation that's going to build them into these strong men and women".

Ceremony was also noted in relation to the connection it provides to both culture and other community members:

> *For me, a healthy child is a child who is following their rites of passage. That… that's going to keep them balanced. Don't skip the important things. Teach their… teach their mothers the importance of keeping that placenta and doing that welcoming ceremony, like what… to be right in your family, but… and it's beautiful. When you see that baby being passed around from individual to say, you know what, I will be there when you want this drum, I… I will teach you your language. And going around, because that's the old ways and… and also remind us that it's not just mom and dad's role to look after this child, it's the community's role and it's the family role. And if mom and dad know that, it… it's easier to ask for help, right…?*

Crafts. Participants spoke about traditional crafts as a simple activity to teach children about their culture and also maintain cultural ways of being and doing: "… So we're trying to get people to come out and share that… with the younger kids because otherwise that's how things get lost… So we'll do that."

Land-based activities. Participants were able to explain that participating in land-based activities is not an important cultural practice, but also vital for wellbeing:

> *I mean, I find if you're outside, you feel better; you're… you know, there's less stress, there's… I think the bush is a great healing tool, but, uh, there's… you can always go out and find something new and learn something new, and… and that's, uh… it's a place to be, um, open and honest and free and it's a safe place…*

They also reported that children are able to succeed when they are connected to the land: "We always know that our children work best when they're… when we bring them into the bush. There's something about the land or there's something about the water, and they don't have enough of that".

Physical activity. Physical activity, and often organized sports, was frequently discussed by participants: "Sports in my community is a big one is sports, very, uh, competitive, um, right from baseball, hockey."

Expression and communication. Participants noted that children who can express and communicate their thoughts and feelings, particularly to adults, were considered to be well:

> *That child who can cry; that child that can tell you, you hurt my feelings; that child that said I don't like when you yell at me; that child that says I had a really good day today. To have that emotional vocabulary and to be able to communicate… yeah, and to speak of it, right, or to say I think I need… again, like I think I need to smudge; or, Mom, I think I need tea; Mom, can you make me some cedar tea because I'm struggling right now? That's an emotionally healthy child.*

Social engagement. Participants explained that, "If you have someone very outgoing and smiling and happy and positive, they're in balance", referring to the coordination of the four domains of physical, mental, emotional, and spiritual wellness. They also spoke of social engagement as a simple method to a child's wellness:

If they're out there, um, laughing and they're having a good time, you definitely know they're healthy. Uh, and yet kids that sit back and don't want to be involved and just don't have the energy, I guess, to do anything, then you know there's a problem, for sure.

While comfort level in social situations differs from child to child, one that is socially engaged is considered to be emotionally healthy and well:

They tend to be a little bit more outgoing or interactive or… or, um, some kids are naturally shy and that's… there's nothing wrong with that; but, um, I find kids that are not as emotionally healthy are… are more shy or they're introverted, they… you know, they don't want to be noticed, they don't want to… they don't want to be involved so…

Self-worth and self-esteem. Participants explained that a child is well if "he's just going out to play and he carries that confidence, that… and he's not worried about what the rest of the world is going to think", and if they are "comfortable [with] who they are". This behaviour is indicative of a sense of self-worth and self-esteem.

Positive role models. According to participants, children in their communities learn traditional activities through their positive role models (e.g., parents, grandparents, teachers, extended family members, elders):

It could be parent… parents, whether it's their parents, their grandparents or role models, um, through different things; through school, they learn that at school; they learn that at church; they learn that at pow-wows. There's always like pow-wows, there's always little teachings. Uh, stuff is taught… is taught like that through school. Um, I know for us, we do youth programming, and, uh, the youth programming is done in, uh, my community as well, so you learn from there. You learn from the elders and the traditional resource people.

Additionally, a broader definition of family (including positive role models) was also connected to the transmission of cultural values:

Um, it is important to have values, and you learn the values from your family. Um, I would say are, um… a lot of families learn their values from their teachers, right, or… or their family members, extended, um, the elders in the community; they will teach the kids, you know, respect and, um… it all comes from their traditional teachings.

Healthy appearance. Participants also noted that observers are able to determine a child's wellness by their appearance: "They have energy. You can tell by their skin, their hair, their teeth, just their physical appearance, um, and they're not tired". This construct appears to be related to not only self-care and hygiene, but also demeanor: "A healthy child would be one that… that would wake up and smile, be happy, sing, um, skip, no worries in the world, um, bright complexion, um, nice shiny teeth, um, just being how that… that at that age is supposed to be…"

History and culture. Participants' described children as being well when they engaged with their First Nations culture as a lifestyle as opposed to a standalone practice:

Um, it's one thing to learn your traditional ways, but it's… it's another to be able to incorporate it into everything that you do. If you're going to incorporate it into everything you do, you have to live it every single day and it's a huge, huge commitment.

Structure and routine. Participants described structure and routine, which provides a foundation for good habits to grow from, as an essential aspect of a child's wellness:

I think structure has a lot to do with it. If you don't have those structures, it's like any… anything you look at, if… if you don't have a good foundation, everything else will just not be there. It'll be crooked or it'll be unstable or some way or another. Like if… if you build a house or you build a car or anything that you build, it's got to have a good foundation.

Participants also noted that providing structure is often challenging for caregivers in their community because "a lot of families live in…day-to-day crisis is… is a norm for them…so …they don't understand personal boundaries".

This lack of structure also impacts a child's capacity to engage with their community and learn important values:

In my community, like… like they just run free like pretty much. There's no structure, right? So there's no real teaching of volunteer and what it means and, uh… and things like that, because I mean basically these kids are raising themselves... Just like I said, again, structure… structural-wise, right, taking care of yourself, uh, being home on a… at a reasonable time, and like there's nothing there.

Spirituality. When participants spoke about spirituality, they did not refer to a specific belief system, but rather the "sense or that understanding that there is something greater than oneself". This was contrasted with statements regarding specific practices, including those around First Nations beliefs.

Coping skills. Participants identified that children who are "able to handle some sort of crisis on their own and do it independently" are well. When a child is well they are also able to "learn that your… the sad and the losses that you do encounter are… are out there, right? But now you got to find the tools to overcome those… those, uh, losses and… and take the positives from them".

Quantitative Analysis

Suggestions from two senior graduate students with expertise in Indigenous mental health and two mental health workers were utilized to generate the next version of the questionnaire in which 29 items were retained. This version was used in the principal components analysis. All skewness statistics were within the acceptable range. One item was identified as being high in kurtosis. This item was regarding the child's ability to dress themselves; as all children in the sample were above the age of 6, and dressing oneself is an age-appropriate skill, this kurtosis was expected.

A principal components analysis was conducted to determine the underlying structure of the pilot measure. The dataset featured a ratio of 3:1 participants to items, and was therefore determined to be suitable for principal components analysis according to recommendations by Norman and Streiner (2008). The Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity values were acceptable (Pallant, 2013). Five components with eigenvalues greater than one were detected, but following examination of the scree plot, it became evident that a three-factor model was most appropriate. Prior to running additional analyses, one item that did not load onto any of the three factors was removed from analyses. A total of 58.8% of variance was accounted for by the three-factor solution, with each factor contributing 39.9%, 12.4%, and 6.5%, respectively (see Table 1).

Table 1. Factor Loadings of the Principal Components Analysis

Factor 1	Factor 2	Factor 3
2. Respects themselves 3. Respects others in the community 5. Is truthful 6. Shows humility 7. Congratulates and celebrates others' successes 8. Does what is right, despite consequences 9. Shows love for friends/family/caregivers 12. Thinks carefully before acting 14. Keeps promises that they make 22. Expresses/vocalizes/communicates their feelings and needs (to caregivers) 23. Refrains from saying or doing things that will upset others 39. Takes care of themselves (physically; e.g., brushes teeth, bathes, dresses themselves) 25. Listens when being talked to 50. Has healthy coping skills to manage emotions 51. Identifies emotions that they are experiencing	1. Abides by/has experience with/has instruction in/has mentorship in the seven grandfather teachings 15. Attends traditional ceremonies and activities (ex. smudging, sweat lodges) 34. Knows what community they are from 35 Knows their spirit name or clan 43. Demonstrates an understanding of their First Nations history and culture 44. Explores their First Nations culture and history 45. Understands, speaks, or is interested their First Nations language 49. Demonstrates spirituality	33. Has pride in who they are 38. Has positive adult role models 17. Likes being on the land 18. Participates in physical activity, through formal or informal means (ex. playing in an organized sports league or playing outdoors) 27. Plays appropriately with friends the same age (cousins, at school, in the community)

Scale statistics. Scale statistics for each of the three factors were also examined using the threshold of .700 suggested by Nunnally (1978). For Factor 1 (General Wellbeing), internal consistency was very high (Cronbach's alpha = .950). Inter-item correlations between items were generally satisfactory, however 12 of the correlations were above the acceptable range (.25 to .65), ranging from .653 to .776. Upon further investigation, the majority of these correlations were quite close to the top end of the acceptable range (i.e., within .10 of .65). Removal of items with high inter-item

correlations did not improve Cronbach's alpha for the scale, therefore these items remain on the scale. The internal consistency of Factor 2 (Traditional Activities) was also high (Cronbach's alpha = .884) and included five inter-item correlations to be above the acceptable range. Results showed that Cronbach's alpha could be slightly improved (by .02) with the removal of one item ("Knows what community they are from"). Based on inspection of the inter-item correlations and corrected item-total correlation for this item (which yielded acceptable results), and the subtle differences that this item may detect compared to similar items, such as "Knows their spirit name or clan" or "Demonstrates an understanding of their First Nations history and culture", the decision was made to retain the item. Internal consistency was adequate (Cronbach's alpha = .762) and inter-item correlations for Factor 3 (Social Engagement) were acceptable, with the exception of the correlation between the items "Likes being on the land" and "Has positive adult role models" being slightly low (r = .234). Examination of the corrected item-total correlations yielded acceptable results for all items and it was determined that the removal of any item would not improve internal consistency, therefore all items were kept on the scale. The three factors derived from these analyses were related to General Wellbeing (Factor 1), Traditional Activities (Factor 2), and Social Engagement (Factor 3).

Factor 1 (General Wellbeing). Factor 1 has been designated as the General Wellbeing factor. The largest number of items (15) loaded onto this factor. As the majority of items that were developed from a Western lens and Western understanding of wellbeing loaded onto Factor 1, the research team anticipated that this factor would be highly correlated with all subscales of the Child and Adolescent Needs and Strengths measure (CANS; with the exception of the Family/Caregiver Needs subscale; Lyons et al., 1999).

Factor 2 (Traditional Activities). A total of eight items related to spirituality and First Nations tradition and culture from the First Nations Children's Wellbeing Measure (FNCWM) loaded onto Factor 2, which was subsequently labelled Traditional Activities.

Factor 3 (Social Engagement). Five items loaded onto Factor 3. Upon examination of the items, this scale was labeled Social Engagement; items related to physical activity, positive adult role models, and pride.

Convergent validity. The CANS (Lyons et al., 1999) was chosen to establish convergent validity of the new measure due to its psychometric properties (Anderson et al., 2003; Lyons et al., 1999). It has also been validated for use across cultures (including Indigenous Canadian cultures) and with children residing in rural communities (Kowatch, 2017; Moore & Walton, 2013). All six subscales of the CANS were utilized: Mental Health Needs; Risk Behaviours; Family/Caregiver Needs and Strengths; Functioning; Care Intensity and Organization; and Individual Strengths. The correlations for Factors 1 (General Wellbeing) and 3 (Social Engagement) were significant (at both $p < .05$ and $p < .01$ levels) and negative (with a range of r = -.224 to r = -.552), demonstrating that children with greater identified needs (according to the CANS) were also likely to have lower wellbeing scores (on the FNCWM). The relationship between the Individual Strengths subscale of the CANS (which is reversed-coded) and Factor 2 (Traditional Activities) was negative, as predicted. This indicated that a child who was more engaged in traditional activities and culture also possessed more strengths (both related to culture and not). The correlation between the CANS Functioning subscale and Factor 2 was negative, and trending towards significance (p = .081). The other CANS subscales (Mental Health, Risk Behaviours, Family/Caregiver Needs and Strengths, and Care Intensity) were not correlated with Factor 2. This lack of relationships may be due to many factors, including the wide range of disorders (including disorders understood to be more organic [e.g., psychosis] and those that can be highly influenced by environmental factors [e.g., anxiety or depression]) evaluated by the Mental Health subscale, and the infrequent endorsement of the Risk Behaviours subscale (leading to a floor effect). Further, the CANS Family/Caregiver Needs and Care Intensity subscales were not related to Factor 2, because a child's participation in traditional activities likely has little impact on their parents' abilities to care for them. Overall, the use of the FNCWM in the assessment of the wellbeing of First Nations children in the Robinson-Superior Treaty Area is supported by the convergent validity results.

Discussion

The present study created a measure of mental wellbeing for First Nations children, by first identifying indicators of wellness using a community-based participatory research approach. We generated items derived from indicators obtained through community interviews, utilized principal components analysis to create three scales, and assessed the convergent validity of this measure with a previous established measure of needs and strengths (CANS; Lyons et al., 1999). The most commonly identified indicator of wellness for First Nations children was related to

engagement in traditional activities. Among the 216 wellness coded responses provided by participants, 22% of indicators ($n = 45$) related traditional activities.

The inclusion of traditional activities within a measure of children's mental wellbeing is a unique contribution to previous research of Indigenous wellness, resilience, and mental health. Within these bodies of literature, traditional activities have been described as very important to the wellbeing of Indigenous children and adults, however, this study represents one of few attempts to psychometrically measure engagement in these activities. Although there are many other measures of children's strengths, areas of needs, and wellness available to date, few have been designed using a community-based participatory approach, grounded using a inductive scale developmental process that was guided by a research advisory. Although Factor 1 (General Wellbeing) and Factor 3 (Social Engagement) of the FNCWM included many items similar to existing measures of child wellbeing, the major contribution of the FNCWM to the field relates to Factor 2 (Traditional Activities). Such processes may improve the cultural representativeness of the measure for First Nations children and may increase the utility of it, particularly compared to other measures available at this time.

This study is a preliminary attempt to identify how specific facets of engagement in traditional activities can affect the wellbeing of Indigenous children, and thus can potentially broaden present day conceptualizations of resilience among Indigenous children and families. By creating the FNCWM, we have proposed a preliminary framework of traditional activities that communities have identified contribute to mental wellbeing, but ultimately, may also be used as a measure to identify protective factors in promoting overall wellness, and resilience for Indigenous children and youth. Facets of this scale have aligned with cultural conceptualizations of children and youth resilience, including having a positive cultural identity, and connectedness to family, culture, and land. For example, Bombay et al. (2010) found that pride related to First Nations identity was a protective factor against the effect that perceived discrimination has on depressive symptoms in adults. In their systematic review, Young et al. (2017) found that in 78% of included studies, Indigenous children with high self-esteem and/or identified with their own culture experienced better mental health outcomes and were more resilient. Therefore, the FNCWM item "Has pride in who they are" has important implications for health and wellbeing for Indigenous peoples. These facets of the FNCWM align closely with existing Indigenous-specific measures of resilience (Jongen et al., 2019), however also uniquely captures experiences related to mental wellbeing for First Nations children. The specialization of this tool can help inform how specific aspects of the medicine wheel (physical, mental, emotional, and spiritual wellbeing), can contribute to broader definitions of resilience. In studies of both Canadian adults and children, experiences of discrimination are related to poor physical and mental health outcomes (Pascoe & Smart Richman, 2009; Siddiqi et al., 2017; Young et al., 2017). If a positive view of one's self can buffer against these experiences of racism and discrimination, then fostering a child's self-perception (across several domains) may be considered to be an effective physical and mental health intervention, and can be protective factor to Indigenous mental wellbeing and/or resilience promotion.

The current scale also used culturally-relevant conceptualizations of components previously identified within children's wellness and resilience literature. For example, one item on the FNCWM asks about any positive adult role models in the child's life, not simply parental figures. This use of this broad language reflects the importance of many community members in a child's life and the wider definition of family for many Indigenous people (Assembly of First Nations & Health Canada, 2015; McShane & Hastings, 2004). The positive adult role models reflected in the scale item "Has positive adult role models" may provide an additional source of connection to culture, thereby enhancing self-pride (referenced in item 33) and also engagement with the indicators assessed in Factor 2 (Traditional Activities). Stuart and Jose (2014) found that high family connectedness was predictive of higher wellbeing in Indigenous Māori youth, regardless of the family structure (e.g., one-parent versus two-parent families). This finding may provide clarification regarding the relevance of the item "Has positive adult role models" to the wellbeing of First Nations children. In the Stuart and Jose (2014) study, family connectedness was not only conceptualized as a source of support (as is in majority culture), but also the vehicle by which cultural knowledge and activities are shared. Dockery (2020) also found that the children of Māori parents who placed an emphasis on passing down pride regarding Indigenous identity and knowledge of family history had better developmental outcomes.

Study Limitations and Future Directions

Based on the results, further examination of the FNCWM is warranted. The measure was revised prior to and after data analysis and will now include 28 items that load on three scales: General Wellbeing, Traditional Activities, and Social Engagement. Collection and analysis of additional quantitative data using this revised measure will provide added support for implementation. Additional exploratory principal components analysis and, following that, a

confirmatory principal components analysis should be conducted with more participants. Unfortunately, the sample size of this study ($n = 91$) was not large enough to utilize this design. Reanalysis of the convergent validity correlations with a larger sample may also be important, as some of these correlations were slightly low. Considering the uniqueness of the Traditional Activities factor, evaluation of the integration of only this scale may yield interesting results. This usage is supported by the psychometric properties of the scale.

Le Grande et al. (2017) identified the dearth of measurements designed for use, specifically, with Indigenous populations as a major contributor to the lack of evidence in relation to Indigenous mental health and relevant interventions. The measure created within the current project can be utilized for both clinical purposes, but also to conduct research with the ultimate goal of closing this evidence gap. Further research can explore the clinical utility of the FNCWM by assessing usability, feasibility, and preliminary efficacy of the measure with specific First Nations and service providers. Such research can explore the utility of the measure across various contexts.

Conclusion

The findings of this study augment the existing literature regarding the wellbeing of First Nations children. Involvement in traditional activities and engagement in culture were cited as fundamental indicators of wellbeing of First Nations children, which is consistent with the majority of the literature. The instrument that was created and evaluated represents one of few valid tools available to assess this. A community-based participatory research approach was utilized throughout the entirety of the project; this included a research advisory that oversaw the project and directed the development of the measure. To ensure that the needs of the clients, families, and organization were being fully explored and met, a range of research methods were used.

Overall, the relational nature of the items differs from the measures of child wellbeing that are currently available and reflects Indigenous conceptualizations of wellbeing, as well as recommendations from the Canadian Psychological Association regarding assessment (Assembly of First Nations & Health Canada, 2015; CPA, 2018). The FNCWM can also be used to identify facets of resiliency or weaknesses that a child may be experiencing, so that treatment can be directed appropriately. Lastly, the FNCWM can be utilized in further research efforts by the organization to ensure that their programs and services are effectively meeting the needs of children, families, and communities, and address the current evidence gap with regards to the wellbeing of Indigenous people in Canada.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Exploring the Prospective Role of Relationships and Psychological Distress in Postpartum Risk of Intergenerational Continuity of Child Maltreatment

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Abstract

Objectives: This prospective longitudinal study aimed to explore the role of family relationships (romantic satisfaction and mother-infant bonding) and psychological distress in the associations between four child maltreatment (CM) subtypes (sexual, physical, and emotional abuse, neglect) and early child abuse potential in young mothers.

Methods: A sample of 85 pregnant mothers (18-29 years old) was recruited to complete an online survey at Time 1 (T1); 57 mothers participated at T2 (3 months postpartum). The survey documented experiences of CM, prenatal romantic satisfaction, postnatal psychological distress, mother-infant bonding, and child abuse potential using validated questionnaires.

Results: Four sequential mediation models were tested, one for each CM subtype. Results show that a maternal history of CM (all subtypes) was indirectly associated with heightened child abuse potential three months postpartum. All CM subtypes were negatively related to prenatal romantic satisfaction, which was in turn negatively associated with postnatal psychological distress. Postnatal psychological distress was related to lower mother-infant bonding which, in turn, was related to increased child abuse potential. The complete sequential model was significant for physical, sexual, and emotional abuse, while a partial sequence was identified with neglect.

Implications: Our results are consistent with theoretical models and empirical findings demonstrating the importance of relational factors and mental health in the intergenerational continuity of CM. While our findings await replication, they emphasize the need to intervene early - during the perinatal period - on mental health and family relationships to interrupt intergenerational cycles of CM in at-risk families.

Keywords: Intergenerational continuity; child maltreatment; psychological distress; romantic satisfaction; early attachment.

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Introduction

Child maltreatment (CM; physical, sexual, and emotional abuse, neglect, exposure to partner violence) is a highly prevalent public health concern experienced by a quarter to a third of adults in high-income countries (Afifi et al., 2014). CM represents one of the greatest threats to positive adaptation throughout the lifespan as it has been associated with many short- and long-term psychological and physical health problems, including depression, anxiety, posttraumatic stress, substance abuse, sexual dysfunctions, obesity, diabetes, and chronic pain (Gilbert et al., 2009; Leeb et al., 2011; Vachon et al., 2015). CM is also associated with relationship functioning, including insecure attachment patterns in childhood (with parents) and adulthood (with romantic partners and one's own children), a greater risk of peer victimization, and lower social support and satisfaction in romantic relationships (Cyr et al., 2010; Goemans et al., 2021; Marshall et al., 2022; River et al., 2020). Therefore, the prevention of CM and the efficient treatment of the associated consequences is highly relevant to ensuring resilient functioning and positive relationships in affected individuals. Furthermore, as CM tends to show intergenerational continuity, wherein parents with a history of CM are at greater risk of having a child who will also suffer CM (Berzenski et al., 2014; Langevin et al., 2021), documenting risk and protective factors involved in this intergenerational continuity appears essential. As stated by Sperlich et al. (2017), "Pregnancy is a crucial point of intersection between generations during which cycles of childhood maltreatment and psychiatric vulnerability are transmitted" (p. 379). Therefore, the perinatal period appears particularly relevant for studying mechanisms underlying the intergenerational continuity of CM. Thus, in line with theoretical models and past empirical findings on this phenomenon (Langevin et al., 2021; Marshall et al., 2022), the present longitudinal study aimed to explore the prospective role of family relationships (i.e., prenatal romantic satisfaction and early mother-infant bonding) and postpartum psychological distress in the associations between four CM subtypes (i.e., sexual, physical, and emotional abuse, neglect) and early CM potential in young mothers.

Intergenerational continuity of child maltreatment

The exact prevalence of the intergenerational continuity of CM remains unknown, as studies have found rates ranging from 7 to 88% depending on the design, the sample, the CM subtypes considered, the measures used (e.g., retrospective self-report, official records), and other methodological characteristics (see Langevin et al., 2021 for a review). One of the most rigorous studies currently available documented the intergenerational continuity of reported CM in the five years following childbirth using a populational birth cohort of teen mothers from California (Putnam-Hornstein et al., 2015). This study found that children of teen mothers with childhood histories of substantiated and unsubstantiated reports of CM were more than twice as likely to have child protection services involvement than their peers born to teen mothers without such histories (44.1% for substantiated CM; 35.9% for unsubstantiated CM; 17.4% for mothers without CM histories). While further studies are necessary to confirm the exact rates of CM continuity, its existence is not debated among experts and studies aiming to better understand its underlying mechanisms are essential.

A recent systematic review of theoretical models used to explain the intergenerational continuity of CM, specifically victim-to-victim cycles of CM wherein the maltreated parents are not the perpetrator of their child's abuse, highlighted that the impacts of CM on individuals' neurobiology, attachment representations, and mental health, as well as the subsequent influence of these factors on parenting and the familial environment (e.g., socioeconomic factors), might be key mechanisms of continuity (Marshall et al., 2022). A systematic review of the psychosocial risk and protective factors involved in the intergenerational continuity of CM (victim-to-victim and victim-to-perpetrator cycles) shows that empirical findings tend to confirm these theoretical pathways (Langevin et al., 2021). Indeed, the most documented factors across studies were those related to maternal mental health (e.g., anxiety, depression), maternal age, and the quality of the relationships that mothers have with their romantic partners and children. Specifically, Dixon and colleagues (Dixon, Browne, et al., 2005; Dixon et al., 2009; Dixon, Hamilton-Giachritsis, et al., 2005) demonstrated that a history of mental illness and substance use was associated with a heightened risk of intergenerational continuity of CM in mothers of newborn infants. Similarly, Yang et al. (2018) found that the association between maternal history of childhood neglect or physical abuse and mothers' perpetration of physical abuse was mediated by their depressive symptoms. As a final example, Grunsfeld (2018) indicated that maternal mental health and problematic substance use were associated with the intergenerational continuity of child sexual abuse in early-to-middle childhood.

Conversely, several empirical studies documented the protective role of relational factors. Conger et al. (2013) found that warmth and positive communication between the parents or the parent and their romantic partner was protective against the intergenerational continuity of harsh parenting. Egeland and colleagues (1988) report that

positive, satisfying, and stable relationships between the mother and her romantic partner, in addition to emotional support from the partner, acted as a buffer against the intergenerational continuity of CM in the first years of life. The protective effect of positive inter-adult relationships was also noted by Thornberry and Henry (2013). In addition to this protective effect of positive adult relationships, Jaffee and al. (2013) documented the protective role of maternal warmth. Similarly, Thornberry et al. (2013) noted that positive intimate relationships between adults were protective factors, as were positive adult-child relationships, attachment to the child (e.g., enjoying the child, getting along, being proud), and satisfaction with parenthood. Taken together, past findings and theoretical models support the notion that the impact of CM on individuals' mental health and ability to form positive relationships with their romantic partners and children is central to understanding the intergenerational continuity of CM.

Current study

The available literature on the intergenerational continuity of CM is limited in many ways, such as a lack of prospective longitudinal studies, the consideration of single CM subtypes or of a few subtypes only, the secondary use of data originally collected for other purposes, and the use of unvalidated measures (Langevin et al., 2021). Furthermore, few studies have used path models to examine the pathways underlying the association between a history of CM in mothers, relational and mental health variables, and second-generation's CM. To fill some of these gaps, this longitudinal study aimed to explore the prospective role of family relationships and psychological distress in the associations between a history of physical, sexual, and emotional abuse or neglect and postpartum child abuse potential in young mothers. A recent study by River et al. (2020) demonstrated that the lower romantic satisfaction of adults with a history of CM mediated the association between CM and prenatal mental health symptoms. Furthermore, maternal mental health problems, in addition to being associated with a higher risk of CM (Ayers et al., 2019), have been shown to negatively impact early mother-infant bonding in many studies (Tichelman et al., 2019). Thus, the current study aimed to test a model wherein romantic satisfaction during pregnancy, postpartum psychological distress, and early mother-infant bonding sequentially mediated the associations between abuse and neglect in mothers' childhood and early child abuse potential. We expect that a history of CM will be associated with lower prenatal romantic satisfaction, which will be related to higher postpartum psychological distress, which, in turn, will be associated with lower mother-infant bonding. Finally, this lower bonding will be associated with greater child abuse potential. Material deprivation was used as a control variable as low socioeconomic status is a known risk factor for the intergenerational continuity of CM (Langevin et al., 2021), as well as psychological distress (Lepièce et al., 2015), and poor attachment quality (van IJzendoorn & Bakermans-Kranenburg, 2010).

Method

Participants

A sample of 98 pregnant women was recruited in 2020-2021 across Canada through postings on social media and community locations serving vulnerable mothers from a metropolitan area. Participants were included if they were between 18 and 29 years old and at least 16 weeks pregnant. Relatively young mothers (national average age at first child's birth is around 28 years old; Statistics Canada, 2014) were targeted in the hopes of obtaining a more homogenous and at-risk sample (e.g., lower socioeconomic background, higher CM rates) (Langevin et al., 2021; Roode et al., 2017). As another strategy to recruit an at-risk sample, our recruitment ads mentioned our interest in understanding the impact of difficult experiences in childhood. Furthermore, being at least 16 weeks pregnant increased the likelihood that participants initiated prenatal care and reduced the risks of miscarriages after entering the study (less than 1% of miscarriages occur after 16 weeks of gestation) (Mukherjee et al., 2013). Participants were excluded if they 1) did not reside in the target areas for recruitment ($n = 2$); 2) did not meet our inclusion criteria for age or weeks pregnant ($n = 3$); or 3) displayed careless responding of completion ($n = 8$; e.g., completed the survey in less than half the modal time; i.e., modal time = 18 minutes) and incorrectly answered two out of three attention check questions (e.g., "Did you select *often* to show that you're paying attention?"). The final sample at Time 1 (T1) was composed of 85 participants.

Participants were again solicited three months after their due dates for the follow-up survey (T2); 57 mothers completed T2 for a retention rate of 67%. Thus, the sample for the current analyses included 57 mothers. On average, participants completed the T2 survey 184 days (approximately 6 months) after T1 (range from 93 to 334 days - approximately 3 to 11 months). At T1, participants with complete data did not differ from participants who dropped out on age ($t(86) = -1.88$, $p = .06$), ethnicity ($\chi^2(6, N = 87) = 1.85$, $p = .93$), education ($\chi^2(4, N = 88) = 9.20$, $p = .06$), occupation ($\chi^2(6, N = 88) = 6.38$, $p = .38$), family status ($\chi^2(3, N = 87) = 3.27$, $p = .35$), family income ($\chi^2(6, N = 85) = 7.12$, $p = .31$), material deprivation ($t(85) = 1.51$, $p = .14$), CM scores (neglect: $t(85) = 1.71$, $p = .09$; physical abuse: $t(85) = -0.06$, $p = .95$; emotional abuse: $t(85) = 0.04$, $p = .97$; sexual abuse: $t(85) = 0.145$, $p = .89$), and psychological distress ($t(85) = 1.96$, $p = .05$). However, participants with complete data presented higher romantic satisfaction ($t(83) = -2.65$, $p = .01$; $M = 16.66$ vs. 14.72) and were more advanced in their pregnancy at T1 ($t(85) = -3.57$, $p = .001$; $M = 27.78$ vs. 22.77 weeks) than participants that discontinued their participation - which reduced the delay between T1 and T2.

Participants all identified as women. At T1, 54 of them (96.4%) reported being in a relationship with a man and two in a relationship with a woman (3.6%). One participant declined to answer this question. The other sociodemographic characteristics of participants are presented in Table 1. Most participants identified as White, had a university-level education, worked either full- or part-time at T1, and were still in a relationship with their child's other parent at T2. The annual family incomes were distributed with approximately 50% reporting incomes under $60,000 CAN. As a reference, the low-income cut-offs for 2021 for families including three to five members were between $40,444 and $55,594 annually (Statistics Canada, 2022). Half the participating mothers were having their first child at the time of their involvement in the study. Finally, rates of CM were relatively high in this sample, and 40.4% of mothers scored in the moderate- or high-risk range for child abuse potential (see Table 1).

Table 1. Sociodemographic characteristics of participants with T1 and T2 data ($n = 57$)

Characteristics	*M* or *n*	*SD* or %
Age in years (T2)	26.14	2.34
Weeks pregnant (T1)	27.78	6.85
Number of children		
First pregnancy	28	49.1
More than one child	29	50.9
Infant age in months (T2)	3.00	0.32
Ethnicity (n = 56)		
White	44	78.6
Black	2	3.6
Indigenous	4	7.1
Asian	2	3.6
Mixed	2	3.6
Other	2	3.6
Education (T1)		
Elementary school or less	1	1.8
High school	13	22.8
Pre-university or professional school	3	5.3
Undergraduate	34	59.6
Graduate	6	10.5
Occupation (T1)		
Working full-time	25	43.9
Working part-time	8	14.0
Unemployed or fulfilling domestic tasks	13	22.8
Student	7	12.3
On leave	4	7.0
Family status (T2)		
With the parent of their child(ren)	43	75.4
With the parent of one of their children	12	21.1
Separated or divorced	1	1.8
Other	1	1.8
Annual family income (T1) (n = 55)		
< $20,000	5	9.1
$20,000-$39,999	10	18.2
$40,000-$59,999	12	21.8
$60,000-$79,999	5	9.1
$80,000-$99,999	10	18.2
$100,000-$119,999	5	9.1
≥ $120,000	8	14.5
Child maltreatment (yes)		
Neglect	28	49.1
Physical abuse	34	59.6
Emotional abuse	33	57.9
Sexual abuse	26	45.6
Child abuse potential		
High risk	16	28.1
Moderate risk	7	12.3
Low risk	34	59.6

Procedures

All measures were collected online via the secure platform Qualtrics. After participants provided their consent, they were directed to the T1 questionnaires, which took approximately 30 minutes to complete. Participants were sent a personalized email invitation three months after their due date to complete the T2 consent and survey (approximately 20 minutes). A unique participant identification number was used to match T1 and T2 data. After completing T2, participants received a $30 gift card. The present study obtained ethical approval from the Research Ethics Board at McGill University (REB File #108 0719). Mothers were provided with a list of resources at the beginning and end of the survey given the sensitive topics covered.

Measures

Sociodemographic characteristics. The sociodemographic characteristics of participants were collected at T1 (e.g., education, income, ethnicity, age, gender, family status) and T2 (e.g., family status, age, partner gender) using forced-choice and open-ended self-report questions. Mothers also completed the *Canadian Survey of Economic Well-Being – Index of Material Deprivation* (Statistics Canada, 2013), a 17-item measure assessing one's ability to afford basic necessities. This survey is an appropriate measure for most of the Canadian population (Rheault & Crespo, 2015). Participants answered yes or no to statements such as "Can you afford to pay your bills on time?" and "Can you afford to buy some small gifts for family or friends at least once a year?". A continuous sum score reflective of the number of unmet needs was calculated (α = .83); a higher score reflects higher material deprivation.

History of child maltreatment. CM (before the age of 18) was self-reported at T1 using the *ISPCAN Child Abuse Screening Tool* (ICAST; 5 items assessing physical/supervisory neglect; ISPCAN, 2015) and the *Early Trauma Inventory Self-Report – Short Form* (ETI-SR-SF; 5 items for physical abuse; 5 items for emotional abuse; 6 items for sexual abuse; Bremner et al., 2007). The ICAST was elaborated through a Delphi study and field-tested; internal consistencies were moderate-to-high (α = .61 to .82) (Dunne et al., 2009). The ETI-SR-SF is a validated measure with adequate internal consistencies in the development sample (α = .78–.90; Bremner et al., 2007). Sample items are: "Have you ever not been given food to eat and/or drink even though your parent(s) or caretaker(s) could afford it?" (neglect), "Were you ever pushed or shoved by a parent or caregiver?" (physical abuse), and "Did anyone ever have genital sex with you against your will?" (sexual abuse). Participants responded in a yes/no format, and a count score ranging from 0-5 or 0-6, reflective of the number of maltreating/neglectful acts endured, was computed for each CM subtype. A dichotomous score was also computed and participants checking yes on at least one of the items were considered to have endured that subtype of CM in their childhood.

Dyadic adjustment The *Dyadic Adjustment Scale - 4* (DAS-4; Sabourin et al., 2005), a validated abbreviated version of the original 32-item DAS, was used to assess mothers' romantic satisfaction at T1. Mothers answered on a 6-point Likert scale ranging from *all the time* to *never* for the first three questions (e.g., "In general, how often do you think that things between you and your partner are going well?"). The last question asks participants to describe their degree of happiness in their relationship with choices ranging from *extremely unhappy* to *perfect*. A sum score ranging from 0 to 21 and reflecting increasing levels of satisfaction was calculated (α = .69).

Psychological distress. Mothers' psychological distress was assessed at T2 using *the Psychiatric Symptom Index* (PSI; Préville et al., 1992), a validated 14-item self-report measure assessing irritability, depression, anxiety, and cognitive symptoms in the past week (e.g., "Did you feel bored or have little interest in things?", "Did you feel easily annoyed or irritated?"). Symptoms are rated on a 4-point Likert scale ranging from *never* to *very often*. A global score of psychological distress (0-100) was computed (α = .93); higher scores reflect higher levels of distress.

Early mother-infant bonding. The 19-item *Maternal Postnatal Attachment Scale* (MPAS; Condon & Corkindale, 1998) was used to assess mothers' early feelings of bonding with their infant at T2. Three subscales are derived from this instrument: 1) Quality of Attachment (9 items; e.g., "Over the last 2 weeks, I would describe my feelings for the baby as: dislike, no strong feelings, slight affection, moderate affection, or intense affection" and "I now think of the baby as: very much my own baby, a bit like my own baby, or not yet really my own baby"); 2) Absence of Hostility (5 items; e.g., "When I am caring for the baby, I get feelings of annoyance or irritation:" with response choices ranging from *never* to *very frequently*"); and 3) Pleasure in Interaction (5 items; e.g., "I try to involve myself as much as I possibly can playing with the baby" with response choices being *true* or *untrue*). Reliability and construct validity of this measure have been established (Condon & Corkindale, 1998; Condon et al., 2008). In the current study, we used the Quality of Attachment subscale only (α = .82), with sum scores reflecting increasing levels of positive mother-infant bonding

Child abuse potential. The *Brief Child Abuse Potential Inventory* (BCAPI; Ondersma et al., 2005), a validated 33-item version of the original 160-item *Child Abuse Potential Inventory*, was completed by the mothers at T2. This questionnaire documents risk factors associated with the perpetration of child abuse without asking direct questions about abusive behaviours; while it was originally developed to assess the risk of physical abuse perpetration, it was found to predict future reports to child protection services for both physical abuse and neglect (Ondersma et al., 2005). BCAPI scores were also found to correlate with scores of emotional and sexual abuse (Lee & Sung, 2022). It includes 24 items on abuse risk to which participants respond *agree* or *disagree* (e.g., "I sometimes act without thinking", "I am a happy person", "Children should never disobey", "My family fights a lot"). The total sum score was used in the current study (α = .91), with higher scores reflecting increased child abuse potential. BCAPI scores lower than nine are

considered low risk, scores ranging from nine to 11 are considered moderate risk, and scores higher than 11 are considered high risk.

Statistical analyses

SPSS with the PROCESS macro (Hayes, 2013) was used for the statistical analyses. Only participants with complete T1 and T2 data were kept for the main analyses. Preliminary analyses were conducted to compare participants with complete data to participants that dropped out of the study on sociodemographic factors and variables of interest collected at T1 (e.g., CM, dyadic adjustment at T1). The bivariate correlations were run to examine the associations among study variables. Multicollinearity among study variables was tested with Variance Inflation Factors (VIF). VIFs greater than 10 represent critical levels of multicollinearity requiring corrective measures (Miles, 2014). The sequential mediation analyses, conducted separately for the four CM subtypes, were run with 95% bias-corrected bootstrap (5,000 samples) confidence intervals (CI) while controlling for the impact of material deprivation on scores of child abuse potential.

Results

Preliminary analyses

The means and standard deviations on the main variables, as well as correlations among study variables, are presented in Table 2. CM subtypes were highly correlated with one another, indicating substantial levels of polyvictimization in the sample. CM also correlated positively with psychological distress, child abuse potential, and material deprivation; it correlated negatively with romantic satisfaction. Romantic satisfaction was negatively associated with psychological distress, child abuse potential, and material deprivation. Psychological distress correlated positively with child abuse potential and material deprivation; child abuse potential and material deprivation were also positively correlated. The early bonding measure correlated less strongly with the other variables; it was negatively correlated with neglect, psychological distress, child abuse potential and material deprivation, but was not correlated with the other study variables.

The high correlation ($r = .788$) between psychological distress and child abuse potential raised concerns about potential multicollinearity. However, all VIF statistics were below the critical threshold, ranging from 1.26 to 2.14. Thus, corrective measures were deemed unnecessary.

Table 2. Means, standard deviations, and correlations among study variables

Variable	*M*	*SD*	Range	1	2	3	4	5	6	7	8
1. Neglect	0.93	1.15	0-4	--							
2. Physical abuse	1.42	1.55	0-5	.742***	--						
3. Emotional abuse	2.02	2.07	0-5	.724***	.691***	--					
4. Sexual abuse	1.44	1.93	0-6	.499***	.578***	.339*	--				
5. Romantic satisfaction T1	16.66	3.24	5-21	-.310*	-.395**	-.351**	-.331*	--			
6. Psychological distress T2	35.46	20.28	2.38-80.95	.368**	.375**	.467***	.299*	-.493***	--		
7. Early bonding T2	39.30	5.12	22.5-45	-.280*	-.132	-.228	-.208	.184	-.408**	--	
8. Child abuse potential T2	7.42	5.98	0-20	.465***	.434**	.556***	.323*	-.468***	.788***	-.517***	--
9. Material deprivation T1	2.77	3.04	0-10	.503***	.584***	.408**	.399**	-.352**	.409**	-.371**	.585***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. T1 = Time 1, T2 = Time 2

Sequential mediation models

Results for the sequential mediation models are presented in Tables 3 and 4 and visually represented in Figure 1. In all four models, prenatal romantic satisfaction was associated with lower postnatal psychological distress. Postnatal psychological distress was associated with lower quality of early mother-infant bonding and heightened child abuse potential. Early bonding was associated with reduced child abuse potential, while prenatal material deprivation was associated with heightened child abuse potential. The specific findings for CM subtypes are presented below.

Table 3. Direct effects in the sequential mediation models

Outcome variable	Child maltreatment		Romantic satisfaction T1		Psychological distress T2		Early bonding T2		Material deprivation T1		
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	R^2
Neglect											
Romantic satisfaction T1	-0.914*	0.378									9.94%
Psychological distress T2	4.604*	2.240	-2.620**	0.773							30.04%
Early bonding T2	-0.804	0.632	-0.083	0.232	-0.092*	0.038					19.31%
Child abuse potential T2	0.418	0.483	-0.093	0.162	0.170***	0.028	-0.201*	0.099	0.431*	0.188	73.21%
Physical abuse											
Romantic satisfaction T1	-0.884**	0.277									16.12%
Psychological distress T2	3.305	1.774	-2.517**	0.806							29.09%
Early bonding T2	0.026	0.502	-0.033	0.241	-0.106**	0.038					16.75%
Child abuse potential T2	0.120	0.410	-0.097	0.165	0.171***	0.028	-0.212*	0.101	0.463*	0.207	72.85%
Emotional abuse											
Romantic satisfaction T1	-0.571**	0.205									12.78%
Psychological distress T2	3.51**	1.209	-2.333**	0.757							34.93%
Early bonding T2	-0.157	0.372	-0.052	0.235	-0.099*	0.040					17.04%
Child abuse potential T2	0.516*	0.254	-0.071	0.157	0.156***	0.028	-0.210*	0.095	0.402*	0.173	74.91%
Sexual abuse											
Romantic satisfaction T1	-0.579*	0.224									11.23%
Psychological distress T2	1.776	1.376	-2.776**	0.797							26.71%
Early bonding T2	-0.327	0.374	-0.082	0.237	-0.099**	0.037					17.98%
Child abuse potential T2	-0.059	0.270	-0.112	0.165	0.173***	0.278	-0.208*	0.099	0.507**	0.181	72.83%

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. T1 = Time 1, T2 = Time 2

Table 4. Significant indirect effects of child maltreatment subtypes on child abuse potential

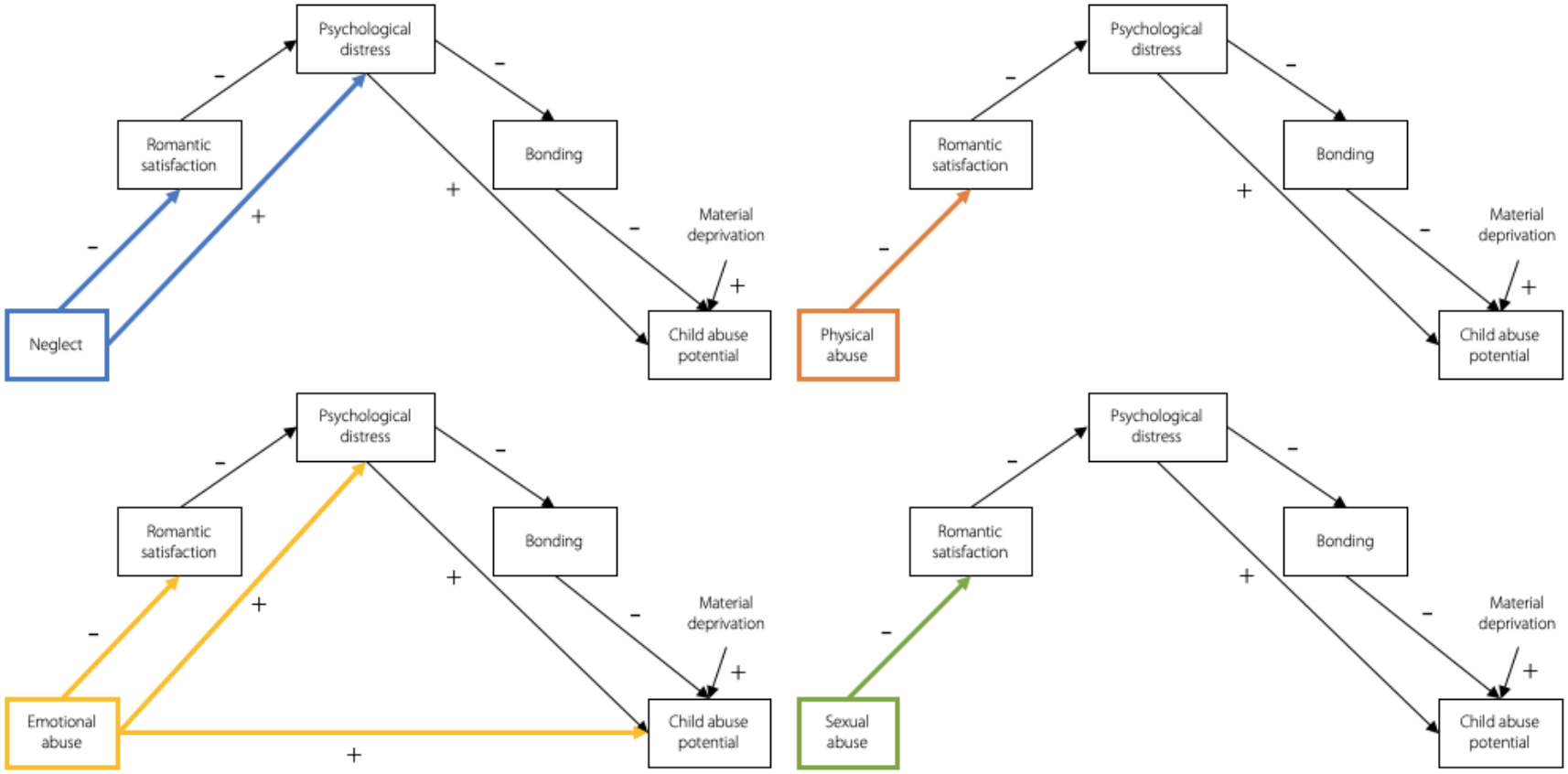
Indirect path	*B*	95% BC bootstrapped CI
Neglect		
Romantic satisfaction - Psychological Distress	0.406	[0.073, 0.967]
Psychological Distress	0.780	[0.056, 2.012]
Psychological Distress - Early Bonding	0.085	[0.001, 0.489]
Physical abuse		
Romantic satisfaction - Psychological Distress	0.381	[0.125, 0.851]
Romantic satisfaction - Psychological Distress - Early Bonding	0.050	[0.002, 0.230]
Emotional abuse		
Romantic satisfaction - Psychological Distress	0.208	[0.060, 0.480]
Romantic satisfaction - Psychological Distress - Early Bonding	0.028	[0.002, 0.134]
Psychological Distress	0.549	[0.172, 1.006]
Psychological Distress - Early Bonding	0.073	[0.003, 0.280]
Sexual abuse		
Romantic satisfaction - Psychological Distress	0.278	[0.073, 0.694]
Romantic satisfaction - Psychological Distress - Early Bonding	0.033	[0.001, 0.171]

Note. BC = Bias Corrected; CI = Confidence Intervals.

Neglect. A history of childhood neglect was associated with lower romantic satisfaction during pregnancy and more psychological distress postnatally. Indirect effects analyses revealed three significant indirect paths from childhood neglect to postnatal child abuse potential: 1) through romantic satisfaction and psychological distress; 2) through psychological distress only; and 3) through psychological distress and mother-infant bonding. The sequential model with neglect as the independent variable explained 73.21% of the variance of early child abuse potential.

Physical abuse. A history of physical abuse was associated with lower romantic satisfaction during pregnancy. Indirect effects analyses revealed two significant indirect paths from childhood physical abuse to child abuse potential postnatally: 1) through romantic satisfaction and psychological distress; and 2) through romantic satisfaction, psychological distress, and mother-infant bonding. Hence, the complete sequential model was significant, revealing that physical abuse was associated with child abuse potential via its negative association with prenatal

Figure 1. Visual representation of the results of the sequential mediation models.



Note. Only significant paths are represented. The colours highlight the findings that are specific to the CM subtypes.

romantic satisfaction, which, in turn, was negatively associated with postnatal psychological distress, which was negatively associated with the early mother-infant bonding, which, finally, was associated with child abuse potential. The sequential model with childhood physical abuse as the independent variable explained 72.85% of the variance of early child abuse potential.

Emotional abuse. A history of emotional abuse was associated with lower romantic satisfaction during pregnancy and heightened psychological distress and child abuse potential postnatally. Indirect effects analyses revealed four significant indirect paths from childhood emotional abuse to child abuse potential: 1) through romantic satisfaction and psychological distress; 2) through romantic satisfaction, psychological distress, and mother-infant bonding - the complete sequential model; 3) through psychological distress only; and 4) through bonding only. This model explained 74.91% of the variance of early child abuse potential.

Sexual abuse. Finally, a history of child sexual abuse was associated with lower prenatal romantic satisfaction. Indirect effects analyses revealed two significant indirect paths from childhood sexual abuse to child abuse potential: 1) through romantic satisfaction and psychological distress; and 2) through romantic satisfaction, psychological distress, and mother-infant bonding - the complete sequential model. This model explained 72.93% of the variance of early child abuse potential postnatally.

Discussion

The current longitudinal study spanning from pregnancy to three months postpartum has major implications for the prevention of CM and for intergenerational resilience. It aimed to explore the role of romantic and mother-infant relationships and psychological distress in the association between maternal histories of neglect, as well as physical, emotional, and sexual abuse in childhood and early child abuse potential. Identifying the mechanisms involved in the continuity of CM, especially during the sensitive perinatal period (Sperlich et al., 2017), is necessary to enhance our ability to intervene early and efficiently to alleviate the risk and bolster the protective factors in at-risk families. The clinical significance of this study is even higher given that many existing psychosocial interventions are effective in fostering positive family relationships and improving psychological distress, which were the main mechanisms explored here. Our hypotheses were mostly supported for all forms of abuse (physical, emotional, sexual); maternal history of CM was indirectly associated with heightened child abuse potential three months postpartum. Our sequential mediation models showed that CM was first negatively related to prenatal romantic satisfaction, which was in turn negatively associated with postnatal psychological distress. Postnatal psychological distress was related to lower mother-infant bonding, which, in turn, was related to increased child abuse potential. With neglect, as opposed to with the other CM subtypes, the significant indirect effects involved the three postulated mediators, but not in a complete sequence. There was a significant indirect association through prenatal romantic satisfaction and postnatal psychological distress or through postnatal psychological distress and bonding only. Our results are consistent with theoretical models and previous empirical findings demonstrating the importance of relational factors and mental health in the intergenerational continuity of CM (Langevin et al., 2021; Marshall et al., 2022). However, this study furthers our understanding of patterns of intergenerational continuity as it provides preliminary evidence of the possible pathways through which these risk and protective factors relate to cycles of CM. Overall, our models explained high proportions of the variance in early child abuse potential (72.83 - 74.91%), but caution is warranted in the interpretation given the strong correlation found between psychological distress and child abuse potential scores.

Another contribution of this study is the inclusion of four universally recognized subtypes of CM (World Health Organization, 2020). Interestingly, only minor variations across models were found, supporting the notion that all four subtypes of CM are similarly associated with child abuse potential through relational factors and mental health symptoms. Specifically, the models with physical and sexual abuse were the same, showing a direct association of these CM subtypes only with prenatal romantic satisfaction and indirect associations with the other variables in the model. However, emotional abuse and neglect were both directly associated with postnatal psychological distress and prenatal romantic satisfaction, with indirect associations to early mother-infant bonding. Emotional abuse was the only CM subtype directly associated with child abuse potential in the mediation model, indicating that other mechanisms might need to be considered to fully understand how childhood emotional abuse may lead to early child abuse potential. A recent study identified romantic attachment and emotion dysregulation as mechanisms underlying the associations between a history of emotional abuse and depression and couples' functioning in the transition to parenthood (Cao et al., 2020). Emotion dysregulation was also identified as a mediator in the association between childhood emotional abuse and emerging adults' relationship satisfaction while controlling for other forms of abuse

(physical abuse and neglect, sexual abuse) (Bradbury & Shaffer, 2012). Therefore, the consideration of emotion dysregulation and romantic attachment might be warranted in future studies.

This study has several strengths, including a prospective longitudinal design, the inclusion of four CM subtypes, the use of validated measures, and the reliance on robust statistical analyses. Nevertheless, some limitations must be acknowledged and warrant that these findings be considered preliminary evidence requiring replication. Fathers were not included in the current study despite their important role in the perinatal period and beyond. The sample size was small, preventing the inclusion of all CM subtypes in the same model, which would have allowed controlling for their co-occurrence and investigating their unique contributions. The sample also represents at-risk young mothers, given the high proportion of mothers with CM histories (approximately 45-60% depending on the subtype) and who are considered at moderate-to-high risk of maltreating their infants (approximately 40%). Our sample also displays high levels of postnatal psychological distress on average based on the IDP scores, the mean score (35.46) being over the clinical cut-off of 26 or 28 (depending on the age of participants). It is worth noting, though, that IDP scores had a large standard deviation around the mean, reflecting great variability in the participating mothers. The sample is also not culturally diverse, with almost 80% of women identifying as White. While our aim was to recruit an at-risk sample, our sample characteristics indicate that our findings might not be generalizable to all young mothers but represent a specific subpopulation of vulnerable mothers. The retention rate (67%) was acceptable, especially given the at-risk nature of the sample, but it still resulted in the loss of a significant number of mothers, particularly those with lower romantic satisfaction at T1. Therefore, results might have been slightly different if all mothers had participated at T2. Another limitation is the sole reliance on single-informant and self-report measures that could have inflated the covariance between the variables and the high explained variances of the models. Finally, exposure to intimate partner violence was not documented as a CM subtype in the current study.

Future studies should replicate our findings with larger and more representative samples and include a measure of childhood exposure to intimate partner violence. A larger sample would allow including all CM subtypes in the same model. A multi-method, multi-informant approach to measurement is recommended (e.g., using official CM records, observational measures for early attachment, dyadic measurement of couples' satisfaction, and structured interviews for mental health). Prospective longitudinal studies involving fathers, covering a more extended period - ideally the 0-18 years old period for the children - and measuring both pre- and post-natal distress and dyadic satisfaction, as well as change over time in key variables, would be highly informative. Studies with larger samples and more time points could incorporate other relevant factors such as substance use, emotion dysregulation, romantic attachment, and other variables highlighted in the CM continuity literature (e.g., neurobiological variables, community-level variables, children's characteristics). Finally, qualitative studies could provide an in-depth and contextualized understanding of the subjective role of relationships and psychological distress in the early risk of intergenerational continuity of CM.

Implications

While our findings need replication, some practical implications can be highlighted. All mediators involved in the models are amenable to change and could be the target of interventions to help reduce the risk of intergenerational continuity of CM and foster resilience in at-risk families. Prenatal supportive interventions for parents with a history of childhood trauma, such as STEP (Berthelot et al., 2021), could promote resilience. Couple therapy (e.g., Behavioural Couple Therapy, Emotionally Focused Couple Therapy) to help couples affected by histories of CM achieve more satisfying relationships could help prevent postpartum psychological distress and indirectly impact the quality of the mother-infant relationship and child abuse potential (Rathgeber et al., 2019). Individual or group therapy with young mothers suffering from postpartum psychological distress could also indirectly reduce child abuse potential through a positive impact on the early bonding capacities of these mothers (Cuijpers et al., 2008). Furthermore, mother-infant psychotherapy and attachment-based interventions might be promising to reduce maternal distress (Huang et al., 2020) and the risks of intergenerational continuity of CM (O'Hara et al., 2019). Finally, given that many relationships from the family system appear relevant to early child abuse potential, systemic interventions (e.g., parent training programs, relationship education, family therapy) might be an option to consider (Stith et al., 2022).

To conclude, given the central role of relationships and mental health in the intergenerational continuity of CM and the devastating consequences of CM on lifespan development, intervening early - in the perinatal period - to interrupt intergenerational cycles of CM through high-quality and affordable services for at-risk families is essential and might contribute to facilitating intergenerational resilience.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Exploring Children's Experiences Following Sport-Related Concussions: Identifying and Overcoming Emotional Challenges and Adversity Following Traumatic Brain Injury (TBI)

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Abstract

Objectives: To gain a better understanding of the emotional and mental experiences of child and adolescent athletes following a sport-related concussion, in order to better support these athletes throughout recovery.

Methods: Adolescents (n=21) ages 15-24 years who self-reported experiencing a sport-related concussion under the age of 18, participated in a retrospective, single group, qualitative analysis based on semi-structured interviews. Thematic Content Analysis was used to identify themes amongst participants' responses.

Results: The results indicated three overarching domains with underlying themes and subthemes within: (1) Acute Challenges Post-Concussion (i.e., difficulty accepting unknowns, self-image and mattering, school, missing out and isolation, feelings of hopelessness), (2) Coping with Acute Challenges Post-Concussion (i.e., support, previous concussions, prioritizing mental health), and (3) Take-Aways Post-Concussion (i.e., learning about injury, self-growth, long lasting impacts on overall health).

Conclusion: Child and adolescent athletes face numerous emotional challenges post-concussion and following recovery; however, there are many ways in which children are resilient and cope with these challenges.

Implications: It is critical that the knowledge of child and adolescent athletes' challenges post-concussion, as well as the successful coping mechanisms and protective factors utilized throughout recovery are used to develop better preventative and interventive strategies, in order to support the athletes' well-being post-concussion.

Keywords: Mental health, sport-related concussions, challenges, protective factors, resiliency.

Introduction

Traumatic Brain Injury (TBI) represents a major public health problem and is a leading cause of hospitalization and death among children and adolescents (Langlois et al., 2006). Concussion is the term most often used to describe a Mild Traumatic Brain Injury (mTBI) suffered through sport, also known as a sport-related concussion (SRC; Mrazik et al., 2016). SRCs are induced by a direct blow to the head, face, neck or anywhere in the body where the blow could be transmitted to the head (McCrory et al., 2017). An estimated 2.5 million SRCs occur each year in high school students across the United States (DePadilla et al., 2018).

The most recent consensus statement on SRCs have called for more research exploring the emotional challenges and experiences that may accompany SRCs (McCrory et al., 2013). Emotional responses seen in athletes following brain injury differ from their response to other musculoskeletal injuries (Hutchison et al., 2009). For example, when assessing mental health post-concussion, if the concussion symptoms last longer than 3 months, they can significantly impact the child's daily life and can intensify emotional or depressive symptoms (Duffy, 2012). Common psychological outcomes following TBI in children and adolescents are anxiety disorders, mood disorders (Hawley, 2003; Kirkwood et al., 2008; Max et al., 2011, 2013), ADHD (Schachar et al., 2015), and an increased risk of developing PTSD (Schachar et al., 2015). Therefore, it is critical that sport-medicine professionals assess and monitor emotional reactions in addition to other somatic and neurocognitive outcomes throughout recovery (Hutchison et al., 2009).

More recently, research has provided a better understanding of SRCs and their adverse health consequences (Costello et al., 2018). In a qualitative study by Cover et al. (2018), retired collegiate athletes spoke about previous concussions and described multiple emotional, physical, cognitive, and social challenges post-concussion. Athletes connected their perception of concussion severity to indifference, change in perspective over time and athletic identity. Engström et al. (2020), and Todd et al. (2018), also noted difficulty with rebuilding self-identities in hockey players who experienced SRCs.

In recent qualitative studies, it has been found that the majority of children's anxiety and stress post-concussion is related to social and academic experiences (Davies et al., 2020; Valovich McLeod et al., 2017). Children also noted emotional challenges, more specifically, intense emotional reactions to their injury and their family's reaction to their injury, including sadness, anxiety and guilt (Davies et al., 2020), as well as personal emotions such as being irritable and easily frustrated (Valovich McLeod et al., 2017).

Because an SRC can cause many mental and physical challenges for athletes throughout recovery, it can be viewed as an adverse event. Despite negative outcomes post-concussion, there is an opportunity for athletes to overcome adversity through portraying resilience. An individual who is successful despite facing adversity is described as resilient (Brooks, 2006). Someone who is resilient possesses certain strengths and benefits from protective factors, which help them overcome adverse scenarios (Alvord & Grados, 2005; Brooks, 2006; Masten, 2007, 2011; Masten et al., 1990; Masten & Coatsworth, 1998; Rak & Patterson, 1996; Werner, 1986). Protective factors such as positive social support through family, friends, teammates, athletic trainers, coaches, and physicians can decrease distress following injury (Covassin et al., 2014; Weber Rawlins et al., 2021). Previous studies have found an association between resilience and concussion recovery (Durish et al., 2019), and post-concussive symptoms (Bunt et al., 2021), such that lower levels of resilience are associated with increased symptom number and severity in adolescents.

The investigation of children and adolescents' experiences post-concussion is an emerging area of research and, therefore, uncertainty exists amongst medical practitioners and sport administrators about how to manage SRC's and how to support children through a full recovery post-concussion (Harmon et al., 2013). Research is needed to further investigate barriers (Cover et al., 2018) and protective factors, but also to explore the strengths and responses that improve mental health recovery post-concussion.

Current Study

As a result of the large number of children and adolescents who experience concussions every year and the link with an increased risk of developing a psychiatric disorder, the current study aimed to further the research in this area by examining how children and adolescents respond emotionally and mentally following an SRC. This will allow for the identification of common adverse experiences throughout recovery, as well as potential protective factors and other mechanisms of resilience.

Method

Approach

Researchers took a post-positivism approach to the analysis. Post-positivism is the most dominant paradigm in sports- psychology (Poucher et al., 2020), where researchers focus on probability and seek to approximate the truth, rather than attempting to entirely grasp it in its essence (Crotty, 1998).

Inter-rater agreement was assessed in the study and a high level of agreement was achieved; therefore, the results are deemed reliable (Smith, 2018). By portraying athletes' experiences and testimonies, the results of the study allow for transferability (Tracy, 2010), and naturalistic generalizability (Stake, 1978, 1995). Additionally, these findings may apply to adolescents who experience other injuries and forms of adversity (COVID-19, etc.) and, therefore, the results may allow for analytical generalization (Chenail, 2010; Polit & Beck, 2010; Ritchie et al., 2003; Simons, 2014).

Participants

Individuals interested in participating in the study were recruited from the community in the Greater Toronto Area and Kitchener-Waterloo region, in Ontario, Canada. Recruitment was done using convenience sampling, and information about the study was spread through a snowball effect within the community. No compensation for participation was provided. Consent was obtained from participants and their parents (if under the age of 18) through an online secure survey host, Survey Wizard (see https://surveys.oise.utoronto.ca/surveywizard2/). Twenty-one individuals ages 15- 24 years (M = 19.76 years, SD = 2.68 years, 43% male, 57% female) contacted the researcher in order to participate in the study (see Table 1). Each participant self-identified as experiencing a sport-related concussion under the age of 18. This experimentation has been reviewed by the University of Toronto Ethics Review Board.

Table 1. Demographic Data

Participant Age	Months Since Concussion	Gender	Sport	Previous Concussions	Total Number of Concussions
15	6	Female	Hockey	Yes	4
16	32	Male	Football	No	1
16	50	Male	Football	No	1
17	5	Female	Hockey	Yes	3
17	Data not provided	Female	Horseback Riding	Yes	2
17	19	Female	Horseback Riding	Yes	3
18	7	Female	Basketball	Yes	4
19	53	Female	Volleyball	Yes	3
19	22	Male	Wakeboarding	Yes	2
20	40	Male	Rock Climbing	No	1
20	14	Male	Lacrosse	Yes	3
20	42	Female	Hockey	No	1
21	77	Female	Hockey	Yes	2
22	Data not provided	Male	Basketball	Yes	2 or 3
22	96	Male	Football	No	1
22	72	Female	Basketball and Slow Pitch	Yes	11
22	77	Male	Hockey	Yes	4
22	112	Male	Hockey	Yes	2
23	63	Female	Bubble Soccer	No	1
23	112	Female	Hockey	Yes	3
24	156	Female	Downhill Skiing	No	1
M = 19.8	**M = 55.5 months/4.8 years**	**Males = 9 (43%)**		**Yes = 14 (67%)**	

Data Collection

Semi-structured interviews were conducted with participants, by one researcher who met with each participant individually. When deciding to use a semi-structured interview, it was important to note that information obtained from free recall, or an unstructured interview schedule, is more likely to capture the unique perspective of the child or adolescent, as opposed to receiving responses to questions posed from the perspective of the adult (Engel, 1995; Faux et al., 1988). The researcher who conducted the interviews had previously taken a Qualitative Research Methods course.

The semi-structured interview was conducted over the telephone and allowed for participants to tell the story of their injury along with different thoughts, feelings, and emotions they experienced at the time of their injury, and throughout their recovery. The interview questions (see Figure 1) were developed by the research team based on key concepts and ideas. The general question was presented to participants and prompts were used, if necessary, to evoke a response if a participant struggled to verbally articulate their experience. If participants had experienced multiple concussions, they were asked to speak about their most recent injury. The interviews were audio recorded and then transcribed by volunteers.

Figure 1. Interview Guideline/Script

Qualitative Interview Questions

Child

General Question: Can you tell me the story about when you got your concussion and how you recovered? While you are telling the story can you try to talk about your feelings, thoughts and emotions?

Prompts: If needed to get more information

1. How did you feel when you were told that you weren't able to play (insert sport they play)?
   a. Have those feelings changed since then?
2. How did it make you feel when your head was hurting, and you couldn't do all the activities you usually do?
3. Your self-image is what you think of yourself and it may be affected by many things such as how you are feeling, what others think of you and how they treat you. How did you think about yourself when you were injured?
   a. Do you still think this way about yourself? Was there a time when those thoughts changed?
4. How did you teammates/ family/ friends react when you got hurt? How have they treated you since then? How does this make you feel?
5. Do you think this injury has taught you anything about yourself outside of (the sport they play)?
   - Has it changed how others treat you? If so, how does this make you feel?

Data Analysis

Inductive thematic content analysis (TCA) was used to analyze the qualitative data. TCA can be defined as a method for identifying, analyzing, and reporting patterns and themes in the data (Braun & Clarke, 2006). A theme captures something important in the data that is relevant to the research question, and must also present some level of patterned response or meaning in the overall data set (Braun & Clark, 2006). There are four phases of TCA: Phase 1 involves becoming familiar with the data which involves collecting data, transcribing it, and finding patterns within the data; Phase 2 is the generation of initial codes; Phase 3 involves searching for themes within the data by going through the different codes and looking for broader themes; and Phase 4 is reviewing themes, which involves going through each theme and refining them (Braun & Clarke, 2006).

The identification of themes was completely driven by the data, and there were no a priori expectations of what would be found. TCA at the latent level was used for data analysis. To ensure reliability and avoid bias, triadic coding was used to analyze the transcribed interviews. The researcher who conducted the interviews, as well as two blind coders, independently coded the data. Meetings were arranged over Zoom (see https://zoom.us), an online video platform, to read through the transcriptions, as a group, and to identify codes. Once all transcripts were coded, the data was analyzed to look at overall themes based on the frequency and importance of individual codes. From there, themes were grouped into larger domains. Any discrepancies in the overall themes were discussed, and a final conclusion was reached. Themes and domains were named by the three coders, based on the identification of a connection amongst the most frequent and important codes.

Results

Three overarching domains were revealed: (a) Acute Challenges Post-Concussion, (b) Coping with Acute Challenges Post-Concussion, and (c) Take-Aways Post-Concussion.

Domain 1: Acute Challenges Post-Concussion

Participants discussed the impact of various recovery challenges and adversities on their physical and mental health (see Table 2).

Difficulty with unknowns throughout recovery. Approximately half of the participants expressed challenges coping with the unknowns involved with concussion recovery, including the unpredictable severity of symptoms, rate of progress, and development of novel feelings and symptoms:

> *I think it was just, kind of what I alluded too, the uncertainty of it. Like one day you wake up and you feel good, or it could even be half a day where you wake up and feel good and then something just clicks and it goes downhill from there. And it really wasn't dependent on anything I was doing, in terms of, it's not like I was staying up late playing videos games or watching TV, that would have probably an had obvious effect on me. It was kind just, it was so random that it was super frustrating and discouraging I'd say (Participant #20).*

> *So, it was very new, and very confusing, and really just very frustrating, because I had no idea how to cope with all the things I was feeling and all the symptoms (Participant #4).*

Impact on self-image and mattering. The majority of athletes talked about the impact that the concussion and recovery process had on their self-image and/or perception of how much they mattered to others and themselves. Fifty-two percent of participants reported an immediate change in their self-image following their concussion and 24% of participants reported a long-lasting impact. One participant noted: "After my third one, I didn't like the way I looked or how I felt as a person after it (Participant #18)".

Half of the participants spoke about the impact that mattering had on their recovery whether it be in a negative or positive form:

> *I felt like I didn't really belong in a place, at the time, and I'm not sure that it wasn't a depression state at the time. I was still young, and I didn't know anything about that, so I don't know if I was depressed or not at the time. But it was definitely…feelings like that because all my friends were at the rink and I wouldn't see them after school, because they had to go to hockey. And I kind of isolated myself from them, because I felt like I wasn't a part of that group anymore, so. That was the hard part that I kinda felt like I didn't belong, and kinda felt like I had to…reinvent myself (Participant #7).*

Twenty-four percent of individuals spoke about feeling like they no longer had a purpose in life after their injury. Those who experienced a negative impact on their recovery, due to feelings of not mattering to others, struggled with the emotional aspect of their recovery.

Challenges with school. Just under half of the participants reported that the return to school was emotionally challenging as a result of the stress/anxiety associated with falling behind, and potentially receiving poor grades. Participants reported challenges related to difficulty concentrating and completing assigned work. One participant noted: "Especially how I was doing in school, I felt bad. Probably that's the biggest toll, because I couldn't do everything I wanted to (Participant #6)".

Missing out and feelings of isolation. Participants frequently discussed feelings of frustration related to missing out on aspects of sport (62%) or other activities they were typically involved in (71%). Sixty-two percent of participants described feelings of isolation throughout their recovery process, many of these individuals using the term "lonely" to describe their feelings. This appeared to be one of the greatest mental health challenges for participants.

Feelings of hopelessness and helplessness. Participants often mentioned feelings of hopelessness and helplessness as they progressed through their recovery. Some participants talked about lack of motivation throughout recovery or "not caring" about certain aspects of their life:

> *I was just wasting my life and I felt like things were hopeless and things would never get better and I didn't see the light at the end of the tunnel (Participant #19).*

> *Sometimes I just didn't even care if I was getting better or not (Participant #9).*

One third of participants in the study mentioned feeling not understood by those around them:

> *It certainly was frustrating, because lots of kids in my class and my friends didn't really understand what a concussion was. So, they thought I was being dramatic, or I was faking it. And that stigma really made me feel, just even more upset, because they had no idea what I was feeling (Participant #14).*

> *The problem with concussions is that it's not a visible wound, it's like a mental illness. It's something that you can only explain to people and they can only understand it if they've been through it. So, the vast majority of people, they just don't get it (Participant #19).*

Table 2. Frequency Chart Domain 1: Acute Challenges Post-Concussion

Acute Challenges Post-Concussion	Participants who Spoke about Theme		Overall Number of Times Theme was Mentioned
	Number (*n*)	Percentage (%)	
Difficulty with Unknowns Throughout Recovery	11	52%	35
Frustration due to Novel Feelings and Symptoms	5	24%	12
Unpredictability of Symptoms	5	24%	8
Frustration due to Lack of Ability to see Progress	5	24%	6
Fear of Unknown	4	19%	6
Difficulty Accepting all Unknowns	2	9%	3
Impact on Self-Image and Mattering	21	100%	73
Change in Self-Image Post-Concussion	11	52%	19
Negative Impact of Mattering on Recovery	7	33%	14
No Change in Self-Image Post-Concussion	7	33%	9
Comparison to the Experience of Others	6	29%	9
Positive Impact of Mattering on Recovery	5	24%	6
Self-Reported Change in how others Perceive/Treat them	5	24%	6
Long-Lasting Impact of Self-Image	5	24%	5
Personal Choice to Self-Isolate	3	14%	5
Challenges with School	9	43%	24
Increased Distress Regarding Academics	7	33%	13
Difficulty Concentrating	4	19%	7
Difficulty Completing School Work	3	14%	4
Missing Out and Feelings of Isolation	18	86%	105
Frustration due to Missing Out on Typical Activities	15	71%	30
Frustration about Sport	13	62%	33
Frustration due to Missing Out on being an Athlete	12	57%	25
Frustration due to Inability to Contribute to Sport as a Team Player	6	29%	8
Feelings of Isolation	13	62%	27
Boredom due to Isolation	5	24%	6
Stress about Losing Athletic Ability Compared to Teammates	3	14%	3
Sadness about Missing Out	3	14%	6
Feelings of Hopelessness and Helplessness	16	76%	53
Hopelessness/Helplessness	12	57%	20
General Sadness throughout Recovery	8	38%	14
Feeling Not Understood	7	33%	19

Domain 2: Coping with Acute Challenges Post-Concussion

Participants described aspects of their recovery that helped to make the process easier on them, which are also referred to as protective factors (Table 3).

Support. All participants described the positive influence of support on both their physical and/or mental recovery. Sixteen out of 21 participants reported that their parents played a positive role in their recovery. Parents were found to provide the most positive form of support; providing transportation, mental health check-ins, and being empathetic. However, 28% of participants described stress, due to their parents' lack of concussion knowledge:

> *So, they [my parents] were really always there for me and so was my brother. So, it was good on the home front, because I always had somebody I could talk to somebody I could turn to, everything like that (Participant #4).*

Participants also reported positive support from their siblings (9%), peers (33%) and teammates (38%). While 9% of individuals mentioned that they did not feel supported by their school, 43% of individuals touched on the positive support they received from their teachers, principals or anyone within the school system in regard to the need for time off, exemption from examinations, or academic accommodations.

Previous concussions. Sixty-seven percent of individuals who participated in the interviews had experienced more than one concussion. Three individuals mentioned that their previous concussions had a negative impact on their recovery, related to the frustration of having another injury and/or knowing the complicated recovery that was to come. However, five participants mentioned that having had previous concussions was helpful in that they were familiar with the potential symptoms and the recovery process:

> *I think it really helped with seeing how that one [concussion] was a pretty serious one and how with the steps that we took, I did get out of it. And now with my mindset, while it [the experience] was still crummy, my mindset to successfully recovering was a lot better. I didn't experience as much emotional and mental negative effects (Participant #10).*

Prioritizing mental health. Although prioritizing mental health above physical health during recovery was not a common subtheme, participants who spoke about it, emphasized it throughout their responses (i.e., 4 participants). They described a point in their physical recovery where their mental health was compromised, and there was a deliberate decision to compromise their physical recovery plan, in order to optimize their mental health.

Table 3. Frequency Chart Domain 2: Coping with Acute Challenges Post-Concussion

Coping with Acute Challenges Post-Concussion	Participants who Spoke about Theme		Overall Number of Times Theme was Mentioned
	Number (*n*)	Percentage (%)	
Support	21	100%	115
Parental Support Positive Impact on Recovery	16	76%	21
General Support Positive Impact on Recovery	10	48%	16
School Support Positive Impact on Recovery	9	43%	16
Support from Teammates Positive Impact on Recovery	8	38%	8
Peer Support Positive Impact on Recovery	7	33%	9
Stress Caused by Lack of Parental Knowledge on Concussions	6	29%	8
Health Care Professional Support Positive Impact on Recovery	5	24%	13
Coach Support Positive Impact on Recovery	5	24%	6
Health Care Professional Support Negative Impact on Recovery	2	9%	6
School Support Negative Impact on Recovery	2	9%	3
Sibling Support Positive Impact on Recovery	2	9%	2
Peer Support Negative Impact on Recovery	2	9%	2
Parental Support Negative Impact on Recovery	1	5%	2
Mental Health Professional Support Positive Impact on Recovery	1	5%	1
Coach Support Negative Impact on Recovery	1	5%	1
Support from Teammates Negative Impact on Recovery	1	5%	1
Previous Concussions	6	29%	20
Previous Concussion had a Positive Impact on Subsequent Recoveries	5	24%	11
Previous Concussion had a Negative Impact on Subsequent Recoveries	3	14%	9
Prioritizing Mental Health	4	19%	8
Put Mental Health Before Physical Health	4	19%	8

Domain 3: Take-Aways Post-Concussion

Athletes touched on different concepts that they had learned from their experiences and the impacts on various aspects of their life (Table 4).

Long lasting impact on mental and physical health. Thirty-eight percent of athletes reported a long-lasting change in their mental health post-concussion, describing this as the most difficult aspect of the recovery process. One third of participants also touched on the impact of long-lasting symptoms including: headaches, dizziness, memory impairment, hormonal disruption, etc.:

> *There is definitely a nervousness I would say anytime you go out, you can get. I would call it an inner anxiety, like a subconscious anxiety, like it's not self-consciously happening, its completely in the back of my mind (Participant #21).*

Learning about injury post-concussion. The majority of participants spoke about the opportunity to learn more about health and injuries after experiencing their concussion. Seventy-six percent of participants described an increased cautiousness about preventing future injuries, with 43% believing that they returned to sports too soon, and 29% believing they should have been more careful.

Self-growth post-concussion. Participants commonly spoke about different forms of self-growth and how the challenges helped determine the person they are today. Forty-three percent of participants described a process of re-evaluation of what was important to them. Just over half of the participants described developing more resilience. One participant noted: "It kind of showed me that I don't exactly need it [hockey] to be who I am exactly (Participant #18)".

Table 4. Frequency Chart Domain 3: Take-Aways Post-Concussion

Take-Aways Post-Concussion	Participants who Spoke about Theme		Overall Number of Times Theme was Mentioned
	Number (*n*)	Percentage (%)	
Long Lasting Impact on Overall Health	14	67%	35
Long-Lasting Self-Reported Impact on Mental Health	8	38%	16
Permanent Physical Change Post-Concussion	7	33%	10
Personal Belief that Mental Health Challenges came from Concussion	6	29%	9
Learning about Injury Post-Concussion	19	90%	63
Increase Cautiousness about Preventing Future Injury	16	76%	27
Retrospective Belief that they Returned too Soon	9	43%	15
Concussion caused Greater Appreciation of Brain Health	6	29%	13
Retrospective Belief that they Should have been more Careful	6	29%	8
Self-Growth Post-Concussion	15	71%	32
Current Personal Resilience due to Concussion Challenges	11	52%	22
Re-evaluating what's of Importance in Personal Life	9	43%	10

Discussion

Isolation

Research on adult athletes has found that frustration over uncertain recovery time, isolation from teammates and sports, and a lack of social support, results in emotional responses following SRC (Kontos et al., 2016). These findings closely resemble the identified challenges and adversities reported by adolescent athletes in our study, specifically, the feelings of missing out and isolation. Similar to the findings of Kontos et al. (2016), the participants in the current study noted frustrations about the uncertainties of recovery, including types of symptoms, lack of ability to see progress, and the duration of recovery. Participants mentioned feelings of isolation, difficulty with unknowns, and feelings of helplessness. Within the theme of feelings of isolation, participants often talked about loneliness. Multiple previous studies in both adults and children found that athletes experience feelings of isolation and loneliness post-concussion (Andrews et al., 1998; Davies et al., 2020; Kontos et al., 2016; Valovich McLeod et al., 2017; Weinberg & Gould, 2014). It is critical that adolescents are provided with the support they need, both from an educational perspective to ensure they have knowledge about what a concussion entails, but also in a companionate matter. During this time of isolation, for adolescents, it is critical that they have outlets of support to confide in, and communicate with, since the current study identifies support as a protective factor that fuels resiliency.

Support

As such, it is critical that children remain connected to peers, friends, and teammates throughout the concussion recovery (Reed et al., 2019). In the current study, participants frequently spoke about various supports that were beneficial to their recovery. This is consistent with the findings of Davies et al. (2020) who found that support from home can be an ameliorating factor.

However, some participants acknowledged stress, at times, as a result of their parents' lack of knowledge regarding concussions. Iadevaia et al. (2015) found that certain social relations had a negative impact on participants' mental health, reporting that children ages 12-16 struggled with a lack of support from teammates and confrontational relationships within their family. This is consistent with Engström et al. (2020) who found that athletes did not receive effective advice or support from the team leaders, including from coaches. Weber Rawlins et al. (2021) emphasizes the importance of both coaches, and the team dynamic, in having a powerful impact on a child's experience post-concussion, highlighting that these supports can have both a positive or negative impact, depending on their approach and perception of the severity of the concussions.

The contradictory findings in the literature, may be explained by Cover et al. (2018), who discovered that if there is any indifference in the child's support system post-concussion, this can cause frustration. The current study, along with previous literature, has found that having individuals around you who did not understand your experience often made things worse (Davies et al., 2020). Additionally, the current findings are supported by Engström et al. (2020), who found that a lack of understanding from others, and the invisibility of their injuries made things challenging. Therefore, the current results, in combination with previous literature, suggest that the child's support system can be supportive of a positive mental recovery, however, if the child does not feel understood, or perceives indifference in their support system, this can act as a barrier. The current findings suggest that positive parental and peer support can aid in children's resiliency as they recovery post-concussion.

Uncertainty

Another challenge identified in the current study, as well as by Kontos et al. (2016), was uncertainty in recovery. Along with uncertainty, helplessness was also identified as a common emotional reaction post-concussion. These findings are similar to those of Davies et al. (2020), who found increases in feelings of sadness and even irritability in youth. Valovich McLeod et al. (2017) also identified feelings of frustration post-concussion, which may be related to the uncertainty of recovery time.

School

The challenges with school mentioned in the current study, as well as the perceptions of lower academic achievement reported by Rieger et al. (2019), appeared to be a tremendous barrier for children throughout recovery. This was also found by Stazyk et al. (2017), who reported that 53% of children ages 7-18 who suffered from a concussion reported a decrease in school performance. Additionally, Valovich McLeod et al. (2017) emphasized the difficulties encountered at school, specifically symptoms causing grades to drop, or impacting children's ability to complete assignments. Similar to the current findings, Valovich McLeod et al. (2017) reported inconsistencies across individuals in regard to academic adjustments post-concussion. Findings from Davies et al. (2020), suggest that coordinated academic adjustments at school could help to alleviate stress and, therefore, are critical in better supporting children as they return to school.

Self-Image and Identity

Rieger et al. (2019) reported perceptions of lower expectations, however, this was not reported by participants in the current study. However, lower personal expectations may be the result of changes in self-image and mattering that was described in the current study. These findings support previous research that has found that self-image is impacted in adults (Caplan et al., 2016), adolescents (Snyder, 2019), and children (Hendry et al., 2020; Iadevaia et al., 2015; Todd et al., 2018) post-concussion. Similar to the impact on mattering observed in the current study, Valovich McLeod et al. (2017) found that athletes demonstrated significant concern for letting their team and family down, and not being able to fulfill their role as an athlete.

Consistent with the current findings, Todd et al. (2018) found that athletes are often trying to form a new identity post-concussion as they struggle with their self-image. They also found that participants', "athletic identity" was disrupted. Specifically, athletic identity is how an individual identifies with their athletic role (Brewer et al., 1993). This is

also supported by Cover et al. (2018), who found that athletes struggled with their athletic identity post-concussion. In the current study, few participants spoke about their self-image in relation to their athletic identity. Interestingly, out of the four individuals who touched on athletic identity, three of them were hockey players. This novel finding suggests that perhaps the culture displayed in the sport of hockey encourages a stronger athletic identity than other sports. In a study by Engström et al., (2020), who interviewed hockey players who had experienced concussions and, therefore, stopped playing hockey, participants discussed how they lost their identity and had to rebuild who they were. The findings from Engström et al. (2020) and Todd et al. (2018), along with the current findings, suggest that it is important that children and adolescents are provided with the means to rebuild their identity throughout recovery, in order to help build feelings of resiliency and strength. This could be accomplished through utilizing peer relations, positive support from family and friends, and perhaps intervention and support in rebuilding self-identity.

Prioritizing Mental Health

The decision for athletes to make their mental health the priority in their recovery was another factor that was found to have a positive impact on participants' emotional and mental health post-concussion. Many spoke about how their mental health interfered with their ability to follow their rehabilitation protocol, which often focused on rest and isolation. This suggests that traditional concussion management may negatively impact mental health. In fact, there is limited evidence that complete rest achieves the goal of shortened recovery (Committee on Sports-Related Concussions in Youth et al., 2014). Long-term rest actually predisposes an individual to symptoms of fatigue, depression, physiological deconditioning, and delayed recovery (Thomas et al., 2015; Willer & Leddy, 2006), suggesting that perhaps active rehabilitation protocols may be more beneficial as they decrease recovery time (Plourde et al., 2018), and have the potential to improve mental health.

Growth and Opportunity for Learning

Several themes were identified regarding what was learned by participants through the concussion recovery process. Participants acknowledged significant learning regarding brain injury, suggesting the need for improved preventative education strategies for athletes. Additionally, participants reported significant self-growth post-concussion, which is similar to the findings of Cover et al. (2018), who noted that concussed individuals seemed to elicit a strong sense of empathy for others who experienced concussions. Despite all of the challenges encountered during recovery, participants reported determination and a re-evaluation of life priorities. The latter finding suggests that these athletes portray resiliency as they strive to recover.

Limitations

This is a retrospective study with recall limitations. Sampling time (i.e., time post-concussion) was also quite variable between participants. We acknowledge the potential for self-selection bias due to voluntary participation. The wide age range of participants makes generalizability challenging, and also makes it difficult to identify key developmental findings. Additionally, a large percentage of participants had sustained previous concussions and, therefore, it is difficult to isolate the impact of the most recent concussion, compared to the cumulative effect. Lastly, the primary researcher had existing relationships with some of the participants, which may have positively or negatively impacted their responses; this may act as both a strength and a limitation.

Conclusion

The current exploratory study provides a framework of potential challenges that adolescent athletes may face post-concussion, as well as the coping mechanisms and the protective factors that are present throughout recovery. By gaining a unique perspective of adolescent athletes in a retrospective approach, the importance of both education and support throughout recovery has been identified. By integrating these factors to shape novel intervention and prevention strategies, it is hoped that improvements in mental health post-concussion in this population will be observed. In regard to preventative approaches, it is critical to educate parents and other supportive adults (teachers, coaches etc.) on both the medical impact of a concussion, as well as the challenges that athletes may experience post-concussion, in the hopes of decreasing both the uncertainty and indifference across support systems. Moving forward, further research is needed on the most effective way to raise awareness (Macdonald & Hauber, 2016), and educate adults, however, it has been found that one-time educational interventions are not enough (Kroshus et al., 2018). Therefore, perhaps providing parents with contextual information, including exemplars that personalize the knowledge for parents could be beneficial (Kroshus et al., 2018).

From an intervention perspective, intervention strategies that teach individuals to cope with feelings of isolation and missing out may help athletes to build characteristics needed for resiliency. This may be potentially achieved through the use of different forms of support, specifically parental. Concurrent parent and child interventions may allow for both education and skill teaching post-concussion, while also using techniques, such as mindfulness to improve mental health outcomes, as found to be successful in the general population (Xie et al., 2021). It is also important that parents are able to advocate for their children, in communicating with the child's peers, other family members, and teachers. By relieving the child of some of the burden of sharing their diagnosis with those around them, during a time where they are already facing challenges, parents can potentially alleviate some of those external pressures to increase well-being.

The results also highlight that the majority of athletes in this age group struggle when returning to school. It is extremely important that future research identifies how the academic environment can better support children with brain injury. The current study highlights the need for educators need to be provided with education around the identified challenges, in order to ensure they are creating an accommodating, consistent, and supportive environment that promotes athletes' well-being.

Implications

This study provided the groundwork for identifying the emotional and mental experiences post-concussion, and highlighting potential protective factors and characteristics that allow children to overcome mental health adversities post-concussion. The current study highlights the salience of education and support in both preventative and intervention approaches, in order to fuel resiliency in children and adolescents, and decrease feelings of uncertainty, hopelessness, and improve self-image. This can be done by utilizing protective factors and educating caring adults (parents, teachers, coaches etc.), in order to better support children throughout recovery. It is critical that throughout the rehabilitation process, mental health is an area of focus, along with physical health, in order to allow child and adolescent athletes to fully recover post-concussion.

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Conflict of interest

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Increasing Resource Parents' Access to Training and Data: An Overview of Two Child Welfare Initiatives

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Abstract

Objectives: Resource parents are critical to young people's well-being, resilient functioning, and placement stability. However, child welfare often experiences challenges in retaining resource parents, which may be partially due to the limited availability of in-service resources. We describe two in-service training initiatives for resource parents in Ontario (Canada) that can support their important caregiving work. We also present preliminary mixed-methods findings on training reactions and learning.

Methods: The first study sampled 91 resource parents who completed the Resource Parent Curriculum (RPC) and collected module evaluations as well as post-program satisfaction data. The second study collected post-training evaluations from 26 resource parents who completed training using the Assessment and Action Record (AAR) to better understand youth in-care.

Results: Resource parents responded positively to the RPC content and delivery; they appreciated the online format (due to COVID-19 restrictions). Parents noted it was helpful to learn how trauma shapes young people's expectations and how thoughts, feelings, and behaviours are interconnected. For the second study, parents' overall training rating was positive. They noted it was helpful to learn how different perspectives could be integrated through AAR findings and highlighted the importance of collaboration with child welfare workers. The training initiatives were well-received and attested to resource parents' motivation to keep improving their parenting practices. Findings indicated gains in knowledge around trauma-informed parenting and indicated the value of data to support young people's well-being.

Implications: Retention will likely improve when resource parents feel supported and capable of handling young people's complex needs. To improve outcomes for both youth in-care and resource parents, it seems important to make training and support available on a regular and ongoing basis and in a collaborative way with child welfare partners.

Keywords: Resource parents; child welfare; training; evaluation.

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General Introduction

A resource parent, defined as a relative/kin, non-related extended family member, or non-related foster parent (California Evidence-Based Clearinghouse for Child Welfare, 2021), plays a critical role in the life of a child or adolescent in out-of-home care given their proximity to and relationship with a young person. Not only do resource parents care for the physical and emotional needs of a young person, but they must also navigate the various systems in which young people are involved (e.g., child welfare, education, mental health, medical) as well as complex family dynamics (Cooley et al., 2015; Geiger et al., 2013). The complex and adverse histories of young people in-care are often related to struggles concerning mental health, educational, and social functioning (Ackerman et al., 1998; Burge, 2007; Heflinger et al., 2000; Leslie et al., 2005; Sullivan & Van Zyl, 2007; Trocmé et al., 2010) that present unique parenting challenges for resource caregivers (Whenan et al., 2009).

In light of these findings, it is critical to support resource parents because they are key members of a young person's support network. Their caregiving role is essential in promoting youth resilient functioning, well-being, and placement stability. As such, resource parents need to be supported in their work, which would better ensure resource parent retention (Newton et al., 2000; Rubin et al., 2007). The number of young people in-care in Ontario (Canada) is increasing faster than the rate of available resource parents (Barbell & Freundlich, 2001; MacGregor et al., 2006; Rodger et al., 2006). Although we could not locate more recent data, scans of the websites of Ontario child welfare agencies, as well as the umbrella agency that oversees these agencies (Ontario Association of Children's Aid Societies), indicate an ongoing need for resource parents to care for child welfare-involved young people. Resource parents are more likely to continue their work when they feel a sense of self-efficacy in their parenting role, feel supported by their child welfare agency, and observe improvements in the young person for whom they are caring (Whenan et al., 2009). In contrast, retention is compromised when resource parents experience conflict with their child welfare worker, believe they have insufficient compensation, have difficulties managing the needs of their young person, and naturally, when there are allegations of maltreatment within the home (Buehler et al., 2003; Coakley et al., 2007).

Various factors related to resource parent retention pertain to perceived parenting self-efficacy as well as the young person's well-being and functioning. These findings are not surprising given the often complex needs of young people in-care and the relatively limited training available to resource parents prior to caring for youth. In Ontario (Canada), resource parents complete a Structured Analysis Family Evaluation (SAFE) home study and pre-service training (Parent Resources for Information, Development, and Education). While resource parents are required to engage in ongoing training yearly, there currently is no mandated in-service training. Pre-service training is often not sufficient to adequately provide for young people in-care, who have often experienced multiple and chronic traumatic and adverse events beginning from a young age and occurring within their caregiving system (Murray et al., 2011). Moreover, removal from one's birth home can result in disruptions across many areas of a young person's life, including contact with family and friends as well as changes in school and community. The impacts of these disruptions and relationship losses do not end when a young person is placed in out-of-home care. Instead, these young people often continue to experience a range of complex feelings and thoughts, as well as challenging behaviours, that require sensitive, consistent, and trauma-informed parenting that occurs within a broader system of support for youth and resource families (Blaustein & Kinniburgh, 2018).

As mentioned, supporting the work of resource parents is critical for their own well-being and retention, as well as for the well-being of young people in their care. Moreover, resource parent support is important for better ensuring youth placement stability (Barbell & Freundlich, 2001). In a study by Perry, Daly, and Kotler (2012) with 852 Ontario newborn to 17-year-olds in-care, 31% of placements were intact after two years; 34% ended through reunification with the biological family; 29% ended by transfer to another family or group home placement; and 5% ended in other ways (e.g., transitioning out of care). As such, 3 in 10 young people experienced a placement breakdown. Placement breakdowns and transitioning out of child welfare without achieving permanency have been linked to long-term, widespread negative outcomes, including mental health difficulties, educational challenges, unemployment, incarceration, and income insecurity (Lockwood et al., 2015). There is a harmful cycle between a young person's emotional/behavioural struggles and out-of-home placement instability. These struggles contribute to placement breakdowns, which then contribute to a worsening of youth well-being and functioning, which further increases the likelihood of additional breakdowns.

Objectives

The challenge in child welfare lies in finding physical permanence for young people and securing placements that provide positive and sensitive caregiver-child relationships (Schofield et al., 2012). Given that retention is partly related to resource parents feeling supported and equipped to meet the complex needs of young people in-care, we worked on two preliminary evaluation studies that address these issues. Our objectives were to 1) describe the two child welfare training initiatives and 2) present preliminary findings on resource parents' training reactions. The first initiative involved an accessible trauma-informed parenting program for resource parents. This initiative was guided by findings that in-service training can increase resource parent satisfaction and placement stability by better equipping resource parents to support the complex needs of their youth (Kalland & Sinkkonen, 2001). The second initiative involved sharing data on a young person's strengths and needs with their resource parent. Through this data sharing, it is expected that resource parents would be in a better position to meet the young person's needs, provide support and guidance, and feel engaged and effective as a caregiver.

Although these two training initiatives are different in content, we have presented them together because they both have been recently piloted within the Ontario child welfare context. They are also in-service training initiatives geared toward supporting the important work of resource parents in promoting young people's well-being and resilient functioning. Finally, these two initiatives illustrate the various complementary ways that can be considered to support resource parents' work, specifically trauma-informed parenting programs as well as access to data about their child's well-being and functioning.

Study 1. Preliminary Evaluation of the Resource Parent Curriculum

Introduction

Many resource parents report feeling unprepared to manage the complex needs of youth in-care (Barber et al., 2001; Koh et al., 2014; Leschied et al., 2014; Newton et al., 2000). Previous research has highlighted the need for ongoing resource parent training as it has been linked with placement stability (Kalland & Sinkkonen, 2001). Resource parents require support through pre-service (e.g., Parent Resources for Information, Development, and Education) and in-service programs. Although the evaluation research is limited, Rork and McNeil (2011) found that programs with an in-service component are associated with more positive outcomes (e.g., parental acquisition of knowledge and skills) than pre-service-only training programs. In-service resource parent training initiatives are critical to maintaining retention and improving positive youth outcomes, such as placement stability and well-being.

It is also important to consider the need to support resource parents within the wider child welfare system. Previous research has identified that lack of service provision was a primary reason for resource parent discontinuation (Baring-Gould et al., 1983), while a range of services and economic supports tend to improve resource parent retention (Campbell et al., 1987). Thus, resource parent retention is enhanced when caregivers feel connected to their child welfare agency and have access to adequate resources that include respite care, information about the child and their history, and supports for their own well-being and caregiving (Buehler et al., 2003; Coakley et al., 2007).

One in-service training initiative is the Resource Parent Curriculum (RPC), which was developed at the National Child Traumatic Stress Network (NCTSN, 2022) by a group of over 30 childhood trauma experts. NCTSN has both academic and community-based service centres focused on providing education and promoting access to evidence-based services. RPC was designed to help therapeutic, foster, adoptive, and kinship parents (all referred to as resource parents) improve their knowledge and skills related to trauma-informed parenting. RPC is an 8-module in-service group program that includes a balance of material presentation, interactive group activities, case examples, and discussions. The eight modules address the following topics: introductions; trauma 101; understanding trauma's effects; building a safe place; dealing with feelings and behaviours; connections and healing; becoming an advocate; and self-care. These topics are aligned with RPC's overall goals of increasing resource parents' knowledge and beliefs about trauma-informed parenting, helping strengthen their ability to tolerate challenging youth behaviours, improving their sense of self-efficacy, and developing awareness of the importance of self-care as well as strategies.

Study Objectives

Given the need for in-service, trauma-informed caregiving supports for resource parents, we delivered and conducted a preliminary evaluation of the RPC program with a sample of Ontario resource parents. This study is one part of a larger quasi-experimental RPC program evaluation and focused on resource parents' reactions to each of the eight modules and satisfaction with the program as a whole. We expected resource parents to respond positively to the training content and delivery for each of the eight modules and the whole program. It was anticipated that resource parents would find that the program fills gaps in their training. We also expected that resource parents would find that the program's online delivery removes barriers to attendance.

Method

Participants and Procedures

Ethics approval was obtained from the University of Ottawa's Office of Research Ethics and Integrity. Recruitment occurred through collaboration with child welfare agencies and within the community. Several Ontario child welfare agencies were contacted via email to gather their interest in a collaboration to deliver the RPC program, and two agencies agreed to participate. The agencies contacted their group of resource parents (i.e., foster, kinship, and group home providers) and provided them with information about the RPC program. Interested resource parents provided permission for the agency to share their contact information with the principal investigator. Recruitment also occurred within the community where the program was promoted through resource parent organizations and social media. With these latter recruitment strategies, the principal investigator's contact information was provided so that interested resource parents could reach out directly for additional information.

The principal investigator contacted interested resource parents to provide additional information about the RPC program and the associated evaluation study. It should be noted that the current study findings are part of a larger quasi-experimental RPC evaluation that involved resource parents completing questionnaires pre-program and at various points after the end of the RPC program. Resource parents also completed satisfaction questionnaires.

Inclusion criteria consisted of currently being a resource parent in Ontario and being comfortable with English. Enrolment occurred on a first-come, first-served basis as NCTSN guidelines suggest a maximum of 25 participants per RPC group to ensure the program is delivered with fidelity. Initially, 163 resource parents expressed an interest in participating in the RPC program, and 91 enrolled in one of the six groups offered through 2020-2021. Groups ranged in size from 6 to 25 resource parents, and it should be noted that participants were able to complete RPC without participating in the evaluation study.

Of the six groups, five were delivered in eight 1.5-hour weekly sessions, and one was delivered over two 1.5-hour sessions per week over four weeks due to scheduling needs. The main facilitator (second author) completed the RPC facilitator training offered through NCTSN. The groups were also co-facilitated by a child welfare professional with either lived experience as a resource parent and/or professional child welfare experience (e.g., child welfare supervisor). Due to COVID-19, all the groups were delivered in an online format. After each session module, participants were sent an online link via email to complete an evaluation. After the last module, participants were emailed an online link to the post-program satisfaction survey.

While demographic information was obtained for resource parents involved in the quasi-experimental research study, it was also possible for resource parents to consent to complete the satisfaction questionnaires without consenting to participate in the larger study. As such, there is no demographic information available for the participants who only completed the satisfaction questionnaires.

Measures

Module evaluations. Resource parents completed a brief feedback form after each module. Module evaluations were developed by NCTSN and tailored to each module activities. Each module evaluation included five items that measured resource parents' satisfaction with the content and delivery. Each item was rated on a 5-point scale: 1(strongly disagree); 2 (disagree); 3 (neutral); 4 (agree); and 5 (strongly agree). Several items of each module evaluation also asked about specific module activities, varying from 3 to 7 items rated on the same 5-point scale along with one open-ended question eliciting any additional feedback.

Post-program satisfaction survey. Resource parents were emailed a link to complete an NCTSN-developed post-program satisfaction survey of 11 close-ended items. Five of these items gathered resource parents' reactions to the training content and delivery along a 5-point scale: 1 (strongly disagree); 2 (disagree); 3 (neutral); 4 (agree); and 5 (strongly agree). The six remaining items asked about specific teaching strategies along a 5-point scale: 1 (very unhelpful); 2 (unhelpful); 3 (neutral); 4 (helpful); and 5 (very helpful). There were also three open-ended questions about the most impactful concepts, aspects that were harder to understand, and any parts of the training that were not very useful. We added one additional open-ended question to gather feedback about the online delivery.

Data analyses

Descriptive statistics were calculated for the module evaluations and were divided into material presentation and activities. Descriptive information was also calculated for the post-program satisfaction questionnaire. We grouped the responses into positive (a score of 4 or 5), neutral (a score of 3), or negative (a score of 1 or 2) to generate percentages using SPSS Version 27. For one item in the module evaluations (I already knew a lot of what was covered), we categorized responses with a score of 4 or 5 as negative. While knowing much of the information covered in the RPC program is not inherently positive or negative, we decided to take a conservative approach in categorizing the frequency of responses.

Open-ended responses were examined through qualitative analysis using both deductive and inductive coding (Fereday & Muir-Cochrane, 2006). A deductive coding scheme was first developed a priori based on the open-ended questions in the post-program satisfaction questionnaire. Within these categories, sub-themes were identified through inductive coding by the second author and then computation of associated frequencies.

Results

Table 1 indicates that overall, most resource parents reported a positive experience with both the content and presentation of modules. For the presentation of material, the number of participants with a positive experience ranged from 72.6% (Building a Safe Place) to 80.6% (Taking Care of Yourself). Positive experiences ranged from 72% (Becoming an Advocate) to 93.2% (Taking Care of Yourself) for program content. For the post-program satisfaction questionnaire, Table 2 shows that the number of participants reporting a positive experience in terms of reactions to training content and delivery ranged from 62.9% (less likely to request a future placement change) to 100% (would recommend this training to other resource parents). Positive experiences ranged from 74.2% (group activities) to 100% (information from slides and presenters) for teaching strategies. Resource parents noted that they found the slides easy to follow and indicated feeling better prepared to meet their child's needs. It should be noted that approximately 20% of resource parents indicated needing additional training to understand the information presented through the RPC program. For teaching strategies, resource parents generally felt that each component was helpful, such as applying the "My Child Worksheet" (e.g., identifying their child's trauma and losses, developing a trauma-informed safety message for their child). Another example of a teaching strategy that resource parents reported as being helpful involved following the de-identified stories of children ranging in age (i.e., infant to adolescent) to illustrate the concepts (e.g., identifying a child's strengths and resilience, brainstorming areas of intervention to address compassion fatigue and vicarious trauma).

Table 1. RPC Module Evaluations

Module	Presentation of Material				Activities			
	n	Negative[a]	Neutral[b]	Positive[c]	n	Negative[a]	Neutral[b]	Positive[c]
1: Introduction	46	12.3%	13.7%	74.0%	31	2.0%	4.2%	87.9%
2: Trauma 101	36	12.8%	10.1%	77.1%	37	3.2%	17.8%	69.0%
3: Understanding Trauma's Effects	42	11.9%	11.0%	77.1%	41	0.5%	7.2%	92.3%
4: Building a Safe Place	29	15.7%	11.7%	72.6%	30	2.8%	11.3%	85.9%
5: Dealing with Feelings and Behaviours	38	11.3%	8.8%	79.9%	36	2.2%	7.9%	89.9%
6: Connections and Healing	41	14.7%	6.5%	78.3%	43	1.4%	11.4%	87.2%
7: Becoming an Advocate	28	12.2%	12.2%	75.6%	27	1.7%	26.3%	72.0%
8: Taking Care of Yourself	32	12.7%	6.7%	80.6%	32	0.0%	6.8%	93.2%

Note. [a] Reflects a rating of 1 or 2; [b] Reflects a rating of 3; [c] Reflects a rating of 4 or 5.

Table 2. RPC Post-Program Satisfaction

Training Component	Item	n	Negative[a]	Neutral[b]	Positive[c]
Reactions to Training	Slides clear and easy to follow	35	0.0%	2.9%	97.1%
Content and Delivery	Would recommend this training to other resource parents	35	0.0%	0.0%	100.0%
	Need more training to really understand this information	35	20.0%	42.9%	37.2%
	Less likely to request a future placement change	35	0.0%	37.1%	62.9%
	Better able to meet my child's needs	35	0.0%	2.9%	97.1%
Teaching Strategies	My child worksheet	34	2.9%	5.9%	91.2%
	Case examples	35	2.9%	5.7%	91.4%
	Large and small group discussions	35	0.0%	14.3%	85.7%
	Information from slides and presenters	35	0.0%	0.0%	100.0%
	Information from the co-facilitator	35	0.0%	0.0%	100.0%
	Group activities	35	0.0%	25.7%	74.3%

Note. [a] Reflects a rating of 1 or 2; [b] Reflects a rating of 3; [c] Reflects a rating of 4 or 5.

Turning to the post-program open-ended feedback, we included themes endorsed by more than one resource parent. For the most impactful program aspects, 11 of the 14 responses (79%) identified learning about the invisible suitcase (Module 3: Understanding Trauma's Effects). This aspect covers the expectations and beliefs that a young person has about themselves, others/their caregivers, and the future due to their past trauma and adversity. One resource parent commented: "The invisible suitcase was definitely my 'a ha' moment [that I] have used since we learned about it. As I believe so strongly that we all have invisible suitcases that we carry around. Ones that some people have never unpacked or want to." Five resource parents (36%) identified the most helpful aspect as being the cognitive triangle (Module 5: Dealing with Feelings and Behaviours module), which involves identifying the connections between a young person's thoughts, feelings, and behaviours to help understand challenging behaviours. Four resource parents (29%) identified balancing encouragement (e.g., supporting positive behaviours, providing opportunities for success and mastery) and correction (e.g., collaborating with the young person to determine workable alternatives to certain behaviours; Dealing with Feelings and Behaviours module) as the most helpful aspect of the program. Two resource parents (14%) noted that the whole module on self-care was most impactful. One resource parent commented: "Self-care is a tough one. We all know the concept of it, it's the practice of it that is hard. Blocking space and committing to it is a huge step in giving back to me." Two resource parents (14%) indicated that all the aspects throughout the RPC program were impactful. One resource parent commented: "This is a great program and should be required training for foster parents. Really, really excellent! The facilitators were awesome and the materials, both in the workbook and as provided as supplementary supports to participants, were excellent!"

In terms of difficult concepts, most responses (n = 13 of 15; 87%) indicated that there were none. Similarly, for aspects of the program that were least helpful, 13 of the 15 responses (81%) indicated there were none. Turning to the online delivery, 12 of the 15 responses (48%) commented that it was effective and an overall positive experience and six (24%) specified that the online delivery removed barriers in attending (e.g., childcare, travel time). One resource parent commented: "I have become a fan of online delivery ... it allows me to attend, saves me hours of driving, the turnout was excellent, so we had lots of viewpoints, and it gives me the opportunity to respond, ask questions [and] get feedback … great." Five responses (20%) indicated that they would have liked the modules to be longer and more interactive to allow for greater discussion and questions. However, two (8%) responses indicated that the length and level of interaction were just right.

Discussion

Overall, most resource parents reported a positive experience with the RPC program's content and delivery. They found the way the material was presented to be helpful, as well as the specific content in each of the eight modules. In fact, all resource parents who responded indicated that they would recommend the training to other resource parents. These findings are important as the workshop demanded quite a significant time investment from resource parents who not only had many responsibilities but were parenting amidst the many challenges stemming from COVID-19. A small portion of resource parents requested even more training on the topics covered by the RPC program to keep building on their knowledge around childhood trauma and trauma-informed caregiving. Although the current study did not collect information on future outcomes, such as placement disruptions, it is worth noting that over half of the resource parents agreed that the training resulted in them feeling less likely to request a future

placement change. This finding suggests that resource parents may have felt more confident in their ability to manage the factors that are often associated with placement disruptions, such as child behavioural difficulties (Konijn et al., 2019).

While resource parents found it helpful to learn about all aspects of how trauma impacts children, the majority identified several concepts from the module Dealing with Feelings and Behaviours as particularly impactful, including the invisible suitcase, cognitive triangle, and balancing encouragement and correction. This finding suggests that resource parents may be particularly interested in specific, concrete strategies and concepts that they can quickly apply in their homes. Several resource parents also identified that addressing the topic of self-care was impactful, which speaks to the need for child welfare agencies to ensure sufficient and regular support is provided to resource parents for their own well-being, given the impact of compassion fatigue.

Turning to the program delivery, many resource parents reported that the online format removed barriers to attendance and participation. Online delivery made it possible for resource parents to engage in a trauma-informed parenting program that they otherwise may not have been able to access. Another benefit to the virtual delivery was that it was possible to engage resource parents from across Ontario. Moving forward, it will certainly open possibilities through offering both in-person and virtual RPC options and, in this way, reaching many more resource parents with this important training.

There are several study limitations; the first is that demographic information was not collected for the sample of resource parents who only completed the measures used in the current study. Such information would be important, in addition to data on the number of years providing care to child welfare-involved youth, number of children in the home, and previously completed trainings. Such information will be helpful to determine whether the training was more beneficial for certain resource parents (e.g., newer compared to more experienced resource parents, kin compared to foster caregivers). Additionally, resource parents self-selected to complete the module evaluations and post-satisfaction questionnaire, so the perspectives of many naturally were not captured.

In terms of the next steps, RPC is over ten years old, so updates are underway to reflect current knowledge in the field. One important consideration includes greater sensitivity to diversity-related issues. Specifically, RPC does not explicitly address how diversity-related factors such as race, gender identity, sexual orientation, religion, and socioeconomic status impact both caregivers and youth in-care. Including greater discussions on how resource parents can help youth maintain connections to their culture seems important and including more content on how intergenerational trauma can help better understand the lived experiences of youth, birth families, and resource parents.

Study 2. Preliminary Evaluation of the Ontario Looking After Children (OnLAC) Initiative

Introduction

In this study, we gathered feedback from resource parents about the utility of having access to collected data around the strengths and needs of their young person in-care. This study was part of a larger project with three Ontario child welfare agencies where we examined how child welfare workers and supervisors could use such data to inform service planning and delivery, as well as by senior managers and directors to further understand the well-being and resilient functioning of all young people within their agency's care. Readers interested in the larger project findings are referred to (Romano et al., 2020) and (Stenason et al., 2021).

Given the many complex needs of youth in-care, it seems critical that service plans be informed by data and research evidence (Collins-Camargo et al., 2011). Although there is no empirical literature, to our knowledge, about the use of child welfare information by resource parents, we believe it is important given their crucial role in safeguarding a young person's well-being and placement stability. Moreover, in Ontario child welfare, this process of resource parents providing data about the young people in their care is already in place. Specifically, all resource parents are required through the Ontario Looking after Children (OnLAC) project to complete an assessment tool yearly related to their youth's well-being and functioning. In 2000, Dr. Robert Flynn introduced the Looking after Children project to Ontario child welfare to monitor and improve developmental outcomes for young people in-care and improve the quality of substitute parenting. The primary information-gathering and monitoring tool within OnLAC is the Assessment and Action Record (AAR), which covers the eight following youth domains: health; education; identity; family/social relationships; social presentation; emotional/behavioural development; self-care skills; and

developmental assets. The AAR is completed by the child welfare worker, resource parent, and young person (if older than ten years) annually as part of a 3-way, face-to-face "conversational interview." Depending on the young person's age and needs, it takes 1.5-2.5 hours to complete one or more sessions.

Since 2006, all Ontario child welfare agencies have been required by the Ministry of Children, Community, and Social Services to complete an AAR for young people who have been in-care for at least one year (Flynn et al., 2009). Currently, about 3,500 young people are assessed annually with the AAR. The findings are intended to be used by child welfare workers in discussions with young people and resource parents so that everyone comes together to make informed and agreed-upon plans of care (Flynn et al., 2004). Although the AAR was developed to be primarily a clinical tool, it has yet to reach its full potential and is often viewed primarily as a research tool. There are several possible contributing factors. First, AAR data may not be available when needed by a child welfare worker to create or revise a young person's care plan, so the timing may be off. Second, AAR data are not presented in an easy-to-understand format. The scores are sent back across the scales that make up the eight domains, so a worker may not be sure how to organize the information conceptually to identify a young person's strengths and needs. Similarly, how data are presented may be difficult to understand and use in terms of means, percentiles, and other statistics. Unsurprisingly, these factors have been reported in past research studies to impact the use of child welfare outcome data (Carrilio, 2008; Collins-Camargo et al., 2011; Esposito et al., 2016). In the case of AAR findings, they are rarely shared with resource parents or young people (Flynn et al., 2004).

Study Objectives

This misalignment between the intended versus the actual use of AAR data led us to partner with three Ontario child welfare agencies to develop, implement, and gather preliminary feedback on an AAR training initiative for various child welfare stakeholders. In this study, we focused on resource parents because of their critical role in promoting the well-being of young people in their care and their regular contribution to providing data about their youth's well-being by way of the annual AAR completion. Through post-training evaluations, we expected resource parents to respond favourably to the training initiative and recognize the benefits of having access to information about the well-being of their youth in-care.

Method

Participants and Procedures

Ethics approval was obtained from the University of Ottawa's Office of Research Ethics and Integrity. We only worked with two agencies around this training initiative for resource parents as the remaining agency declined participation. We developed a recruitment text around the purpose of the training initiative and delivery aspects (i.e., date, duration, location). The two agencies circulated this information to resource parents through their internal electronic communication system and/or through word of mouth. We did not monitor the nature of the agencies' recruitment efforts, so we do not know how extensive they were and how many resource parents they reached. The training was an open invitation, so there was no requirement to register beforehand. These procedures were adopted to create the least amount of burden on both our participating child welfare agencies and on any interested resource parents, and we deemed them to be appropriate given the preliminary nature of the study.

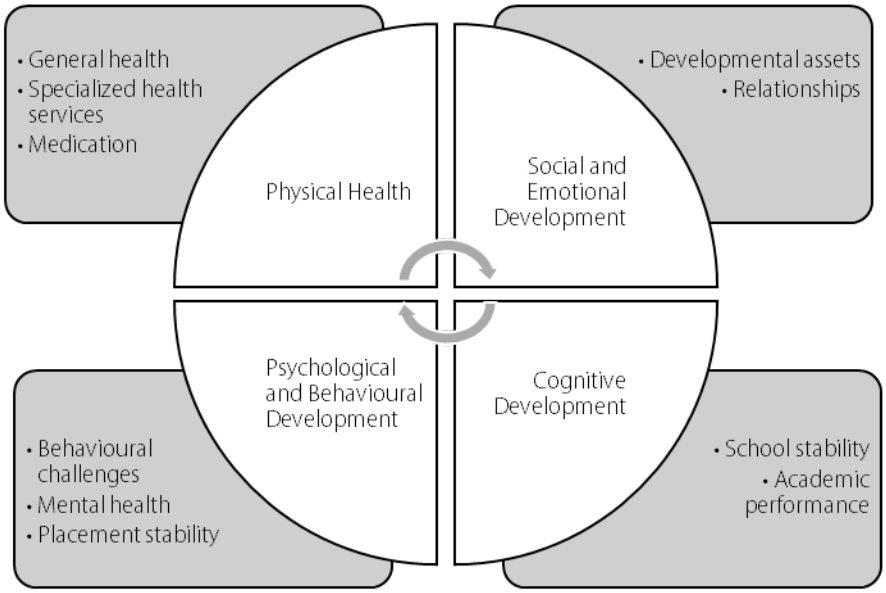
We conducted two separate trainings throughout 2018-2019, and each was approximately 2 hours in length and occurred at the child welfare agency. Each training had two facilitators – the two study authors for one training and the second author along with a research assistant for the other training. At the end of the training, we distributed a written consent form and a training evaluation form. We did not collect demographic data as we wished to minimize the research burden on resource parents. A total of 26 resource parents completed the training evaluation forms (9 for one training and 17 for another training).

Training Initiatives

The overall training goal was to familiarize resource parents with the AAR data to better understand its utility in providing information about a young person's strengths and needs. In this way, we also anticipated that resource parents would prompt workers to keep sharing AAR information to help improve their parenting work and advocate for the needs of the young person for whom they were caring.

The first training component began with an overview of the AAR's history, purpose, and domains assessed. We then explored together how the AAR can be used to understand youth well-being. This second component involved an overview of four common dimensions of well-being among young people and illustrated their inter-relatedness (Figure 1). We spoke about understanding these areas within a broader and more diverse context that included the history and background of the young person along with their lived experiences within their birth homes and child welfare, for example. The rectangles in Figure 1 provided examples of factors that can influence a young person's well-being, mapping onto information available through the AAR. We then presented AAR data for a fictional young person in an easy and visually appealing manner that mapped onto these four well-being dimensions and the various factors within these dimensions (Figure 2). We worked through the information with resource parents to make meaning and to think about ways to support young people's development, well-being, and functioning. Finally, the third component included a discussion around how they, as resource parents, could prompt their child welfare workers to share AAR information with themselves and young people.

Figure 1. Four Common Dimensions of Youth Well-Being with Corresponding AAR Domains



We relied on Kirkpatrick and Kirkpatrick's (2016) multi-level evaluation model that used close- and open-ended questions from the post-training questionnaire. We explored the first two levels of the model: reactions (i.e., perceptions of the training and its objectives) and learning (i.e., knowledge acquired and attitude change). Addressing the two additional levels of the model, namely behaviour changes and results, was beyond the scope of this preliminary study. The post-training questionnaire we developed included five items on reactions to the training content, delivery, and facilitators (Cronbach's $\alpha = .90$). Each item was rated on a 5-point scale with descriptions at 1 (not at all) to 3 (neutral) to 5 (completely). To assess learning, resource parents responded to three items on AAR content, the training applicability, and the resource parent's confidence in using the AAR content (Cronbach's $\alpha = .75$). Two items were rated on the same 5-point scale as above, namely from 1 (not at all) to 5 (completely). One of the items (What is the likelihood of you applying the training content to your parent work?) had slightly different descriptors that ranged from 1 (not at all likely) to 3 (neutral) to 5 (very likely). There was one last item that asked resource parents about their overall training rating along a 5-point scale from 1 (not at all satisfied) to 3 (neutral) to 5 (completely satisfied). Finally, there were three open-ended questions that asked about the most and least helpful aspects of the training and suggestions for improvement.

Figure 2. Example of AAR Snapshot

AB's Cognitive Development

The following section includes information related to AB's cognitive development from the perspective of the caregiver, the worker, and AB. The goal of this section is to give you a sense of how AB is doing academically and in their extra-curricular activities. Do you notice any differences in opinion among the different informants?

Caregiver Rating: Reading Performance	
Very well/Well	
Average	X
Poor/Very poor	
Does not take it	

Worker rates AB's reading performance as being **at grade level** when compared to their peers in 2017.

Caregiver Rating: Math Performance	
Very well/Well	
Average	X
Poor/Very poor	
Does not take it	

Worker rates AB's math performance as **below grade level** when compared to their peers in 2017.

Caregiver Rating: Science Performance	
Very well/Well	
Average	X
Poor/Very poor	
Does not take it	

Caregiver rates AB's overall academic performance in 2017 at a **Level 3 (70-79%, B- to B+).**

AB feels that they are doing poorly or very poorly in school.

Overall, AB says that they do not like school.

Data analyses

We used SPSS Version 27 to conduct descriptive analyses on the questionnaire ratings. We grouped the responses into high (score of 4 or 5), neutral (score of 3), or low (score of 1 or 2) to generate percentages. Qualitative data from open-ended questionnaire items were examined manually through a content analysis guided by a hybrid approach to deductive and inductive coding (Fereday & Muir-Cochrane, 2006). Responses were coded using a deductive approach based on the a priori items. The coding scheme consisted of the following categories: helpful aspects, less helpful aspects, and suggestions for improvement. One reviewer (second author) independently examined the responses to identify responses with similar meaning within the pre-determined categories. An inductive approach to identifying new emergent codes was not required as there was a fit for all responses. Code frequencies were calculated to highlight more common experiences (Hsieh & Shannon, 2005).

Results

Table 3 shows that, overall, most resource parents responded positively to the AAR training. About 7 in 10 resource parents (72%) responded positively to the training content. Approximately 9 in 10 resource parents rated the training delivery positively in that it stimulated learning and encouraged discussion, and the reaction to facilitators' knowledge and interactions with participants was also rated as positive (range from 88-96.2%). For learning outcomes, the findings were more mixed but generally positive. Most resource parents (64%) agreed that the training expanded and enhanced their understanding of how AAR data can be used to inform their parenting work. Slightly more than 6 in 10 resource parents (65.3%) responded positively to the application item in acknowledging that they would apply the training content to their parenting work, and slightly more than 6 in 10 (65.2%) also indicated that the training increased their confidence in using AAR data to inform their parenting work.

Table 3. AAR Post-Training Satisfaction Results

	Item		Negative[a]		Neutral[b]		Positive[c]	
			n	%	n	%	n	%
Reaction	Content	Curriculum content was clear and relevant	0	0.0%	7	28.0%	18	72.0%
	Delivery	The training stimulated learning and encouraged discussion/questions	0	0.0%	3	12.0%	22	88.0%
	Facilitators	The facilitators were knowledgeable and effective in delivering the training	1	4.0%	2	8.0%	22	88.0%
		The facilitators were prepared and well organized for the training	0	0.0%	1	3.8%	25	96.2%
		The facilitators effectively addressed challenging issues and questions	1	4.0%	1	4.0%	23	92.0%
Learning	AAR	The training expanded and enhanced your understanding of the AAR and how it can be used	4	16.0%	5	20.0%	10	64.0%
	Application	What is the likelihood of you applying the training content to your parenting work?	5	21.7%	3	13.0%	15	65.3%
	Confidence	After receiving the training, how confident do you feel in using AAR data to inform your parenting work?	2	8.7%	6	26.1%	15	65.2%

Note. [a] Reflects a rating of 1 or 2; [b] Reflects a rating of 3; [c] Reflects a rating of 4 or 5.

For open-ended questions, 11 resource parents provided a response about helpful training aspects. Three noted that the training was informative in illustrating how the perspectives of various individuals (i.e., young person, caregiver, and child welfare worker) could be integrated to provide a more comprehensive understanding of a young person's well-being. Three resource parents indicated that the training served as a helpful reminder and review of the AAR and that the training confirmed what they already understood. Other comments included the following: the training highlighted the importance of greater discussions with child welfare workers around and the well-being of young people; the training provided an opportunity to have a group discussion about the AAR; the training helped illustrate the types of questions that can be pursued to understand a young person's well-being.

For less helpful aspects, eight resource parents provided responses. Two noted that the fictional case example was limited because young people in-care tend to have more complex presentations. Two resource parents commented on the length of the training, with one suggesting a longer training while another finding the training too lengthy. One resource parent noted that the training was limited in addressing their need for greater information-sharing and more in-depth discussions with their worker around the strengths and needs of young people.

There were 11 resource parents who provided suggestions for improving the training. Four noted that the training would be more helpful if they had access to AAR information for their youth in-care and if this information could be shared as part of a discussion that included themselves, the worker, and the young person. Two resource parents indicated a desire for more feedback on our next steps to promote the applied use of AAR data. One resource parent noted having participated in other AAR trainings and having content overlap. Considering that our initiative is the first of its kind in its focus on AAR data interpretation, we can only surmise that this feedback is around the training component related to the AAR overview (e.g., domains assessed, purpose).

Discussion

Resource parents play a critical role in nurturing and supporting the needs of youth in-care, and we would argue that access to data related to a youth's well-being must be provided as part of evidence-informed practice. In the current preliminary study, we implemented a brief training aimed at improving resource parents' understanding of the applied utility of the AAR– a data collection tool that is completed annually for all young people who have been in the care of Ontario child welfare for at least one year. Most resource parents responded positively to the training in terms of the material covered and the facilitators and training delivery method. However, several resource parents did suggest in their comments that they would have benefitted from a more complex case example. Most resource parents also agreed that the training improved their knowledge of how AAR data can be used to better understand their young person and to improve their parenting work. The training also appears to have increased resource parents' confidence in and likelihood of using AAR findings to support their parenting work (pending greater access to this information). Of course, this brief training initiative must be viewed as only the beginning of more regular and ongoing access to AAR

data, both through additional training opportunities but more importantly through Ontario child welfare's greater incorporation of AAR data into service planning and delivery.

Given the novel nature of the AAR training initiative, it is difficult to map findings onto previous research. In general terms, however, our findings speak to resource parents' openness to learning about and using information about their youth to improve their parenting practices, similar to some previous research conducted with child welfare workers (Collins-Camargo et al., 2011; Romano et al., 2020). As such, it is important to provide resource parents with regular opportunities to consider AAR data (and other sources of information about young people). In fact, feedback through the open-ended questions suggested that resource parents found it helpful to consider ways of integrating the perspectives of various stakeholders (i.e., young people, resource parents, child welfare workers) to foster young people's resilient functioning. The feedback also suggested that resource parents desire greater contact and information-sharing with their youth's child welfare worker. The sharing of such information can increase understanding of the young person's strengths and needs and inform service planning, which includes the parenting practices of the resource caregiver.

This study was preliminary and therefore limited in its research scope and its data collection methods and analyses, which were descriptive and based on parent-reported responses to the training. Our findings were based on a small convenience sample and are limited in their generalizability to Ontario-based resource caregivers. Moreover, we did not gather socio-demographic data or resource caregiving history, so future research building on this preliminary study will need to collect this information. In terms of future directions, we are currently working on making AAR data more accessible to child welfare workers in Ontario in a way that is aligned with the timing of development/revision of plans of care and in a format that is individualized for each young person and is easy to interpret (e.g., colour-coded visuals, basic statistical concepts). As part of this work, we also train and support workers in sharing AAR data with young people and their resource caregivers in a collaborative manner that gathers and integrates feedback into service planning.

General Discussion

The studies we presented summarized two in-service training initiatives for resource parents caring for young people involved in the Ontario (Canada) child welfare system and outlined preliminary findings on training reactions and learning outcomes. The content of the training initiatives was different – one involved a multi-week trauma-informed parenting program, and one involved a workshop on the applied use of data collected for youth in-care. However, the goal of both initiatives was to offer different training opportunities that continue to build the caregiving skills and capacities of resource parents, all within a systems perspective that acknowledges the critical role of child welfare in supporting resource parents' work and well-being, which by extension positively impacts the resilient functioning and permanency of youth in-care.

Across both training initiatives, resource parents welcomed the opportunity to learn about additional ways to support their young person's needs, and they responded positively to both the training content and delivery. The online delivery of the parenting program (because of COVID-19 protections) was appreciated by several resource parents in that it increased participation by removing such barriers as travel and childcare. In the future, it will be important to consider ways of integrating both in-person and virtual programming to maximize the benefits offered through each of these delivery methods.

Resource parents across both training initiatives reported that they would make use of the material in their caregiving work and that the material helped increase their parenting confidence. Resource parents who completed the RPC program seemed to respond particularly favourably to the module on dealing with young people's feelings and behaviours through a trauma-informed lens (e.g., concept of the invisible suitcase). For the AAR training initiative, parental responses generally were positive, but there was greater variation across learning outcomes, which appears reasonable given that this training consisted of a brief workshop, whereas the RPC program spanned multiple weeks. Nonetheless, resource parents who participated in the AAR training noted being more likely to reach out to their child welfare worker to inquire about the data and ask that the AAR findings be shared with them and the young person they were caring for.

Finally, our findings speak to the important collaborative role that child welfare must assume with regard to supporting resource parents. In the RPC training initiative, the module on self-care was noted as being particularly helpful. Resource parents are caring for young people who often have complex histories of trauma and loss, which can

be physically and emotionally taxing. As such, resource parents must be surrounded by supportive individuals, such as their child welfare worker, who can monitor their well-being and put into place any needed supports so that resource parents can continue to provide sensitive and effective caregiving to young people in-care.

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Conflict of interest

The authors have no conflict of interest to disclose.

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"Maybe We Should Destigmatize It": Young Adults' Perceptions about Instruction on Sexual Consent and Sexual Coercion During Adolescence

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Abstract

Objectives: For decades, scholars and sexual health professionals have urged policymakers to improve the efficacy of sex education. Although some progress has been made through the development of comprehensive sexuality education (CSE), curricula in the United States remain limited. For instance, healthy sexual encounters require mutual sexual consent, void of sexually coercive behaviours, yet CSE initiatives only recently added instruction on consent and coercion as important parts of sex education curricula. Further, little is known about what youth learn about consent and coercion through family, friends, and media. The purpose of this study, then, was to gain insight into the information young adults received during adolescence about sexual consent and coercion through formal and informal sources, and to seek their perceptions about possible curriculum improvement.

Methods: This study utilized five focus groups to assess 32 college students' perceptions about their adolescent experiences with instruction on consent and coercion in formal and informal sex education. The mean participant age was 22, and most were women, heterosexual, and Latinx.

Results: The results indicated that these young adults did not learn about sexual consent and coercion while in high school, but believed that these topics should have been addressed. They also believed that formal sex education should move away from abstinence-only or abstinence-forward education, and should not be rooted in fear-mongering. Gender impacted whether and what youth learned about sexual consent from parents and peers. While mothers talked to sons about using contraceptives and also about obtaining consent, they talked to daughters about negative sex outcomes, such as a ruined reputation or early pregnancy. Fathers were less likely to talk to their children about sex, especially daughters. Young men talked to peers about whether they had sex, while young women talked to their friends about the physical experience of having sex.

Implications: Implications support the implementation of sex education in high schools that facilitates not only physically safe, but also emotionally healthy relationships, as well as an urgency for a cultural shift towards the acknowledgment of intimate behaviours as normative processes among adolescents.

Keywords: Sex education, adolescents, sexual consent, sexual coercion, teen dating.

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Introduction

The #MeToo movement has reignited conversations about sexual consent and coercion, with many discussions revolving around how these concepts are not typically present in formal sex education (Burton et al., 2022; Cary et al., 2022; Willis et al., 2019). Failure to adequately discuss consent and coercion in educational settings is problematic as both terms have notoriously vague definitions (Beres, 2014; Muehlenhard et al., 2016). Sexual consent can refer to an internal desire to engage in sex, an external agreement to have sex, and/or another person's interpretation of consent to have sex (Muehlenhard et al., 2016). Scholars have also distinguished between consenting to and wanting sex; one does not necessarily imply the other (e.g., only consenting to sex to please a partner; Katz & Tirone, 2009; 2010; Muelenhard et al., 2016; O'Sullivan & Allgeier, 1998). Sexual coercion has generally been defined as verbal persuasion to participate in sex and can range from mild, positive coaxing to extremely aggressive swearing and belittlement (Livingston et al., 2004; Pugh & Becker, 2018). Other research has also shown coercion to potentially include physical force or the administration of drugs or alcohol (Daspe et al., 2016; Strang et al., 2013). When persuasion is used to obtain sex, consent is not considered to be present, yet verbal coercion seems to be a prevalent component of sexual negotiation (Ramisetty-Mikler et al., 2007). Put more simply, the behaviours or statements that one person might perceive as consent or coercion, might not be perceived the same by someone else. Moreover, consent and coercion are often affected by contextual characteristics such as gender (e.g., Jozkowski et al., 2014), and intoxication (e.g., Jozkowski & Wiersma, 2015). Unclear definitions and the impact of contextual factors leave room for ambiguity and interpretation. Given the complexities associated with understanding and interpreting consent and coercion, education about sexual consent and coercion is one key avenue, among others, to encouraging healthy and wanted sexual behaviours.

Universities have started to pave the way in this regard, with many universities mandating affirmative consent policies (Muehlenhard et al., 2016; White House Task Force to Protect Students from Sexual Assault, 2014). That being said, sex education for younger groups in the United States remains limited and controversial (Hall et al., 2016; Landry et al., 2000; 2003), partly as a result of unwarranted concerns that talking to youth about sex will drive earlier onset of sexual activity (Kramer, 2019; Unis & Sällström, 2020; Weaver et al., 2005). Regardless of these debates, it is not uncommon for teenagers to engage in sexual behaviours (including, but not limited to, intercourse; Centers for Disease Control and Prevention [CDC], 2018; Olmstead, 2020). All of this highlights the need for sex education that discusses healthy intimate behaviours.

When youth are exposed to sex education in school, the content tends to focus on the anatomy of the reproductive system, sexually transmitted infections (STIs), and pregnancy prevention, with little to no content about navigating sexual encounters (e.g., communicating and interpreting consent or dealing with pressure to have sex; Burton et al., 2022; Muehlenhard et al., 2016; Willis et al., 2019). The CDC's Youth Risk Behaviour Surveillance research urges schools to increase efforts to implement and improve instruction on condom and contraceptive use among youth (Szucs et al., 2020), but there is also room for additional topics that speak to the complexities involved in sexual interactions. Over the past few decades, American sexual health advocates have pushed for the implementation of comprehensive sexual education (CSE) initiatives for school-based sex education curricula (over the traditional abstinence-only until marriage [AOUM] approach), which in more recent years has also started to include topics associated with sexual consent and healthy relationships (American College of Obstetricians and Gynecologists, 2016). CSE, especially with sex-positive messages, such as those offered in a number of European countries, is associated with better health outcomes for adolescents, such as having safe and protected sex, and does not lower the age at which adolescents engage in sexual intercourse for the first time (Weaver et al., 2005; Unis & Sällström, 2020). Despite these encouraging observations about the health benefits of CSE, implementation of CSE in the United States remains inhibited (Hall et al., 2016), and even when it is taught, the content and focus is not universal across jurisdictions (American College of Obstetricians and Gynecologists, 2016; Sexuality Information and Education Council of the United States [SIECUS], 2022).

Of course, youth can also learn about sex, and sexual consent and coercion, through other means, such as parents, friends and media. Parent-child communications about sex are somewhat normative, and the majority of parents reported talking to their children about at least one sexual topic (Dilorio et al., 2003; Widman et al., 2014). However, studies have suggested that the frequency and complexity of parent-child communications about sex are less than desirable and are rarely focused on sexual consent (Flores & Barroso, 2017; Padilla-Walker, 2018; Padilla-Walker et al., 2020) or sexual coercion (Padilla-Walker et al., 2020). Parents also reported feeling uncomfortable talking to their children about sex, and wanted to share the responsibility to broach the topic with schools (Weaver et al., 2001; Byers

& Sears, 2012). Little is known about conversations with peers about sex, but one study suggested gender differences exist, in which boys talk to their friends about condom use and STIs, while girls talk to their friends about whether or not they have had sex (Dilorio et al., 1999). There is no known research available to discern whether adolescents talk to their peers about consent or coercion, yet since it is not a common topic in sex education or in conversations with parents, it might be unlikely that youth would have the appropriate terminology or aptitude to talk to their peers about it. Although recent social media campaigns, such as #MeToo, might have impacted youth's knowledge of sexual consent and coercion, some argue that these social movements have had little impact on ordinary American life (Taub, 2019). It has been observed that young people's understanding of consent continues to be affected by traditional gendered sexual scripts in the aftermath of this movement (Setty, 2021). Finally, young people also consider mass and social media, including pornography, as a source of sex education (Hust et al., 2014; Simon et al., 2014), but they also reported that these sources do not always adequately convey information about communicating or interpreting consent (Cary et al., 2022; Rothman & Adhia, 2015). Considering that many adolescents engage in sexual conduct with similarly aged individuals and that navigating sexual interactions is complex, it is important to evaluate the information adolescents receive, including content of formal and informal sex education.

Objectives

The purpose of this study was to gain insight into the information young adults received during adolescence about sexual consent and coercion through formal and informal sources (i.e., sex education in school, parents, friends and media). The study also sought to identify which sources young adults found most useful during adolescence. In addition, this research assessed the factors that facilitated a growing understanding of consent and coercion after high school. Finally, this study gathered information about young adults' perceptions about strategies to improve formal sex education in high school, particularly the instruction on sexual consent and coercion.

Method

Data Collection

During the Spring of 2021, five focus groups were conducted via Zoom among college students at a racially diverse and public university in central California. The student population is largely Latinx, who commute to campus daily. College students were chosen, since they fairly recently finished high school in grade 12 and could likely recall their experiences with formal and informal sex education. They also could provide suggestions on how to improve sex education based on what they know now. Focus groups on sensitive topics like sex education have been found to be useful. Being in a group of peers can be conducive to sharing and elaborating on reflections on learning about sex (Cary et al., 2022; Frith, 2000; Herrman et al., 2017; Rose et al., 2019; Setty, 2021; Unis & Sällström, 2020). We were mindful of sensitive information being shared in the groups and sent participants information on campus support services following the focus group meetings; this information was also included in the consent form.

At the time of recruitment and during facilitation of focus groups, many universities remained under COVID-19 restrictions, so all procedures were conducted through digital techniques. Potential participants were recruited via email, through a process that randomly selected any student at the target university. The email invitation, automated and supported by Qualtrics, informed potential participants of the purpose of the study, their voluntary participation in the study (which could be withdrawn at any time), and incentives provided for their time ($50 gift card). Interested individuals were then prompted to complete a very brief survey linked in the invitation email. They were first asked to identify their gender identity (i.e., male, female, non-binary, transgender, other, prefer not to share) and sexual orientation (gay or lesbian, straight, bisexual, intersexual, queer, other, prefer not to share) in efforts to place them in pre-scheduled focus groups based on their responses. The focus groups were pre-scheduled to alleviate any attrition that may have resulted from multiple communications with potential participants. The purpose of categorizing participants into specific focus groups based on gender identity and sexual orientation was intended to increase participant comfortability, since content matter included possibly uncomfortable topics (e.g., content of discussion with parents and friends about sex). None of the potential participants identified as non-binary, transgender, other, or preferred not to answer. Once potential participants completed these initial questions, they were automatically provided the time and date of their respective focus groups (i.e., heterosexual men, heterosexual women, LGTBQ+ men, LGTBQ+ women) and asked if they were available to participate at that time.

Upon confirming availability to participate, the participants were sent an informed consent form via Docusign (i.e., an electronic signature software). Focus groups were held through video conferencing on Zoom, which has

become a somewhat normative methodology as a result of social distancing requirements (Dodds & Hess, 2020). Video capabilities for all respondents, excluding the researchers, were disabled. Participants were instructed how to set up a pseudonym as their screen name, thereby enhancing confidentiality. Respondents were also asked to be somewhere private when they signed into the online meeting. Ethical approval was received from the researchers' institution.

In total, 32 individuals participated in five focus groups, with each group ranging from four to 11 people. Two focus groups consisted of heterosexual women (group 1, n=6; group 2, n=11), while the remaining three groups consisted of a heterosexual men's group (n=5), an LGTBQ+ women's group (n=6), and an LGTBQ+ men's group (n=4). The invitation was sent out to a total of 4,000 students (originally 2,000, followed up by another 2,000 to attain an increased sample), with 103 completed responses (many of which included interested students who could not attend the pre-scheduled focus group). Response rates were rather low, which was potentially due to the content matter being discussed, the impact of the COVID-19 pandemic, and the need to have pre-scheduled meeting dates. Content matter may have mattered most, as an identical research invitation, with no incentives to participate, was sent out the previous year and even fewer people were interested in participating. COVID-19 may have impacted some students, who may have become less likely to check university emails as a result of disrupted family lives and work schedules. The final sample of 32 students represented only those who were willing to participate, and were available during the pre-scheduled focus group times. Focus groups were scheduled in the early evening in attempts to accommodate a student population who often have numerous and overlapping school, work and family responsibilities. Data saturation was reached, since no additional themes emerged after the fourth focus group (Fusch & Ness, 2015). Focus groups ranged from 52 to 93 minutes, with the mean time allotment equaling 71 minutes. On average, focus group participants were 22 years old, at the time of the study. The majority of participants identified as women (71.9%). A little more than half identified as Latinx (52.2%), and other participants identified as White (28.7%), Black (8.6%), and Asian (10%). Two-thirds of the sample consisted of participants who identified as heterosexual, while the other third identified as LGTBQ+. Participants graduated from high school, on average, about five years prior to study participation. Although the average age and years from graduation might suggest that more advanced students participated in the study as compared to beginner students, the targeted university enrolls fewer students aged 18-21 as compared to the national average.

Focus groups were semi-structured and based on nine primary questions that asked participants about their experiences with formal and informal sources of sexual knowledge during adolescence. For instance, participants were asked about the nature and content of sex education in school, their understanding of sexual consent and coercion at the time, their discussions with parents and friends about sex, and what they found to be the most useful source of information. They were also asked about their perceptions on how to improve sex education, and how their understandings of sexual consent and coercion have changed since high school.

Both researchers identify as cisgender women and as heterosexual. One of us grew up in the United States and one of us in Europe, in a country where formal sex education is potentially more embedded in schools, comprehensive and repetitive than it is in the United States. Both of us have experience doing in-depth interviews with vulnerable populations (e.g., victims of violence, incarcerated women), as well as doing focus group interviews. The first author took the lead in the focus group interviews, with the second author taking notes during the interviews, and asking for clarification and follow-up during the interviews. We debriefed immediately following each interview and shared field notes, for instance, on how we had both felt and appreciated the respondents' willingness to share their views, how their views concurred, and their eagerness to see change for future generations. The concurrence in the participants' perspectives was remarkable, and the mutual support among participants was palpable, despite being in an online focus group without the use of cameras (participants would express agreement verbally or use emojis, including the thumbs up, heart, or clapping hands emoji, to demonstrate immediate reactions and not to interrupt the participant who was speaking).

Data Analyses

Focus group audio files were transcribed and then manually coded. Analyzing the data was an inductive process, in which open coding was used to develop themes (Williams & Moser, 2019), in line with a phenomenological approach (Creswell, 2013). Both researchers conducted line-by-line coding independently and then subsequently assembled themes into a coding structure based on the research questions (Creswell, 2013; Miles et al., 2014). Interrater reliability was established through consistent meetings to discuss identified codes.

The coding structure resulted in seven primary codes. Generally, the literature suggests that a theme (i.e., primary code) can be established if it occurs within 50% of the sample (Campbell-Reed et al., 2013). However, this measure is somewhat less relevant in relation to focus group data as the sample refers to each group, rather than individual responses. Nonetheless, in this study, themes were established if they were identified in at least three out of the five focus groups. These overarching themes appeared in the various gender and sexual orientation groups, rather than being unique to a particular gender or sexual orientation. The researchers did identify themes specific to gender and LGTBQ+ groups; however, variations between groups is not within the scope of this study, and will be discussed in separate publications. In addition to primary codes, "sub codes" were similarly identified and illustrated specific phenomena related to primary codes. For instance, "sex education as physically relevant, but mentally improper" was identified as a primary code for formal sex education, with several sub codes (e.g., abstinence-focused, shame invoking, fear-mongering approach) characterizing the primary code. Some group differences were identified among sub codes.

The primary codes or "content themes" provided information about (1) access to sex education; (2) young adults' perceptions about the nature and content of sex education in schools; (3) the content of conversations about sex with parents as well as with friends; (4) the most relied upon resources for sex among adolescents; (5) their understanding of consent and coercion while in high school; and (6) the information young adults wished they had received about sex, sexual consent, and coercion during their teenage years.

Results

Making Do with Little Education

The results suggested that focus group participants usually experienced some form of exposure to sex education, but that these instances might have been extremely momentary. For some, an introduction to sex education occurred in middle school (grades 5-8), but not in high school (grades 9-12). When focus groups did mention having received sex education in high school, they often reported very limited instruction, since it was not its own curriculum. For instance, Nate, an LGTBQ+ man, stated, "... [it] was actually a summer school class and a summer course over a period of four weeks. So, it wasn't even in, you know, the general curriculum". Instead, sex education often supplemented already existing courses or were additional, non-required electives. Most participants stated that sex education in high school ranged between one class period to around a week's worth of instruction.

Similarly, many participants did not talk to their parents about sex at all. Among those that did talk to their parents, a few respondents indicated that they had received helpful information, but most mentioned these conversations as infrequent occurrences that lacked depth and clarity, and/or were shrouded in shame. For instance, Stephanie, a heterosexual woman, discussed her confusion with her mother's attempt to provide sex education while watching a popular TV show when she was 8 or 9 years old, and the lack of support she received at a later age:

> *…My mom had kind of given me, like, "the talk" and her version of the talk was making me watch [...] '16 and pregnant'. [...] I didn't even really know what sex was and she was just having me watch this show as kind of like, almost like a scare tactic into scaring me into not having sex [...], having a boyfriend or getting in a relationship with a partner, and at the time I was just more confused because she didn't explain what sex was. [...] As I got older the only time that we had readdressed sex with my family was after my first relationship and I had been sexually coerced, and so I opened up to my mom about that and it was definitely a lot of shame. [...] So for [my parents] it was like [...] "you should have just never gotten in the relationship in the first place," instead of actually, like, looking at the hurt I had gone through or the manipulation.*

Formal Sex Education as Physically Relevant, but Mentally Improper

The nature of sex education in high school has been highly focused on maintaining abstinence and characterized by a social inappropriateness of talking about sex openly. Statements indicating that young adults felt fear and/or shame when learning or trying to communicate about sex with instructors while in high school was a common theme across all focus groups. Strategies to promote abstinence also often involved fear mongering, in which youth were instructed on the potentially devastating consequences of sexual behaviour on their future lives. In speaking about sex education in his school, Brad, a heterosexual man, stated:

> *…my high school just had an [STI] class and from what I recall, it was just basically designed to scare me into not having [sex]…like even the teacher, she brought in someone from outside and [the*

speaker] was just like going into all the negatives about it and like, she'd tell us like all these negative stories of like kids that had sex in like high school and whatever, and then like their lives are ruined.

Focus group discussions about problems with the content of sex education were nearly universally shared. When youth experienced some form of sex education in school, the curricula revolved around anatomy of the sexual reproductive system, as well as STI and pregnancy prevention, and again, it is important to note that the overarching goal was to promote abstinence. As explained by Rebecca, a heterosexual woman, "Mine definitely referred to abstinence. I remember my teacher saying that the only safe sex is with yourself. And also they highlighted the different [STIs]. I remember that I was very scared".

Although some aspects of sex were covered in formal sex education, young adults also mentioned that sex itself was not clearly addressed nor was there much instruction on what to do if there were consequences to sex or how to prevent them. Erica, an LGBTQ+ woman, said: "They taught us that there were all these sexual diseases, but not really what to do about them… nothing more in depth". The general consensus apparent in all of the focus groups was one in which the participants seemed to be realizing that they did not learn much about sexual behaviour (or what to do in a variety of subsequent situations) in high school.

Participants also referred to the fact that sex education seemed outdated and ineffective. Cynthia, a heterosexual woman, recalled the curriculum as, "videos that came straight [out of] the 90s type of thing," while Karina, an LGTBQ+ woman, said:

I don't even know if I felt like those were effective…because there was so much [sic] people [...]. I feel like it was more like they were trying to manage our behaviour or like, the gossip and people like laughing and having side conversations, more than anything else, so our class was like, overly crowded with this like short-term lesson that we had.

Here, the participants highlighted the potential importance of the facilitation of sex education in school, suggesting, again, that sex education is not conveyed as an important topic of discussion for youth. Outdated and ineffective sex education was also evident when participants talked about it being heteronormative. Carlos (LGTBQ+ man) was fortunate to have parents that he felt comfortable talking to about sex, because he certainly did not feel as if he would learn about LGTBQ+ experiences in formal sex education:

Since I am gay, like anything, all the sexual education that I had been taught, you know, if any, was also just heterosexual and so going to my dad and my stepmom about like, how to be safe and like, what it all entails and what, you know, having sex would mean and everything like that… . I did talk with them a lot, and so they were informed, very informative.

Finally, several women participants noted that their sex education ignored women's sexuality and an obvious, yet not discussed, aspect of sex: it can be enjoyable, and not just for men. Cynthia, a heterosexual woman, believed that not talking about women's pleasure was concerning, because of the potential implications for understanding consent:

It's about how you get a woman pregnant, not anything about female pleasure… which I think is very problematic. When we don't talk about some sexual activities and women enjoying the sexual act, and not just happening to partake in it, it starts to you know, uh, confuse what consent means, and you know this leads to a whole host of problems that could probably be prevented if we just talked about the emotional sides of sex.

Prioritizing Abstinence is Potentially Harmful.

Given the findings thus far, it was not surprising that the participants in the focus groups did not report learning much about sexual consent or coercion during formal sex education in high school. Cynthia, a heterosexual woman, mentioned being taught that, "… if you didn't want something to happen to you, then you don't participate", reinforcing that the focus was on abstaining from sexual activity rather than teaching youth about how to develop healthy relationships. In another focus group, two LGTBQ+ women alluded to how the failure to talk about the nuances of consent and coercion might leave individuals without the appropriate tools to navigate them. For instance, Karina explained that she felt disempowered to negotiate consent: "I wasn't really informed on consent and it wasn't something that I kind of knew or felt like I had the power to say no and remove myself from some positions". Charlotte referred specifically to the lack of nuance provided about consent (and potentially coercion as well): "They never gave

us ideas or scenarios that we could apply to… they didn't give us the full knowledge, it was just you were either raped or you consented, that's it".

Several participants shared direct or indirect experiences that spoke to the importance of in-depth teaching about sexual consent and navigating sexual coercion. Erica, an LGTBQ+ woman, talked about the experiences of other girls and believed that coercion was normative behaviour among boys: "I definitely know that, like, many girls were, like, coerced into having sex with their boyfriends when they weren't really, like, into it, but at the time I was like, 'oh that's normal, it's what boys do'." Direct experiences, such as Stephanie's (a heterosexual woman), highlighted the emotional turmoil that can result from not knowing about healthy sexual behaviours:

> *I was actually sexually coerced in my very first relationship, and I didn't actually learn what that even meant until a year after that relationship had ended. [...] I really felt manipulated in that relationship. But [...] I didn't know what the words were, and definitions for what had happened until actually learning about the information about a year later. After that relationship ended, it was actually very hurtful and [...] I felt very alone [...]. I just felt really sad, really depressed and really lonely, but then actually being able to put words to what had happened and learning about it made me feel a lot more comfortable knowing that what I had gone through was not uncommon.*

Stephanie eventually learned about sexual coercion, which validated how she felt about her previous relationship. Had Stephanie received information about sexual coercion earlier, she could have felt this validation sooner.

Parent-Child Conversations (Mostly) Mirror School Content

Be Abstinent and Avoid Sexual Consequences.

While many participants mentioned that they did not talk about sex with their parents at all, others did. When young adults did talk to their parents about sex during adolescence, abstinence remained a prominent area of discussion, and participants associated this with culture and religiosity. For example, Billy, a heterosexual man, stated, "My family is kind of traditional, so more of the conversation was around abstinence and the consequences that come with sex so you know, just preparing yourself?"

Boys, Be Safe, Girls, Don't Do It!

The content shared by parents varied by gender, and this often included parent gender as well. Mothers were more likely than fathers to talk to their children about sex overall, and the content varied based on the gender of the child. The focus group involving only heterosexual men suggested that parents (disproportionately mothers) talked to their sons about the possible consequences of sexual activity (e.g., pregnancy), protection (i.e., condoms), and the need to ensure sexual consent. Although most of these statements did not specify the term consent, the comments highlighted the need for the boys to ensure that both people are comfortable with engaging in sex. Jose, a heterosexual man, did refer to consent, but stated that the majority of content from parents was about protection:

> *The most we ever talked about was like, just protection and also like, kind of consent, like make sure both parties are okay with it. You know, anytime there's any like, discrepancy or you know, where somebody is uncomfortable, you know, make sure you… stop with that, but you know, it's just mostly like protection and that kind of stuff…*

Although heterosexual men's statements did not refer specifically to pregnancy or STIs, several comments suggested that parents talked to adolescent men about the potential outcomes of sexual behaviour.

Parents (again, disproportionately mothers) did not, however, talk to daughters about consent, and instead seemed to mostly focus, with a few exceptions, on the potentially negative consequences that can occur through sexual involvement. Sometimes, mothers used the possibility of a ruined reputation or non-supported parenthood as tactics to inhibit girls from having sex. Karina, an LGTBQ woman, talked about interactions with her mother that made her feel unable to talk to her parents about sex:

> *I strongly avoided it and I think my mother did as well. Or, what she would say was like, "if you had sex, you are either a whore or a slut, and those girls who are having sex in high school are that," so, [...] I was like, "I'm never going to tell her this"… . I just pretended like that's not even something I'm thinking about at all.*

Other maternal tactics to induce fear in their daughters involved discussing the life-long consequences of sex, such as pregnancy. Rebecca, a heterosexual woman, discussed how her mom let her know that she would be on her own in the case that she got pregnant:

> *My mom did tell me, like, "If you get pregnant, that's your baby. I'm not gonna be taking care of it. If you need to get a job, you get a job to pay for diapers. [...] I'm not gonna raise another one." So, that really scared me straight. I was like, "Wow, okay."*

Several women also emphasized that they could not talk to their fathers about sex. Cynthia, a heterosexual woman, believed her dad would have recoiled at any mention of sex:

> *…um, but like in regards to my dad, if you mention anything sexual, he gets like, really like, flustered and like, does not want to talk about it. He still thinks I'm six years old, so you know, it's one of those things.*

Most Friends Don't Know Much Either

Due to the fact that sex education in school and through conversations with parents is so lacking, some pursued information through friends. Both gender and sexual orientation influenced the information that participants sought out from friends in high school. Men discussed conversations with peers as simple verification as to whether or not they had sex, with Billy, a heterosexual man, saying, "… so we did not kiss and tell in terms of details, but just like others have stated, 'I had sex with this person. Cool, not cool', um, that's it."

On the other hand, young women did not talk much to their friends about sex. However if they did, it was sometimes to verify with more sexually experienced girls whether their parents were honest about the general sexual experience. For instance, Rebecca, a heterosexual woman, recalled several friends being fearful of the perceived pain involved with having sex:

> *I had five female friends and the common word that they all used was just, a pain, like, there was just the pain level and I guess that's the only thing their parents really told them was like, it hurts. Don't do it and that was pretty much it, and that's probably why we, we just stayed away from sex like, it hurts. Why would I voluntarily do something that hurts?*

Again, the fear-mongering used by parents to promote abstinence was apparent, and girls sometimes used their friends to gauge what to expect when they began engaging in sexual activities. In some cases, however, more sexually active girls took it upon themselves to inform other girls about available resources, and pleasant and unpleasant experiences.

LGTBQ+ men and LGTBQ+ women discussed how they sought out fellow LGTBQ+ peers to discuss sexual topics. When asked about sources for information about sex, Carlos referred to friends. In the same breath, he acknowledged that other adolescents did not necessarily have accurate information about sex:

> *I definitely would talk with my friends about being gay. You know, that's kind of how we got our education. It was just talking to each other and figuring out, you know, what do you do, what you don't do… that was kind of our education, was finding out within our own community of friends and usually people of your own age. [...] Sometimes it wasn't all like correct, because also, you know, we were in high school. And so, we, you know, some of us had only heard things, so we talked about, like, rumors about what it would be like, so not all of it was, like, true or very informative.*

Google Teaches Sex Education

More so than friends, focus group participants went to mass and social media to learn about sex. Indeed, when asked about their most useful resource for sex education while in high school, many young adults, across all focus groups, referred to media. For instance, Emmanuel, a heterosexual man, said, "On the internet, Google", which was quickly followed up with agreement among the other participants in his group. Beyond broader Google searches, participants also referenced specific sites or social media, including Twitter, Reddit, Tumblr, and YouTube. They also referenced other media sources, such as textbooks. Young women varied from men in that they also referenced teen magazines or fiction novels, such as Mary (an LGTBQ+ woman):

Okay, I have to add young adult books onto that as well. [...] I can think back to the first time I ever read a sex scene and was like, "Oh my God, is that what it's like?" That was also a huge source.

In addition, while not specifically identified as a prevalent theme, young adults also sometimes mentioned pornography within the context of media searches, but some were not as forthcoming when talking about it. Karina, an LGTBQ+ woman, for instance, was rather upfront in discussing the use of pornography to learn about sex, and she also discussed how she had to "un-learn" that information later:

I don't know if I'd quite call it learning, especially since I feel like I've had to do so much unlearning, but I would definitely say porn. Porn was like, the main source that I went to, to kind of like, learn like, more physical stuff…

At the same time, the heterosexual men's group did not overtly state that they accessed pornography on the internet until prompted by one of the interviewers. Here, the interviewer asked, "So more so Google, than pornography or anything like that?", which was followed by two men agreeing that pornography was a source of sex education.

Insufficient Understanding of Consent and Coercion in High School

Consent Means A lot of Things.

Data suggested that participants' understanding of sexual consent during high school was rudimentary, and some gender differences were clear. Most participants referred to their understanding of consent as a mutually existing, firm, verbal yes, providing clear indication that both parties wanted to participate in sexual activity. In addition, men participants also understood that consent could be removed at any time and that being rejected for sex should be respected. Miguel, a heterosexual man, illustrated this point when he said, "Yeah, well for me it would just be like both having to agree, and I guess whenever someone felt uncomfortable, that was like, what drew the line. That's when you, you know, knew to stop". While findings pertaining to a mutual, verbal communication as indicative of consent existed among both men and women, women did not spontaneously mention that consent could be removed. Women participants focused mostly on verbal affirmation for consent, although a few women, in individual instances, also indicated that consent extended beyond physical activity to include the dissemination of nude photos, could require that "love" exists to occur, and that it was perceived as a concept that men needed to obtain from women. Kimberly, a heterosexual woman, provided insight about the latter:

It was more towards, like, if a male, you know, asked a female. It was never really the other way around. It was more like, if a female you know, said no. [...] It was just more basic like if they expressed no, then that's like, not them consenting to having sex, but that's about it.

Kimberly's statement about men's sole responsibility in obtaining consent was not a prevalent theme throughout the majority of focus groups, but, along with the other individual statements made by women, gave insight into possible gender differences that exist in girls' and boys' understanding of consent. The latter half of her statement, however, was a dominant theme, in which young men and women could not articulate much to define consent past a mutual, verbal agreement.

The Muddled Meaning of Coercion.

Findings about young adults' knowledge of sexual coercion, during high school, indicated that youth learn even less about it than they do about consent. Focus group discussions about their high school understanding of sexual coercion typically resulted in responses indicating that sexual coercion was not a term that participants were introduced to in adolescence. Billy, a heterosexual man, provided the most often used definition of coercion by heterosexual focus group men, stating, "…the persistence of persuasion. So, persistent persuasion, so you know, [having a] current no, but [thinking to oneself] 'let me see about advancements [to change this]', essentially." Heterosexual men stated that during high school, they understood that coercion meant trying to convince a person to have sex, and believing the possibility for sex remained even if the other person refused. LGTBQ+ men did not respond similarly, and instead indicated that they did not learn about coercion in high school. Beyond the broad explanation offered by heterosexual men, women's adolescent views on coercion were somewhat limited to understanding it either as persistent persuasion or adverse experiences outside of romantic relationships, or as involving physical force or aggression within relationships, as depicted here by Mary, an LGTBQ+ woman:

Yeah, I think at that time… sexual coercion… like the idea of that was usually rape, consisting of somebody who you didn't necessarily know that well or like, you weren't even in a relationship with. Or, if it was like, you know, maybe a couple, [...] you know… whoever, like, kind of started [coercing and] was like, really aggressive or angry.

Stephanie's (a heterosexual woman) observations further illustrate this well:

We never really talked about… what coercion would look like when you're in a relationship with someone. Um, so in high school, you know, a lot of people and myself included were, you know, in relationships and there was never any explicit conversation about the fact that even when you have a partner there is also an aspect where you could be coerced into doing something that maybe you're uncomfortable with or you weren't 100% sure that you wanted to do.

Karina, an LGTBQ+ woman, talked about how coercion was a typical behaviour among high schoolers, stating, "I do feel like it was normalized at the high school that I went to… for people to be persistent and keep asking and asking, and it was just a way of flirting".

Participants' knowledge of sexual consent or coercion, even if the terminology was lacking, showed that adolescents tended to only have some base knowledge of these concepts, but they at least learned a little bit about it somewhere.

The Desire for a Truly Comprehensive Sex Education in High School

College and Experience Refined Sexual Knowledge.

A great deal of information about sex was learned once participants were enrolled in college, thus increasing their knowledge about sex, and sexual consent and coercion. Raquel, a heterosexual woman, explained that she received more information about the ways in which consent and coercion differ:

I kind of understood what consent was, but not really. I didn't even know what sexual coercion was except for when we took the [required university training on sexual harassment] that we have to do every year. That's when I was like, "Oh, so there's a difference".

Learning could have also come from college courses that may have talked about similar topics. For example, Cynthia, a heterosexual woman, referred both to the mandatory university training, as well as a women's studies course as sources of new information about sex:

I took a women's studies class as a requirement and that class just, like, sparked like, you know, a passion in me to, like, really explore topics like this [in other courses].

Heterosexual men, in particular, referred to lived experiences as being a major source of information after high school, with Billy stating:

Being put in like, you know, actual situations where you actually have to, you know, recall those… you know, your education of what to do in this situation. So real life situations, more so.

Charlotte, an LGBTQ+ woman, alluded to college as an environment in which questionable situations are more visible, suggesting that it is not only direct sexual experiences that provided an enhanced understanding of nuances involved in sexual situations:

Being able to like, you know, go to football games, sometimes see a guy pulling a girl away and she doesn't look into it. You know, seeing things happen around you really expanded my thoughts and my knowledge on the situation, so I guess like the personal experience and being in a different atmosphere than in high school […] and you're seen more as adults and it's easier to have those adult-like conversations.

Destigmatize Sex and Provide an Open Dialogue.

As a result of their experiences during and after high school, the focus groups had numerous thoughts on possible ways to improve sex education in high school. Here, the findings might best be characterized by Stephanie's (a heterosexual woman) emphatic statement in response to our question how sex education could be improved: "Man, where do I start!?" Participants wanted a multi-faceted approach within a full and focused curriculum that was offered

earlier than university. Focus groups overwhelmingly agreed on the need to move away from an abstinence-heavy approach, and remove fear-mongering and shame as a primary strategy to ensure it. Stephanie elaborated on the need to abandon abstinence-only education, because of the likelihood that youth are having sex and need tools to be safe, not shamed:

> *They're obviously still going to be partaking in sex, regardless of what we teach them. But if we teach them abstinence-only, then they're not going to, maybe, have the resources to know the proper protection, such as condoms, birth control, just being safe, even just in the terms of coercion and in terms of consent as well, and understanding that you don't have to partake in sex if you don't want to. There needs to be less shame involved with it, and it needs to be more of an open dialogue.*

Rebecca, a heterosexual woman, added that knowledge is perhaps more effective than using scare tactics:

> *Sex is taught with fear like, we teach the children like, fear like, "it hurts, don't do it, you're gonna end up pregnant, you're gonna get [STIs] and then you're gonna die." Like, I feel like we should replace that with knowledge.*

Young adults also insisted that instructors and parents should acknowledge that adolescents will experiment with sexual behaviours and therefore, should be provided room for an open dialogue that normalizes sex. As Jose, a heterosexual man, argued, "... maybe we should destigmatize it, like, you know, it doesn't make sense to make it so scary when we all do it. We all know we do it". Nate, an LGTBQ+ man, added that not normalizing discussions about sex could make students uncomfortable in talking to instructors about sex:

> *…but you know, maybe students wouldn't be comfortable telling a teacher or something, or asking a teacher a question when they're going to be with them for the rest of the school year. You know, they probably are thinking, "oh, well, what if that teacher thinks differently of me?" And again, that comes back to transparency and open communication.*

Young adults across the various focus groups also strongly believed it was highly important to teach about consent and coercion, and to do so in an inclusive way. Participants thought that instruction should be sure to emphasize that each person should only be concerned about what he or she is comfortable with sexually, rather than succumbing to any peer or societal pressure. Being inclusive also referred to educating boys and girls about both sexes (e.g., women's anatomy and women's pleasure during sex), letting youth know that sex is not only about reproduction (e.g., that it is pleasurable), acknowledging all sexualities other than heterosexuality, including information about healthy and unhealthy relationships, and emphasizing that sexuality and sexual experiences are unique to each individual. Jose, a heterosexual man, for instance, talked about perceiving sex as solely a reproductive function when he was younger and the need to talk more about other sexual functions:

> *I think we should stop teaching sex just as maybe reproduction. You know, as a kid 'cause that's what I thought like, we just do it to make more of us. But I think we should teach it more as, like, it can be your own. You know, like, it's more… it's not just reproduction.*

The need to move away from a heteronormative curriculum was emphasized in LGBTQ+ as well as heterosexual focus groups. Mary's (LGBTQ+ woman) observation, illustrates this particularly well, however:

> *I also think that like, a part of sex education, it's so in this little box, especially for just like, it's a man and a woman versus what like, you know, there's people who are asexual or just like I don't know, everything like that spectrum of like, the LGBTQ+ community […] helps give a broader perspective. [...] Sex doesn't just involve, like, uh, penises, or vagina, like, it's so different for so many people.*

Finally, participants perceived adults who provided comfortable spaces to talk openly about sex as a means to prevent unhealthy behaviours, increase accessibility to other resources (e.g., organizations to help with birth control), and improve general support navigating sexual topics and situations. Erica, an LGTBQ+ woman, indicated that having non-judgmental adults to talk to is important, because youth are often engaging in sexual behaviours anyway:

> *Underage kids having sex [in our State] is, you know, illegal, but they have it anyway and they don't have resources, like, if their parents aren't okay with it, but they're still doing it. [...] They have very limited ways to be able to get condoms or birth control, or also just to understand that certain relationships aren't healthy. They don't have people they can talk [to about] that kind of stuff, especially if they want to, but if they have to say something like, "Oh, I'm having sex with a 20-year-*

old man", there's no one there to really tell them, "Oh my God, that's probably really not okay and unhealthy."

Participants believed that schools should provide a place and an adult who can meet students' needs as related to questions or concerns about sexual behaviours. They suggested the best option would be for schools to employ a specific sexual resource person, rather than expecting a regular faculty member to fill the role. A specialized sexual resource counselor would be more comfortable with sexual topics, and would potentially reduce shame associated with sex and more likely to be inclusive of other sexualities. Fiona, a heterosexual woman, suggested that, without this space and person, students will continue to avoid talking about sex:

Most people in high school don't feel like there is a space or a person or a part of the school where they could at any point go and get these, you know, questions addressed or needs met. […] Kids view sex as shameful, or something that's not meant to be talked about and you'll continue to not talk about sex, because of that environment and that mentality.

Carlos, an LGTBQ+ man, added that using everyday faculty as a resource might be problematic if that person happens to be someone less focused and accepting of inclusivity:

I've also heard homophobic comments from certain teachers when they don't think that anyone is listening and so [...] that also helps fuel the idea of having someone on the staff. [...] You know they're going to be accepting, you know, of any sexuality, any gender, any questions, you know, heterosexual, homosexual or other. I think that would really help, because [...] in some areas, not all teachers and not all adults and authority figures are accepting.

Taken together, results suggested that participants believed that comprehensive sex education should be prioritized, normalized, and supported by like-minded individuals.

Discussion

The fact of the matter is that many adolescents engage in sexual activities (Haydon et al., 2012; Young et al., 2018), and the stigmatization of sex as a shameful behaviour, especially for girls (Sprecher et al., 2022), tends to inhibit adolescents from talking to adults about it (Motsomi et al., 2016; Weaver et al., 2005). Youths' perceived inability to talk to adults about sex, consent, and coercion is problematic as it likely limits their knowledge about healthy sexual behaviours. Our findings strongly suggested that heterosexual and LGTBQ+ individuals had mostly similar experiences with sex education, and both groups preferred comprehensive sex education that acknowledges sex as a normative, and often pleasurable, activity for both men and women, supporting similar research by Unis and Sällström (2020). The United States jurisdictions continue to implement either CSE or AOUM sex education approaches. Evaluations show that CSE is promising (Goldfarb & Lieberman, 2021) and includes information about making healthy, personal decisions about engaging in sex. However, the effectiveness of both approaches is measured through STI and pregnancy prevention (Blanton, 2019), rather than examining youth's knowledge and understanding of sexually healthy behaviour, and that is an important shortcoming. Whether participants in this study received CSE or AOUM is unclear, but our results suggested that sex education was not prioritized, was abstinence-only or at least abstinence-forward, and, most importantly, consistently lacked information about the nuance that is present in sexual interactions. The latter affects young people's understanding of sexually healthy behaviour. This is not new information. For decades, scholars and sexual health professionals have urged for improved sex education (Goldfarb & Lieberman, 2021; Santelli et al., 2019), and while some progress has been made through the development and implementation of CSE, there is also evidence that sociocultural and political barriers continue to inhibit facilitation on a broader scale (Hall et al., 2016). The challenges associated with confronting these barriers highlight the importance of continually providing up-to-date, science-based evidence on best practices for sex education. This study reinforced ongoing arguments for further expansion and improvement of CSE.

Beyond wanting sex education that removes the stigma of conversing about sexual behaviour, the participants in the various focus groups also suggested numerous topics that are not currently included in CSE or AOUM curricula. Sex education tends to focus on reproductive anatomy, and STI and pregnancy prevention, without actually discussing the social components involved in sexual interactions, such as sexual consent or coercion (Burton et al., 2022; Muehlenhard et al., 2016; Willis et al., 2019). Given the role that both of these components play in sexual victimization and offending, they are more than pertinent to the curricula (Niolon, 2017; Righi et al., 2021). One recent

initiative also illustrates the potential value in speaking about consent more broadly in sex education curricula, in which consent means more than "no means no" or "yes means yes," and instead also includes conversations about "healthy relationships, gender stereotypes, ethics, communication and empathy" (Sibosado & Webb, 2022, p. 2). This supplement to sex education curricula is referred to as "comprehensive consent education", and can improve youth's understanding of consent by allowing them to practice consent in lower pressure situations so that they are better prepared in higher pressure situations (Comprehensive Consent, 2022). An improved understanding of consent and coercion also empowers teenagers, which in turn may help prevent unpleasant and adverse experiences (Sprecher et al., 2022; Weaver et al., 2005), and the need for more information does not cease there. Young adults felt that they did not learn about how to handle negative sexual experiences. When adverse sexual experiences occur, knowledge about sexual consent and coercion can promote victim resiliency, in which victims might be less likely to engage in self-blame and other negative cognitions associated with such experiences. For example, Enhanced Assess, Acknowledge, Act (EAAA; also known as Flip the Script with EAAA) is a Canadian-based, university-level program founded in theory and research (see Nurius & Norris, 1996; Bart & O'Brien, 1985; Rozee & Koss, 2001; Ullman,1997), indicating that women face challenges in confronting sexually coercive males. EAAA teaches women about the possibility that they might experience sexual coercion on the university campus, and the corresponding "red flags" of such behaviour (Senn et al., 2022). A Canadian evaluation of the program found that women who were raped post-intervention blamed themselves significantly less after participating in the EAAA program than women in the control group (Senn et al., 2022).

Participants in our focus groups also wished they had learned more about other sexualities, in which they felt that sex education was too heteronormative, and failed to include enough information about women's anatomy and sexual experiences. These findings reinforced suggestions offered by other studies in relation to being more inclusive (Centers for Disease Control and Prevention [CDC], 2022; Pound et al., 2016), and for including sexual consent in sex education curricula (Willis et al, 2019).

The findings also supported best known practices by identifying the importance of well-qualified and highly trained instructors and staff, and more inclusive accessible sexual health services (i.e., inclusive in the sense of considering sexual diversity, for instance; CDC, 2022), which was also highlighted in Pound et al.'s (2016) international comparison. Participants believed that sex education instructors should specialize in the topic, rather than be a Biology teacher serving in the role as sex educator, for example. Similarly, and in line with the Centers for Disease Control and Prevention (CDC, 2022) and Weaver and colleagues' (2005) research, the results showed that young adults should have easy access to sexual health services, of which one avenue could involve having a sex resource person available at schools. Ensuring that sex education classes are taught by a trained and qualified instructor, while also providing additional resources outside the classroom, should improve students' comfortability (Rose et al., 2019), and potentially increase the likelihood that students will talk to qualified individuals about sex related matters. In addition, access to sexual health services might increase youths' use of condoms and contraceptives (Ross & Hardee, 2013). Accessibility can also be tied to the frequency and duration of sex education courses. These findings highlight the need for a full, up-to-date curriculum that is presented to youth, preferably in an age-appropriate capacity (Schneider & Hirsch, 2020). At the very least, improved sex education curricula should occur in middle and high school, and preferably prior to the normative age of onset of sexual activity.

Parents are another source of sex education. Although many parents discussed sex to some degree with their children (Dilorio et al, 2003; Widman et al., 2014), research has suggested that it is often lacking the depth needed to provide youth with the information required to traverse the complexities of sexual behaviour in a healthy manner (Flores & Barroso, 2017; Padilla-Walker, 2018; Padilla-Walker et al., 2020). Many parents also do not talk to their children about sex, because of the possible discomfort incurred by such conversations (Byers & Sears, 2012; Weaver et al., 2001). Children also tend to feel uncomfortable about having these conversations with their parents (Motsomi et al., 2016). Initiatives should be created that inform parents about the risks associated with not teaching adolescents about sex at home and in school (in many states in the USA, parents are allowed to opt their children out of sex education courses in school, which should be discouraged based on our findings). This should include a message impressing on parents that acknowledging sexual behaviour among adolescents, and talking about the complex relational and interactional dynamics involved, does not equal encouraging risky sexual interactions. Instead, it enables adolescents to safely navigate teen dating. It is more problematic for parents to ignore or refuse to acknowledge that their adolescent children are having sex, than to have open and honest conversations about sex. Actually, more education on healthy sexual behaviours has been associated with delayed onset of sexual activity (McElwain & Bub, 2018), and, even more importantly, with safer, healthier sexual behaviours (Holman & Kellas, 2015; Rogers et al., 2015).

By and large, adolescents are not learning adequate information about sex through school or parents. As a result, they become self-reliant and seek out their own information through peers or media. Young adults reported little substance in discussions with friends about sex. Boys merely talked about whether or not they had sex, without additional details, while girls seemed less likely to talk to their friends about sex at all (with the few exceptions in which girls talked to their friends about expectations of sex). Results determining that youth do not seek out much information about sex from friends might be positive in that their friends may not have much better information than they do, given the limited formal and informal sex education they are all receiving.

Adolescents acknowledged that information from peers was likely flawed and potentially based in gossip, and indicated that they did not receive sufficient and clear information from their parents and in school. As a result, many sought out information through the internet. Young men and women used various internet sites during high school to seek out information about sex, with a few explicitly mentioning pornography. Young women also referred to magazines and fiction as a source of sex education. While there are certainly great sources of information about sex on the internet, there are also inaccurate and stereotypical sites that provide potentially harmful information. For instance, online information, especially pornography, might provide unrealistic expectations of sex and depict unhealthy consent and coercion scenarios (Watson & Smith, 2012). In addition, pornography tends to focus on men's pleasure, which can potentially reinforce hegemonic masculinity in sexual relations (Garlick, 2010). A potential resolution to inaccurate sexual perceptions or inappropriate behaviours that might be learned through pornography might involve incorporating a program called Respectful Relationships into sex education curricula. This Australian program focuses on developing healthy relationships of all kinds, and has a component specially designed to dismantle the misogyny of mainstream pornography (O'Mara & Duncanson, 2021). Another possible improvement might involve the use of media by instructors to illustrate positive and negative sexual behaviours, and the sexual scripts that might impact their occurrence (Little, 2021). Both programs might be able to help deconstruct internalized sexual and gender scripts provided in media, while also promoting respect within interpersonal relationships. Generally, seeking out information about sex on the internet, without additional guidance, might lead to a slew of additional problems. Adolescents' tendency to seek out privately assessed information about sex further promotes the importance of oversight by sex education facilitators.

A final, positive finding involves the heightened level of knowledge and understanding of sex, and sexual consent and coercion that occurs once young adults enrolled in higher education. All American universities that receive federal funding need to have a Title IX coordinator (U.S. Department of Education, 2022), who often organizes annual sexual harassment prevention training for incoming and current students. Similar to what Cary et al. (2022) found in their focus groups with college students on their conceptualizations of consent following the #MeToo movement, our findings suggested that these college trainings, that include information on consent and coercion, were appreciated and were often the first clear introduction to the concept of consent and coercion. Not all young adults will pursue higher education, however, and may miss out on the vital information provided there. In addition, the onset of sexual behaviour often occurs prior to university enrollment, thereby providing a need to educate youth and young adults earlier on.

Limitations

Limitations of the study include the use of a one university, college-only sample, the potentially enhanced desire of participants to be a part of this research study, concerns about memory bias or the transference of current knowledge in place of retrospective understanding, and the likelihood that participants may have been unwilling to share some information with a group environment. All participants were enrolled in college at one university, so there is no information from individuals who did not have access to university training and education about sex. This may have been important regarding participants' knowledge and understanding of sex, and sexual consent and coercion following high school, for example, if non-university enrolled individuals learned more through direct sexual experiences than university-enrolled people. The results are also not representative of the American university population. There were also many more women than men, which may have been the result of women's increased interest in the topic. Some participants may also have been enrolled in certain university courses that heightened their intrigue to participate in this study. In addition, an average of five years had passed since participants were in high school, so it is possible that some memory bias existed among the sample. Two structured research questions asked participants about their knowledge of sexual consent and coercion during high school. Asking about their retrospective knowledge may have resulted in responses that were not fully distinct from their current knowledge, thereby potentially skewing those results. Nevertheless, the participants seemed to do their best to reflect back on their

knowledge during high school, in which they were able to verbalize that they often did not know the terms for consent or coercion, or fully understood what these concepts meant, prior to university enrollment. Finally, some of the questions asked, or content that arose in focus groups, may have made participants uncomfortable and therefore unwilling to share their experiences or perspectives. For instance, some participants were willing to talk about using pornography as a resource for sex, but it was not enough to develop a theme. It is possible that other focus group members used pornography as a sexual resource, but were too uncomfortable to share this with others.

Conclusion

This study shows the ever-present need for improvements to sex education in the United States. For decades, research has shown that traditional abstinence-focused approaches, which seem to involve fear-mongering and shaming tactics, do not inhibit adolescents from having sex (Haydon et al., 2012; Weaver et al., 2005; Young et al., 2018). Several countries outside the United States seem to have better acknowledged and responded to failures of historical sex education, with many incorporating sex education prior to high school, implementing CSE on a wider scale, and making sexual health services more easily accessible (Sex Information and Education Council of Canada [SIECCAN], 2022; Weaver et al., 2005), all practices supported by this study. These efforts should continue, and the United States should follow suit. It is time to acknowledge that youth are having sex, rather than pretending it is not happening. In order to support healthy dating during adolescence and young adulthood, a time when sexual dating violence is prevalent (Niolon et al., 2017), sex education should be a top priority in schools and should include instruction on the complexities of sexual consent and coercion, among other topics. We, other scholars, sexual health advocates, medical professionals, parents, and even the young people themselves, support sex education reform. It is beyond time to give young people, in a proactive manner and as part of a comprehensive and accurate curriculum, the words and tools they need to navigate intimate relationships and sexual activity in a safe and healthy manner.

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Victim-to-Victim Intergenerational Cycles of Child Maltreatment: A Systematic Scoping Review of Theoretical Frameworks

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Abstract

Objectives: Child maltreatment is a serious problem worldwide associated with numerous developmental and psychological problems that can impede children's short and long-term functioning. The negative effects of maltreatment may put children on a trajectory where they are likely to experience later abuse and even abuse their own children. While studies have focused primarily on the intergenerational transmission of maltreatment (victim-to-perpetrator cycles), there are studies, albeit fewer, documenting cycles of intergenerational continuity of maltreatment (victim-to-victim cycles; e.g., child sexual abuse). Clear theoretical frameworks are lacking from studies on intergenerational maltreatment. This review aimed to systematically identify theories, theoretical or conceptual frameworks that have been used to explain the victim-to-victim cycles of maltreatment.

Methods: Searches were executed in PsychINFO, Medline, and Scopus. Fifteen papers were included in this review.

Results: The most common theories used to explain the intergenerational continuity of maltreatment victimization were attachment theory and traumatic stress models. Other identified theories include those from social, developmental, and biological domains. Notably, there were only five papers on the intergenerational continuity of child sexual abuse, highlighting a lack of focus on the theoretical explanations of this issue. Based on the findings, a unified model of victim-to-victim cycles of maltreatment is proposed to guide future studies.

Implications: Future research in this area could include testing and comparing theoretical explanations and advancing the current state of the literature by using qualitative and mixed methods.

Keywords: victim-to-victim cycles of maltreatment, intergenerational continuity, theory, theoretical framework, conceptual framework.

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Introduction

Intergenerational continuity of maltreatment describes situations wherein a person experiences some form of childhood abuse or neglect and later has a child who also experiences abuse or neglect, regardless of the perpetrator's identity (e.g., Berlin et al. 2011). The prevalence of cycles of maltreatment over generations ranges from 7 to 88% (Langevin et al., 2019); the wide range reflects differences between maltreatment subtypes and methodological factors. The effects of child maltreatment have frequently been explained using a conceptualization of complex trauma. Complex trauma involves exposure to stressors that are repetitive and prolonged; the harm is typically caused by caregivers, occurs at developmentally vulnerable times, and sets off a cascade of negative consequences, including dissociation, emotion dysregulation, and somatic stress (Courtois & Ford, 2009). These negative sequelae may derail a child's developmental trajectory and impact their adult life in ways that contribute to maltreatment victimization continuity. However, just as children who have experienced abuse can demonstrate resilience in various areas of functioning (e.g., Yoon et al., 2020), it is important to identify factors contributing to resilience with regard to ending cycles of maltreatment victimization.

There is well-developed theoretical knowledge on cycles of violence focused on physical abuse. As noted by Kim et al. (2007), investigation of the intergenerational transmission of physical abuse is largely focused on how a victim becomes a perpetrator (i.e., victim-to-perpetrator cycles). In contrast, the intergenerational continuity of other types of abuse (e.g., sexual abuse or exposure to intimate partner violence) can represent victim-to-victim cycles wherein the maltreated parent is not the perpetrator. To illustrate this view, child sexual abuse (CSA) victimization is a prevalent problem that can lead to victim-to-victim cycles, such as when a non-offending parent experienced CSA and later their child experiences this same kind of abuse perpetrated against them (Cyr et al., 2013). On the other hand, a victim-to-perpetrator cycle of abuse would be when an individual experiences abuse and then abuses their child, whether it be physically, emotionally, or sexually. The importance of ending victim-to-victim cycles of abuse is evidenced by the negative impacts of child maltreatment victimization on individuals' lives. For example, CSA is associated with devasting consequences for children's development, as documented by an increased risk of psychopathology and physical health problems (e.g., Fergusson et al., 2013; Hailes et al., 2019; Hébert et al., 2017). The negative ramifications of CSA can persist into adulthood in the form of experiencing intimate partner violence (IPV) and adult sexual assault revictimization (Papalia et al., 2020), as well as mental health problems, such as anxiety (Gardner et al., 2019) and post-traumatic stress (Adams et al., 2018).

Prevalence rates of victim-to-victim cycles of maltreatment are not well documented. As an example, of the few studies providing prevalence rates, estimates of CSA continuity vary from 26.6 to 51.0% (Grunsfeld, 2018; Leifer et al., 2004; McCloskey & Bailey, 2000; Testa et al., 2011). Regarding the intergenerational continuity of child maltreatment in general, a recent systematic review showed that rates could range from 7 to 88% depending on sample characteristics, maltreatment types examined, definitions of maltreatment, age range of participants, and measures (Langevin et al., 2019). Concerning victim-to-perpetrator cycles, researchers have estimated that around 30% of maltreated parents are likely to abuse their children (Kaufman & Zigler, 1987), while other studies have documented prevalence rates ranging from 1% to 38% (Ertem et al., 2000). To distinguish victim-to-victim cycles from victim-to-perpetrator cycles, researchers must collect information about perpetrator identity and clarify the types of intergenerational cycles they are investigating.

Although exact prevalence estimates of victim-to-victim cycles are not known, understanding the mechanisms involved in these cycles is crucial. Several mechanisms have been proposed to explain how any type of abuse may continue within families, including compromised parent-child attachment and parenting behaviours (see Langevin et al., 2019 for review), impairments in mental and physical health (Maniglio, 2009), and adverse educational and occupational outcomes that may confer risk to the next generation (Currie & Widom, 2010). Since the literature pertaining to victim-to-victim cycles of maltreatment is limited and scattered, a systematic review of the theories related to this topic will guide future research methodology and, ultimately, encourage more comprehensive investigations that strive to explain this problem. An enhanced theoretical base could also contribute to improved intervention and prevention efforts by highlighting specific factors that practitioners could target to enhance families' resilience to end cycles of child maltreatment.

The present systematic review will summarize the theoretical literature on the intergenerational continuity of child maltreatment, focusing on victim-to-victim cycles, and integrate the findings into a unified and parsimonious – hence clinically relevant – model. Selecting a few key targets that have been incorporated in theoretical models, as well

as empirically supported, would contribute to clinicians' work with individuals and families to reduce the risk of maltreatment continuity, as well as to work with families to enhance coping skills and resilience when victim-to-victim cycles have been reported. A simplified model would also be practical for clinicians to integrate in their practice, compared to more complex and comprehensive models that may be harder to implement.

Method

A systematic scoping review was determined to be appropriate to address the objective of identifying and summarizing theories, as this research objective is broad and qualitative. Scoping reviews are useful when the aim is to provide an overview of research without answering a specific research question (Arksey & O'Malley, 2005).

Article Search and Selection

The initial search was built in PsycINFO (Ovid, 1806 to Present) in collaboration with a subject expert librarian and was subsequently adapted to Medline (Ovid MEDLINE(R) ALL, 1946-) and Scopus. Retrieved articles were organized into Endnote and Rayyan (Ouzzani et al., 2016); the latter was used to apply inclusion and exclusion criteria. The search combined terms related to abuse, intergenerational relations, and theory (Table 1). Family and marital conflict were included as search terms to obtain papers that might have included an examination of exposure to intimate partner violence. Hand searching was also conducted to identify articles outside the main database search.

Table 1. PsycINFO (Ovid, 1806-Present) search strategy executed on April 21, 2020

#	Search Statement	Results	#	Search Statement	Results
1	battered woman.mp.	285	43	(sex$ adj3 victim$).mp.	7243
2	battered women.mp.	3216	44	(sex$ adj3 coerc$).mp.	2016
3	exp Battered Females/	3128	45	(sex$ adj3 maltreat$).mp.	574
4	*Partner Abuse/	10080	46	(groom$ adj3 sex$).mp.	418
5	exp Intimate Partner Violence/	11516	47	(sex$ adj3 violen$).mp.	10675
6	exp Marital Conflict/	3055	48	(sex$ adj3 trauma).mp.	2622
7	*Family Conflict/	1812	49	pedophil$.mp.	2448
8	exp Exposure to Violence/	926	50	(sex$ adj3 revictim$).mp.	280
9	exp Domestic Violence/	11400	51	revictimisation.mp.	21
10	physical victimization.mp.	378	52	revictimization.mp.	732
11	physical aggression.mp.	3775	53	re-victimisation.mp.	13
12	physical assault.mp.	1146	54	re-victimization.mp.	106
13	exp Physical Abuse/	5877	55	victimization.mp.	28952
14	exp Verbal Abuse/	508	56	victimisation.mp.	999
15	psychological victimization.mp.	56	57	1 or 2 or 3 … to 56	140052
16	emotional maltreatment.mp.	328	58	exp Theories/	291343
17	psychological maltreatment.mp.	610	59	exp Psychological Theories/	65355
18	psychological violence.mp.	447	60	(theoretical adj3 framework$).mp.	29081
19	exp Emotional Abuse/	2578	61	(theoretical adj3 model$).mp.	21410
20	exp Child Neglect/	4102	62	(psychological adj3 theor$).mp.	18470
21	exp Child Abuse/	29485	63	58 or 59 or 60 or 61 or 62	339263
22	exp Sexual Abuse/	27781	64	exp Generational Differences/	2196
23	exp Incest/	2580	65	exp Transgenerational Patterns/	3375
24	exp Rape/	5925	66	exp Intergenerational Relations/	4035
25	exp Sex/	115719	67	(Intergenerational adj3 relation$).mp.	4748
26	exp Victimization/	21340	68	(Intergenerational adj3 continuit$).mp.	237
27	exp Violence/	78244	69	(Intergenerational adj3 trans$).mp.	3043
28	25 and 26	1501	70	(Intergenerational adj3 cycle$).mp.	190
29	25 and 27	3688	71	(Intergenerational adj3 pattern$).mp.	326
30	exp Crime Victims/	4910	72	(Generation$ adj3 difference$).mp.	3311
31	25 and 30	256	73	(Transgeneration$ adj3 pattern$).mp.	3408
32	exp Sex Offenses/	35792	74	(Transgeneration$ adj3 relation$).mp.	52
33	exp Pedophilia/	1594	75	(Transgeneration$ adj3 trans$).mp.	4472
34	(sex$ adj3 abuse$).mp.	31546	76	(Transgeneration$ adj3 continuit$).mp.	6
35	incest$.mp.	5220	77	(Transgeneration$ adj3 cycle$).mp.	18
36	(sex$ adj3 child$).mp.	37783	78	(Multigenerational adj3 trans$).mp.	87
37	(sex$ adj3 offens$).mp.	10982	79	(Multigenerational adj3 cycle$).mp.	10
38	molest$.mp.	1864	80	(Multigenerational adj3 pattern$).mp.	42
39	rape$.mp.	11393	81	(Multigenerational adj3 relation$).mp.	63
40	(sex$ adj3 crim$).mp.	5369	82	(Multigenerational adj3 continuit$).mp.	3
41	(sex$ adj3 assault$).mp.	7379	83	64 or 65 or 66 … to 82	13640
42	(sex$ adj3 exploit$).mp.	1348	84	57 and 63 and 83	135

Inclusion and Exclusion Criteria

Articles were included if authors presented a clear summary of a theory, theoretical framework, or conceptual framework used to explain victim-to-victim cycles of maltreatment within the introduction, results, or discussion sections. The maltreatment types examined include neglect, physical, emotional, and sexual abuse, as well as exposure to domestic violence. As described by Creswell and Creswell (2017), "a theory in quantitative research is an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables (typically in terms of magnitude or direction)" (p. 52). The definition of a theoretical framework guiding this review is that a framework is the application of a theory or set of concepts drawn from a theory to explain a phenomenon (Imenda, 2014). No restrictions were placed in terms of publication date. However, articles needed to be useful and relevant to the current state of evidence to contribute to future research and were therefore excluded if too outdated. One article (Ney, 1988) was excluded because all three authors concluded that the model was not in line with the current conceptualization of victim-to-victim cycles and reflected antiquated ideologies that could be interpreted as victim-blaming, thereby limiting its use to orient future research and intervention on intergenerational cycles of maltreatment. Only published research articles and book chapters (English and French) were included to maximize the quality of included theories. Quantitative, qualitative, and review papers were included. To address the gap in the literature that is more specific to victim-to-victim cycles of child maltreatment and to account for the potentially different mechanisms involved, articles were excluded if the theories presented focused solely on explaining victim-to-perpetrator cycles. Victim-to-perpetrator cycles have largely been explained so far using social learning theories (e.g., Tomsich, 2015). After the first author conducted title and abstract screening, both the first and third authors reviewed the 45 full-text articles for possible inclusion. Discrepancies were discussed among all authors to agree upon the final sample.

Data Extraction and Analysis

Data were systematically extracted from full-text articles. Tables 2 and 3 were used as organizing grids to present information from each article: the type of paper (e.g., review, empirical), the name of theory or framework, the applicability of the theory in explaining the continuity of maltreatment (i.e., how did the authors use the theory to explain this problem), and the type of maltreatment that was examined.

Table 2. Included papers – organized by maltreatment type

Reference	Type of Paper	Theory/ Framework	Type of Maltreatment
Alexander (2015)	Book chapter – narrative review	Attachment and family systems theories	CSA
Baril & Tourigny (2015)	Review and presentation of explanatory model	Trauma theory	CSA
Maker & Buttenheim (2000)	Narrative review and presentation of a clinical case	Trauma theory	CSA
Greenspun (1994)	Description of integrated theoretical model and case studies Transmission is explained using projective identification	Psychoanalytic and family system theories	Father-daughter incest
Bennett (1992)	Narrative review and presentation of clinical case study	Murray Bowen's family system theory	Incest
Alink et al. (2019)	Narrative review – introduction to special section	Attachment theory; Neurophysiological models; Developmental psychopathology models; Heritability models	CMG
Cicchetti & Rizley (1981)	Narrative review	Ecological framework	CMG
De Bellis (2001)	Narrative review and presentation of data	Developmental traumatology model	CMG
Geiger et al. (2015)	Book chapter – narrative review	Attachment theory; Ecological framework; Risk and resilience frameworks	CMG
Levendosky et al. (2012)	Narrative review	Attachment theory	CMG
Morton & Browne (1998)	Narrative review	Attachment theory	CMG
Sperlich et al. (2017)	Review and presentation of conceptual framework	Attachment and trauma theory	CMG
Courtois & Ford (2009)	Guide for treating complex stress disorders	Trauma theory	CMG
Tuohy (1987)	Review of the role of defense mechanisms of parents who experienced abuse	Psychoanalytic theory	CMG
Chu & DePrince (2006)	Empirical study investigating the role of maternal dissociation, betrayal trauma and parenting in the development of dissociation among their children	Trauma betrayal theory	Betrayal trauma and dissociation

Note. CMG = Child maltreatment in general; CSA = Child Sexual Abuse

Table 3. Included papers – explaining victim-to-victim cycles

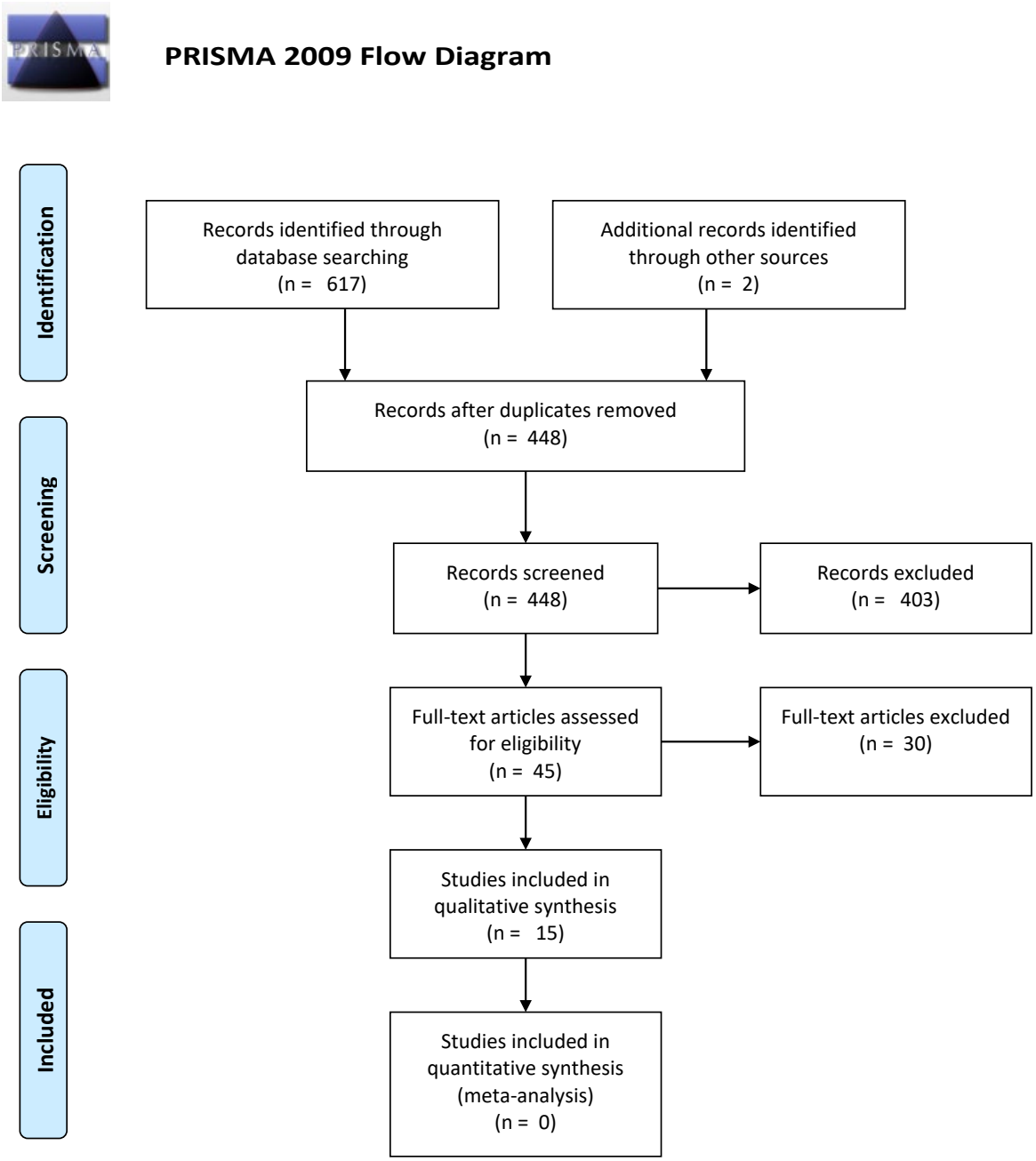
Reference	Applicability to Explaining Victim-to-Victim Cycles of Maltreatment (reported by original authors)	Summary of Evidence (reported by original authors)
Alexander (2015)	Risk for revictimization and cycles of CSA is best captured using an attachment and family dynamics framework. Pathways to cycles of violence are associated with a break down in family structure and attachment relationships. Trajectories of risk include early onset of puberty, risky behaviour, partner relationships, parenting, and sexual revictimization.	- CSA is associated with the timing of puberty. Family-related factors also affect the timing of puberty: parental conflict, poor mother-daughter relationship, lower socioeconomic status (e.g., Alvergne et al., 2008; Downing & Bellis, 2009). - CSA history increases the risk of partner violence (Babcock & DePrince, 2013). - CSA survivors are more likely to be aggressive and display less warmth toward their children (e.g., Banyard, 1997; Barrett, 2010).
Baril & Tourigny (2015)	Explanatory model of intergenerational CSA suggests that the long-term effects of CSA, including psychological difficulties, parenting problems, and intimate partner violence, increase the risk of a child's sexual victimization. Intergenerational CSA is defined as both parent and child experienced CSA, and the parent is not the abuser.	Research supporting parenting problems in CSA survivors (Banyard, 1997; Barrett, 2010; DiLillo & Damashek, 2003).
Maker & Buttenheim (2000)	Trauma theory is used to illustrate the repetition of a mother's abuse with her child – the focus is on how sexual abuse affects parenting, ultimately increasing the risk of sexual abuse in the next generation. Trauma theory: abuse triggers fear and shame; trauma may be re-experienced, and the individual is flooded with affect that was present in the original traumatic situation.	- Clinical case illustrates a mother who experienced CSA and difficulties parenting her son. Her concern was that her son would sexually abuse her daughter, just as she experienced growing up. - Sexually abused patients fear becoming bad parents and have unrealistically high expectations of parenting (Herman, 1981). *(trauma-related shame and guilt)*
Bennett (1992)	The family is viewed as a multigenerational system of emotional interaction. Differentiation of self: an individual's emotional independence and maturity. Multigenerational transmission: people tend to marry others with similar levels of self-differentiation.	- Low differentiation in a family is associated with elevated levels of anxiety and depression (Bowen, 1978). - Myths within families maintain low self-differentiation and can impact the mother-child relationship (Seltzer & Seltzer, 1983); undifferentiation may be transmitted to the next generation (Kerr, 1988).
Alink et al. (2019)	**Attachment theory**: attachment relationships depend on the parenting a child receives. Attachment styles of maltreated children affect adult relationships and problematic parenting behaviours of their own children. **Neurophysiological models**: stress regulation is affected by early maltreatment. Increased stress response in adulthood can affect parenting behaviours. **Developmental psychopathology models**: maltreated children experience difficulty with developmental tasks, resulting in cognitive, social, emotional, and neurophysiological deficits; this can ultimately lead to psychopathology. Psychopathology can influence parenting behaviours as well as a parents' risk of maltreatment. **Heritability models**: heritable factors may explain the transmission of maltreatment and parenting.	- Maltreatment is related to deficits in social information processing (Keil & Price, 2009). - Attachment styles of maltreated children are often insecure (Cyr et al., 2010). Insecure attachment is related to parenting problems and maltreatment (Reijman et al., 2017). **(attachment theory)** - Altered stress regulation found in maltreating parents (Reijman et al., 2015; 2016). **(neurophysiological models)** - Maternal depression mediates childhood experiences of physical abuse and subsequent insensitive parenting (Madigan et al., 2015). **(developmental psychopathology models)** - Behavioural genetic studies have shown partial heritability of abuse and neglect (Fisher et al., 2015).
Cicchetti & Rizley (1981)	Examines etiology and transmission of child maltreatment with a focus on risk factors. Two categories of risk: 1) potentiating factors and 2) compensatory factors. Maltreatment is transmitted across generations through the transmission of risk factors for maltreatment.	Factors that reduce vulnerability or stress, or that increase buffers or protective factors, should decrease the probability of maltreatment occurring, as well as its transmission across generations.
De Bellis (2001)	Maltreatment is transmitted across generations primarily through its effect on parental psychopathology - PTSD symptoms affect mental health in infancy, childhood, and adolescence.	- Post-traumatic stress disorder (PTSD) is commonly seen in maltreated children (Famularo et al., 1994). - PTSD can influence behavioural and emotional regulation development and later mental health problems (Pynoos et al., 1995).

Reference	Applicability to Explaining Victim-to-Victim Cycles of Maltreatment (reported by original authors)	Summary of Evidence (reported by original authors)
		- Increased rates of depression, PTSD, substance abuse, and antisocial behaviours in parents of maltreated children have been reported (Famularo et al., 1992).
Geiger et al. (2015)	Reviews theories and how they pertain to the intergenerational transmission of child maltreatment. **Bowlby's attachment theory** is described – attachment relationship serves as the basis of a child's development and foundation for future relationships. Insecure attachment styles can contribute to difficulties in parent-child relationships. **Ecological framework**: there are multiple mechanisms involved in explaining continuity of child abuse at multiple and interacting levels; risk and protective factors interact with each other (e.g., personality, family factors, societal factors). **Risk and resilience**: literature on resilience and protective factors to prevent child abuse are reviewed (e.g., financial stability and social support, education, marriage, partner violence, history of abuse, maternal warmth).	- Insecure attachment styles may be passed on to the next generation (Crittenden & Ainsworth, 1989). **(attachment theory)** - Dixon et al. (2009) – financial stability and social support reduce the risk of maltreatment. **(ecological framework)** - Example of a protective factor in breaking the cycle of maltreatment: safe, stable, and nurturing relationships (Conger et al., 2013). **(resilience framework)**
Levendosky et al. (2012)	Proposes a model using attachment theory to explain how intimate partner violence (IPV) may affect children and the intergenerational transmission of IPV. The betrayal involved in experiencing IPV damages an individual's internal working models of relationships, which influences parenting behaviours, consequently affecting the child's development of internal working models, and behavioural and emotional regulation.	Children of parents who have experienced IPV are at an increased risk of both later victimization and perpetration (Levendosky et al., 2006). Increased vulnerability is explained by IPV's effects on parents' and children's internal working models, which disrupts attachment representations and parenting behaviours (Levendosky et al., 2006).
Morton & Browne (1998)	Maltreatment can be seen as insensitive parenting - infants form internal representations of caregivers as being unresponsive and unreliable. Maltreated children may be unable to form secure attachments with their children – this is hypothesized as the process by which maltreatment continues in the next generation.	Maltreating parents are harsher, more interfering, controlling, and negative in interacting with their children (e.g., Crittenden, 1981).
Sperlich et al. (2017)	Proposes a cycles-breaking framework to guide perinatal research and interventions to break cycles of maltreatment and psychiatric vulnerability: 1) mother's child abuse trauma; 2) pre-existing PTSD/MDD; 3) pregnancy PTSD/MDD; 4) postpartum PTSD/MDD; 5) bonding problems; 6) impaired dyadic relationship; 7) child's abuse trauma and psychiatric vulnerability.	Early exposure to stress and trauma can have long-lasting impacts on an individual's stress response (Glaser, 2000). Documented links between impaired bonding, postpartum depression, problems in the dyadic relationship, and greater risk of maltreatment (van Ijzendoorn et al., 1999).
Courtois & Ford (2009)	Complex PTSD results from a series of events or prolonged exposure to trauma. Somatization, dissociation, and affect dysregulation are proposed as being the three main symptoms of complex PTSD.	This model conceptualizes PTSD as beyond a list of symptoms to more comprehensively understand the consequences of repeated trauma exposure, such as often the case with maltreatment.
Tuohy (1987)	Child abuse is conceptualized as resulting from impaired separation and individuation of the child from the parent. If parents use repression and isolation of painful affect, situations where abuse could occur may be more likely, while having access to childhood pain may deter them from repeating behaviours.	Fraiberg (1975) describes problems with parent-child attachment as resulting partly from maladaptive defense mechanisms. Defense mechanisms are highlighted as contributing to perpetuating intergenerational cycles of abuse.
Chu & DePrince (2006)	Authors use betrayal trauma theory (Freyd, 1996) and the Discrete Behavioral States model (Putnam, 1997) to guide their study. Betrayal trauma proposes that when violence is experienced from someone close to the victim, memory disruption, dissociation, and cognitive dysfunction are resulting consequences that maintain attachment between the victim and perpetrator. Dissociation is hypothesized as a mechanism by which trauma-related information is blocked.	Child maltreatment may lead to dissociation, leading to impairments in processing safety cues and social rules, potentially resulting in decreased parental monitoring of the child's environment.

Results

A total of 617 articles were identified through database searching. After duplicates were removed, 448 articles remained, and the titles and abstracts were screened. Two articles (one published in French) that were identified through hand searching were included. After this screening process, 403 articles were excluded, leaving 45 articles eligible for full-text assessment. Thirty full-text articles were excluded. A total of 15 articles were eligible for inclusion in this review (Figure 1). Five included articles presented theories relevant to the study of CSA specifically. Nine articles presented theories to explain child maltreatment more broadly (without focusing on specific types), and one article was explicitly focused on the intergenerational transmission of betrayal trauma and dissociation. The following section summarizes the main theories presented in these articles (see Tables 2 and 3).

Figure 1. PRISMA chart



Attachment Theory

Attachment theory was the most commonly reported framework, as seven articles summarized this theory and its relation to explaining victim-to-victim cycles of maltreatment (Alexander, 2015; Alink et al., 2019; Geiger et al., 2015; Levendosky et al., 2012; Morton & Browne, 1998; Sperlich et al., 2017). While Tuohy (1987) explicitly uses psychoanalytic perspectives (psychoanalysis, ego psychology, object relations theory, and self-psychology) to describe the assessment and treatment of children, the intergenerational cycle of abuse is described primarily based on attachment issues between parent and child.

Attachment theory, originally put forth by Bowlby (1969/1982), provides valuable insight into how things may go awry in parent-child relationships, thereby contributing to lifelong struggles and an increased risk of later victimization. More specifically, attachment styles represent patterns of interactions and behaviours between caregivers and their children, are established early in life, and set the stage for how individuals perceive and interact in future relationships. Attachment theory postulates that the quality of the attachment relationship between a child and their caregiver depends on the caregiver's level of sensitivity and responsiveness towards the child (Bowlby, 1969/1982). Ainsworth et al. (1978) described attachment classifications as secure and insecure (i.e., anxious-avoidant and anxious-resistant). Main and Solomon (1990) later added the disorganized-disoriented insecure attachment style. A secure attachment style is a protective factor for children's development, while insecure attachment styles are associated with various difficulties, including internalizing and externalizing problems (Colonnesi et al., 2011; Fearon et al., 2010). The security of the attachment relationship is compromised in situations of abuse or neglect because the primary caregiver, who is responsible for providing safety and protection, may fail to protect the child against a threat or pose a threat to the child through their actions (Cloitre et al., 2011). Consequently, children who have experienced maltreatment commonly develop an insecure attachment with their caregivers (Cyr et al., 2010), and may go on to have insecure attachments with their children when they become parents themselves (van IJzendoorn et al., 2019). For example, Trickett and colleagues (2011) argue that attachment relationships following CSA are important for a child's adjustment, as sexual abuse activates a child's attachment system leading them to seek comfort and security from non-abusive caregivers. Parental support plays a critical role when children disclose their sexual abuse, as perceived positive support is associated with adaptive psychological and relational outcomes (adult attachment, psychological symptoms, and dyadic adjustment related to relationship quality and satisfaction) (Godbout et al., 2014). Thus, in victim-to-victim cycles, where parents are not the perpetrators of the abuse, a child may rely on their parent for support. However, in cases of intergenerational continuity, where parents also have a history of CSA, the ability to bond with their child and engage in responsive parenting behaviours may be negatively affected by their distress (Courtenay et al., 2015), rendering it such that the child may not receive optimal support. Therefore, the child might learn that they cannot rely on their parent for physical or emotional comfort, leaving them to seek proximity to others to meet their attachment needs, putting them in vulnerable situations and increasing the risk of victimization.

Another attachment mechanism through which victim-to-victim cycles may perpetuate themselves is through internal working models. Internal working models are cognitive representations of individuals' views of themselves, others, and expectations in relationships (Bowlby 1969/1982). According to Levendosky et al. (2012), the effects of IPV on parents' and children's internal working models may lead to an increased vulnerability for later victimization. In contexts in which abuse occurs, children may grow up more helpless and less competent, and develop interpersonal schemas (thoughts, feelings, and behaviours concerning relationships) that contribute to victimization (e.g., by selecting partners who re-enact abusive behaviours or relationship dynamics experienced in childhood) (Cloitre et al., 2011). Thus, the attachment styles and internal working models of maltreated children ultimately affect adult relationships and can lead to problematic parenting behaviours, high levels of conflict, and even IPV in the household (Alink et al., 2019; Levendosky et al., 2006; Reijman et al., 2017), thereby continuing a cycle of victim-to-victim maltreatment wherein children in the next generation are exposed to IPV.

Traumatic Stress Models

Theories conceptualizing trauma and its sequelae were integrated into five papers (Baril & Tourigny, 2015; Courtois & Ford, 2009; De Bellis, 2001; Maker & Buttenheim, 2000; Sperlich et al., 2017). Traumatic stress models can be used to explain victim-to-victim cycles of maltreatment as resulting from the negative and long-lasting impacts that trauma has on psychological functioning. Maker and Buttenheim (2000) presented a clinical case to illustrate the repetition of a parent's abuse with their child. The authors focused on how CSA impacts parenting, which ultimately increases the risk of CSA in the next generation. For example, abuse can trigger feelings of fear and shame in the child

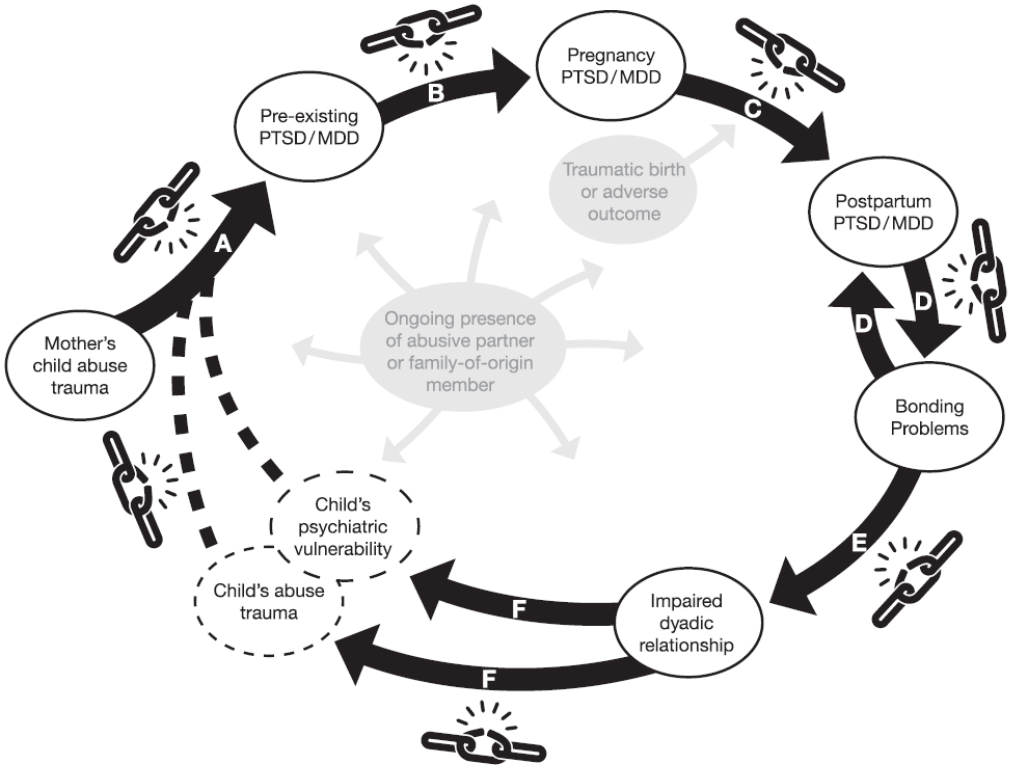
that may be re-experienced in the parental role, particularly when individuals are confronted with their child's developmental challenges pertaining to sexuality and aggression (Maker & Buttenheim, 2000). In these situations, parents may be flooded with emotions that were present in the original traumatic situation, and these symptoms can persist in the form of intrusive flashbacks, nightmares, and dissociative symptoms that interfere with parenting. Shame and fear related to trauma have also been associated with beliefs about parenting such that individuals who experienced CSA might fear becoming bad parents, perceive themselves as less competent in the parental role, or have unrealistically high expectations concerning their child's level of autonomy (Bailey et al., 2012; Cohen, 1995; Herman, 1981). Thus, these parenting difficulties, such as inaccurate risk assessment, may lead some children to end up in risky situations where abuse could be perpetrated by someone else. It is important to note that these difficulties with the parenting role and problems with parent-child attachment are the result of the original perpetrators' actions.

De Bellis (2001) proposed a developmental traumatology model based on a post-traumatic stress disorder (PTSD) model, highlighting that PTSD is commonly seen in maltreated children. Intergenerational maltreatment is described as being transmitted primarily through parental mental illness resulting from the experience of traumatic stress during childhood, which impacts biopsychosocial development. The central argument is that the negative effects of trauma on mental health can lead to maladaptive parenting. In support of this notion, PTSD resulting from child maltreatment has been associated with caregiver-infant bonding impairments (Muzik et al., 2016) and lower levels of parental sensitivity (Muzik et al., 2013). Similarly, CSA has been associated with depressive symptoms that can interfere with parental engagement, sensitivity, and responsiveness (Lovejoy et al., 2000; Zvara et al., 2017) as well as parenting difficulties such as lower levels of parental warmth, higher levels of psychological aggression, and corporal punishment (Barrett, 2009). The mental health problems that emerge as a consequence of child maltreatment may contribute to an increased risk of abusing or neglecting one's own children (victim-to-perpetrator cycle) or to victim-to-victim cycles that may arise from parental disengagement as a consequence of the trauma they have personally experienced. A similar argument was outlined by Chu and DePrince (2006), who discussed the role of betrayal trauma history in the development of dissociative symptoms. The authors proposed that child maltreatment can lead to dissociation, which in turn can contribute to alterations in processing social rules and safety cues, thereby impairing the parent's ability to monitor the safety of their child's environment.

Sperlich et al. (2017) used theories on attachment and trauma to propose a cycles-breaking framework to guide perinatal research and interventions (Figure 2). This was the only identified model that placed emphasis on the perinatal period. Evidence supporting such a framework comes from findings that early exposure to stress and trauma can have long-lasting impacts on an individual's stress response and vulnerability to psychiatric disorders (Glaser, 2000). This model highlights the links between impaired mother-infant bonding, depression, problems in the dyadic relationship, and a greater risk of maltreatment (van Ijzendoorn et al., 1999). At all stages of this cycle, it is acknowledged that there could be the presence of an abusive partner or family member. The utility of this model is the focus on breaking cycles of maltreatment and mental health problems, which is illustrated at various points in the cycle to emphasize optimal times for intervention.

The Complex Post-Traumatic Stress model (CPTSD; Courtois & Ford, 2009), which was identified through hand-searching, is also applicable. The CPTSD model highlights the numerous and lasting impacts that chronic exposure to interpersonal violence, especially early exposure, can have on an individual's functioning and mental health. This model is particularly relevant to explaining victim-to-victim cycles since child maltreatment is associated with negative psychological consequences that can impact interpersonal functioning, including parenting and bonding with one's own children (e.g., Zvara et al., 2015).

Figure 2. Reproduction of Sperlich et al. (2017)'s cycles-breaking framework

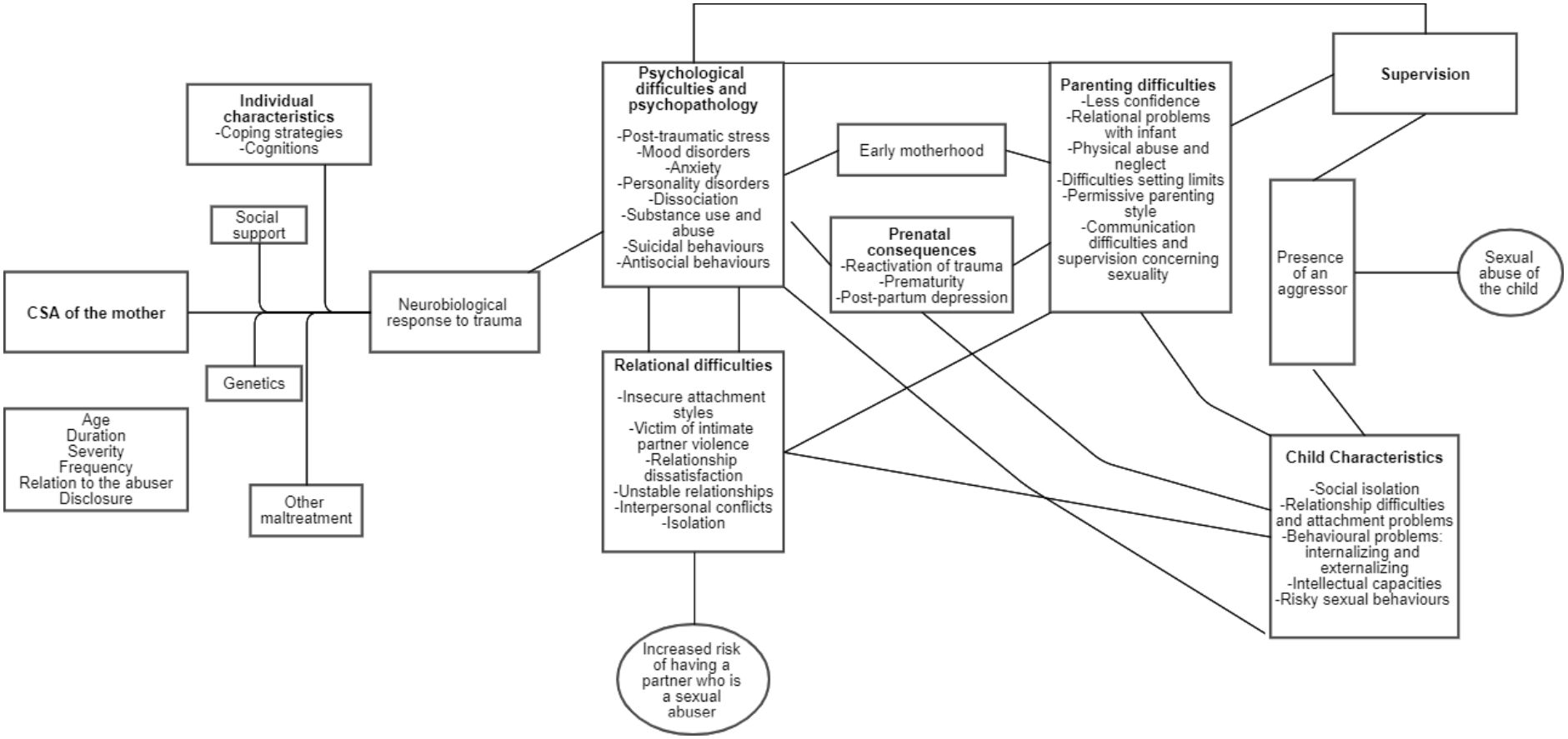


Lastly, Baril and Tourigny (2015) published a comprehensive model explaining the intergenerational continuity of CSA (Figure 3). Though this model is based on traumatic stress models, elements of attachment theory are also incorporated. The model suggests that the long-term effects of CSA, including psychological difficulties, parenting problems, and IPV, primarily explain the increased risk of a child's sexual victimization. Other factors are also included, such as genetic factors, coping strategies, prenatal care, and children's characteristics. However, the emphasized continuity mechanism concentrates more on mental health and relational issues that can impair parenting.

Family Systems Theory

Three papers (Alexander, 2015; Bennett, 1992; Greenspun, 1994) explained victim-to-victim cycles of maltreatment using family systems theory, initially proposed by Bowen (1978). Family systems theory conceptualizes the family as a multigenerational system of emotional interaction. Alexander (2015) highlighted evidence of the family role in continuing cycles of maltreatment, such as through parental conflict, poor mother-daughter relationships, and lower socioeconomic status (SES). In the paper by Bennett (1992), two aspects of family systems theory are particularly relevant to explaining a clinical case of incest: differentiation of self, which is an individual's emotional independence and maturity, and multigenerational transmission, which is the notion that people tend to marry others with similar levels of differentiation of self. Essentially, it is hypothesized that individuals who grew up in families with a lack of interpersonal boundaries may enter relationships with rejecting and abusive partners, contributing to the continuity of abuse in the next generation. Further, when incest is present, family members may accept the notion that it is appropriate for adults to abuse children. Acceptance of these notions can impact the parent-child relationship (Seltzer & Seltzer, 1983) and may be passed onto the next generation through continued parent-child boundary issues (Kerr, 1988). In support of this notion, evidence suggests that survivors of CSA may have more difficulty establishing hierarchical boundaries with their children or be more likely to engage in role reversals whereby they rely on their children for emotional support (DiLillo & Damashek, 2003). As such, children placed in this parentified role may be given levels of autonomy that are not developmentally appropriate, making them more vulnerable as targets to potential perpetrators.

Figure 3. Reproduction of Baril and Tourigny's (2015) model of the intergenerational continuity of CSA



The Ecological Framework

Building from the ecological model for human development, originally put forth by Bronfenbrenner (1979) and later by Belsky (1980), Cicchetti and Rizley (1981) describe the use of an ecological framework to explain the intergenerational continuity of child maltreatment. The framework proposed in this paper is broad in describing maltreatment and focuses on factors that confer risk or, conversely, can have a buffering effect against intergenerational continuity. More specifically, potentiating factors that increase the probability of child maltreatment include vulnerability factors, which are enduring features that increase risk, as well as challengers, which are transient but significant stresses. For instance, vulnerability factors may include personality attributes, such as poor frustration tolerance, or situational variables, such as poverty. In contrast, challengers may include significant stressors like the loss of a loved one, physical illness or injury, marital problems, problems with disciplining children, or legal difficulties. In contrast, compensatory factors that decrease the risk of maltreatment include protective factors, which are enduring conditions or attributes that decrease risk, and buffers, which are defined as transient conditions that defend against transient increases in stress. Protective factors may include traits such as an easy temperament, intelligence, physical health, and interpersonal skills, while buffers may include financial savings and social support. The proposition made by the authors is that child maltreatment is transmitted across generations primarily through the transmission of risk factors. They assert that maltreatment can only occur when potentiating factors override compensatory ones.

Developmental Theories

Developmental psychopathology models have also been used to explain intergenerational cycles of maltreatment. As summarized by Alink et al. (2019), these models propose that maltreated children might have trouble negotiating developmental tasks, which could result in cognitive, social, emotional, and neurophysiological deficits that ultimately lead to psychopathology. In turn, psychopathology can increase parenting stress (see Hugill et al., 2017 for review), contributing to negative parenting behaviours or increasing parents' risk of maltreating their children. Negative parenting behaviours may also unintentionally put children in risky situations where abuse could occur, such as limited or absent parental supervision.

Biological Models

Neurophysiological Models.

These models highlight that early maltreatment affects stress regulation and argue that dysregulated stress response in adulthood can affect parenting behaviours (Alink et al., 2019). This has been supported by research that shows altered stress regulation in maltreating parents (Reijman et al., 2016), which has been related to disengaged parenting (Reijman et al., 2015). These findings suggest that altered stress regulation and its effects on parenting could serve as a mechanism by which child maltreatment could continue within families. In support of this notion, other research has shown the importance of gene-environment interactions in predicting stress reactivity, such that youth who have experienced adverse life events and who also have certain genetic variants exhibit enhanced heart rate reactivity to psychosocial stressors compared to those with fewer genetic susceptibility variants (Allegrini et al., 2019). Therefore, those who have underlying genetic vulnerabilities that are compounded by experiences of child maltreatment may demonstrate greater stress reactivity in adulthood, which could interfere with the parental role.

Heritability Models.

Patterns of intergenerational child maltreatment and problematic parenting can also be explained by heritable factors, though these models were only referenced in one paper. Alink et al. (2019) summarized some of the behavioural genetic findings supporting the use of these models. Most research on heritability models has come from animal studies, though some research shows partial heritability of abuse and neglect in humans (Fisher et al., 2015). Based on a longitudinal study of twins followed until the age of 18, Fisher et al. (2015) reported significant but modest heritability for crime victimization, peer or sibling victimization, and internet or mobile phone victimization. Sexual victimization in adolescence did not seem to be under genetic influence; rather, environmental risk factors better accounted for this abuse (Fisher et al., 2015). The authors highlight that their genetic findings support the notion that victimization experiences appear to be more strongly related to being exposed to risky environments instead of heritable characteristics. Part of a risky environment could indeed be difficulties with the parenting role. A meta-analysis conducted by Kendler and Baker (2007) supports the role of genetics in partially explaining parenting behaviour, as they report on heritability estimates for certain parenting traits, such as parental warmth (34-37%), protectiveness (20-26%) and control (12-17%). With respect to victim-to-victim cycles, parents may have a combination of genetic and

environmental risk factors, along with the symptoms and consequences resulting from their own trauma, that can interfere with adaptative parenting.

Discussion

Nearly four decades ago, Cicchetti and Rizley (1981) emphasized the importance of documenting differential risk patterns to understand the continuity of different types of child maltreatment across generations. This scoping review aimed to identify and summarize theoretical explanations pertaining to the victim-to-victim cycles of maltreatment, and integrate these findings into a model that could illustrate the theoretical and empirical explanations related to victim-to-victim cycles. An overview of theories related to these cycles is necessary to contribute to the literature, as there is evidence for their existence (e.g., Grunsfeld, 2018). Yet the mechanisms explaining them are not well documented or understood, particularly in comparison to the literature documenting how individuals who experienced maltreatment may become perpetrators. It is evident from this review that the literature on victim-to-victim cycles needs more theoretical and empirical development. Out of the 15 papers included in this review, five articles discussed CSA specifically, while the remaining articles explained the intergenerational continuity of maltreatment more broadly.

Critique of Theories

Attachment theory was one of the most documented theoretical frameworks used to explain victim-to-victim cycles identified through this review. Both attachment and traumatic stress models were used to create a cycles-breaking framework proposed by Sperlich et al. (2017). This model offers strengths in guiding perinatal research and the depiction of a diagram regarding points in the cycle where interventions could be implemented to break the cycle of abuse. Though the focus of Sperlich's paper is on the perinatal period, the study of pre- and postnatal influences in victim-to-victim cycles could be further investigated. The role of mental health in victim-to-victim cycles is a recurring theme in the literature. Therefore, implementing early interventions with pregnant mothers demonstrating specific risk factors (e.g., mental health problems, history of child maltreatment, experiences of IPV) could potentially break these cycles.

De Bellis's (2001) developmental traumatology model relies primarily on the notion that early-onset PTSD and subsequent difficulties with mental health and parenting may explain the intergenerational continuity of child maltreatment. However, more empirical investigations are needed to determine how the model could be applied to enhance our understanding of victim-to-victim cycles more specifically. While PTSD is a documented outcome of child maltreatment (e.g., Messman-Moore & Bhuptani, 2017), there are many other factors involved in explaining continuity and discontinuity that this model does not thoroughly capture (e.g., SES and relational factors).

Regarding biological explanations of victim-to-victim cycles of maltreatment, Pittner et al. (2020) reported heritability estimates for experiencing maltreatment ranging from 30% for neglect to 62% for severe physical abuse. Genetic factors related to the risk of experiencing maltreatment and negative parenting behaviours need further investigation in samples of children who have experienced various types of maltreatment. These factors could be integrated into theoretical frameworks to explain victim-to-victim maltreatment. This would encourage researchers to consider biological factors in the study of this issue and the role of gene-environment interactions in the mental health and resilience of survivors of abuse (e.g., Normann & Buttenschøn, 2020).

While the ecological framework identified in this review is useful in studying child maltreatment more broadly, risk and protective factors may differ or have greater importance depending on the type of maltreatment being studied. Although parenting, attachment, and other family-related factors are implicated in maltreatment cases and play a role in maltreatment continuity (e.g., Egeland et al., 1988), there are several risk and protective factors that likely interact with each other to explain why abuse may continue across generations.

Although Belsky's (1980) ecological model of child maltreatment was not identified through the article search, it is worth highlighting that this conceptual framework has been widely used to identify risk and protective factors at multiple, interactional levels of functioning. Belsky (1980) describes the role of factors at various levels, including the ontogenetic (individual; e.g., maltreatment history, child-rearing); microsystem (child, family, and peers; e.g., parenting behaviours, family interactions); exosystem (neighbourhood characteristics; e.g., community resources); and the macrosystem (social and cultural influences; e.g., societally acceptable parenting practices, observation of violence

through media). In investigations of victim-to-victim cycles of maltreatment, it is important to consider risk and protective factors at these multiple levels.

Through this review, it was evident that the theoretical models pertaining to victim-to-victim cycles of abuse do not typically highlight the role of the perpetrator, though this is an essential feature to consider. Individuals can face innumerable negative consequences at multiple levels of functioning after experiencing child abuse. These consequences can make it more likely that a victim-to-victim cycle continues. However, these cascading effects result from the perpetrator's actions who inflicted the abuse in the first place. Individuals are then left to face the aftermath as children and as adults, possibly across generations. It is also worth noting that much of the published research on this topic has focused on mothers (Langevin et al., 2019), which may lead to an overemphasis on the role of women in intergenerational cycles of maltreatment, and victim-blaming. Future studies need to engage more with the role of the perpetrators themselves and of other parents and caregivers.

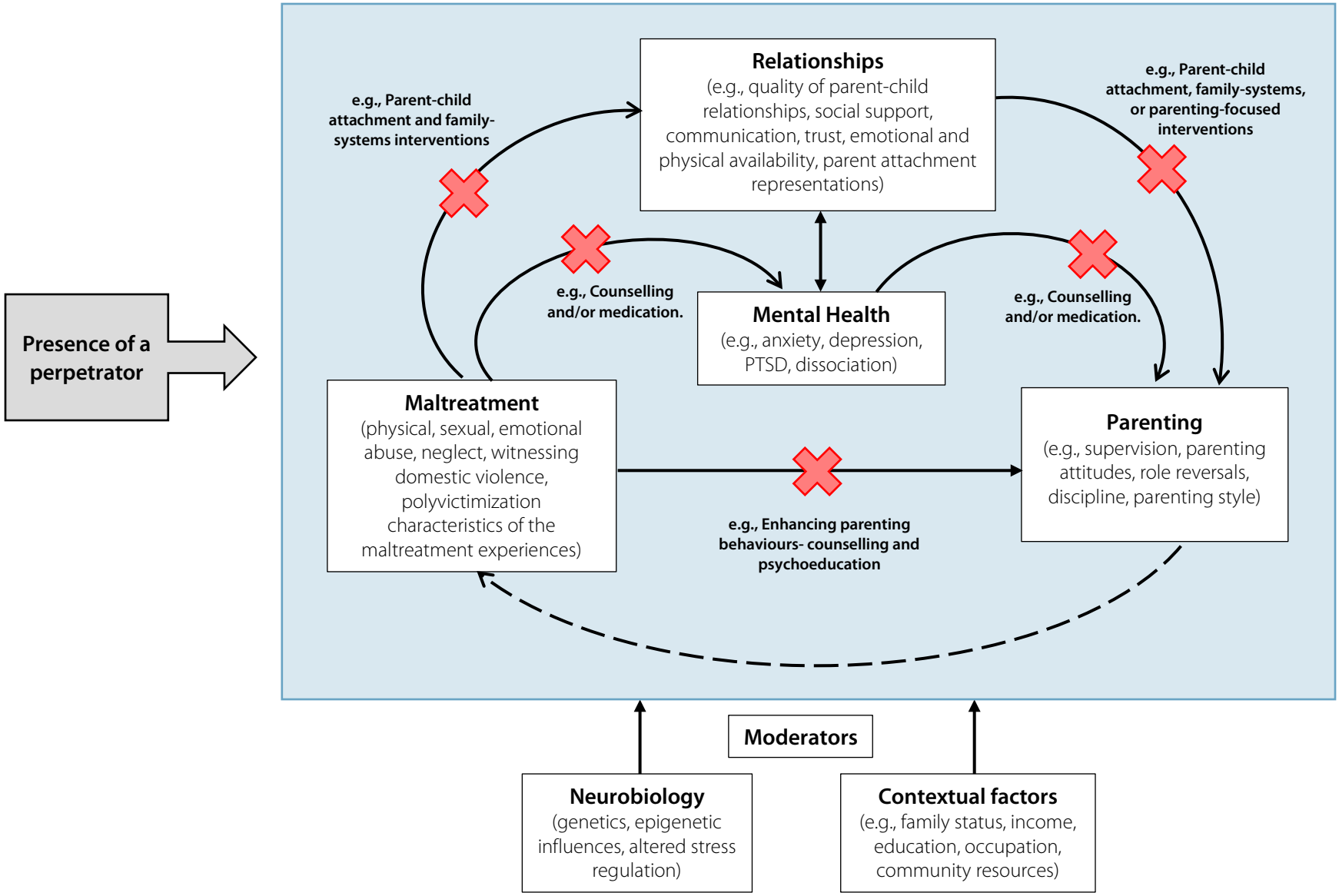
Unifying Model of Victim-to-Victim Cycles of Maltreatment

A unified and more parsimonious model highlighting the key factors that are recurrently appearing in the literature as being involved in victim-to-victim cycles of maltreatment was needed. Such a model should highlight entry points for interventions that aim to foster resilience by breaking victim-to-victim cycles of maltreatment and should also benefit researchers. While the model proposed by Baril and Tourigny (2015) is comprehensive, it is specific to CSA, and it may not be the most readily applicable model in terms of research and clinical practice because of its complexity. In comparison to more complex theoretical models, a unified parsimonious model allows researchers to flexibly choose different methodologies and measures to examine the most salient variables involved in victimization cycles to address this issue from multiple perspectives and further our understanding of the mechanisms involved. Thus, conceptual models can help guide future research, especially an understudied topic such as victim-to-victim cycles of maltreatment. The model presented in Figure 4 was developed through trimming, summarizing, and integrating the theoretical knowledge identified through this review. The model is a starting point and could be amended to incorporate new findings since the number of investigations into this research problem increases.

Within our proposed model, the outcome is second-generation child maltreatment. Child maltreatment is depicted as having negative impacts on relationships and mental health (mediators), both of which can affect the other. In turn, relationships and mental health can influence parenting, leading to an increased risk of maltreatment victimization. Parenting difficulties are represented as an outcome of child maltreatment, mental health issues, and relational issues and can predict second-generation maltreatment. On a broader level, there are also contextual risk and protective factors (e.g., macrosystem-level, such as cultural beliefs and values, and exosystem-level, for instance, neighbourhood and community-level factors), and neurobiological components (moderators) that can impact each of these variables and their relationships. Researchers may wish to use this model to guide their investigations of the mechanisms contributing to the continuity of maltreatment within families, by including relationships (e.g., intimate partner, parent-child), parental mental health, and parenting-related factors as mediators that can lead to second generation maltreatment, and how neurobiological and contextual factors may moderate the relationships within this model (e.g., socioeconomic factors moderating the association between parental histories of child maltreatment and adult mental health). The moderating role of positive relationships could also be further investigated in studies of resilience since the role of safe, stable, and nurturing relationships has been documented as a protective factor against intergenerational cycles of abuse (Jaffee et al., 2013). Additionally, the model could be enriched through clinicians' modifications based on their experiences with families who have experienced intergenerational maltreatment. In this way, the model could be informed and strengthened by empirical and practice-based evidence.

While there is not an extensive amount of research on victim-to-victim cycles of maltreatment, the model aligns nicely with empirical findings synthesized in a recently published systematic scoping review on psychosocial risk and protective factors involved in intergenerational cycles of child maltreatment (Langevin et al., 2019). For instance, in this review, the authors documented the role of individual, relational, and contextual factors that have been investigated as mediators or moderators of intergenerational cycles of maltreatment. Specifically, parental mental health was a well-documented risk factor in perpetuating maltreatment, in addition to relational factors, including couples adjustment, attachment and social support, and contextual factors such as socioeconomic status and community violence (Langevin et al., 2019).

Figure 4. Unified model of victim-to-victim cycles of maltreatment



Strengths and Limitations

A strength of this review is the comprehensive summary of theoretical explanations pertaining to the intergenerational continuity of maltreatment, with a specific focus on identifying theories relevant to the understudied issue of victim-to-victim cycles. While a systematic scoping review was appropriate for describing and synthesizing research, there are several limitations associated with this approach. For example, scoping reviews do not typically evaluate the quality of evidence; they may be based on broad and less defined search strategies requiring hand searching; and they do not provide a concrete answer to a specific research question (Sucharew & Macaluso, 2019). Despite our systematic approach and strategies to minimize bias (e.g., having two people screen articles), there is always a risk of bias involved in scoping reviews.

Most of the included studies provided a general narrative overview of theories and their application to victimization cycles. Only two papers presented a concrete theoretical framework depicted with a diagram and provided the narrative overview (Baril & Tourigny, 2015; Sperlich et al., 2017). Only two papers provided concrete clinical case examples to complement theoretical explanations (Bennett, 1992; Maker & Buttenheim, 2000). Most of the time, the discussion of theories or theoretical frameworks in the papers included in this review lacked specificity in terms of accounting for victim-to-victim cycles of maltreatment.

Future Directions

One avenue for future investigation and consideration when formulating theoretical frameworks include examining fathers' role, which would provide further support for the use of attachment and family systems theories. The proposed unified model has the advantage of being applicable to fathers who have histories of child maltreatment as well. Additionally, many of the theories reviewed in this paper have not provided an extensive discussion of the role of SES or other contextual factors (e.g., neighbourhood characteristics, social and cultural influences), apart from the ecological framework.

Future qualitative research may be particularly beneficial in terms of generating a theory or complementing existing theoretical explanations, such as with the grounded theory methodology. While many qualitative studies are exploring various issues related to child abuse (e.g., Fong et al., 2020), qualitative and mixed-method studies exploring themes related specifically to continuity and discontinuity of victim-to-victim maltreatment cycles are lacking. These methodologies have the advantage of answering research questions that quantitative studies alone cannot to identify gaps in research and practice.

Ultimately, it is imperative that future studies explicitly identify theoretical frameworks used to explain victim-to-victim cycles of maltreatment, as this is not always the case (Schelbe & Geiger, 2017).

Implications

Child maltreatment and victim-to-victim cycles has consequences for the family as a unit. In the spirit of taking a family-based approach to victim-to-victim cycles of maltreatment, it could be helpful for clinicians to search for resilience – what the family has done well in the past and how they have successfully solved problems (Nichols & Davis, 2017). Families who have experienced adverse events, as in the case of a parent dealing with a disclosure of their child's sexual abuse when they themselves experienced this abuse as a child, may be overcome with frustration, discouragement, as well as blame or guilt. Even the most discouraged families have been successful at times (Nichols & Davis, 2017), which makes it even more important for clinicians to identify and enhance the positive things this parent has done for their child, in addition to working on the factors that have been summarized in our unified model, such as attachment, parenting, mental health, and access to resources (i.e., the contextual-level). As illustrated in the model, interventions could be planned to target parent-child attachment relationships to develop more secure bonds (e.g., "Child-Parent Psychotherapy", Cicchetti et al., 2006; "Minding the Baby", Sadler et al., 2013). Parental mental health problems could be addressed through counselling or medication, emphasizing on early prevention and intervention, such as during the prenatal period. As parenting has been documented as a problematic area among survivors of abuse (Lange et al., 2020; Wark & Vis, 2018), psychoeducation and therapy could also be beneficial in terms of cultivating more positive parenting practices (e.g., by targeting appropriate parent-child roles, parenting styles, communication strategies, discipline, and supervision) to reduce the likelihood of maltreatment victimization continuity and foster resilience.

Conclusion

Promotion of individual- and family-level factors have indeed been documented as components that can contribute to resilience in children who have experienced maltreatment (Meng et al., 2018). Prominent themes in the literature surrounded the role of parenting, attachment, and mental health in the pathway to maltreatment continuity. Based on these findings, a unified model of these results is proposed, which has the advantage of research and clinical practicality. However, future studies employing diverse samples are needed to test this model in research and clinical populations across cultures.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Research Reactivity and Distress Protocols for Youth Trauma-related Research: A Scoping Review

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Abstract

Objective: To explore literature regarding youth with Adverse childhood experiences (ACEs), their potential reactivity to research, and research trauma mitigation protocols.

Methods: A systematic scoping review was conducted in APA PsychInfo, CINAHL, Embase, and OVID Medline. 2 reviewers screened each article for 12 eligible studies. Quantitative and qualitative studies measuring maltreatment and trauma research responses were eligible. *Youth* were defined as individuals aged 10-19.

Results: No study utilized the ACEs questionnaire with research-related stress measures. Among those that included research reactivity measures, various forms of childhood and youth victimization were considered. The majority of participants did not report feeling upset, with many reporting benefits to participation. Information on protocols for managing distress was available for 11 studies, the most common being the provision of a resource helpsheet and/or referral system.

Implications: There is no indication of distress following ACEs-related research, with few studies measuring across the research experience. One study measured follow-up for distress and further action. Additional research may be indicated to assess the effectiveness of these protocols in this population with a follow-up assessment.

Keywords: ACEs, research reactivity, clinical protocol, youth.

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Introduction

Youth experiencing adverse contexts and experiences has been identified as an important area for developing health services (Dube, 2018; Giano et al., 2020). The World Health Organization (WHO) defines youth as persons between 10 and 19 years of age (WHO, n.d.), capturing the transitional ages from puberty to young adulthood. About 26% of the global population is under the age of 15 (Statistica, 2021). Developmentally, youth are on a trajectory of greater autonomy and decision-making capacity (Zimmer-Gembeck & Collins, 2008) at a time of risk for relationship violence and mental health problems (Kessler et al., 2005; Taquette & Monteiro, 2019). Globally, adolescents in low-income, urban communities were found to have high exposure to adversity, with 46% of participants reporting violence victimization and 38% experiencing emotional neglect (Blum et al., 2019).

Clinician-researchers, in particular, are presented with the issue of care parameters when childhood adversity is the domain of research inquiry. Depending on the circumstances, professionals may possess a legal duty of care, or another duty (such as in occupational policy), to act in the person's best interests, which may require referring a situation to welfare authorities or taking other precautionary action (Wekerle, 2013). Minors are not likely to fully understand the implications of their assent or consent as it relates to mandatory reporting law requirements, with the notion that early services may prevent victimization and promote resilience (Wekerle, 2013). Further, the majority of youth with adversity backgrounds have been shown to have poorer health practices (e.g., low routine check-ups; Alcalá et al., 2018; Black et al., 2016). Despite a surge in research on adversity, an under-consideration of the implications of such inquiry has been identified (Finkelhor, 2018; Kia-Keating et al., 2019; McLennan et al., 2020). In any investigation of trauma exposures, appropriate trauma-informed response is relevant (Racine et al., 2020). An area of research gap relative to the volume of adversity research is understanding the appropriate supportive approaches that have been undertaken in conducting such research. Anda and colleagues (2020) highlight that the presence or absence of ACEs cannot be taken to indicate risk or response at the individual level, as their connection to ill health was demonstrated at the population level. In a systematic review of reviews, evidence is inconclusive on a clear fit between trauma exposures (type, nature, and number of) and trauma-based interventions (Lorenc et al., 2020). Trauma- and Violence-Informed Care (TVIC) practice is built on the knowledge and understanding of the impacts of trauma and violence on health (Ponic et al., 2016). In addition to recognizing trauma event(s) exposure, it also addresses the effects of systemic, structural, and organizational violence (i.e., historical, intergenerational, cultural; Cullen et al., 2020; Oral et al., 2016; Public Health Agency of Canada, 2018). An important component is the need to ensure avoidance of re-traumatization or unintended risk of violence exposures, with an implicit assumption that there is an ongoing timeframe across the interaction. TVIC places psychological and physical safety as a priority goal (Isobel et al., 2021). Indeed, in Canada, systemic and structural violence, indeed "cultural genocide," has been acknowledged in the Truth and Reconciliation Report on Indigenous-directed discrimination and abuse (Truth and Reconciliation Commission of Canada, 2015). It is important to recognize trauma as ongoing; to date, over 1,000 graves have been discovered at residential school sites in Canada (Deer, 2021). An estimated 1,200 sterilizations took place among Indigenous people between 1966 and 1976, affecting approximately 1,150 women and 50 men or persons of undocumented sex (Stote, 2022). Intergenerational trauma is a factor to be considered for Indigenous youth participation in trauma-informed research.

The right of the victim's voice in research as a component of self-determination has been argued, although perhaps less clearly for youth (Becker-Blease & Freyd, 2006; Kosher & Ben-Arieh, 2020). The United Nations Convention on the Rights of the Child (UNCRC; United Nations, 1989) states that children and adolescents have the right to express their views and participate in all matters that affect them. The UNCRC similarly guarantees cultural participation, such that, as applied to research, appropriate methodologies (e.g., qualitative interviews, visual-based approaches), are considered (United Nations, 1989). However, informed consent for legal minors is accomplished typically through youth assent or consent, depending on the jurisdictional guidance. The former is based on the assumption that guardians will make decisions to protect their child's best interest (Brassard et al., 2020; Field et al., 2004). In a research context, the potential impact of participation is an empirical question. Actions towards youth must promote their sense of dignity and worth, respecting their human rights and fundamental freedoms (Bargeman et al., 2021). As previously defined by Liebenberg and Joubert (2019), resilience is "an interactive developmental process involving the agency, or inner capability of individuals, to call on their personal assets, engage with others and look for external resources to successfully transform adversity into opportunities to learn and thrive." A positive research experience for youth participants may act as a potential resilience experience and contribute to developing a positive meaning-making framework (Liebenberg & Joubert, 2019). Concerns about potential harms have led researchers to implement specified plans to measure and respond to distress that may arise (Yeater & Miller, 2014).

ACEs prevalence among youth

Exposure to one type of adverse event (e.g., ACEs; Felitti et al., 1998) increases the likelihood of exposure to others (Su et al., 2015). Youth from service systems have higher endorsements of adversities (Freeman, 2014). A systematic review on ACEs and pediatric health outcomes found that exposure to ACEs can alter the stress response and cortisol release and is associated with cognitive delays, asthma, infections, somatic complaints, and sleep disruptions (Oh et al., 2018). A US national survey found that increased exposure to ACEs is associated with poor adolescent health and emotional well-being, with each additional ACE increasing the odds of poor health and emotional problems by 9% and 32%, respectively (Balistreri & Alvira-Hammond, 2016). Certain groups of youth have experienced higher-than-average levels of ACEs, including youth who are system-involved, i.e., child welfare (McCrae et al., 2019); juvenile justice (Baglivio et al., 2014; Weber & Lynch, 2021); mental health (Finkelhor et al., 2021), as well as cultural groups, such as Indigenous youth (Ames et al., 2015; BigFoot et al., 2018; Freeman & Ammerman, 2021; Richards et al., 2021; Smith et al., 2021), and other youth of colour (Freeny et al., 2021). Given the probabilistic detection of increased health risk, the question arises as to what type of post-research participation referrals and protocols are required.

The importance of collecting empirical data on potential benefits and harms for participants in trauma-related research has been identified to inform these clinical protocols (Jaffe et al., 2015). Previous studies in adult populations have found that asking ACEs questions is associated with distress in a small proportion of participants: although some emotional reactivity was evoked, participants reported positive sentiments about discussing their experiences in a safe and controlled setting (Becker-Blease & Freyd, 2006; Jaffe et al., 2015; McClinton Appollis et al., 2015). While the risk-benefit ratio for this type of research is not unfavourable in adult populations (McClinton Appollis et al., 2015), limited information is available on youth populations. The specific objectives of this scoping review are to explore the existing literature to address the following questions:

1. Among youth with adversity and/or trauma events exposure, what is known in terms of general reactivity to research study participation?
2. Among studies, what protocols are identified for managing distress and reactivity to research study participation?

Method

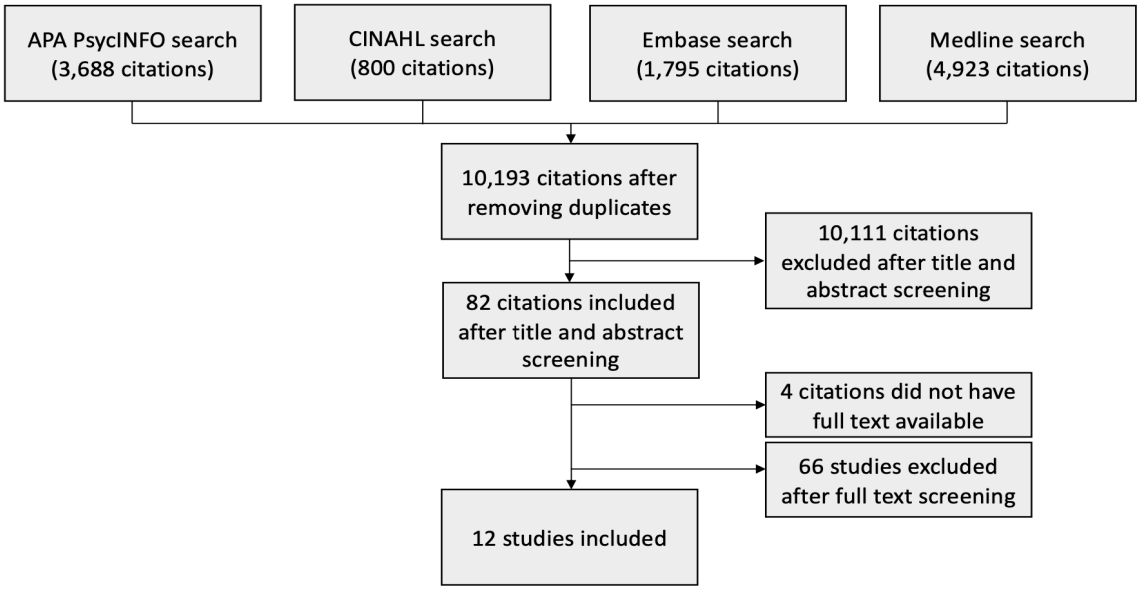
Identifying relevant studies

We followed Arksey and O'Malley's (2005) methodology framework for this review to summarize current findings in the field of ACEs research and participant reactivity and identify potential gaps to guide further research. The final search on PsycINFO, Embase, Medline, and CINAHL databases was conducted on December 28, 2020. The search strategy was developed in collaboration with an academic librarian and included terms related to youth, adolescents, and the violence/trauma indicators used in the ACEs questionnaire (family mental illness, domestic abuse, intimate partner violence, ACEs, child abuse, child trauma, child neglect), as well as terms related to the research response (clinical protocol, distress protocol, research participation, and research reactivity).

Study selection

The inclusion criteria for articles included the following: (i) peer-reviewed, quantitative, or qualitative data publications that included research ethics approval; (ii) in English; (iii) with youth participants (10 to 18 years old, inclusive); and (iv) a focus on adversity/trauma items, or use of the ACEs questionnaire. Only articles in English published after 1998 were included, given that the first article on ACEs was published in 1998 (Felitti et al., 1998). The exclusion criteria included (i) non-original studies, including dissertations, thesis, book chapters, personal communication, audio files, images, case reports, or reviews. Articles were first screened by title and abstract, followed by full-text screening (Figure 1). In both screening phases, each article was evaluated by two independent authors, and any conflicts were resolved by consensus. Information extracted from eligible studies included the year of publication, country, the purpose of the study, participant demographics (i.e., age and sex/gender), sample size, study design, method of recruitment, method of conducting research, characteristics of ACEs studied, participant reactions to study, protocol in handling research reactivity, and suggestions for protocols in future studies. Two independent authors completed data extraction for each study, and conflicting information was reviewed to reach a consensus. In total, 12 studies met eligibility criteria and were included.

Figure 1. PRISMA flow diagram of the literature review process



Results

A summary of the results found from each paper can be found in Table 1.

Study Characteristics

The participant populations of the studies were from two main categories: (1) school studies; and (2) service system studies. Six studies sampled from a population of school-attending adolescents (Chu et al., 2008; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Zajac et al., 2011), four studies drew from system-involved adolescents, in child welfare or mental health (Chu & Deprince, 2013; Devries et al., 2015; Skar et al., 2019; Waechter et al., 2019), and one study drew participants from both populations (Guerra & Pereda, 2015). Walsh and colleagues (2016) additionally investigated adolescents who were victims of childhood sexual abuse material (CSAM). Youth were recruited in various countries (US, Canada, Uganda, South Africa, Finland); however, no research study focused on trauma-specific groups, such as Indigenous youth.

Research reactivity tapped three areas: (1) level of youth upset, (2) youth perceptions of benefits, and (3) youth regrets regarding participation. All 12 studies reported that the majority of participants did not experience substantial distress. Among the eight studies that examined participants' perceptions of benefits (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Walsh et al., 2016), all reported some benefits to research participation. Of the five studies that measured regrets to participation, the majority of adolescents did not report regrets (Edwards et al., 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Waechter et al., 2019; Walsh et al., 2016). Of the 12 studies, 11 mentioned protocols to address potential distress or concerning disclosures from participants (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Waechter et al., 2019; Walsh et al., 2016; Zajac et al., 2011).

Table 1. Data Extraction Chart of Studies

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
Chu et al., 2013 United States	- 180 female mid-adolescents aged 12-19 (M_{age} 15.85) - Current or past involvement in the child welfare system	- Reactivity was measured secondary to participation in one of two intervention groups - Trauma history was assessed using the validated Traumatic Events Screening Inventory (TESI) - Child Version via one-on-one interviews - PTSD symptomatology was assessed using the validated Trauma Symptom Checklist for Children (TSCC) - Reactivity was assessed at four periods using the validated Response to Research Participation Questionnaire (RRPQ) via one-on-one interviews - Cost-benefit score was calculated by subtracting the negative appraisal scores from positive scores - Approved by the university institutional review board	- Childhood interpersonal trauma exposure (teen dating violence, injuries, domestic violence, community violence, accidents, physical and sexual victimization)	- Participants reported positive cost-benefit ratios after research sessions across four timepoints - Retention rates remained consistent at each interview time point - Symptom severity and perceptions of participation did not predict retention	- Used consent quizzes to assess participant's understanding of the consent/assent information - At end of the first interview, participants were offered a newsletter that provided referrals to community agencies dealing with health and violence issues	N/A
Chu et al., 2008 United States	- 181 early adolescents 7-12 with their parents (M_{age} 9.98) - 86 females, 6 unknown genders - From local Denver metropolitan area	- Participants completed questionnaires about their behaviour and their parent's parenting practices, then completed lab tasks in sessions 1 and 2 to assess cognitive performance - Trauma history was provided by parents with the validated UCLA PTSD Index - Reactivity was assessed after completion of both studies using the validated Response to Research Participation Questionnaire for Children (RRPQ-C) in a one-on-one interview - Cost-benefit score was calculated by subtracting the negative appraisal scores from positive scores - Approved by the university institutional review board	- Interpersonal trauma (e.g., sexual abuse, physical abuse, witnessing domestic violence, witnessing community violence) - Non-interpersonal (e.g., motor vehicle accidents, medical traumas, etc.)	- Participants reported positive cost-benefit ratios, with no significant difference between trauma exposure groups - 6.1% made one or more negative appraisals of the research process, but for most, positive items were still rater higher than negative items - 1.6% reported negative cost-benefit ratios; however, this was due to boredom rather than emotional distress - no significant association was found between sex and reactivity	- Used consent quizzes to assess participant's understanding of the consent/assent information - Participants were asked to talk about a pleasant event with the experimenter before leaving	- Encourage systematic assessment of research reactivity - Encourage the use of consent quizzes to assess early adolescent's understanding of the consent/ assent information
Devries et al., 2015	- 40 adolescents aged 12-14 years	- Conducted as part of the larger "Good Schools Study"	- Asked about specific acts of	- Most participants expressed relief to be able to discuss their experiences and did	- Study-employed counsellor available after completing the	- Encourage future protocols to include

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
Uganda	(M_{age} NA) - 18 boys, 22 girls - From Ugandan primary schools referred to a community agency through the study	- Data on violence and mental health were gathered via face-to-face interviews - Trauma history was assessed using the validated International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tool-Child (ICAST-C), and validated items from the WHO Multi-Country Study on Women's Health and Domestic Violence against Women - Reactivity was assessed in select participants who were referred after interviews via one-on-one interviews about their experiences in the research and referral process - Approved by the Ministry of Education and Sports and District Education Officer[1]	violence (e.g., "Hit you with a stick? Caned you? Kicked you?)	not see the interview as traumatic event - Adolescents valued being asked about their problems and expressed relief to be able to talk to someone about their experiences - One participant said that the interview had caused her to recall the pain of the original abuse - Several others mentioned that they felt "bad then good" at the interview - Several participants mentioned feeling scared about their information being passed on	initial interview survey - Comprehensive referral protocol offered specific pathways of action based on severity and timeframe of disclosure - Decisions regarding disclosures were made in line with laws of Uganda and structure of local child protection systems - 3.8% of the 529 referred participants were followed up on, requiring the research team to intervene and employ the study counsellor to take charge of follow ups - Drawing on the WHO Study, interviews were scripted to end on a positive note by focusing on child's strengths	precise definitions and referral pathways, and be developed considering local legal and practice environments - When services are not well developed, alternative strategies to support participants should be agree upon and detailed
Edwards et al., 2016 United States	- 204 mid-adolescents aged 13-18 (M_{age} 15.56) - 117 males, 85 females, 2 identified as other - High school adolescents in New England area	- Participants completed a survey in gender-specific groups, with multiple choice and open-ended questions, and participated in focus groups - Trauma history was assessed using a 2-item survey from the validated Youth Risk Behaviour Surveillance Survey (YRBS) - Reactivity was assessed using researcher-created questions tapping feelings of upset, benefits, and regrets to participation - Approved by the university institutional review board	- Dating violence (DV): physical, sexual, emotional abuse	- Victims of sexual DV reported being upset more than non-victims - 1.5% regretted their participation, 6% reported being upset because of their participation - 49% reported personal benefits - Of participants reporting upset, 58.3% reported personal benefits - 90.9% of physical DV history, 80% of sexual DV history participants did not report upset feelings and 36.4% and 60% reported benefits respectively - No significant difference between sexes was found	- All facilitators had previous experience related to DV - All facilitators were trained on the current protocols prior to facilitating a focus group - Students received local referral and debriefing information and - An advocate from a local crisis center was with the research team during all data collection procedures.	- Encourage the implementation of information on research reactivity in consent forms prior to participation - Encourage implementation of information on commonly upsetting aspects of research during debriefing and tailoring self-care tips to these concerns
Fagerlund et al., 2016 Finland	- Two age cohorts of adolescents aged 12 (n = 4745) and	- Conducted in a group setting on school computers via an online survey - Trauma history was assessed using the	- Sexual victimization analyzed using four	- The most common feeling about answering the survey was neutral, but slightly positive (50% non-victimized, 43%	- Participants entered the survey via a webpage which offered extra tasks for those who finished	- Encourage the systematic assessment of

[1] In replacement of a research ethics board

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
	15 years (n = 3107) (M_{age} 13.19) - 48% males - Finnish school students	Finnish Child Victim Survey (FCVS), a self-report survey of youth's experiences of violence on a broad range - Reactivity was assessed by requesting respondents to write free-text comments based on the question "How did you feel about answering these questions?" - Followed ethics guidelines set by Finnish Advisory Board on Research Integrity and United Nations Convention on the Rights of the Child[2]	types of victimization: by adults, by peers, online victimization, and victimization in the context of organized free-time activities	victimized) - 20% of respondents regarded answering the survey as negative and/or confusing - Victimized participants reported higher rates of negative responses (19% of non-victimized individuals, 23% of victimized) - Feelings of relief were more frequent among participants with a history of sexual victimization than their non-victimized peers. - Differences in reactions between victimized and non-victimized participants were statistically significant - No significant difference between sexes was reported, however females more frequently reported negative emotions as well as relief	early, so nobody could see how long it took for everyone else to answer - The webpage also included the contact information of support organizations	research reactivity - Encourage future research design to utilize more open-ended questioning regarding reactivity
Finkelhor et al., 2014 United States	- 2312 adolescents aged 10-17 (M_{age} NA) - Adolescents from randomly selected households nationally	- Interviews conducted over the phone with one interviewer - Trauma history was assessed using the enhanced version of the validated Juvenile Victimization Questionnaire (JVQ) to measure 54 childhood victimizations - Mental health symptomatology was assessed using the validated TSCC - Reactivity was assessed using a set of researcher-developed debriefing questions tapping the importance of research, regrets to participation, and the presence and degree of upset. - Approved by university institutional review board	- JVQ included: experience of conventional crime, physical assault, maltreatment, peer victimization, sexual victimization, witnessing violence in the home and community	- 4.6% reported being upset by the survey - Of these, 26% said the questions were not very upsetting, 49% said a little upsetting, 9% said pretty upsetting, 17% said a lot upsetting - Among participants who reported upset, 95.3% reported that they still would have participated - 0.3% were both upset by the survey and would not participate again, with only one citing the nature of the questions as why they would not participate - Of the 57 who said they would not participate again, 64% cited the length of the survey - Higher levels of mental health symptomatology was significantly associated with higher levels of upset - No significant differences between sexes were found	- Survey had a procedure for identifying participants reporting high-risk experiences: child maltreatment, sexual assaults, or suicidal ideation - Interviewers registered concern about participants whom they felt might be in danger - Both types of cases were evaluated as whether they merited a call back to the participant by the study crisis counselor - Interviewers offered a toll-free number to all participants that provided further information and assisted with referral to local services if desired - 17.3% of participants were flagged for evaluation, with 2% deemed serious to merit clinician follow-up	- Encourage future research to incorporate similar protocols of providing information on services and monitoring at-risk participants
Guerra & Pereda, 2015 Chile	- 114 early adolescents aged 12-17 (M_{age} 14.01)	- Instruments administered in a single session in a private room for the sexually abused group by their	- Child sexual abuse (implied to be from previous reports)	- Question 1: abused group reported significantly less unpleasant emotions than control; victims had M score of 1.43	- To minimize potential adverse effects, a pilot study conducted with 10 adolescents who had	- Encourage systematic assessment of

[2] In replacement of a research ethics board

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
	- 86.8% females - Victims of childhood sexual abuse in psychotherapy care - Non abused adolescents from local schools	psychotherapists - Participants without a reported history had instruments administered in a class session done in groups - Trauma history and symptomatology assessed using self-report scales: Generalized Self-Efficacy Scale; Youth Coping Scale adaptation; Multidimensional Scale of Perceived Social Support; Child Post-Traumatic Stress Symptoms Scales adaptation; Child Depression Scale and State Anxiety Scale adaptations - Reactivity assessed using questions about emotional impact: 1) "were the questions unpleasant to answer?" (1 'not at all' to 5 'a lot'), 2) "how did you feel while answering the questions?" (verbal responses) - Approved by the university institutional review board		of displeasure ("not at all'), while controls had M score of 1.88 - Question 2: responses grouped into five categories - 1st: "feeling good after thinking about it" had responses from 61.1% - 2nd: "feeling good, but disconnected", had 14.1% - 3rd: "feeling so-so, but supported by the study", had 5.6% - 4th: "feeling not so well" had 9.3% - 5th: "feeling bad" had 9.3% - Significant correlation between discomfort and severity of trauma symptoms (from 0.35-0.49, $p < 0.01$) - Females showed significantly stronger unpleasant emotions and discomfort compared to males in the abused group	been victims of sexual abuse - Based on these results, two questions from the Youth Coping Scale were excluded as they were considered invasive/inadequate for highly traumatized populations ("describe the problem you are having" and "did you think about how this situation could improve your life?") - To avoid contact with unknown researchers, psychotherapists administered the instruments - Followed a protocol including guidelines for a support session for victims after answering - Interviews ended on a positive note to induce pleasant emotions	research reactivity - Encourage assessment of instruments in causing discomfort using pilot studies - Encourage administering instruments in a private setting
McClinton Appollis et al., 2020 South Africa	- 3264 early adolescents aged 12-15 (M_{age} 13.55) - 60% females, 37.5% males, and 2.5% had no response - Random sample of high school students in the Western Cape Town Province	- Instruments were administered using a written questionnaire in a classroom setting consisting of 227 questions and a survey at the end about perceived harms - Trauma history was assessed using adapted validated measures from the WHO Multi-Country Study on Women's Health and Domestic Violence against Women - Reactivity was assessed at the end of the survey, with five questions about perceived benefits, two questions about perceived harms, and one question about regrets with a 2-point scale (yes = 1, no = 0) - Approved by the university institutional review board	- Verbal intimate partner violence (IPV), physical IPV, sexual IPV, verbal abuse, physical abuse, sexual abuse at home or at school	- Most participants reported benefits (70.3%), with significantly more females than males - > 25% of participants reported harms, with significantly more males than females - Most participants who reported harms also reported benefits (76.4%) - 14% of participants reported regrets from participating, with no significant differences between sexes - 35.7% reported a negative impact (either harms or regrets) - Of these, 70.9% also reported benefits	- Participants informed of the questions' sensitive nature, and if they need to talk, research staff will stay behind - Referral system to assessment and counselling services built into the project - Only trained fieldworkers remained in classrooms/arranged rooms so distance was sufficient to ensure confidentiality - Support services card containing relevant contact numbers of sexual and reproductive health clinics, social and mental health services, and police stations in their region given at the end - Space provided at the end of the questionnaire to inform if they were in a difficult situation and needed help - Four referrals were made based on active cases of trauma	N/A

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
Skar et al., 2019 Norway	- 10,157 early adolescents aged 6-18 (M_{age} 13) - 1001 participants did not provide info about age - 5230 females (55%), 489 did not provide info about sex - Adolescents in mental healthcare clinics	- Instruments were administered using a self-report or an interview - Trauma history was assessed using a screening inventory from the Norwegian Centre for Violence and Traumatic Stress Studies, including 15 traumatic events; participants responded yes, no or pass (coded as yes) - PTSD symptomatology was assessed using the validated Child and Adolescent Trauma Screen (CATS) - Reactivity was assessed using the 1st item of a reaction questionnaire from a previous study on trauma screening: "did you find it upsetting or stressful to answer these questions?", using a visual analog scale from 1 to 7 (1-2 is no or minimal upset, 3-5 is moderate upset and 6-7 is high upset) - Approved by the Norwegian Regional Committee for Medical and Health Research Ethics	- Threat-related events, including child abuse, sexual abuse, family and community violence, natural disasters, serious unintentional injuries, sudden or violent loss of loved ones, and war	- Most participants did not find the trauma screening upsetting, with 68.4% reporting no or low levels of upset - 31.2% of participants who had been exposed to trauma and 12.0% of unexposed participants reported moderate levels of upset - 5.2% of participants who had been exposed to trauma and 1.5% of unexposed participants reported high levels of upset - Exposure to sexual abuse was significantly associated with higher levels of upset than other traumas - Female sex was significantly associated with higher levels of upset - Higher levels of PTSD symptoms were significantly associated with higher levels of upset	N/A	- Encourage validation of participant and discussion on any ongoing trauma after conducting interviews
Waechter et al., 2019 Canada	- 382 mid-adolescents aged < 18 (M_{age} 15.8) - 46% boys - Adolescents receiving child protective services (CPS) care in a major urban centre	- Data from a larger cohort called Maltreatment and Adolescent Pathways (MAP) - Participants completed batteries of assessments across time points; most (80%) completed these privately at home - Trauma history was assessed via the validated Childhood Trauma Questionnaire (CTQ) - PTSD symptomatology was assessed via the validated TSCC - Reactivity was assessed with six researcher-developed questions using a 7-point [0 (not at all) to 6 (a lot)] scale. - Questions were: 1) "How interesting?", 2) "How distressing?", 3)"How clear?", 4) "Did you gain something?", 5) "Questionnaire upsetting?", 6) "Still would have agreed?" - Approved by the university institutional review boards	- Emotional neglect, physical neglect, sexual abuse, physical abuse, and emotional abuse	- Participants with more current trauma symptom severity reported more distress and upset because of the study - Participants above the clinical cut-off (at least one item on the TSCC) found the study significantly more distressing and upsetting but also more interesting than those below the cut-off - Participants who reported at least one form of extreme child maltreatment found the study significantly more distressing than those below the cut-off but also found it more interesting, the questions to be clearer, and more likely to report that they would still have agreed to participate knowing what was involved than to those below the cut-off - Mean scores for each group indicated favourable responses to research in all domains (< 3 concerning negative aspects, > 3 concerning positive aspects)	- The research assistants had project-supplied cell phones and were also instructed to call the project manager and/or PI for support. - Participants received a help sheet that listed local resources and 24-h help lines at the end of each session. - Clinicians involved for follow-up referrals	- Encourage implementation of support systems for distressed participants during and post participation - Encourage implementation of allied health professionals in studies

Study & Country of Origin	Participant Population	Method of Conducting Research	Characteristics of ACEs	Participants' reactions	Protocol	Suggested Protocol(s)
				- Significant positive correlation between reactivity and perceived benefits of participating (from .231-.383, $p < 0.001$)		
Walsh et al., 2016 United States	- 11 adolescents aged 13-17 (M_{age} NA) - Adolescents who had forensic interviews at Children's Advocacy Centers	- One-on-one telephone interviews lasting approximately 10-15 minutes - Reactivity was assessed by asking questions about the importance of participating in the research, how upsetting the questions were in the survey, and whether they would have still agreed to participate knowing what was involved - Approved by the university institutional review board	- Victims of child sexual abuse including those portrayed in sexual abuse images and those who were not photographed	- Most participants felt it was very important to participate in research, and reported not being upset by the questions - 83% of participants found the research very important, with 18% finding it more than a little important - 100% did not find it at all upsetting - 100% would still agree to participate knowing the survey content	- They offered toll-free phone numbers for support services	- Encourage implementation of support systems for distressed participants during and post-participation
Zajac et al., 2011 United States	- 3614 adolescents aged 12-17 (M_{age} NA) - 1849 males, 1760 females - Participants from randomly selected households nationally	- One-on-one telephone interviews - Trauma history was assessed using specific interview questions - Mental health symptomatology was assessed using validated measures from previous studies - Reactivity was assessed at the end of the interview, using the following four questions: "Were any of the questions emotionally upsetting to you?", "Are you still feeling emotionally upset?", "If you would like to talk to someone about how you are feeling, would you like me to have someone call you?", "Do you need to talk with a counselor, or can I have someone call you?" - Approved by the university institutional review board	- Physical assault and abuse, sexual assault, witnessed community and parental violence, and other potentially traumatic events such as motor vehicle accidents and natural disasters	- 5.7% reported that some questions had been emotionally upsetting to them - 0.2% reported still feeling upset by the end of the interview - < 0.1% wished to speak to a counselor - < 0.1% required immediate contact with a counselor - Participants with trauma history reported significantly higher rates of distress than the unexposed group - Females reported significantly higher rates of distress than males - Participants positive for mental health symptomatology reported significantly higher rates of distress	- To increase likelihood of open answers, interviewers asked if they were in a private situation where they could answer freely, and planned to call back if they were not - Participants were asked if they wanted to speak to a counselor after participating - Referral system to speak to a counsellor built into the questions	- Encourage systematic assessment of research reactivity - Encourage assessment of which aspects of instruments elicited reactivity

Participant Demographics (Age, Sex and/or Gender, Country of Origin)

Studies varied in sample size, ranging from 11 to 10,157 adolescents (Skar et al., 2019; Walsh et al., 2016). Of the 12 studies, 11 studies provided information on the age ranges of participants (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Skar et al., 2019; Waechter et al., 2019; Walsh et al., 2016; Zajac et al., 2011). Eight studies had available data on mean ages, in which participants ranged from 9.98 to 15.85 years old (Chu et al., 2008; Chu & Deprince, 2013; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Skar et al., 2019; Waechter et al., 2019). Nine studies included information about the sex and or gender of participants (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Skar et al., 2019; Zajac et al., 2011). Two studies examined nearly all-female samples (Chu et al., 2013; Guerra & Pereda, 2015).

Study methods

Methods of measuring adversity and/or trauma exposure varied across studies. No study measured both the traditional ACEs questionnaire and reactivity to research. Validated questionnaires were used in seven studies, and were administered through a variety of methods, including face-to-face interviews, phone calls, and written questionnaires (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Waechter et al., 2019). Only one of the seven studies (i.e., McClinton Appollis et al. 2020) administered these instruments in a group setting. Examples of victimization questionnaires included the Juvenile Victimization Questionnaire (Finkelhor et al., 2014) and the Traumatic Events Screening Inventory-Child Version (Chu & Deprince, 2013). All 12 studies examined sexual abuse, nine studies examined physical abuse (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Skar et al., 2019; Waechter et al., 2019; Zajac et al., 2011), six studies examined emotional/psychological abuse (Edwards et al., 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Skar et al., 2019; Waechter et al., 2019; Zajac et al., 2011), five studies examined witnessing domestic/family violence (Chu et al., 2008; Chu & Deprince, 2013; Finkelhor et al., 2014; Skar et al., 2019; Zajac et al., 2011), five studies examined witnessing community violence (Chu et al., 2008; Chu & Deprince, 2013; Finkelhor et al., 2014; Skar et al., 2019; Zajac et al., 2011), four studies examined non-interpersonal traumas (i.e., accidents or natural disasters; Chu et al., 2008; Chu & Deprince, 2013; Skar et al., 2019; Zajac et al., 2011), two studies examined adolescent intimate partner violence (IPV; Chu & Deprince, 2013; Edwards et al., 2016), and one study examined neglect (Waechter et al., 2019).

Five studies measured trauma exposure using tools that were either designed by the researchers or were based on previously developed tools that did not have information regarding validity (Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; Skar et al., 2019; Walsh et al., 2016; Zajac et al., 2011). Methods of administering these instruments included interviews, phone calls, and written questionnaires.

Reactivity to research also used varied measurements. Two studies used published questionnaires to assess reactivity, both of which used a version of the Response to Research Participation Questionnaire (RRPQ; Chu et al., 2008; Chu & Deprince, 2013). The 10 other studies used measures that were either designed by researchers or were based on previously developed tools; these did not typically report psychometric properties (i.e., test-retest measurement, validity, etc.). Three studies that used a telephone interview (Finkelhor et al., 2014; Walsh et al., 2016; Zajac et al., 2011), three used an in-person interview (Devries et al., 2015; Edwards et al., 2016; Guerra & Pereda, 2015), and four used self-report questionnaires (McClinton Appollis et al., 2020; Waechter et al., 2019; Skar et al., 2019; Fagerlund & Ellonen, 2016). Additionally, six studies also evaluated the symptomatology of different mental health disorders, most commonly post-traumatic stress disorder (PTSD; Chu & Deprince, 2013; Finkelhor et al., 2014; Guerra & Pereda, 2015; Skar et al., 2019; Waechter et al., 2019; Zajac et al., 2011). All of these studies utilized validated questionnaires, with the Trauma Symptom Checklist for Children (TSCC) being the most common (Chu & Deprince, 2013; Finkelhor et al., 2014; Waechter et al., 2019).

Participation Reactivity

Negative perceptions from participants constituted a minority of reactions to research participation. Methods used to report reactivity varied between studies. Of the 12 studies, 11 utilized some form of quantitative measure to report findings. In contrast, the study by Devries et al. (2015) relied solely on qualitative results from participant interviews, with the majority expressing positive effects and only one citing a negative response. Quantitative reporting

was primarily done via Likert scales measuring reactivity and/or the frequency of certain responses (e.g., interest in the study, fatigue, or distress levels). Of the four studies that reported averaged scores (Chu et al., 2008; Chu & Deprince, 2013; Guerra & Pereda, 2015; Waechter et al., 2019), results supported positive perceptions of participation and showed minimal negative reactions. Two studies additionally calculated a cost-benefit score based on the scales utilized, in which the majority of participants demonstrated a favourable ratio (Chu et al., 2008; Chu & Deprince, 2013). Waecheter et al. (2016) similarly found a positive association between reactivity and reported benefits. Negative responses, distress, or regret, ranged from the highest in the McClinton Appollis et al. (2020) study with 35.7% of participants and the lowest at 0% in the Walsh et al. (2016) study. However, most of the studies that reported frequencies (five of the nine studies) had <10% of participants reporting any negative reaction to research participation (Chu et al., 2008; Edwards et al., 2016; Finkelhor et al., 2014; Walsh et al., 2016; Zajac et al., 2011). Positive/neutral attitudes or perceived benefits towards the research constituted a large proportion of responses. In the McClinton Appollis et al. (2020) study, of those reporting negative reactions, 70.9% also reported benefits of participating.

Five studies considered the relationship between mental health symptomatology and research reactions (Finkelhor et al., 2014; Guerra & Pereda, 2015; Skar et al., 2019; Waechter et al., 2019; Zajac et al., 2011). All studies found a positive association between symptom severity and negative reactions. Additionally, Waechter et al. (2019) found a positive association between symptom severity and perceived benefits. In the seven studies that compared youth with a history of ACEs with a control or a less trauma-exposed group (Chu et al., 2008; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; Waechter et al., 2019; Zajac et al., 2011), five found that those with a history of abuse experienced more negative emotions than those with lower trauma scores or controls. However, the study by Guerra and Pereda (2015) found the opposite, with abused participants reporting significantly fewer unpleasant emotions, and the study by Chu et al. (2008) reported no significant differences in cost-benefit scores between groups. The Fagerlund and Ellonen (2016) study found that participants with adversity were also more likely to feel "relief" after participating; however, further details were not provided. Two studies attempted to examine reactivity between different types of traumas (Edwards et al., 2016; Zajac et al., 2011). Both studies found that sexual abuse history was associated with greater feelings of upset compared to other forms of trauma and when compared to controls.

Seven studies also aimed to analyze the relationship between sex and reactivity, which showed varying results as well (Chu et al., 2008; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Skar et al., 2019; Zajac et al., 2011). Three studies showed no significant differences in reactions between male and female participants (Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014). Three other studies found that females reported significantly more negative reactions than males (Guerra & Pereda, 2015; Skar et al., 2019; Zajac et al., 2011). McClinton Appollis et al. (2020) found that significantly more females than males reported benefits, while significantly more males than females reported upset.

Research Distress Mitigation Protocols

Among the 11 studies that referred to protocols (Chu et al., 2008; Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; Guerra & Pereda, 2015; McClinton Appollis et al., 2020; Waechter et al., 2019; Walsh et al., 2016; Zajac et al., 2011), the most common method, used by nine studies, was some form of referral system (Chu & Deprince, 2013; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Waechter et al., 2019; Walsh et al., 2016; Zajac et al., 2011). Four studies offered counselling (Devries et al., 2015; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Zajac et al., 2011), three structured their interviews to end on a positive note (Chu et al., 2008; Devries et al., 2015; Guerra & Pereda, 2015), two utilized specially trained interviewers (Edwards et al., 2016; Guerra & Pereda, 2015), two had detailed consent procedures (Chu et al., 2008; Chu & Deprince, 2013), and one conducted a pilot study to identify changes to be made in their instruments used (Guerra & Pereda, 2015). Both Chu et al. (2008) and Chu and Deprince's (2013) studies used an interactive consent quiz to evaluate youths' understanding of the consent process. Five studies employed some integrated protocol for referring adolescents based on any distress disclosures or observations during the study (Devries et al., 2015; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Waechter et al., 2019; Zajac et al., 2011); six studies provided youth with an information sheet (Chu et al., 2008; Edwards et al., 2016; Fagerlund & Ellonen, 2016; McClinton Appollis et al., 2020; Waechter et al., 2019; Walsh et al., 2016). In the studies using specialized interviewers, Edwards et al. (2016) required facilitators to have prior experience working with relationship violence. Guerra and Pereda (2015) utilized the participants' psychotherapists as the data collectors (i.e., administer questions), with the rationale of minimizing contact with the unfamiliar researchers.

Only four studies provided detailed information regarding the usage of their protocols (Devries et al., 2015; Finkelhor et al., 2014; McClinton Appollis et al., 2020; Zajac et al., 2011). In the Devries et al. (2015) article, they employed a referral protocol that was based upon children's disclosures of violence and categorized into "urgent", "serious but less urgent", and "serious but non-urgent". Working with the child protection system hierarchy in Uganda, research teams would either directly contact local non-governmental organization (NGO) services for less urgent cases, or directly place the child in the care of the Community Development Office and allow the local government systems to handle decision making for more serious cases. They outlined that 529 adolescents utilized their referral protocol but with a follow-up rate of 3.8% for child protective services to contact the child. Details on the scheduling and frequency of these follow-ups were not provided. Due to this, researchers themselves had to intervene and employ their own study counsellor to aid in managing follow-ups. Finkelhor et al. (2014) reported that 17.3% of participants were flagged for in-study evaluation, and 2% were later flagged for clinician follow-up. McClinton Appollis et al. (2020) reported that four participants were referred to local services due to active trauma. Zajac et al. (2011), describes that < 0.1% of participants required a counsellor. Apart from Devries et al. (2015), no other studies followed up on adolescents' use over time of any help resources or referrals.

Study recommendations on protocols

It was clear that no study had as its sole focus the detailed evaluation of research reactivity and the need for, access to, and use of clinical protocols. Studies, therefore, were active in making recommendations for the study of youth distress, participation, and cost/benefit analysis. Ten studies outlined future considerations (Chu et al., 2008; Devries et al., 2015; Edwards et al., 2016; Fagerlund & Ellonen, 2016; Finkelhor et al., 2014; Guerra & Pereda, 2015; Skar et al., 2019; Waechter et al., 2019; Walsh et al., 2016; Zajac et al., 2011). Four studies encouraged the continued use of instruments that measured distress about research participation (Chu et al., 2008; Fagerlund & Ellonen, 2016; Guerra & Pereda, 2015; Zajac et al., 2011). Fagerlund and Ellonen (2016) further indicated the importance of incorporating questions that allow "free text" answers to generate a greater range of youth responses than prescribed self-ratings. Along similar lines, Guerra and Perada (2015) suggested the continued use of pilot studies to examine which aspects of certain instruments were most distressing before conducting research. Five studies mentioned the need for referral protocols to support services in place for research regarding sensitive topics with youth (Devries et al., 2015; Finkelhor et al., 2014; Skar et al., 2019; Waechter et al., 2019; Walsh et al., 2016), including building in alternate service opportunities where trauma-based services are not well developed. Waechter et al. (2019) also advocated for the continued involvement of other allied health professionals across research phases, such as a service-based research advisory committee. In this Maltreatment and Adolescent Pathways study, the research questionnaire queried resilience and positive experiences, in addition to traumatic experiences and symptoms. Improvements to the consent and debriefing process were suggested by three studies (Chu et al., 2008; Edwards et al., 2016; Skar et al., 2019). Chu et al. (2008) encouraged the continued usage of consent quizzes. The provision of information regarding research reactivity in the consent form may be important for the validation of participant experience tips (Edwards et al., 2016; Skar et al., 2019).

Discussion

Despite the prevalence of research on childhood adversity, health, and mental health in youth, there is surprisingly little research considering the participation process from a youth perspective. This aspect of rights and ethics has generally been an add-on to larger studies with vulnerable populations or studies involving sensitive victimization questions. No study had this question as to its primary focus. This scoping review considered 12 studies from the peer-review literature that research ethics committees had vetted. Most utilized quantitative approaches to measuring youth distress post-participation and some pre- and post-participation. While distress was a concern in several of the included studies, this review found that responses to research participation were generally positive, which is consistent with similar reviews conducted on adult-only or combined adult and adolescent populations (Becker-Blease & Freyd, 2006; Appollis et al., 2015). Only one study measured participant reactivity at multiple time points, suggesting that this may be an untapped opportunity to examine the occurrence of and change in distress over time. Most studies found that participating in research had benefits, with youth citing the opportunity to discuss their experiences as positive. The general trend suggests that participants who had experienced adversity and/or more severe mental health symptoms may be more likely to report negative reactions than other participants. One study found that such youth were also more likely to report being more interested in the research and to still have agreed to participate in the study after knowing what was involved (Waechter et al., 2019). It has been suggested that emotional reactivity may result from increased engagement with the research (Newman & Kaloupek, 2004), indicating that the

measure of reactivity alone would not be informative from the perspective of youth's right to participation. This would likely extend to higher trauma groups and may benefit from considering cultural traditions. For example, for Indigenous youth, cultural support may be important, in addition to more traditional helpline resources, including traditional medicines (e.g., cedar tea), smudging with Sage or Sweetgrass, and community representative to provide such support (e.g., Auntie, Elder; Venugopal et al., 2021). Avoiding this type of research based solely on the potential risks as perceived by research ethics boards may be a form of "protectionism" in which persons with lived experiences are not given the opportunity to contribute to advancing knowledge in this field (Friesen et al., 2017). When assessing the acceptability of sensitive questions in an adult population, almost all respondents felt that questions about childhood maltreatment were important to ask (Fortier et al., 2020). A core principle of research ethics prescribes that the likely benefit of the research must justify any risks of harm or discomfort to participants (Beauchamp & Childress, 2019). When specific groups are considered, the role of the community research advisory is important (Billan et al., 2020). The limited research in this area clearly points to the understanding of research as both an opportunity for risk and resilience. Empirical evidence on costs, as well as benefits, remains an important research goal. While limited relevant studies were identified, the tentative understanding is that clear, high clinical distress may be present, but for a small minority of a sample. No clear measurement approach emerged, with studies using either the Response to Research Participation Questionnaire (Kassam-Adams & Newman, 2002) or study-developed reflection items tapping discomfort and whether their decision to participate would have changed having experienced the research study. While all studies provided information about the nature and risks of participating in the research during the consenting process, two studies specifically administered "consent quizzes'' (Chu et al., 2008; Chu & Deprince, 2013). Investigators found that these quizzes were effective as a standard to assess understanding of consent/assent information. The administration of these items also varied widely, ranging from face-to-face or telephone interviews to virtual or in-person questionnaires. These various approaches should be further investigated to ensure that these instruments are reliable and do not introduce additional distress.

The seven studies incorporating sex into their analysis came to varying conclusions about the relationship between participant sex and distress. Three studies did not find a significant difference between sexes, three found that females reported more distress, and one found that females reported less distress and more benefits. The latter was the only study that also analysed the relationship between sex and research participation benefits, indicating that this may be a gap area for further research. Further studies on how gender norms can influence benefits and harms are important in tailoring protocols to better support these participants. In response to stressful situations, females are more likely to use emotion-focused coping and seek social support, potentially allowing female participants to find greater value in sharing their experiences through research participation (Green & Diaz, 2008; Renk & Creasey, 2003). On the other hand, masculinity norms may result in additional stigma for male participants (Renk & Creasey, 2003).

There is an overarching need to address specific youth groups with elevated adversity to assess for differential impacts in distress as well as empowerment. Two studies included in this review represented special populations but only focused on child welfare system-involved youth. Previous studies found that both LGBTQ+ adults and youth reported higher rates of childhood adversity and increased levels of emotional distress as compared to the general population (Clements-Nolle et al., 2018; Elze, 2019; Merrick et al., 2018; Russell & Fish, 2016; Craig et al., 2020). Indigenous youth are another population at risk of high adversity and mental health and related issues that should be further investigated (Hop Wo et al., 2020) in terms of experiences with research participation. Histories of unethical research practices (e.g., nutritional experiments, vaccine trials, etc.) committed against Indigenous populations may exacerbate research reactivity and distress among youth, thereby increasing the need for protocols (Hyett et al., 2018), and a heightened sensitivity for researchers to craft trauma-and-violence informed research experiences. The present scoping study highlights the nascent area of this research and the need to be prioritized when sensitive questions are being investigated with vulnerable populations that need a higher consideration for preventing marginalization, a query without clear clinical protocols, and longitudinal considerations of research reactivity.

Recommendations for future protocols

A more recent publication outlined some recommendations for developing protocols to mitigate distress in childhood adversity/trauma event research, focusing on design features to minimize distress, and protocols to respond to participants who became distressed (Matthews et al., 2022). Some examples included: using validated, non-aversive instruments; sequencing and framing questions in a way that minimizes distress; employing professional interviewers; using local samples to test research instruments; ensuring participants are aware of their rights; and providing information about support agencies (Mathews et al., 2022). Elements of these were utilized in the included studies;

however, none of the studies included all the elements. Recommendations for future protocols emphasize the importance of the informed consent process for this kind of research. Overall, it is important for participants to be assured of the confidential nature of the research, and that their participation should be completely voluntary, with a particular focus on their rights to withdraw consent at any time and to choose not to answer questions. Two of the included studies reported success using "consent quizzes" to assess participant understanding of this information (Chu et al., 2008; Chu & Deprince, 2013).

In developing protocols to mitigate reactivity, precise definitions should be utilized to outline a clear referral pathway consistent with the local legal and practice environment (Devries et al., 2015; Mathews et al., 2022). These protocols should involve a stepped approach that addresses varying levels of distress, and training should be provided to all interviewers to ensure that they are able to recognize distress and implement protocols (Mathews et al., 2022). Developing protocols for this type of research is further complicated by the fact that the participants are minors who may also be disclosing information that warrants legal action. Researchers can collaborate with local child protective services to create protocols for reporting child welfare concerns, and it is extremely important that they are clearly specified and understood by the research team (Becker-Blease & Freyd, 2006). Information on incidents reported seems important to include in study publications. Future studies should consider clearly outlining the conditions that necessitate referral, the subsequent pathways of referral, and reporting data on the use of referrals and follow-ups.

Limitations

Variability in methods (in-person or telephone interview formats versus Likert-type rating questions) may have influenced the extent to which experimenter demand bias (i.e., cues that make the participant conform to perceived expectations from the researcher) may have created varying contexts for social desirability responding. This is especially relevant for youth samples sensitive to adults or authority figures (e.g., university researchers). Our inclusion and exclusion criteria also introduced potential bias in our results, as only English-language, peer-reviewed, published literature was selected. Due to the likelihood of published material containing reports and studies with positive outcomes, there is a risk of bias in the results analysed. There is also the possibility that this review may have missed some relevant studies due to our search strategy, the inherent broad focus of scoping reviews, database selection (i.e., some databases that were not searched may have identified additional relevant studies), exclusion of the grey literature from the search, and time-of-search limits.

Implications

This scoping review was conducted to explore the existing literature on research reactivity in youth with adversity and/or trauma event exposure. In accordance with similar studies conducted in adult populations, the included studies in this review suggest that participating in research is generally not found to be harmful to most adolescent studies. Studies did not define research participation as a potential resilience experience with relevant measurement, although youth did describe that the opportunity to respond to victimization questions could be experienced as a positive. Only one study examined the occurrence of and change in distress throughout the research experience, where distress reduction may be an indicator of resilience. Future research, taking both a risk and resilience perspective, may be fruitful in addressing the acceptability of such research among youth and exploring ways to enhance research participation as a positive experience.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Self-Compassion Among Youth with Child Maltreatment Histories and Psychological Distress: A Scoping Review

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Abstract

Objective: Focusing on youth (ages 15-24), our scoping review aims to address these questions: (1) What is the relationship between self-compassion (SC) and psychological distress in youths with child maltreatment (CM) histories? and (2) How does this relationship differ across child maltreatment types?

Methods: Eight databases were screened: OVID MEDLINE, OVID PsychInfo, PsycARTICLES, ProQuest Sociological Abstracts, ProQuest ERIC, OVID Embase, CINAHL, and PUBMED. Our search strategy and inclusion/exclusion criteria yielded an initial 4143 studies. With 1365 duplicates removed, 2778 titles and abstracts were screened. 17 studies were included for full-text screening, and seven studies were selected for data extraction and final inclusion.

Results: SC was found to moderate and mediate the relationships between CM and psychological distress. The role of fear of SC was also investigated and found to function as a mediator between CM and PTSD symptom severity. Regarding CM types, emotional abuse was found to significantly predict SC levels in a child welfare population.

Implications: Given the significance of SC and fear of SC in the relationship between CM and psychological distress, implementation of SC into clinical practice should be considered. Recommendations are made to expand research into more diverse populations, such as child welfare and/or Indigenous youth.

Keywords: Self-compassion, child maltreatment, psychological distress, youth.

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Introduction

On a global scale, child maltreatment (CM) is a significant health and social problem. The World Health Organization (WHO) defines CM as "all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power" (Consultation on Child Abuse Prevention, World Health Organization. Violence and Injury Prevention Team & Global Forum for Health Research, 1999). Table 1 includes definitions of types of CM. The prevalence of CM varies by type, sex, and location. Based on a review of self-reports in North America, approximately 24.3% of boys and 21.7% of girls report physical abuse; 14.1% and 20.4% report sexual abuse; 28.4% and 23.8% report emotional abuse; and 16.6% and 40.5% report neglect respectively (Moody et al., 2018). It is important to note that these self-reports are likely lower than actual prevalence rates, due to challenges surrounding disclosure (e.g., feelings of shame, fear of not being believed, lack of trust in adults or professionals; Jernbro et al., 2017; Lemaigre et al., 2017). In the 2020 fiscal year, the US and local protective services received approximately 3,925,000 million referrals of CM involving 7,065,000 children, though this data is likely underestimated too (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2022). A combination of prospective case reviews and retrospective self-reports is considered most accurate in determining incidences of CM (Shaffer et al., 2008).

Table 1. Definitions of Child Maltreatment Types (Government of Canada, 2012)

Child Maltreatment Type	Definition
Physical Abuse	"The application of unreasonable force by an adult or youth to any part of a child's body"
Sexual Abuse	"Involvement of a child, by an adult or youth, in an act of sexual gratification, or exposure of a child to sexual contact, activity, or behaviour"
Emotional Abuse	"Adult behaviour that harms a child psychologically, emotionally, or spiritually"
Neglect	"Failure by a parent or caregiver to provide the physical or psychological necessities of life to a child"
Exposure to Family Violence	"Circumstances that allow a child to be aware of violence occurring between a caregiver and his/her partner or between other family members"

General Negative Outcomes of Child Maltreatment

CM is costly at a system level. In the United States alone, an average of approximately $210,012 USD is spent per victim of non-fatal CM (Fang et al., 2012). This total includes costs from childhood and adulthood healthcare, special education, child welfare, criminal justice, and productivity losses. Notably, CM is not an isolated event, but long-lasting in its consequences, extensive in its impact across all facets of life, and potentially reoccurring.

CM is associated with a host of negative outcomes that extend into adulthood for the victim. These outcomes include psychological and behavioural problems (e.g., relational challenges, substance abuse; Jonson-Reid et al., 2012; Paradis & Boucher, 2010), physical problems (e.g., disability, brain injury; McKinlay et al., 2014; O'Sullivan & Watts, 2018), sexual problems (e.g., sexually transmitted diseases, unwanted pregnancy; Ajilian Abbasi et al., 2015; Gilbert et al., 2009), and long-term health consequences (e.g., cancer, liver disease; Gilbert et al., 2009; Krug et al., 2002). The effects of CM can also be observed before adulthood. The WHO (2022b) defines youth as ages 15-24 years. This developmental phase includes two major life transitions: adolescence (ages 10-19 years; WHO, 2022a) and emerging adulthood (ages 18-25 years; Arnett, 2000). In the current study, "youth" refers to those aged 15-24 years. Second to infancy, adolescence involves the most biological, psychological, and social role changes during one's lifetime (Bonnie & Beckes, 2019; Chaku & Hoyt, 2019). Emerging adulthood is the continuation of adolescence, involving identity exploration (e.g., romantic relationships, work), and instability (e.g., residential changes, entering new careers; Arnett, 2000). Youth with histories of maltreatment present significantly more psychological challenges, compared to youth without maltreatment histories (Kisely et al., 2018; Nanni et al., 2012; Scott et al., 2010). These challenges include suicidal ideation, anxiety, depression, emotional distress, and other psychiatric disorders (e.g., post-traumatic stress disorder (PTSD), antisocial personality; Silverman et al., 1996; Wolfe et al., 2001). The type of maltreatment also appears to have significance; for example, histories of sexual and emotional abuse were found to have greater associations with suicidal ideation among adolescents, compared to physical abuse or neglect (Miller et al., 2013). Generally, these consequences are compounded with polyvictimization, where multiple experiences of maltreatment exacerbate negative outcomes

experienced (Finkelhor et al., 2011; Turner et al., 2017). Such findings point to the need for early, and tailored, intervention for youth with CM histories.

Self-Compassion

The potential of self-compassion (SC) has been indicated as relevant for those with a maltreatment history. It is important to note that many different conceptualizations of SC exist, some of which have roots in Buddhist teachings with the religion itself dating back approximately 2,500 years ago (Khoury, 2019; Shonin et al., 2014). However, this scoping review will utilize the definition of SC based on the work of Dr. Kristin Neff, as it was her extensive work in SC that popularized the concept in Western psychology and stands as the most common operationalization of SC, due to the extensive use of Neff's Self-Compassion Scale (Baer, 2010; Barnard & Curry, 2011; Khoury, 2019).

According to Neff (2003a), SC is said to be comprised of three distinct components each having two poles (i.e., positive and negative): self-kindness, common humanity, and mindfulness. Self-kindness refers to being kind and understanding to oneself instead of self-critical (Neff, 2003a). Common humanity consists of viewing personal experiences as part of the larger human experience rather than separate and/or isolated from others, while mindfulness refers to approaching painful thoughts and feelings with balanced awareness instead of over-identification (Neff, 2003a). Therefore, SC encompasses not only acknowledgment and acceptance of one's own suffering, but kindness to forgive oneself (Neff, 2003a). It also includes understanding one's failures and shortcomings in a non-judgmental manner, which better allows the individual to view these as a shared human experience (Neff, 2003a).

Alternatively, Gilbert (2020) defines compassion as being sensitive to self-suffering and suffering in others, as well as a commitment to both alleviate and prevent it from occurring. Gilbert (2014) further defines it as consisting of three elements: compassion felt for others, compassion felt from others to ourselves, and compassion directed to ourselves (i.e., SC). Related to compassion, Gilbert et al. (2011) describes a phenomenon whereby certain individuals, especially those that are highly self-critical, may be fearful of SC and receiving compassion from others. This led to the development of the Fear of Compassion scales, which measured fear of self-compassion (FSC), fear of compassion from others, and fear of compassion for others (Gilbert et al., 2011).

In relation to psychological health, there are two ways that SC may act in a protective manner: (1) SC can interact with risk factors to buffer the adverse effects of the risk factor, and (2) SC can directly counteract the main adverse effects of the risk factor (Strickland et al., 2019). Various studies have demonstrated that SC is inversely related to negative psychological outcomes, such that higher levels of SC served as buffers against outcomes such as anxiety, depression, stress, and PTSD symptomology (Krieger et al., 2013; Macbeth & Gumley, 2012; Neff, 2003b; Scoglio et al., 2017; Winders et al., 2020). Additionally, increased SC was associated with an increase in resilience and emotional regulation, with the latter potentially serving as a mediator between SC and negative mental health outcomes (Inwood & Ferrari, 2018; Scoglio et al., 2017).

The existing literature has also demonstrated that among individuals with a history of CM, SC mediates the severity of psychological distress outcomes such as depression, anxiety, shame, and PTSD symptomology (Barlow et al., 2017; Messman-Moore & Bhuptani, 2020; Ross et al., 2019; Tarber et al., 2016; Wu et al., 2018). From these studies, two relational hypotheses can be suggested: (1) increased SC positively impacts mental well-being by reducing psychological distress severity; and/or (2) increased psychological distress due to CM decreases the level of SC an individual possesses. Most studies investigate the adult population; however, there is a gap in knowledge regarding the relationship between SC and psychological distress in youth survivors of CM. In this paper, psychological distress is broadly defined as subjective general distress that is associated with stress, mental disorders, and emotional problems, as well as having a negative impact on daily activities (Fortin et al., 2006). Emotion dysregulation is also explored as a manifestation of psychological distress, given detected associations between deficits in emotion regulation and measures of mental health (Inwood & Ferrari, 2018; Scoglio et al., 2017).

The aim of this scoping review is to investigate the current state of the empirical literature on the relationships across SC, psychological distress, and CM among youth. This review also aims to investigate how these relationships differ across specific types of maltreatment (e.g., physical abuse, sexual abuse, neglect, emotional harm, and exposure to family violence). Based on the information gathered, recommendations for future research and interventions related to SC for maltreated and distressed youth will be discussed.

Method

This scoping review followed the five stages outlined in the Arksey and O'Malley (2005) framework.

Stage 1 – Identifying the Research Question

Scoping reviews are typically conducted to examine and analyze current research activity on a specific topic (Arksey & O'Malley, 2005; Colquhoun et al., 2014; Levac et al., 2010). The purpose of this review was to analyze literature on the relationship between CM (i.e., physical, emotional, and sexual abuse, and neglect), psychological distress, and SC among youth. The first stage in the review process involves identifying the research question and clearly stating the topic of study, the population, and the outcomes of interest (Arksey & O'Malley, 2005; Colquhoun et al., 2014; Levac et al., 2010). Our topic of study was SC and psychological distress among youths with CM histories. Our target population was youth as defined by the WHO (2022b) – persons between the ages of 15-24 years. Our outcomes of interest were SC, psychological distress, and CM histories. Our two research questions were: (1) What is the relationship between SC and psychological distress in youth with a history of CM? and (2) How does this relationship differ across various types of CM?

Stage 2 – Identifying Relevant Studies

A search for relevant literature was conducted within a total of eight databases: OVID MEDLINE, OVID PsychInfo, PsycARTICLES, ProQuest Sociological Abstracts, ProQuest ERIC, OVID Embase, CINAHL, and PUBMED. A search strategy containing important keywords was developed by several authors (NW, KK, PR, WL, SO) with the assistance of an academic health sciences librarian. The detailed search strategy, customized for each respective database and restricted to title and abstract, can be found in the Appendix. The use of inclusion/exclusion criteria was also implemented for the selection of studies. The inclusion criteria included a focus on SC, psychological distress, and CM; participants aged 15-24 years; English language; and peer-reviewed primary, quantitative research studies. The exclusion criteria included types of communications or studies other than peer-reviewed primary, quantitative research studies (e.g., podcasts, images, personal communications, book chapters, theses/dissertations, reviews, qualitative studies, and case studies). These studies were excluded for the purposes of ensuring only peer-reviewed, rigorous data was collected for review and analysis. Though some theses/dissertations may be considered peer-reviewed, all theses/dissertations were removed to maintain a conservative approach.

Stage 3 – Study Selection

Implementation of our search strategy and inclusion/exclusion criteria to the eight databases yielded an initial total of 4143 studies. Covidence (see https://www.covidence.org/) was used to manage study selection and data extraction. 1365 duplicates were removed from the initial screening, and 2778 studies went on to title and abstract screening. From there, 17 studies met our inclusion/exclusion criteria and moved on to full-text review. Out of the 17 studies, seven studies were selected for final inclusion and underwent data extraction. A double-blinded screening process involving five separate reviewers (NW, KK, PR, WL, SO) was implemented throughout all steps of the review process. Any disagreements were resolved by two reviewers (NW, KK) and all reasons for exclusion were recorded. Our process of study selection is outlined in Figure 1.

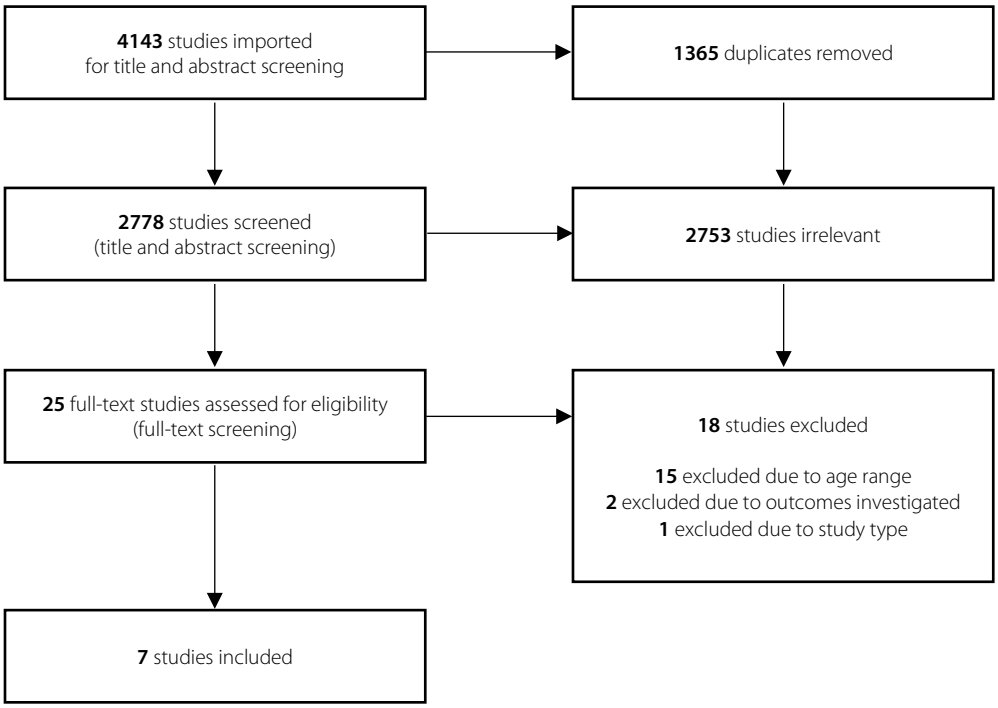
Stage 4 – Charting the Data

A data extraction form was created through Covidence to determine which variables were relevant to our study aims. The following data items were extracted from each article: study characteristics (title, author(s), year of publication, country of origin, purpose/aim, and methodology), population characteristics (setting/country, participant age, sex and/or gender, sample size), definitions of key terms (i.e., SC, CM, psychological distress), outcome measures, results, and other relevant information, including any relationships between sex and gender and their impact on SC, CM, and/or psychological distress.

Stage 5 – Collating, Summarizing, and Reporting the Results

The final stage involved analyzing the results of the extracted data. Main themes and implications of the findings were determined. The results section outlines individual study characteristics and describes the relationships between history of CM, SC, and psychological distress that were elucidated from included studies.

Figure 1. PRISMA Diagram (study selection process)



Results

Study Characteristics

A total of seven studies were included in our scoping review (Table 2). Three studies originated from the US (Boykin et al., 2018; Miron et al., 2016; Reffi et al., 2019), two from Canada (Tanaka et al., 2011; Vettese et al., 2011), one from China (Hou et al., 2020), and one from Spain (Játiva & Cerezo, 2014). Among the included studies, all of them were peer-reviewed primary articles with six cross-sectional studies (Boykin et al., 2018; Hou et al., 2020; Játiva & Cerezo, 2014; Miron et al., 2016; Reffi et al., 2019) and one cohort study (Tanaka et al., 2011). There were three out of seven included studies that used solely female samples (Boykin et al, 2018; Miron et al., 2016; Reffi et al., 2019). However, two of those three studies used female college students enrolled in psychology courses at a large Midwestern university (Miron et al., 2016; Reffi et al., 2019), while the third used female college students non-selectively (Boykin et al., 2018). Two out of seven included studies had similar male to female participant proportions (Hou et al., 2020; Tanaka et al., 2011), and two of the included studies had a much higher proportion of male than female participants (71.6% to 28.4% and 65.4% to 34.6%, respectively; Játiva & Cerezo, 2014; Vettese et al., 2011). While all included studies enrolled youth participants, three in particular recruited participants over 18 years old (Boykin et al., 2018; Miron et al., 2016; Reffi et al., 2019). The average age of participants across all study samples was 19 years old, and ages ranged from 15 to 24 years old.

All but one of the included studies measured SC per se using the Self-Compassion Scale (Neff, 2003b). On the other hand, two of the studies (Boykin et al., 2018; Miron et al., 2016) measured FSC through the Fears of Compassion Scale, specifically the subscale, Fear of Compassion for Self (FCS-SC; Gilbert et al., 2011). All the included studies measured CM. However, various scales were used in different studies. Five studies (Boykin et al., 2018; Hou et al., 2020; Reffi et al., 2019; Tanaka et al., 2011; Vettese et al., 2011) measured different aspects of CM (emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect) using the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994, 2003) or its short forms (CTQ-SF; Bernstein et al., 2003). The remaining two studies (Játiva & Cerezo, 2014; Miron et al., 2016) used the Traumatic Life Events Questionnaire (Kubany, Haynes et al., 2000) and the Juvenile Victimization Questionnaire (Finkelhor et al., 2005), respectively, to assess participants' severity of CM. All seven studies measured psychological distress in various forms. For instance, one study (Miron et al., 2016) used the Posttraumatic Stress Disorder Screening and Diagnostic Scale (Kubany, Leisen et al., 2000) to measure PTSD symptoms and depression symptoms while two studies (Reffi et al., 2019; Vettese et al., 2011) used the modified version of the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to assess the emotional dysregulation of participants following

traumatic events. Table 2 outlines a detailed comparison of the study characteristics of the included studies, and Table 3 summarizes the findings of each study.

Relationship Between Self-Compassion and Child Maltreatment

CM was significantly negatively associated with SC within all identified studies assessing SC (Hou et al., 2020; Játiva & Cerezo, 2014; Miron et al., 2016; Reffi et al., 2019; Tanaka et al., 2011; Vettese et al., 2011. This relationship was also demonstrated across various forms of CM. Miron et al. (2016) found that exposure to childhood sexual abuse (CSA) or childhood physical abuse (CPA) was associated with significantly lower SC scores compared to no history of CM. In another study that also explored different forms of maltreatment, those who experienced more types of victimization exhibited lower levels of SC than those who experienced fewer types (Játiva & Cerezo, 2014). Similarly, Tanaka et al. (2011) showed CPA, emotional abuse, and emotional neglect were associated with lower levels of adolescent SC. However, only emotional abuse was a significant predictor of low SC when accounting for physical abuse and emotional neglect.

FSC was also examined in two studies (Boykin et al., 2018; Miron et al., 2016). FSC refers to a conditioned fear response to experiencing compassion from others or oneself (Boykin et al., 2018; Gilbert et al., 2011). Gilbert (2014) propose that FSC occurs when a history of maltreatment interrupts the ability of a child to develop emotional regulation skills (i.e., the ability to manage emotional expressions, experiences, and responses; Gross, 1999). This contributes to the development of internal working models, where one is undeserving of love, and compassion is synonymous to weakness. Such internal models are a conditioned fear response towards self-kindness (i.e., FSC; Boykin et al., 2018; Gilbert, 2014). Two studies examined the relationship between FSC and CM, with Boykin et al. (2018) observing that moderate to severe CM was significantly associated with greater FSC compared to those with no or minimal prior history of CM. While Miron et al. (2016) also found that childhood abuse exposure was correlated with higher FSC, researchers further compared differences in FSC among those with experiences of four different groups: CSA only, CPA only, both CSA and CPA, and no history of sexual victimization. Results showed that those who experienced combined CSA and CPA reported significantly greater FSC than those with only a CPA history or no history at all (Miron et al., 2016). These findings extend upon those of Boykin et al. (2018) who did not examine the effects of different types of CM, and instead reported broadly on the effects of CM.

Relationship Between Self-Compassion and Psychological Distress

Throughout the diverse forms of psychological distress present within identified studies, SC was consistently associated with a lower likelihood or severity of psychological distress. Investigated forms of psychological distress included emotional dysregulation (i.e., difficulty with the acceptance, understanding and awareness of emotions, as well as an associated loss of control when upset; Gratz & Roemer, 2004), depression and anxiety symptoms, suicide attempt, addictive behaviour severity, and negative automatic thoughts (i.e., intrusive and repetitive cognition activated by adverse life experiences; Hou et al., 2020). They also included psychological symptom severity as measured by the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983), PTSD symptoms (Boykin et al., 2018; Hou et al., 2020; Játiva & Cerezo, 2014; Reffi et al., 2019; Tanaka et al., 2011; Vettese et al., 2011) and psychological maladjustment (Játiva & Cerezo, 2014). Specifically, psychological maladjustment included serious psychiatric disorders in childhood and adulthood, anxiety, social relationship problems, delinquency, depression, behaviour problems, substance abuse, suicide attempts, adult criminality, and PTSD (Játiva & Cerezo, 2014). In studies examining general psychological distress or maladjustment, lower SC was consistently associated with a greater likelihood of psychological distress or maladjustment (Játiva & Cerezo, 2014; Tanaka et al., 2011; Vettese et al., 2011). Similarly, two of the included studies found lower SC was associated with higher depression (Hou et al., 2020; Tanaka et al., 2011). As well, both Reffi et al. (2017) and Vettese et al. (2011) found SC to be negatively associated with emotional dysregulation. Lastly, evidence from individual studies suggested that lower SC was associated with greater alcohol use problems, increased severity of addictive difficulties, internalizing and externalizing problems, negative thoughts, and the increased likelihood of reporting a serious suicide attempt (Hou et al., 2020; Játiva & Cerezo, 2014; Tanaka et al., 2011). The study conducted by Boykin et al. (2018) differed from other studies in that it examined FSC, which was found to be positively associated with greater PTSD symptom severity. While Miron et al. (2016) studied both SC and FSC, the authors did not examine potential distinct relationships between SC and/or FSC and psychological distress.

Table 2. Included Study Characteristics

Author(s) Year of publication	Country where study took place	Research design	Sample size (*N*=X) Study participants	Age range; average age	Males: Females (Sex)	Men: Women (Gender)	Aims/purpose	Outcomes	Measures
Boykin, D. M., Himmericha, S. J., Pinciottia, C. M., Millera, L. M., Miron, L. R., & Orcutt, H. K. 2018	USA	Cross sectional study	*N*=288 College students	>18; 19.22	0: 100*	0: 0	To examine relationships across fear of self-compassion, psychological inflexibility, child maltreatment, and PTSD symptom severity	- Childhood maltreatment - Emotional abuse - Physical abuse - Sexual abuse - Emotional neglect - Physical neglect - Fear of self-compassion - Psychological inflexibility - PTSD symptom severity	**Childhood Trauma Questionnaire**; CTQ (emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect) **Fear of Compassion Scales-Self-Compassion**; FCS-SC (fear of self-compassion) **Acceptance and Action Questionnaire**; AAQ-II (psychological inflexibility) **PTSD Checklist for DSM-5**; PCL-5 (perceived PTSD symptom severity)
Hou, X.-L., Bian, X.-H., Zuo, Z.-H., Xi, J.-Z., Ma, W.-J., & Owens, L. D. 2020	China	Cross sectional study	*N*=578 College students	17-24; 20.30	0: 0	52.2: 47.8	To examine the relationship between general child maltreatment and young adult depression symptoms with negative automatic thoughts and self-compassion serving as mediators of this relationship	- Emotional abuse - Physical abuse - Sexual abuse - Emotional neglect - Physical neglect - Negative automatic thoughts - Self-compassion - Depression symptoms	**28-item Childhood Trauma Questionnaire-Short Form**; CTQ-SF (emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect) **Automatic Thought Questionnaire**; ATQ (negative automatic thoughts) **26-item Self-Compassion Scale**; SCS (self-compassion) **Beck Depression Inventory**–First Edition; BDI-I (depression symptoms)
Játiva, R., & Cerezo M. A. 2014	Spain	Cross sectional study	*N*=109 High school students with poor school performance	15-18; 16.74	71.6: 28.4*	0: 0	To analyze the relationship between self-reported victimization and psychological maladjustment	- Conventional offenses - Child maltreatment - Peer and Sibling victimization - Sexual victimization - Indirect victimization - Internet victimization - Psychological maladjustment - Internalizing behaviour - Externalizing behaviour - Self-compassion	**Juvenile Victimization Questionnaire**; JVQ (conventional offenses, child maltreatment, peer and sibling victimization, sexual victimization, indirect victimization, internet victimization) **Youth Self Report**; YSR (psychological maladjustment. internalizing behaviour, externalizing behaviour) **26-item Self-Compassion Scale**; SCS (self-compassion)

Author(s) Year of publica-cation	Country where study took place	Research design	Sample size (*N*=X) Study participants	Age range; average age	Males: Females (Sex)	Men: Women (Gender)	Aims/purpose	Outcomes	Measures
Miron, L. R., Seligowski, A. V., Boykin, D. M., & Orcutt, H. K. 2016	USA	Cross sectional study	*N*=377 Undergraduate students enrolled in an Introductory Psychology course at a large Midwestern university	>18; 19.12	0: 100*	0: 0	To examine the influences of self-compassion and fear of self-compassion on the relationship between childhood abuse histories, and depression and PTSD symptoms	- Lifetime trauma history (e.g., childhood physical abuse, childhood sexual abuse) - PTSD symptoms - Depression symptoms - Self-compassion - Fear of self-compassion	**Traumatic Life Events Questionnaire**; TLEQ (lifetime trauma history e.g., childhood physical abuse, childhood sexual abuse) **Posttraumatic Stress Disorder Screening and Diagnostic Scale**; PSDS (PTSD symptoms) **Depression, Anxiety, Stress Scale**; DASS (depression symptoms) **26-item Self-Compassion Scale**; SCS (self-compassion) **Fear of Compassion Scales-Self-Compassion**; FCS-SC (fear of self-compassion)
Reffi, A.N., Boykin, D. M., & Orcutt, H. K. 2019	USA	Cross sectional study	*N*=245 College students from psychology courses at a large Midwestern university	>18; 19.27	0: 0	0: 100	To investigate the mitigating role of self-compassion on emotional dysregulation among women with varying child maltreatment experiences	- Substance use - Alcohol use - Childhood maltreatment - Self-compassion - Emotional dysregulation	**National Institute of Drug Abuse Quick Screen**; NIDA Quick Screen (substance use). Two single items were used to assess alcohol use in the past 30 days. The first item assessed drinking frequency ("During the past 30 days, how often did you usually have any kind of drink containing alcohol?"). This item was included as a predictor of emotional dysregulation. The second item screened for binge drinking patterns ("During the past 30 days, how often did you have 4 or more drinks containing any kind of alcohol within a two-hour period?"; alcohol use) **28-item Childhood Trauma Questionnaire-Short Form**; CTQ-SF (childhood maltreatment) **26-item Self-compassion Scale**; SCS (self-compassion) Modified version of the **Difficulties in Emotion Regulation Scale**; DERS (emotional dysregulation)

Author(s) Year of publica-cation	Country where study took place	Research design	Sample size (*N*=X) Study participants	Age range; average age	Males: Females (Sex)	Men: Women (Gender)	Aims/purpose	Outcomes	Measures
Tanaka, M., Wekerle, C., Schmuck, M.-L., Paglia-Boak, A., & The MAP Research Team 2011	Canada	Cohort study	*N*=117 Child welfare-involved youth	16-20; 18.1	0: 0	45.3: 54.7	To examine the relation-ships among child mal-treatment, self-compas-sion, and mental health among child welfare-involved youth	- Physical abuse - Sexual abuse - Emotional abuse - Physical neglect - Emotional neglect - Self-compassion - Depression symptoms - Psychological distress (e.g., depressed mood, anxiety, and problems with social functioning) - Alcohol problems - Substance abuse - Suicide attempt	**Childhood Trauma Questionnaire**; CTQ (physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect) **26-item Self-Compassion Scale**; SCS (self-compassion) **Center for Epidemiologic Studies Depression Scale**; CES-D; short-form (depression symptoms) **The General Health Questionnaire**; GHQ (psychological distress) **The Alcohol Use Disorders Identification Test**; AUDIT; 10-item self-report version (al-cohol problems) **CRAFFT** (substance abuse) **Suicide attempt/OSDUHS** (suicide at-tempt)
Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C. 2011	Canada	Cross sectional study	*N*=81 Youth seen at intake to a substance treatment program in a hospital-based, joint youth addictions and mental health treat-ment program	16-24; 19.49	0: 0	65.4: 34.6	To determine the role of self-compassion in pre-dicting emotion dysregulation outcomes beyond child maltreat-ment history, psycho-logical symptom severity, and problem substance use To determine the role of self-compassion in buff-ering the impacts of child maltreatment	- Emotion dysregulation - Child Maltreatment (e.g., physical abuse, physical neglect, emotional abuse, emotional neglect, sexual abuse) - Self-compassion - Psychological symptom severity - Addictive severity - Number of days of sub-stance and alcohol use	**Difficulties in Emotion Regulation Scale**; DERS (emotion dysregulation) **28-item Childhood Trauma Question-naire Short Form**; CTQ-SF (childhood mal-treatment e.g., physical abuse, physical ne-glect, emotional abuse, emotional neglect, sexual abuse) **26-item Self-Compassion Scale**; SCS (self-compassion) **Brief Symptom Inventory**; BSI (psychologi-cal symptom severity) **6-item Substance Misuse Scale of the Be-haviour and Symptom Identification Scale**; SMS or BASIS (addictive severity) **Timeline Follow-back**; TLFB (number of days of substance and alcohol use)

Note. ***** This study used the terms "sex" and "gender" interchangeably.

Table 3. Study Results

Author(s)	Relationship b/w self-compassion & child maltreatment	Relationship b/w self-compassion & psychological distress	Relationship b/w child maltreatment & psychological distress	Relationship b/w self-compassion & child maltreatment & psychological distress	Gender and sex related findings
Boykin, D. M., Himmericha, S. J., Pinciottia, C. M., Millera, L. M., Miron, L. R., & Orcutt, H. K.	- History of moderate to severe child maltreatment was significantly associated with greater fear of self-compassion compared to minimal to no history of child maltreatment	- Fear of self-compassion was associated with greater PTSD symptom severity	N/A	- Fear of self-compassion functioned as a mediator between child maltreatment and PTSD symptom severity - Moderate to severe child maltreatment was significantly associated with greater psychological inflexibility, PTSD symptom severity, and fear of self-compassion, compared to participants with minimal to no child maltreatment - Fear of self-compassion did not predict PTSD symptom severity when psychological inflexibility was present	N/A
Hou, X.-L., Bian, X.-H., Zuo, Z.-H., Xi, J.-Z., Ma, W.-J., & Owens, L. D.	- Child maltreatment was negatively associated with self-compassion	- Negative automatic thoughts and depression symptoms were negatively associated with self-compassion	- Negative automatic thoughts and depression symptoms were positively associated with child maltreatment - Child maltreatment positively predicted negative automatic thoughts, which positively predicted depression symptoms - Early negative experiences, such as child maltreatment may lead to the development of later depression symptoms (childhood maltreatment was positively correlated with young adult depression symptoms)	- Self-compassion had a significant effect in moderating the relationship between child maltreatment and depression symptoms through negative automatic thoughts (a weaker link was observed in subjects with high self-compassion than those with low self-compassion)	N/A
Játiva, R., & Cerezo M. A.	- Child maltreatment was significantly and negatively associated with self-compassion	- Self-compassion was significantly and negatively associated with psychological maladjustment - Self-compassion was significantly and negatively associated with internalizing and/or externalizing problems	- Conventional offenses, peer and sibling victimization, and child maltreatment all had significant positive relationships with psychological maladjustment, and internalizing and/or externalizing problems	- Self-compassion functioned as a significant mediator between victimization and psychological maladjustment (indirect effect=0.38; z=2.22; p=.02) with fewer types of victimization experienced being linked to higher levels of self-compassion and lower levels of psychological maladjustment	N/A

Miron, L. R., Seligowski, A. V., Boykin, D. M., & Orcutt, H. K.	- Any type of childhood abuse exposure was significantly correlated with lower self-compassion scores, and significantly higher fear of self-compassion scores, than those without a CSA or CPA history - Participants with a combined CPA/CSA history reported significantly higher fear of self-compassion than those with a history of CPA only and those with no child abuse history	N/A	- Any type of childhood abuse was significantly associated with greater depression symptoms, and PTSD symptoms than non-victims - Participants with a combined CPA/CSA history reported significantly greater depressive symptoms than participants with no abuse history - Participants with a combined history of CPA/CSA had significantly more PTSD symptoms than those reporting no abuse history and those reporting a history of CSA only - There was a significant direct effect of CPA on PTSD symptoms	- CSA history had an indirect effect on depression symptoms and PTSD symptoms through fear of self-compassion, but not self-compassion. - CPA history was directly associated with PTSD symptoms, but not self-compassion or fear of self-compassion - Self-compassion and fear of self-compassion do not exert an indirect effect on post-trauma pathology for survivors of CPA	- Relationship between participant sex and fear of self-compassion was insignificant - Relationship between participant sex and self-compassion was significant, with greater self-compassion scores among men compared to women - Relationship between gender and history of CSA and CPA was significant, with women being more likely to report both than men
Reffi, A. N., Boykin, D. M., & Orcutt, H. K.	- Child maltreatment was significantly negatively associated with self-compassion	- Self-compassion was negatively associated with emotional dysregulation	- Child maltreatment significantly predicted emotional dysregulation	- Self-compassion predicted emotion dysregulation at a greater degree than other predictors - Self-compassion functioned as a significant mediator between child maltreatment and emotional dysregulation - When self-compassion was added to the model of child maltreatment's effect on emotional dysregulation, the magnitude of this effect was still significant but reduced	N/A
Tanaka, M., Wekerle, C., Schmuck, M.-L., Paglia-Boak, A., & The MAP Research Team	- Higher degrees of childhood physical abuse, emotional abuse, and emotional neglect were significantly associated with lower self-compassion - Controlling for age and gender, emotional abuse was significantly associated with reduced self-compassion, even when taking into account emotional neglect and physical abuse	- Low self-compassion scores were associated with greater anxiety/depression, psychological distress, alcohol use problems, and serious suicide attempts	N/A	- Child welfare-involved youth were grouped using maltreatment-related impairment risk scores based on 5 different outcomes (i.e., anxiety/depression, psychological distress, alcohol use problem, substance use problems, suicide attempt) - A greater number of positive outcomes (i.e., endorsing maltreatment-related impairments) was associated with lower self-compassion, suggesting that self-compassion, if present, may lessen the severity of maltreatment-related outcomes	N/A

Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C.	- Greater child maltreatment was associated with lower levels of self-compassion - Child maltreatment history significantly predicted self-compassion	- Greater self-compassion was associated with less emotion dysregulation, and less severe addictive problems and psychopathology	- Greater child maltreatment experiences were associated with greater emotion dysregulation - Greater child maltreatment was associated with higher levels of psychopathology, and greater severity of substance use - Child maltreatment history significantly predicted emotion dysregulation	- Self-compassion significantly predicted emotion dysregulation, beyond child maltreatment history, current psychological distress and addiction severity - Controlling for self-compassion, child maltreatment history had a non-significant impact on emotion dysregulation - Self-compassion significantly mediated the relationship between history of childhood maltreatment and emotion regulation difficulties	- Higher levels of childhood maltreatment were experienced by females compared to males - Total self-compassion score and emotion dysregulation did not have any gender differences - Gender was not controlled for in any analyses because there was no significant differences on the main outcome variable of emotion dysregulation

Relationship Between Child Maltreatment and Psychological Distress

Numerous studies investigated the relationship between CM and various forms of psychological distress, including depression, automatic negative thoughts, substance abuse, emotion regulation, and PTSD (Hou et al., 2020; Játiva & Cerezo, 2014; Miron et al., 2016; Reffi et al., 2019; Vettese et al., 2011). Within these examinations, a positive relationship between CM and psychological distress was consistently observed. CM was significantly associated with psychological maladjustment (Játiva & Cerezo, 2014), greater psychopathology, a higher severity of substance use (Vettese et al., 2011), internalizing and/or externalizing problems (Játiva & Cerezo, 2014), and emotional dysregulation (Reffi et al., 2019; Vettese et al., 2011).

Within two identified studies investigating depression, CM was significantly associated with depressive symptoms (Hou et al., 2020; Miron et al., 2016). Specifically, Miron et al. (2016) reported that the experience of CSA, CPA, or combined CPA/CSA was significantly associated with increased depressive symptoms and PTSD, compared to those without a history of abuse. Similarly, although Hou et al. (2020) did not consider specific subtypes of maltreatment, CM was found to be significantly and positively associated with both depression and negative automatic thoughts. Furthermore, a mediation analysis found that childhood maltreatment predicted negative automatic thoughts, which in turn predicted depression symptoms. These findings indicate that negative automatic thoughts may mediate the link between childhood maltreatment and symptoms of depression in young adults.

Sex and Gender Related Findings

The role of sex and gender was a topic of inquiry within the studies conducted by Miron et al. (2016) and Vettese et al. (2011) respectively. According to the Canadian Institutes of Health Research, gender can be defined as " the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people" while sex can be defined as "a set of biological attributes in humans and animals" (Canadian Institutes of Health Research, 2020). However, it is important to note that the terms, sex and gender, are sometimes used interchangeably in literature, and therefore may not be accurate to their definitions. For the purposes of this study, males and females refer to sex, and men and women refer to gender. If an included study used sex and gender interchangeably, and binary options, it was assumed to be sex. Both studies found greater levels of childhood maltreatment among females and women compared to males and men, with Miron et al. (2016) specifically considering CSA and CPA. An area of contention was the relationship between gender, sex and SC. While Miron et al. (2016) found no significant relationship between sex and FSC, SC scores among males were significantly higher than among females. In contrast, Vettese et al. (2011) found no significant gender difference in SC scores and emotional regulation between men and women. This discrepancy in results could have been attributed to Miron et al.'s (2016) larger sample size (N=377) as opposed to Vettese et al. (2011; N=81), thereby allowing for the study to be better powered for detecting sex differences in relation to SC.

Relationship Between Self-Compassion, Child Maltreatment, and Psychological Distress

Across various forms of psychological distress and CM, several studies pointed to the moderating and mediating roles of SC (Boykin et al., 2018; Hou et al., 2020; Játiva & Cerezo, 2014; Miron et al., 2016; Vettese et al., 2011. In the following sections, findings related to moderating roles will be discussed first, followed by mediating roles of SC.

Moderating and Mediating Roles of Self-Compassion

Suggesting moderation effects, Hou et al. (2020) found that the indirect relationship between CM and depressive symptoms through negative self-thoughts was weakened among participants with higher SC. Additionally, researchers found that SC significantly mediated the relationship between CM and emotional dysregulation. In the study by Vettese et al. (2011), the effect of a history of CM on emotion regulation difficulties was reduced to a non-significant level when SC was controlled for, suggesting mediation through SC. These findings align with those from a replicative study – when a model investigating the effect of CM on emotional dysregulation had SC added to it, the association between the two was still significant but reduced (Reffi et al., 2019). In the study by Játiva & Cerezo (2014), the protective mediating role of SC was similarly demonstrated in the relationship between CM and general psychological maladjustment, which encompassed mental health challenges, criminality, and behavioural problems. Individuals who experienced more types of victimization had less SC and greater levels of psychological maladjustment (Játiva & Cerezo, 2014). As well, in the study by Tanaka et al. (2011), "maltreatment-related impairments" (p. 889),

including problems with alcohol use, psychological distress, and report of a serious suicide attempt were associated with lower SC, alluding to the protective role of SC.

Moderating and Mediating Roles of Fear of Self-Compassion

FSC was another factor examined for its association with PTSD symptoms and depression within two identified studies. While related to self-compassion, FSC stands as its own distinct concept (e.g., individuals with low FSC do not necessarily possess high levels of SC). However, FSC can also potentially hinder one's process to increasing SC; to avoid incurring any potential pain, fear may serve as a defense mechanism against utilizing SC (Joeng & Turner, 2015).

The moderating role of FSC was not identified in any of the studies. With respect to PTSD symptoms, evidence from both studies suggested that the indirect effect of CM on PTSD symptoms occurred through the mediation of FSC (Boykin et al., 2018; Miron et al., 2016). Boykin et al. (2018) found that severe to moderate CM was significantly related to psychological inflexibility, elevated PTSD symptom severity, and FSC when compared to those with minimal or no experiences of CM. Further mediation analysis demonstrated an indirect impact of CM on PTSD symptom severity through FSC (Boykin et al., 2018). However, FSC failed to predict PTSD symptom severity in the presence of psychological inflexibility. Researchers tested psychological inflexibility as a moderator of this indirect effect, but the impact of CM upon PTSD severity at varying levels of psychological inflexibility remained non-significant, thus indicating that psychological inflexibility was not a moderator (Boykin et al., 2018).

While investigating the mediating role of FSC, Miron et al. (2016) found that CSA had an indirect impact on PTSD and depression symptoms through FSC. In contrast to previously mentioned findings, SC did not have an indirect effect in this relationship, potentially implicating a unique role for FSC beyond low levels of SC. Another result that contrasts those of other studies was that neither FSC nor SC exerted an indirect effect on PTSD symptoms within survivors of CPA. Furthermore, the indirect effect of CPA through SC on depression and PTSD was non-significant (Miron et al., 2016).

In sum, findings from the present review suggest that SC has both a moderating and mediating role within the relationship between CM and various forms of psychological distress. With regards to its role in different types of CM and psychological distress, limited data alludes to a greater impact of FSC as a mediator in youth who have experienced CSA as opposed to CPA (Miron et al., 2016). In a sample of child welfare-involved youth, higher childhood emotional abuse, physical abuse, and emotional neglect was significantly associated with lower self-compassion, with emotional abuse being the most significant predictor out of the three, when compared to other maltreatment types (Tanaka et al., 2011).

Discussion and Implications

With a primary aim to investigate the relationships among CM, SC, and psychological distress in youth, and a secondary aim to identify if these relationships differ based on types of CM experienced, our scoping review yielded a total of seven studies.

The Role of Self-Compassion

Overall, our results found that SC played a moderating and mediating role in the relationship between CM and psychological distress. In one group of college students, it was observed that SC had a significant impact as a moderator between CM and depressive symptoms through negative self-thought (i.e., higher levels of SC weakened this relationship; Hou et al., 2020). Furthermore, among another sample of college students and youth enrolled in a substance treatment program, SC mediated the relationship between CM and emotional dysregulation (Reffi et al., 2019; Vettese et al., 2011). In both groups, the effect of CM on emotional dysregulation was reduced when SC was controlled for or added to the relationship, suggesting the possibility of mediation. Similar results were seen in high school students with regards to the mediating role of SC present in the relationship between CM and psychological maladjustment (Játiva & Cerezo, 2014). Lastly, in child-welfare involved youth, maltreatment-related impairments (i.e., anxiety/depression, alcohol use problems, psychological distress, and serious suicide attempts) were also associated with lower SC scores, which allowed authors to conclude that the presence of SC may lessen the severity of these impairments (Tanaka et al., 2011).

The mediating role of SC in the CM and psychological distress pathway is consistent with current literature focused on adult populations (Barlow et al., 2017; Messman-Moore & Bhuptani, 2020; Miron et al., 2014; Ross et al, 2019;

Tarber et al., 2016; Wu et al., 2018). For example, Barlow et al. (2017) analyzed data from college students including: childhood abuse, PTSD symptoms, trauma appraisals (i.e., the way in which a traumatic event is understood, such as self-blame or shame), emotion regulation difficulties, and SC. Researchers found that childhood abuse was both a direct and indirect cause of emotion regulation difficulties through trauma appraisals and low SC (Barlow et al., 2017). Likewise, Ross et al. (2019) found that in adults and college students, SC and shame significantly and indirectly (in this order) mediated the pathway from emotional abuse to depression. Authors propose that emotional abuse hinders the creation of a kind relationship with oneself, which may lead to difficulties in or barriers to utilizing SC (Ross et al., 2019). Thus, differences in SC levels within the participants accounted for variance in shame, while shame served as a partial predictor for maltreatment-associated depression (Ross et al., 2019). Although these studies echo the findings that SC is a mediator for child maltreatment-related psychological distress, it is evident that many other factors, such as shame or self-blame, may be involved that prove to be additional or even stronger mediators in this relationship.

The Role of Fear of Self-Compassion

FSC was also investigated in this review. Among a group of college students, it was observed that FSC mediated the relationship between CM and PTSD symptom severity, such that the presence of FSC correlated with greater PTSD symptoms (Boykin et al., 2018). Within a sample of undergraduate students, it was also found that FSC, but not SC, had an indirect effect on depression and PTSD symptoms caused by CSA (Miron et al., 2016). Neither FSC nor SC had any effect on post-trauma pathology and PTSD symptoms caused by CPA (Miron et al., 2016). The differing roles of FSC between CSA and CPA may be related to the type of abuse. CSA has been associated with feelings of self-blame and shame (e.g., feeling responsible for the abuse), which have in turn been linked with PTSD symptomology (Feiring & Cleland, 2007). Current literature also notes that greater severity and persistence of CSA are correlated with self-blame and shame, thereby contributing to variance in the attributions of self-blame and shame by CSA victims (Valle & Silovsky, 2002). Given that FSC indirectly impacts CSA-related depression and PTSD, we hypothesize that the presence of self-blame and shame can impact levels of FSC, which in turn impacts the development of depression and PTSD symptoms. As Miron et al. (2016) simply measure the presence of CSA, future research should encompass additional CSA factors (e.g., severity, frequency), as well as attributions (e.g., self-blame, shame) in order to fully elucidate the relationship between CSA and FSC and ultimately, psychological distress.

It was also noted that in the presence of psychological inflexibility, FSC failed to predict PTSD symptoms in college students (Boykin et al., 2018). Psychological inflexibility can be defined as a combination of cognitive fusion (i.e., the replacement of reality with one's own thoughts) and experimental avoidance (i.e., being averse to negative thoughts, feelings, and memories; Schramm et al., 2020). Although the presence of psychological inflexibility was expected to increase the negative impact of FSC on PTSD symptoms, no moderating role was found (Boykin et al., 2018). Instead, authors found that in a multiple mediation analysis, both psychological inflexibility and FSC were mediators of the relationship between CM and PTSD. However, psychological inflexibility was a stronger mediator of the two and thus reduced the impact of FSC to negligible (Boykin et al., 2018). Psychological inflexibility can be hypothesized to have a greater mediation impact than FSC, as the avoidance and suppression of thoughts and emotions related to a traumatic event (e.g., CM) can increase the risk of developing PTSD (Kachadourian et al., 2021; Schramm et al., 2020). Prior research has also demonstrated that lowering psychological inflexibility may be vital in reducing PTSD symptom severity (Kachadourian et al., 2021; Schramm et al., 2020). In contrast, Miron et al. (2015) investigated the relationships between FSC, psychological inflexibility, and PTSD symptoms in a sample of undergraduate students, and revealed that psychological inflexibility significantly moderated the relationship between FSC and PTSD symptoms. Findings may differ due to differences in samples (e.g., 64.9% female versus 100% female; traumatic event experience versus childhood maltreatment). Specific types of CM may also be more likely to foster psychological inflexibility (e.g., more traumatic and frequent experiences may result in greater suppression and avoidance of thoughts). Further research is needed to elucidate the role of psychological inflexibility in the relationship between CM, FSC, and PTSD symptoms.

The Relationship Between Self-Compassion and Fear of Self-Compassion

While studies analyzed within this review did not explore the relationships between SC and FSC, both SC and FSC were shown to play mediating and moderating roles within the relationships between CM and psychological distress. Furthermore, a commonality between multiple studies was that the presence of other factors such as shame and self-blame might significantly impact these relationships and remain to be explored further.

Current literature points to potential relationships between SC and FSC within the CM and psychological distress pathway. Naismith et al. (2018) investigated the relationships among SC, FSC, and childhood abuse and neglect among other factors, in individuals diagnosed with personality disorder. The authors found that SC was uniquely predicted by low early warmth/neglect, while FSC was predicted by the presence of multiple adverse childhood experiences. Although it is uncertain if there exists a relationship between SC and FSC, both low SC and FSC were associated with self-criticism (Naismith et al., 2018). Based on our current findings, we propose that SC and FSC may be related via the self-kindness aspect of SC. As self-criticism is known to be the negative pole of self-kindness and also contributes to the development of FSC, it is reasonable to conclude that self-criticism, including relevant factors such as self-blame and shame, could reduce levels of SC and increase levels of FSC. Future research should further explore the impact of these factors, and relevance to the relationship between SC and FSC.

Impact of Child Maltreatment Subtypes

Overall, our results garnered limited data on these relations across specific CM subtypes, with only two studies addressing specific types. Of note is Tanaka et al.'s (2011) finding that out of all subtypes of CM, emotional abuse alone was a significant predictor of SC. Prior research has also shown that when compared with physical and sexual abuse, emotional abuse was the strongest predictor of later emotional dysregulation (Burns et al., 2009). Emotional dysregulation has also been found to mediate the relationship between PTSD symptom severity and SC (Scoglio et al., 2017). Assuming emotion regulation serves as a mediator between SC and negative mental health outcomes, the role of emotional maltreatment may be of greater significance than any other form of maltreatment in this pathway. Despite its significance, little attention has been given to emotional abuse clinically, compared to other CM types such as physical and sexual abuse (Wekerle & Smith, 2019). Further research is necessary to elucidate the specific impact of different subtypes of CM as they pertain to SC and psychological distress.

Roles of Sex and Gender

From previous literature, some evidence has pointed towards sex and gender playing a role in individual levels of SC (Bluth & Blanton, 2015; Bluth, Campo et al., 2016; Yarnell et al., 2015; Yarnell et al., 2018). However, while sex and gender have only demonstrated minor differences in SC levels across these studies, these differences could greatly impact the effectiveness of interventions or the analysis of other dimensions (i.e., if sample size was comprised of a majority of a certain sex or gender, small differences may result in a cumulative effect, ultimately causing data to be skewed).

From the studies in the present review, Miron et al. (2016) and Vettese et al. (2011) observed that females and women, respectively, experienced greater levels of CM than males and men. However, their results differed regarding sex and gender differences in SC: males had higher SC scores than females in Miron et al. (2016), whereas Vettese et al. (2011) failed to find any significant gender differences. Some research shows that the sex difference may emerge in later adolescence. Specifically, Bluth and Blanton (2015) found that in a sample of adolescent students aged 11-18 years, older girls (aged 14-18 years) possessed lower SC than both older boys and younger male and female adolescents (aged 11-14 years). Similar to Miron et al. (2016), and Bluth and Blanton's (2015) older adolescent subsample, Yarnell et al.'s (2015) meta-analysis revealed that men on average, possessed slightly higher levels of SC than women, which the authors found to be consistent with prior research that established women as more likely to be self-critical and engage in negative self-talk (Leadbeater et al., 1999; Pritchard & DeVore, 2013).

As observed in our results, the roles of sex and gender are also important for understanding the levels of CM experienced. For example, Cappelleri et al. (1993) carried out an extensive analysis of nationally representative studies in the United States and concluded that females experienced a higher rate of CSA than males, with no sex differences in the experience of CPA. Additionally, Titus et al. (2003) found that victimization experiences differed by gender in adolescents entering substance abuse treatment. Compared to boys, girls were more likely to have experienced any type of victimization and be survivors of victimization experiences (Titus, 2003). However, it is important to note that males have often been underrepresented in CM and abuse studies (Behl et al., 2003). Males also experience more difficulties in disclosure of CSA such as fear of stigmatization as homosexual, given most perpetrators are often other males (Alaggia, 2010; Easton et al., 2013), and the need to adhere to culturally informed masculine roles (Easton, 2013). Given the limited data gathered from the included studies, more male and men-inclusive studies that recognize the barriers faced in representation and disclosure should be conducted to determine the role of sex and gender in SC and psychological distress pathways in youths with CM histories. Though not examining CM, the importance of male and men-inclusive studies is further underscored by Kehayes et al. (2018)'s study investigating the differing impact of

alcohol-related sexual victimization on male and female undergraduate students. Results showed that the relationship between sexual victimization by an intoxicated perpetrator and increased anxiety was stronger in males than females, with the authors calling for greater attention to be paid to the experiences of sexually victimized males (Kehayes et al., 2018). The frequent conflation of terms, sex and gender, also call for more studies that determine the roles of sex versus gender in this relationship.

Future Directions

Given the significance of SC and FSC in moderating and mediating levels of psychological distress for CM victims, it may be worthwhile to consider the applicability of SC in clinical practice. Current existing interventions for victims of CM include trauma-focused cognitive behavioral therapy (TF-CBT; Cohen et al., 2012). TF-CBT is particularly known for its implementation of "trauma narration", where victims recount the story of their traumatic histories. It may be worthwhile to involve SC practices and strategies prior to or following this stage, to help alleviate any stresses associated with recalling one's traumatic experiences (Cohen et al., 2012). Moreover, Drs. Kristin Neff and Christopher Germer developed the Mindful Self-Compassion program, which has shown significant gains in SC, mindfulness, and well-being in a randomized control trial of community adults (Neff & Germer, 2013). The program involves an 8-week workshop on training individuals to cultivate skills of SC. Tailored versions of the program exist, including one for teens, which has likewise demonstrated greater SC and life satisfaction, as well as significantly lower depression among participants in the intervention compared to the control (Bluth, Gaylord et al., 2016). Studying the effectiveness of these existing programs among survivors of CM may be valuable. There are also a number of compassion-based interventions including Compassion-Focused Therapy (CFT), Mindful Self-Compassion (MSC), Compassion Cultivation Training, Cognitively Based Compassion Training, Cultivating Emotional Balance, and Compassion and Loving-Kindness Meditations (Kirby, 2017). While these interventions utilize compassion, each are unique in their specific aims and programming content (Kirby, 2017). Of note is CFT, which aims to help individuals who experience shame and self-criticism (i.e., a population relevant to CM), by engaging in affiliative, caring, and altruistic behaviour toward themselves and others (Gilbert, 2014). Its approach incorporates the concept of self-compassion (i.e., being compassionate towards oneself) as a core element and has been shown to reduce outcomes such as depression, anxiety, and psychological distress (Kirby, Tellegen et al., 2017).

Other interventions include emergent mental health technologies (mHealth). The JoyPop™ app (see https://youthresilience.net/joypop-app), for example, is an evidence-based, trauma-informed resilience app for youth, including features based on SC and positive psychology. In a sample of undergraduate students who used the app for 30 days, those with greater adverse childhood experiences (ACEs) displayed a more rapid increase in emotion regulation with daily use of the app, compared to those with fewer or no ACEs (MacIsaac et al., 2021). Such SC interventions may therefore be even more relevant to youth with CM histories.

Moreover, the current review predominantly included studies in school samples, with only one investigating child welfare-involved youth and another investigating youth with substance use problems. It may be valuable to further conduct research in more diverse populations, such as those in the child welfare system and those of Indigenous backgrounds, who may be at greater risk of experiencing CM and psychological distress (Collin-Vézina et al., 2011; Hop Wo et al., 2020). One study found that among American Indigenous-identifying adults, SC was associated with lower suicide risk (Dolezal et al., 2021), alluding to the potential benefits of SC among Indigenous youth as well. Child welfare-involved youth, in particular, may benefit from services that promote SC. Having access to such services may help facilitate the transition for youth aging out of care (i.e., at age 18), as they lose access to the resources and support previously provided by the government.

Strengths and Limitations

There are several strengths to this scoping review. This is the first review of our knowledge to investigate the current state of the literature on SC, CM, and psychological distress among youth. Existing reviews on similar topics include meta-analyses on self-compassion and psychological distress among adolescents (Marsh et al., 2018), and the differential effects of self-compassion components on well-being and psychological distress (Chio et al., 2021). Our focus on CM is particularly unique.

Limitations of this review include the cross-sectional nature of studies. The lack of longitudinal data prevents the ability to ascertain cause-and-effect relationships across the three factors of SC, CM, and psychological distress. Understanding the longitudinal steps in these pathways can better support the development of future interventions

(e.g., we can target predictors and risks early on to prevent outcomes, such as psychological distress and low self-compassion). This review also did not implement quality assessment, in an effort to be as comprehensive as possible in being the first review of its topic, therefore limiting the rigor of studies included. Additionally, most samples included solely or mostly female participants. In the included studies, significant differences were found between male and female participants, and men and women participants, respectively (Miron et al., 2016; Vettese et al., 2011). Miron et al. (2016) found significantly higher SC scores in males than females, while Vettese et al. (2011) failed to find any gender-related differences. Future research should further elucidate if gender and/or sex plays a role in the relationships between self-compassion, CM, and psychological distress. Furthermore, although sex and/or gender was investigated in all the included studies, the terms, "sex" and "gender," were used interchangeably for a few select studies (Boykin et al., 2018; Játiva & Cerezo, 2014; Miron et al., 2016). The report of gender, therefore, may not be accurate to its correct definition (i.e., "the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people"; CIHR, 2020). We recommend that future studies include gender in their analysis, with recognition of the expansive gender identities and greater psychological distress potentially faced by the marginalized population of gender-diverse individuals (Cyrus, 2017; Frohard-Dourlent et al., 2020). While age restrictions ensured a systematic approach to the selection of literature, it may have excluded relevant studies with ages close to the inclusion criteria, but younger and/or older (Pohl et al., 2020; Boyraz et al., 2019; Joss et al., 2019).

Conclusion

Overall, the seven studies included in this scoping review point to a moderating and mediating role of SC in the relationship between CM and psychological distress among youth. FSC was also investigated and suggested an indirect effect of CM on increased psychological distress, particularly PTSD symptoms and depression through FSC. With regards to relations of SC to specific types of CM, emotional abuse was found to be associated with significantly lower SC compared to other subtypes. Though the included studies are limited in determining longitudinal relationships, it is clear that SC is significant in the relationship between CM and psychological distress. It is reasonable to presume that other factors, such as severity of maltreatment or feelings of shame, may affect this relationship too. The low number of studies detected leaves room for continued research, deeper understanding, and potential clinical implementation of SC interventions for youth with maltreatment histories and psychological distress.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Appendix: Search Strategy

OVID MEDLINE

Exp Child Abuse/ OR Exp Child Abuse, Sexual/ OR Exp Physical Abuse/ OR Exp Domestic violence/

1. (child* adj2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*)) .ti, ab
2. (sex* adj2 (abus* OR victim* OR exploit* OR harass*)) .ti, ab
3. (prostitut*) .ti, ab
4. (molest*) .ti, ab
5. (incest*) .ti, ab
6. (rape*) .ti, ab
7. (traffick*) .ti, ab
8. (CSA) .ti, ab
9. (CSE) .ti, ab
10. (phys* adj2 (abus* OR harm*)) .ti, ab
11. (neglect*) .ti, ab
12. (emotion* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
13. (psych* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
14. (famil* adj2 (violen*)) .ti, ab
15. (domestic* adj2 (violen* OR batter*)) .ti, ab
16. (intimate partner violence) .ti, ab
17. (abus* adj2 (spous* OR wife OR husband)) .ti, ab
18. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
19. Exp empathy/ OR Exp mindfulness/
20. (self-compassion*) .ti, ab
21. (self compassion*) .ti, ab
22. (self-kindness) .ti, ab
23. (self kindness) .ti, ab
24. (common humanity) .ti, ab
25. (mindfulness) .ti, ab
26. 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26
27. 19 AND 27

OVID PsycInfo

1. Exp Child Neglect/ OR Exp Child Abuse/ OR Exp Sexual Abuse/ OR Exp Sexual Harassment/ OR Exp Rape/ OR Exp Domestic Violence/ OR Exp Intimate Partner Violence/ OR Exp Physical Abuse
2. (child* adj2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*)) .ti, ab
3. (sex* adj2 (abus* OR victim* OR exploit* OR harass*)) .ti, ab
4. (prostitut*) .ti, ab
5. (molest*) .ti, ab
6. (incest*) .ti, ab
7. (rape*) .ti, ab
8. (traffick*) .ti, ab
9. (CSA) .ti, ab
10. (CSE) .ti, ab
11. (phys* adj2 (abus* OR harm*)) .ti, ab
12. (neglect*) .ti, ab
13. (emotion* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
14. (psych* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
15. (famil* adj2 (violen*)) .ti, ab
16. (domestic* adj2 (violen* OR batter*)) .ti, ab
17. (intimate partner violence) .ti, ab
18. (abus* adj2 (spous* OR wife OR husband)) .ti, ab
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. Exp self-compassion/ OR Exp mindfulness/ OR Exp self-evaluation/ OR Exp Empathy/
21. (self-compassion*) .ti, ab
22. (self compassion*) .ti, ab
23. (self-kindness) .ti, ab
24. (self kindness) .ti, ab
25. (common humanity) .ti, ab
26. (mindfulness) .ti, ab
27. 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26
28. 19 AND 27

PsycARTICLES

1. MAINSUBJECT.EXACT.EXPLODE("Child Abuse") OR
   MAINSUBJECT.EXACT.EXPLODE("Sexual Abuse") OR
   MAINSUBJECT.EXACT.EXPLODE("Incest") OR
   MAINSUBJECT.EXACT.EXPLODE("Sexual Harassment") OR
   MAINSUBJECT.EXACT.EXPLODE("Child Neglect") OR
   MAINSUBJECT.EXACT.EXPLODE("Emotional Abuse")
2. ab(child* NEAR/2(maltreat* OR trauma* OR abus* OR batter* OR exploit*)) OR ti(child* NEAR/2(maltreat* OR trauma* OR abus* OR batter* OR exploit*))
3. ab(sex* NEAR/2 (abus* OR victim* OR exploit* OR harass*)) OR ti(sex* NEAR/2(abus* OR victim* OR exploit* OR harass*))
4. ab(prostitut*) OR ti(prostitut*)
5. ab (molest*) OR ti(molest*)
6. ab(incest*) OR ti(incest*)
7. ab(rape*) OR ti(rape*)
8. ab(traffick*) OR ti(traffick*)
9. ab(CSA) OR ti(CSA)
10. ab(CSE) OR ti(CSE)
11. ab(phys* NEAR/2 (abus* OR harm*)) OR ti(phys* NEAR/2(abus* OR harm*))
12. ab(neglect*) OR ti(neglect*)
13. ab(emotion* NEAR/2(harm* OR abus* OR maltreat*)) OR ti(emotion* NEAR/2(harm* OR abus* OR maltreat*))
14. ab(psych* NEAR/2(harm* OR abus* OR maltreat*)) OR ti(psych* NEAR/2(harm* OR abus* OR maltreat*))
15. ab(famil* NEAR/2(violen*)) OR ti(famil* NEAR/2(violen*))
16. ab(domestic* NEAR/2(violen* OR batter*)) OR ti(domestic* NEAR/2(violen* OR batter*))
17. ab(intimate partner violence) OR ti(intimate partner violence)
18. ab(abus* NEAR/2(spous* OR wife OR husband)) OR ti(abus* NEAR/2(spous* OR wife OR husband))
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. MAINSUBJECT.EXACT.EXPLODE(Self-Compassion) OR MAINSUBJECT.EXACT.EXPLODE(Self-Concept) OR MAINSUBJECT.EXACT.EXPLODE(Empathy)
21. ab(self compassion*) OR ti(self compassion*)
22. ab(self kindness) OR ti(self kindness)
23. ab(common humanity) OR ti(common humanity)
24. ab(mindfulness) OR ti(mindfulness)
25. 20 OR 21 OR 22 OR 23
26. 19 AND 24

ProQuest Sociological Abstracts

1. MAINSUBJECT.EXACT.EXPLODE("Child Abuse") OR
   MAINSUBJECT.EXACT.EXPLODE("Child Sexual Abuse") OR MAINSUBJECT.EXACT.EXPLODE("Sexual Abuse") OR
   MAINSUBJECT.EXACT.EXPLODE("Incest") OR
   MAINSUBJECT.EXACT.EXPLODE("Sexual Harassment") OR
   MAINSUBJECT.EXACT.EXPLODE("Prostitution") OR
   MAINSUBJECT.EXACT.EXPLODE("Child Neglect") OR
   MAINSUBJECT.EXACT.EXPLODE("Emotional Abuse") OR
   MAINSUBJECT.EXACT.EXPLODE("Family Violence") OR
   MAINSUBJECT.EXACT.EXPLODE("Spouse Abuse")
2. ab(child* NEAR/2(maltreat* OR trauma* OR abus* OR batter* OR exploit*)) OR ti(child* NEAR/2(maltreat* OR trauma* OR abus* OR batter* OR exploit*)) OR
3. ab(sex* NEAR/2 (abus* OR victim* OR exploit* OR harass*)) OR ti(sex* NEAR/2(abus* OR victim* OR exploit* OR harass*)) OR
4. ab(prostitut*) OR ti(prostitut*) OR
5. ab (molest*) OR ti(molest*) OR
6. ab(incest*) OR ti(incest*) OR
7. ab(rape*) OR ti(rape*) OR
8. ab(traffick*) OR ti(traffick*) OR
9. ab(CSA) OR ti(CSA) OR
10. ab(CSE) OR ti(CSE) OR
11. ab(phys* NEAR/2 (abus* OR harm*)) OR ti(phys* NEAR/2(abus* OR harm*)) OR
12. ab(neglect*) OR ti(neglect*)
13. ab(emotion* NEAR/2(harm* OR abus* OR maltreat*)) OR ti(emotion* NEAR/2(harm* OR abus* OR maltreat*)) OR
14. ab(psych* NEAR/2(harm* OR abus* OR maltreat*)) OR ti(psych* NEAR/2(harm* OR abus* OR maltreat*)) OR
15. ab(famil* NEAR/2(violen*)) OR ti(famil* NEAR/2(violen*)) OR
16. ab(domestic* NEAR/2(violen* OR batter*)) OR ti(domestic* NEAR/2(violen* OR batter*)) OR
17. ab(intimate partner violence) OR ti(intimate partner violence) OR
18. ab(abus* NEAR/2(spous* OR wife OR husband)) OR ti(abus* NEAR/2(spous* OR wife OR husband))
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. ab(self compassion*) OR ti(self compassion*) OR
21. ab(self kindness) OR ti(self kindness) OR
22. ab(common humanity) OR ti(common humanity) OR
23. ab(mindfulness) OR ti(mindfulness)
24. 20 OR 21 OR 22 OR 23
25. 19 AND 24

ProQuest ERIC

1. MAINSUBJECT.EXACT.EXPLODE("Family Problems") OR MAINSUBJECT.EXACT.EXPLODE("Child Abuse") OR MAINSUBJECT.EXACT.EXPLODE("Family Violence") OR MAINSUBJECT.EXACT.EXPLODE("Sexual Abuse") OR MAINSUBJECT.EXACT.EXPLODE("Sexual Harassment") OR MAINSUBJECT.EXACT.EXPLODE("Violence") OR MAINSUBJECT.EXACT.EXPLODE("Child Neglect")
2. ab(child* adj2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*)) OR ti(child* adj2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*))
3. ab(sex* adj2 (abus* OR victim* OR exploit* OR harass*)) OR ti(sex* adj2 (abus* OR victim* OR exploit* OR harass*))
4. ab(prostitut*) OR ti(prostitut*)
5. ab (molest*) OR ti(molest*)
6. ab(incest*) OR ti(incest*)
7. ab(rape*) OR ti(rape*)
8. ab(traffick*) OR ti(traffick*)
9. ab(CSA) OR ti(CSA)
10. ab(CSE) OR ti(CSE)
11. ab(phys* adj2 (abus*" OR harm*)) OR ti(phys* adj2 (abus*" OR harm*))
12. ab(neglect*) OR ti(neglect*)
13. ab(emotion* adj2 (harm* OR abus* OR maltreat*)) OR ti(emotion* adj2 (harm* OR abus* OR maltreat*))
14. ab(psych* adj2 (harm* OR abus* OR maltreat*)) OR ti(psych* adj2 (harm* OR abus* OR maltreat*))
15. ab(famil* adj2 (violen*)) OR ti(famil* adj2 (violen*))
16. ab(domestic* adj2 (violen* OR batter*)) OR ti(domestic* adj2 (violen* OR batter*))
17. ab(intimate partner violence) OR ti(intimate partner violence)
18. ab(abus* adj2 (spous* OR wife OR husband)) OR ti(abus* adj2 (spous* OR wife OR husband))
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. ab(self-compassion*) OR ti(self-compassion*)
21. ab(self compassion*) OR ti(self compassion*)
22. ab(self-kindness) OR ti(self-kindness)
23. ab(self kindness) OR ti(self kindness)
24. ab(common humanity) OR ti(common humanity)
25. ab(mindfulness) OR ti(mindfulness)
26. 20 OR 21 OR 22 OR 23 OR 24 OR 25
27. 19 AND 26

OVID Embase

1. Exp child abuse/ OR Exp sexual abuse/ OR Exp child sexual abuse/ OR Exp physical abuse/ or Exp family violence/ OR Exp partner violence/ OR Exp domestic violence/ OR Exp child neglect/
2. (child* adj2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*)) .ti, ab
3. (sex* adj2 (abus* OR victim* OR exploit* OR harass*)) .ti, ab
4. (prostitut*) .ti, ab
5. (molest*) .ti, ab
6. (incest*) .ti, ab
7. (rape*) .ti, ab
8. (traffick*) .ti, ab
9. (CSA) .ti, ab
10. (CSE) .ti, ab
11. (phys* adj2 (abus* OR harm*)) .ti, ab
12. (neglect*) .ti, ab
13. (emotion* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
14. (psych* adj2 (harm* OR abus* OR maltreat*)) .ti, ab
15. (famil* adj2 (violen*)) .ti, ab
16. (domestic* adj2 (violen* OR batter*)) .ti, ab
17. (intimate partner violence) .ti, ab
18. (abus* adj2 (spous* OR wife OR husband)) .ti, ab
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. Exp empathy/ OR Exp mindfulness/
21. (self-compassion*) .ti, ab
22. (self compassion*) .ti, ab
23. (self-kindness) .ti, ab
24. (self kindness) .ti, ab
25. (common humanity) .ti, ab
26. (mindfulness) .ti, ab
27. 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26
28. 19 AND 27

CINAHL

1. (MM "Child Abuse, Sexual") OR (MM "Child Abuse") OR (MM "Sexual Abuse") OR (MM "Intimate Partner Violence") OR (MM "Domestic Violence") OR (MM "Assault and Battery")
2. TI (child* N2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*)) OR AB (child* N2 (maltreat* OR trauma* OR abus* OR batter* OR exploit*))
3. TI (sex* N2 (abus* OR victim* OR exploit* OR harass*)) OR AB (sex* N2 (abus* OR victim* OR exploit* OR harass*))
4. TI ("prostitut*") OR AB ("prostitut*")
5. TI ("molest*") OR AB ("molest*")
6. TI ("incest") OR AB ("incest")
7. TI ("rape*") OR AB ("rape*")
8. TI ("traffick*") OR AB ("traffick*")
9. TI ("CSA") OR AB ("CSA")
10. TI ("CSE") OR AB ("CSE")
11. TI (phys* N2 (abus*" OR "phys* harm*)) OR AB (phys* N2 (abus*" OR "phys* harm*))
12. TI ("neglect*") OR AB ("neglect*")
13. TI (emotion* N2 (harm* OR abus* OR maltreat*)) OR AB (emotion* N2 (harm* OR abus* OR maltreat*))
14. TI (psych* N2 (harm* OR abus* OR maltreat*)) OR AB (psych* N2 (harm* OR abus* OR maltreat*))
15. TI (famil* N2 (violen*)) OR AB (famil* N2 (violen*))
16. TI (domestic* N2 (violen* OR batter*)) OR AB (domestic* N2 (violen* OR batter*))
17. TI ("intimate partner violence") OR AB ("intimate partner violence")
18. TI (abus* N2 (spous* OR wife OR husband)) OR AB (abus* N2 (spous* OR wife OR husband))
19. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18
20. (MM "Compassion") OR (MM "Mindfulness") OR (MM "Self Concept") OR (MM "Self-Talk")
21. TI ("self-compassion*") OR AB ("self-compassion*") OR TI ("self compassion*") OR AB ("self compassion*")
22. TI ("self-kindness*") OR AB ("self-kindness*") OR TI ("self kindness*") OR AB ("self kindness*")
23. TI ("common humanity") OR AB ("common humanity")
24. TI ("mindfulness") OR AB ("mindfulness")
25. 20 OR 21 OR 22 OR 23
26. 19 AND 25

PUBMED

1. ("child abuse"[MeSH Terms]) OR "child abuse, sexual"[MeSH Terms]) OR ("domestic violence"[MeSH Terms]) OR ("spouse abuse"[MeSH Terms]) OR ("rape"[MeSH Terms]) OR ("physical abuse"[MeSH Terms])
2. ("child* maltreat*" [tiab])
3. ("child* trauma*" [tiab])
4. ("child* abus*" [tiab])
5. ("sex* abus*" [tiab])
6. ("sex* victim*" [tiab])
7. ("sex* exploit*" [tiab])
8. ("sex* harass*" [tiab])
9. ("prostitut*" [tiab])
10. ("molest*" [tiab])
11. ("incest" [tiab])
12. ("rape*" [tiab])
13. ("traffick*" [tiab])
14. ("CSA" [tiab])
15. ("CSE" [tiab])
16. ("physical abuse" [tiab])
17. ("physical harm" [tiab])
18. ("child batter*" [tiab])
19. ("neglect*" [tiab])
20. ("emotional harm" [tiab])
21. ("emotional abuse*" [tiab])
22. ("emotional maltreatment*" [tiab])
23. ("psychological harm" [tiab])
24. ("psychological abuse" [tiab])
25. ("psychological maltreatment*" [tiab])
26. ("family violence" [tiab])
27. ("domestic* violence" [tiab])
28. ("domestic* batter*" [tiab])
29. ("intimate partner violence" [tiab])
30. ("spousal abuse" [tiab])
31. ("wife abus*" [tiab])
32. ("husband abus*" [tiab])
33. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32
34. ("empathy"[MeSH Terms]) OR "mindfulness"[MeSH Terms])

35. ("self-compassion*" [tiab]) OR ("self compassion*" [tiab])
36. ("self-kindness*" [tiab]) OR ("self kindness*" [tiab])
37. ("common humanity" [tiab])
38. ("mindfulness" [tiab])
39. 34 OR 35 OR 36 OR 37 OR 38
40. 33 AND 39

International Journal of Child and Adolescent Resilience
Revue internationale de la résilience des enfants et des adolescents

Une intervention de groupe brève pour favoriser le bien-être des femmes enceintes pendant la pandémie de COVID-19 et soutenir la résilience des familles

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Résumé

Contexte : La pandémie de COVID-19 a été associée à une augmentation de la détresse psychologique chez les femmes enceintes. Le présent article vise à évaluer l'acceptabilité du programme STEP-COVID (Soutenir la Transition et l'Engagement dans la Parentalité dans le contexte de la pandémie de COVID-19), une intervention prénatale de groupe en ligne, en mode synchrone, visant à soutenir le bien-être, la mentalisation et la résilience.

Méthode : Vingt et une femmes enceintes québécoises ont participé au programme et ont complété des mesures des symptômes psychologiques et de la mentalisation avant et après l'intervention ainsi qu'une échelle évaluant leur perception de changements sur des domaines associés à la résilience. Après chaque rencontre, elles ont rempli un questionnaire évaluant leur appréciation du programme.

Résultats : Les 18 participantes (86 %) ayant complété le programme ont rapporté de hauts taux de satisfaction après chacune des rencontres et au terme de l'intervention. Une diminution des symptômes anxio-dépressifs et des symptômes de stress post-traumatiques et une amélioration des fonctions réflexives sont observées entre le début et la fin du programme. Les participantes ont également rapporté des changements positifs sur des sphères de fonctionnement associées à la résilience.

Conclusion : Les résultats soutiennent l'acceptabilité du programme STEP-COVID et suggèrent que l'offre d'une intervention de groupe brève en ligne est appréciée par les participantes, semble favoriser une diminution de la détresse psychologique et une amélioration de la mentalisation et pourrait contribuer à la résilience dans le contexte de la pandémie de COVID-19.

Mots-clés : grossesse, coronavirus, détresse psychologique, mentalisation, intervention.

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Introduction

Détresse psychologique chez les femmes enceintes pendant la pandémie de COVID-19

Une augmentation considérable de la détresse psychologique a été observée chez les femmes enceintes pendant la pandémie de COVID-19. À titre d'exemple, une étude québécoise réalisée auprès de 496 femmes enceintes avant le début de la pandémie et de 1 258 femmes enceintes recrutées au moment de la déclaration de l'urgence sanitaire en avril 2020 a permis d'observer une hausse des symptômes anxio-dépressifs au début de la pandémie (Berthelot, Lemieux et al., 2020). De façon concordante aux propos de plusieurs chercheuses et chercheurs indiquant que la pandémie de COVID-19 représente une forme de traumatisme en raison de son caractère menaçant, imprévisible, extrême et prolongé (Bridgland et al., 2021; Collin-Vézina et al., 2020), une légère augmentation des symptômes post-traumatiques et dissociatifs a également été observée chez les femmes enceintes (Berthelot, Lemieux, et al., 2020; Liu et al., 2021). Bien que la situation de la COVID-19 soit évolutive et que les niveaux de détresse psychologique aient été appelés à fluctuer en fonction du risque d'exposition au virus, de l'ampleur des mesures de santé publique, de l'avancement de la grossesse (Bérard et al., 2022) et du degré d'exposition à la COVID-19 à travers les médias (Lemieux et al., 2021), les nombreuses méta-analyses et revues systématiques tendent à confirmer une élévation de la détresse psychologique chez les femmes enceintes pendant la pandémie de COVID-19 partout dans le monde (Ahmad et Vismara, 2021; Campos-Garzon et al., 2021; Chmielewska et al., 2021; Demissie et Bitew, 2021; Fan et al., 2021; Feduniw et al., 2021; Sun et al., 2021; Tomfohr-Madsen et al., 2021; Vieira et al., 2021; Yan et al., 2020). Ceci pourrait s'expliquer, entre autres, par la menace particulière que représente une infection à la COVID-19 pendant la grossesse (Wei et al., 2021) et le fait que la période entourant l'arrivée d'un enfant requiert généralement une contribution accrue du réseau de soutien (Harrison et al., 2021; Thapa et al., 2020), ce dont ont été privées les femmes enceintes lorsque des mesures de santé publique visant à limiter la propagation du virus étaient en vigueur.

Cette hausse de la détresse psychologique chez les femmes enceintes est préoccupante considérant que la détresse prénatale est connue pour entraîner des répercussions négatives sur le fonctionnement des familles et sur le développement de l'enfant. D'abord, les symptômes anxieux et dépressifs en cours de grossesse sont susceptibles de perdurer à la suite de l'arrivée de l'enfant (Duguay et al., 2022) et d'affecter le fonctionnement maternel (Meaney, 2018). De plus, lorsqu'un parent éprouve de tels symptômes, les ressources psychologiques dont il dispose afin d'être alerte aux besoins de son enfant, de comprendre ses comportements et d'y répondre de manière sensible sont amoindries (Lemieux et al., 2021; Meaney, 2018; Piché et Vilatte, 2021). Ensuite, la sévérité des symptômes anxieux et dépressifs chez les mères lors de la grossesse a été associée à un risque accru que l'enfant naisse précocement et avec un plus faible poids (Bussières et al., 2015), qu'il présente des délais dans son développement socioémotionnel (Madigan et al., 2018) et cognitif (Tarabulsy et al., 2014) ou qu'il développe éventuellement une psychopathologie (Glover, 2011). Peu d'études sont disponibles actuellement quant aux répercussions de la détresse prénatale engendrée par la pandémie de COVID-19 sur le développement ultérieur des enfants. Une étude québécoise a rapporté que les symptômes anxio-dépressifs chez les femmes enceintes durant la pandémie étaient associés à des délais dans le développement socioémotionnel du nourrisson. Toutefois, les résultats ont également montré que cette association s'expliquait indirectement par la détresse postnatale. En d'autres mots, les femmes présentant des symptômes psychologiques en cours de grossesse étaient plus à risque de présenter des symptômes à la suite de la naissance de l'enfant, ce qui était en retour associé à un moins bon développement socioémotionnel chez ce dernier. En contrepartie, une détresse transitoire et limitée à la grossesse n'avait pas d'impact sur le développement ultérieur de l'enfant (Duguay et al., 2022). Des résultats similaires ont été observés dans une récente étude italienne (Provenzi et al., 2021). Bien qu'un grand nombre d'études aient documenté une association entre le stress prénatal et le développement de l'enfant, que ce soit pendant ou avant la pandémie de COVID-19, les résultats sont inconsistants quant aux répercussions intergénérationnelles d'un stress léger ou modéré (c.-à-d., un niveau de symptômes anxieux ou dépressifs qui n'atteint pas les critères d'un trouble de santé mentale) et une association causale entre le stress prénatal et des problèmes développementaux chez l'enfant n'a toujours pas été établie (Bleker et al., 2019). De plus, plusieurs facteurs sont susceptibles de modérer cette association. Par exemple, des études ont montré que le soutien de l'autre parent (Luecken et al., 2013; Stapleton et al., 2012) ou la participation à des interventions psychologiques prénatales (Bleker et al., 2020) pouvaient atténuer, voir supprimer, les effets du stress prénatal sur le développement ultérieur de l'enfant.

L'importance de la mentalisation pour soutenir le bien-être psychologique, l'engagement maternel et la résilience des femmes enceintes en contexte d'adversité

La mentalisation (ou le fonctionnement réflexif) est un processus inférentiel permettant à l'individu de comprendre et de se représenter les comportements humains en termes d'états mentaux, tels que des désirs, émotions, intentions, pensées ou croyances (Fonagy et al., 2002). Il s'agit d'un concept transdiagnostique et transthéorique à l'intersection des neurosciences cognitives, de la théorie de l'attachement, de la psychopathologie développementale et de la psychologie clinique (Bateman et al., 2018). La mentalisation est une habileté particulièrement pertinente à considérer en matière d'intervention clinique prénatale au cours de la pandémie de COVID-19 pour quatre raisons. D'abord, plusieurs études empiriques confirment le rôle de la mentalisation chez les mères en ce qui a trait à leur bien-être psychologique et leur engagement dans la maternité en cours de grossesse (Berthelot et al., 2019), leur adaptation lors de la transition à la maternité (Ensink et al., 2014), leurs comportements maternels (Zeegers et al., 2017), la relation d'attachement qu'elles développent avec leur enfant (Berthelot et al., 2015; Ensink et al., 2016; Slade et al., 2005) et le développement de ce dernier (Garon-Bissonnette et al., 2022). En effet, les mères ayant une bonne aptitude à mentaliser présentent généralement une saine curiosité à l'égard des sensations, émotions et cognitions à la source des comportements de leur enfant et à l'égard de leurs propres états mentaux (Slade, 2005). Cette habileté est cruciale pour l'expression de comportements maternels sensibles et amène notamment les mères, lors des interactions avec leur enfant, à lui refléter ce qu'elles comprennent de son monde interne via leurs expressions faciales et le langage. Ceci favorise en retour l'établissement d'une relation d'attachement sécurisante avec l'enfant, et le développement de sa cognition sociale, de ses habiletés de régulation émotionnelle et de ses fonctions exécutives (Aldrich et al., 2021; Bernier et al., 2017).

Deuxièmement, la mentalisation peut être affectée par les situations hautement stressantes. En effet, des déficits de mentalisation s'observent principalement lorsque la personne vit une charge émotionnelle importante ou rencontre de l'adversité (Bateman et Fonagy, 2015). Dans ces moments, la personne risque de régresser vers des modes de fonctionnement pré-mentalisant, qui se caractérisent notamment par une difficulté accrue à réguler ses émotions et une diminution de l'habileté à percevoir correctement les états mentaux des autres (Berthelot et Garon-Bissonnette, 2022). Le danger objectif que posait la pandémie de COVID-19 pour les femmes enceintes et leur fœtus, les limitations de contacts alors qu'elles se trouvaient à une période de leur vie où le besoin en soutien social était accru et l'augmentation des obligations familiales dans le contexte de fermetures d'écoles et autres mesures de santé publique ont pu contribuer à accroître leur sentiment d'être menacées ou sous pression. Dans de tels contextes, où les exigences sont très élevées et les soucis prennent beaucoup de place, il devient plus difficile de s'engager psychologiquement dans la grossesse et de demeurer sensible à ses besoins affectifs ainsi qu'aux états mentaux des autres membres de la famille (Yatziv et al., 2022). Une récente étude a d'ailleurs démontré que les discours des parents pendant la pandémie avaient tendance à être moins orientés vers les autres et les émotions et à être davantage autocentrés et orientés vers des aspects concrets comparativement à la période précédant la pandémie (Yatziv et al., 2022).

Troisièmement, la mentalisation est conceptuellement liée à la résilience psychologique. D'abord, plusieurs définissent la résilience psychologique comme un fonctionnement préservé dans un contexte d'une telle adversité qu'il est attendu que les personnes développent des problèmes psychologiques (Nishimi et al., 2021). En ce sens, plusieurs études ont rapporté que des symptômes psychologiques à la suite d'événements de vie adverses s'expliqueraient en partie par l'interférence de ces stresseurs avec les habiletés mentalisation (Berthelot et al., 2019; Katznelson, 2014). Des habiletés de mentalisation préservées pourraient ainsi jouer un rôle clé dans l'adaptation psychologique dans le contexte de la pandémie de COVID-19 (Gamache et al., 2022; Lassri et Desatnik, 2020). Ensuite, d'autres définissent la résilience psychologique comme un processus dynamique permettant de surmonter les difficultés rencontrées avec persévérance, une bonne conscience de soi et un sentiment préservé de cohérence interne (Sisto et al., 2019). Cette définition de la résilience est étroitement associée à celle de la mentalisation, qui est conceptualisée comme une habileté fondamentale à la régulation affective, à la conscience de soi et au développement d'un concept de soi stable (Fonagy et al., 2002; Fonagy et Target, 2006).

Finalement, le paradigme de la mentalisation offre un cadre d'intervention intégré pour l'intervention psychologique. En effet, des interventions basées sur la mentalisation ont été adaptées avec succès pour un ensemble de conditions et de clientèles (Luyten et al., 2020), notamment auprès des parents (Byrne et al., 2020), et sont suggérées comme étant particulièrement prometteuses dans le contexte de la pandémie de COVID-19 (Lassri et Desatnik, 2020).

Ces constats suggèrent que les femmes enceintes pourraient bénéficier d'interventions basées sur la mentalisation en leur offrant un espace réflexif leur permettant de se réapproprier l'expérience de la grossesse et de la maternité dans le contexte de la pandémie de COVID-19, de limiter leur détresse psychologique et de soutenir leur résilience, ce qui pourrait en retour entraîner des répercussions positives sur leur enfant et leur vie familiale. À ce jour, nous n'avons recensé aucune étude portant sur une intervention psychosociale en ligne pendant la pandémie de COVID-19 auprès des femmes enceintes de la communauté afin de diminuer la détresse prénatale et de soutenir un engagement positif dans la maternité. De telles interventions sont pourtant identifiées comme prioritaires depuis le début de la pandémie (Buekens et al., 2020; Ceulemans et al. 2020; Penner et Rutherford 2022; Thapa et al., 2020; Venta et al. 2021).

STEP-COVID : Soutenir la Transition et l'Engagement dans la Parentalité dans le contexte de la pandémie de COVID-19

Afin de soutenir les femmes enceintes pendant la pandémie de COVID-19, nous avons adapté un programme d'intervention de groupe prénatal basé sur la mentalisation destiné aux femmes enceintes ayant vécu des traumatismes interpersonnels, le programme STEP (Soutenir la Transition et l'Engagement dans la Parentalité; Berthelot et al., 2018; Berthelot et al., 2021; Drouin-Maziade et al., 2019). Cette adaptation, intitulée STEP-COVID, vise à rejoindre l'ensemble des femmes enceintes, qu'elles aient ou non une histoire traumatique. Le programme STEP-COVID cible cinq objectifs centraux : 1) diminuer l'isolement en permettant aux participantes de discuter des aspects positifs et des défis de la maternité avec d'autres femmes enceintes, 2) explorer ce que vivent les femmes enceintes dans le contexte de la pandémie, 3) permettre aux participantes de se réapproprier l'expérience de la grossesse dans le contexte d'incertitude lié à la pandémie, 4) réfléchir à de nouvelles façons de composer avec le stress et les émotions désagréables, et 5) soutenir la mentalisation par rapport à soi, à leur rôle de mère et par rapport à la relation à venir avec leur enfant. Le programme comprend six à sept rencontres qui sont offertes à des groupes de quatre à six femmes enceintes. Le programme est manualisé, conçu pour être coanimé par des professionnel.le.s de diverses professions (incluant minimalement un.e psychologue ou un.e autre professionnel.le ayant une expérience significative en santé mentale et quant aux interventions basées sur la mentalisation). Il s'agit d'un programme d'accompagnement et d'éducation psychologique utilisant des activités structurées, fondées sur des bases théoriques et sur la recherche clinique, afin de soutenir les échanges et favoriser la mentalisation chez les participantes. La perspective de l'accompagnement à la parentalité retenue pour le programme réfère à une démarche visant à aider le parent à cheminer, à se construire et à atteindre ses buts personnels (Beauvais, 2004) en misant notamment sur la relation, le dialogue, l'écoute et sur une posture mentalisante (Paul, 2012). L'intervention s'inscrit également dans les grands principes des approches centrées sur la mentalisation (Allen et al., 2008). Tel que montré récemment via une analyse qualitative du discours des participantes à la version originale du programme STEP (Berthelot et al., sous-presse), le contenu des activités, le collectif de femmes enceintes et le cadre d'animation sécurisant et bienveillant offrent aux participantes l'opportunité de faire une rencontre avec elles-mêmes permettant une réappropriation subjective de leur expérience (Smolak et Brunet, 2020), laquelle a pu être mise à mal par le contexte de peur et d'incertitude de la pandémie, les obstacles au partage de leur expérience avec d'autres mères ou leurs proches en raison des mesures d'isolement et de distanciation et le caractère irréel d'une grossesse pendant la pandémie (Riley et al., 2021).

L'intervention se divise en deux phases incluant chacune trois rencontres. Les trois premières rencontres visent à explorer la façon dont les participantes se sentent (en accordant une attention tant aux émotions agréables que désagréables), à mieux comprendre ce qui les amène à se sentir ainsi, à leur permettre d'échanger avec d'autres personnes qui vivent des choses similaires, et à soutenir leurs capacités à composer avec le stress et les émotions plus désagréables afin de trouver ou de préserver un équilibre. Les trois rencontres suivantes visent à permettre aux participantes de s'approprier pleinement la grossesse et la maternité en leur donnant un espace pour réfléchir à comment elles souhaitent être comme mères, comment leur histoire personnelle influence leur expérience de la grossesse et de la maternité, envisager les moments qui seront les plus agréables comme mères et ceux qui demanderont plus d'adaptations, et identifier leurs besoins ainsi que les ressources à leur disposition.

Objectifs de l'étude

Le but de la présente étude est d'offrir des données préliminaires concernant l'acceptabilité du programme STEP-COVID. L'acceptabilité d'une intervention réfère à la façon dont la population ciblée reçoit l'intervention et la mesure dans laquelle l'intervention répond à ses besoins (Ayala et Elder, 2011; Bowen et al., 2009). Ces deux dimensions de l'acceptabilité d'un programme sont explorées de façon préliminaire via des stratégies complémentaires

correspondant aux deux objectifs de l'étude. Le premier objectif est d'évaluer l'appréciation que font les participantes de chacune des rencontres et de l'ensemble du programme via des données quantitatives. Le deuxième objectif est d'évaluer si, entre le début et la fin du programme, les participantes rapportent une diminution de la détresse psychologique (opérationnalisée ici via des mesures des symptômes anxio-dépressifs et post-traumatiques), une augmentation de leurs habiletés de mentalisation et des changements significatifs dans des sphères de fonctionnement associées à la résilience, c'est-à-dire l'estime de soi, la perception d'être en mesure de faire face aux obstacles, l'ouverture à aller chercher de l'aide en cas de besoin ou à se confier, la confiance dans ses habiletés maternelles, l'aptitude à identifier ses besoins, l'affirmation de soi, et la capacité à composer avec le stress et les émotions désagréables.

Méthodologie

Procédure

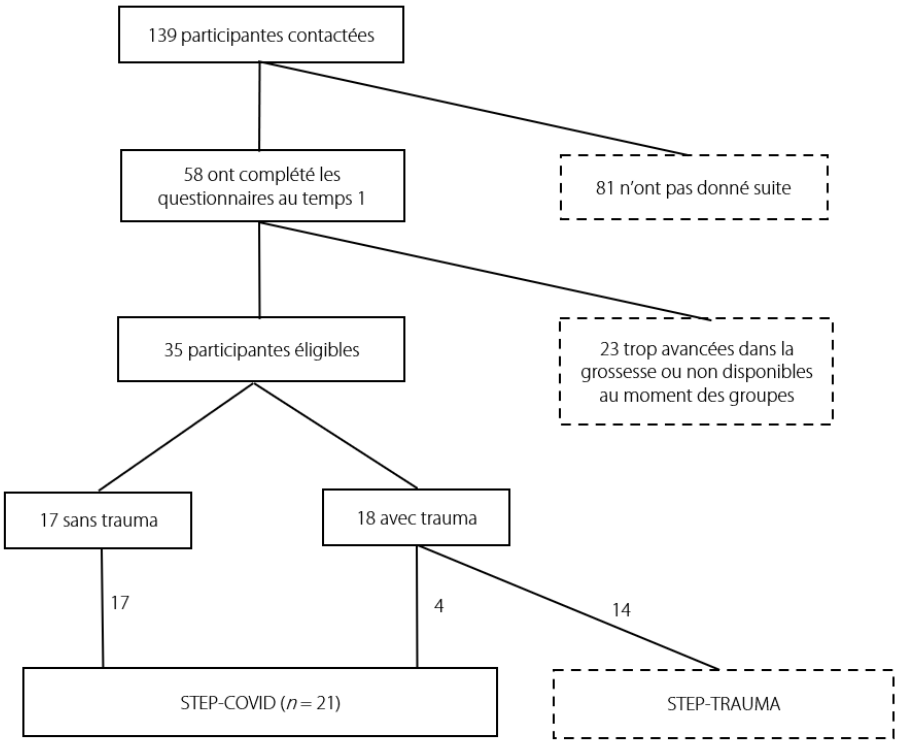
Le programme STEP-COVID a été offert en ligne en mode synchrone sous la forme d'un essai clinique non-randomisé. Ce projet repose sur un devis de recherche par des méthodes mixtes de type concomitant imbriqué « QUAN + qual ». Ce type de devis est l'un des quatre qui sont recommandés dans le cadre d'études portant sur une intervention (Creswell et Plano Clark, 2018). La présente étude utilise les données quantitatives de ce projet (mesures pré et post-intervention et évaluation de la satisfaction). Les participantes ont été recrutées via des annonces sur les réseaux sociaux (Facebook) entre le 1er avril 2021 et le 16 mai 2021. Les participantes désirant avoir plus d'information sur l'étude étaient contactées au téléphone ou par courriel par une assistante de recherche qui leur expliquait l'intervention et le déroulement de la recherche. La première étape consistait à remplir une série de questionnaires sur une plateforme sécurisée permettant à la fois d'évaluer les critères d'éligibilité et de recueillir des données pré-intervention pour l'évaluation des effets du programme. Les questionnaires autoadministrés évaluaient notamment les caractéristiques sociodémographiques, la détresse psychologique (p. ex., symptômes anxio-dépressifs et post-traumatiques), les sentiments à l'égard de la maternité, la mentalisation et les disponibilités sommaires pour participer au programme. La majorité de ces questionnaires étaient administrés à nouveau au terme de l'intervention. Les femmes satisfaisant les critères d'éligibilité selon leurs réponses aux questionnaires (c.-à-d., être entre 12 et 28 semaines de grossesse et être disponible à l'une des plages de disponibilités des intervenant.e.s offrant l'intervention) étaient invitées à participer à l'intervention. Deux interventions étaient offertes simultanément par l'équipe de recherche : une intervention de huit à neuf rencontres développée pour les femmes enceintes ayant un vécu traumatique (STEP) et une intervention de six à sept rencontres destinée à toutes les femmes enceintes pendant la pandémie de COVID-19, qu'elles aient ou non un vécu traumatique (STEP-COVID). Les participantes ayant rapporté aux questionnaires avoir vécu de mauvais traitements au cours de leur enfance étaient orientées vers le programme STEP. Toutefois, un vécu de maltraitance n'était pas un critère d'exclusion du programme STEP-COVID et les participantes affichant une préférence pour ce programme malgré leur histoire traumatique étaient orientées vers cette version du programme (voir Figure 1). Les participantes étaient ensuite rencontrées en ligne afin de prendre part à un entretien servant à introduire brièvement le programme et les conditions de participation (c.-à-d., pouvoir assurer la confidentialité lors du déroulement des rencontres) et à évaluer les critères d'exclusion (c.-à-d., présenter des difficultés qui compromettent la disponibilité émotionnelle et réflexive nécessaire pour entamer le programme tel que des idéations suicidaires, de la violence active, une condition de santé mentale non stabilisée, une consommation importante de drogues ou d'alcool, des comportements autodestructeurs, ne pas être convaincue de vouloir mener la grossesse à terme ou vivre une grossesse à risque élevé). L'étude a reçu l'approbation du Comité d'éthique de la recherche du Centre intégré universitaire de santé et de services sociaux de la Mauricie-et-du-Centre-du-Québec (CER-2016-016) et du Comité d'éthique de la recherche avec des êtres humains de l'Université du Québec à Trois-Rivières (CER-16-226-10).

Participantes

Vingt et une participantes, distribuées en cinq groupes d'intervention, ont participé à l'étude. Les femmes étaient âgées de 30 ans en moyenne (*ÉT* = 4,29, étendue = 23-41) et étaient majoritairement primipares (76,2 %, *n* = 16). Elles étaient toutes en couple avec l'autre parent au début de l'étude (*N* = 21). Quatre-vingt-quinze pour cent d'entre elles avaient fait des études postsecondaires ou universitaires (95,1 %, *n* = 20) et la grande majorité était présentement à l'emploi (57,1 %, *n* = 12) ou en retrait préventif (38,1 %, *n* = 8). Seules deux femmes (9,5 %) rapportaient un revenu familial annuel sous le seuil canadien du faible revenu (Statistiques Canada, 2019). Neuf participantes (42,9 %) rapportaient des antécédents de troubles de santé mentale et quatre (19,1 %) présentaient un trouble de santé

mentale actuel. Finalement, quatre femmes rapportaient avoir vécu des événements traumatiques au cours de leur enfance (19,1 %).

Figure 1. Sélection des participantes au programme STEP-COVID



Mesures

Évaluation de la satisfaction. À la fin de chaque rencontre, les participantes ont anonymement évalué leur appréciation quant à celle-ci par le biais de questionnaires maison (Drouin-Maziade et al., 2019). Elles ont indiqué dans quelle mesure elles considéraient chaque séance comme : a) utile, b) instructive, c) émotionnellement difficile et d) stimulant de nouvelles prises de conscience. Elles indiquaient également e) leur niveau de motivation à participer à la suite des rencontres. À la fin de la dernière rencontre du programme, trois questions additionnelles évaluaient si les participantes avaient observé des changements positifs dans leur façon de se sentir par rapport à elles-mêmes et la maternité et si le programme leur avait permis d'identifier leurs forces en tant que futures mères. Tous les items ont été évalués sur une échelle de Likert en cinq points allant de 1 (Totalement en désaccord) à 5 (Totalement d'accord).

Échelle de détresse psychologique de Kessler (K-10). Les symptômes de détresse psychologique ont été mesurés à l'aide de la version francophone validée du *Kessler Psychological Distress Scale* (K-10; Gravel et al., 2003; Kessler et al., 2002). Le questionnaire a été rempli à deux reprises, soit avant et après l'intervention. Cet instrument contient 10 items évaluant les symptômes anxieux (p. ex., « à quelle fréquence vous êtes-vous sentie si anxieuse que rien ne pouvait vous calmer? ») et dépressifs (p. ex., « à quelle fréquence vous êtes-vous sentie si triste que rien ne pouvait vous remonter le moral? ») au cours du dernier mois. Les réponses sont cotées sur une échelle de Likert en 5 points allant de 1 (Aucune fois) à 5 (Tout le temps). Des scores élevés indiquent davantage de détresse. Les versions anglophones et francophones ont des propriétés psychométriques satisfaisantes (Gravel et al., 2003). L'instrument a fréquemment été utilisé auprès de femmes enceintes (Berthelot et al., 2020; Spies et al., 2009).

Inventaire des symptômes de stress post-traumatique du DSM-5 (PCL-5). Considérant l'augmentation des symptômes post-traumatiques documentée chez les femmes enceintes pendant la pandémie (Berthelot et al., 2020), les symptômes du trouble de stress post-traumatique (TSPT) ont été mesurés à l'aide de la version francophone validée du *PTSD Checklist for DSM-5* (PCL-5; Ashbaugh et al., 2016). Le questionnaire a été rempli à deux reprises, soit avant et après l'intervention. Cet instrument comporte 20 items et est basé sur les critères diagnostiques du TSPT du

DSM-5 (Wilkins et al., 2011). Les réponses sont cotées sur une échelle de Likert en 5 points allant de 0 (Pas du tout) à 4 (Extrêmement). Les versions francophone et anglophone sont fidèles (cohérence interne, stabilité temporelle) et démontrent une bonne validité convergente (Ashbaugh et al., 2016; Wilkins et al., 2011).

Fonctionnement réflexif. La version courte francophone du Questionnaire de fonctionnement réflexif (*Reflective Functioning Questionnaire*, RFQ-8; Badoud et al., 2015; Fonagy et al., 2016) a été utilisée pour évaluer l'évolution des fonctions réflexives en cours de programme. Le questionnaire a été rempli à deux reprises, soit avant et après l'intervention. Le RFQ-8 comporte huit items évalués sur une échelle de Likert en sept points allant de 1 (complètement en désaccord) à 7 (complètement d'accord). Une méthode de cotation médiane est utilisée pour obtenir deux sous-échelles reflétant deux types d'échecs de fonctionnement réflexif : la certitude envers les états mentaux (ou l'hypermentalisation) et l'incertitude à l'égard des états mentaux (ou l'hypomentalisation). Puisqu'il était attendu que l'intervention favorise une meilleure mentalisation en contribuant à augmenter la curiosité des participantes envers leurs états mentaux et ceux de leur enfant à la suite de sa naissance, seule l'échelle d'incertitude a été retenue pour la présente étude. Un score élevé à cette échelle reflète un manque de curiosité quant à ses états mentaux et à ceux des autres. La version originale anglophone ainsi que la version courte francophone montrent de bonnes qualités psychométriques (Badoud et al., 2015; Fonagy et al., 2016).

Changements dans les sphères de fonctionnement. Un questionnaire maison a été administré afin d'évaluer la perception de changement chez les participantes à l'égard de diverses sphères de fonctionnement associées à la résilience (Berthelot, Garon-Bissonnette, et al., 2020). Le questionnaire comprend sept items qui évaluent les changements observés en ce qui concerne l'estime de soi, la perception des aptitudes parentales, la gestion du stress et des émotions difficiles ainsi que de la capacité à reconnaitre ses besoins, à s'affirmer et à demander de l'aide en cas de besoin. L'instrument utilise une échelle de Likert en cinq points allant de -2 (Cela s'est grandement détérioré) à 2 (Cela s'est grandement amélioré), un score de 0 reflétant l'absence de changement sur cette sphère de fonctionnement. Des exemples de question sont : « Depuis le début de la grossesse, est-ce que j'ai observé des changements en ce qui concerne mon sentiment d'être capable de faire face aux obstacles qui se présentent à moi » et « Depuis le début de la grossesse, est-ce que j'ai observé des changements en ce qui concerne ma capacité à demander de l'aide ou du soutien lorsque j'en ai besoin ». L'instrument a été administré après l'intervention.

Résultats

Assiduité et appréciation du programme

Parmi les 21 participantes initiales, 18 ont complété le programme. Deux participantes ont quitté le groupe après la première rencontre en raison d'un conflit d'horaire et une participante a quitté après la troisième rencontre en raison d'un degré d'engagement insuffisant qui se manifestait notamment par un non-respect du cadre des rencontres (p. ex., ne pas ouvrir sa caméra; s'engager dans d'autres activités pendant les rencontres) et par un manque d'assiduité. Les participantes ayant abandonné le programme n'étaient pas différentes de celles ayant complété le programme en termes d'âge, du nombre d'enfants, de leur niveau d'éducation, de leur occupation principale, de leur origine ethnique, du revenu familial et de leurs antécédents traumatiques (données non rapportées). Les 18 participantes ayant complété le programme ont assisté en moyenne à 94,7 % des rencontres.

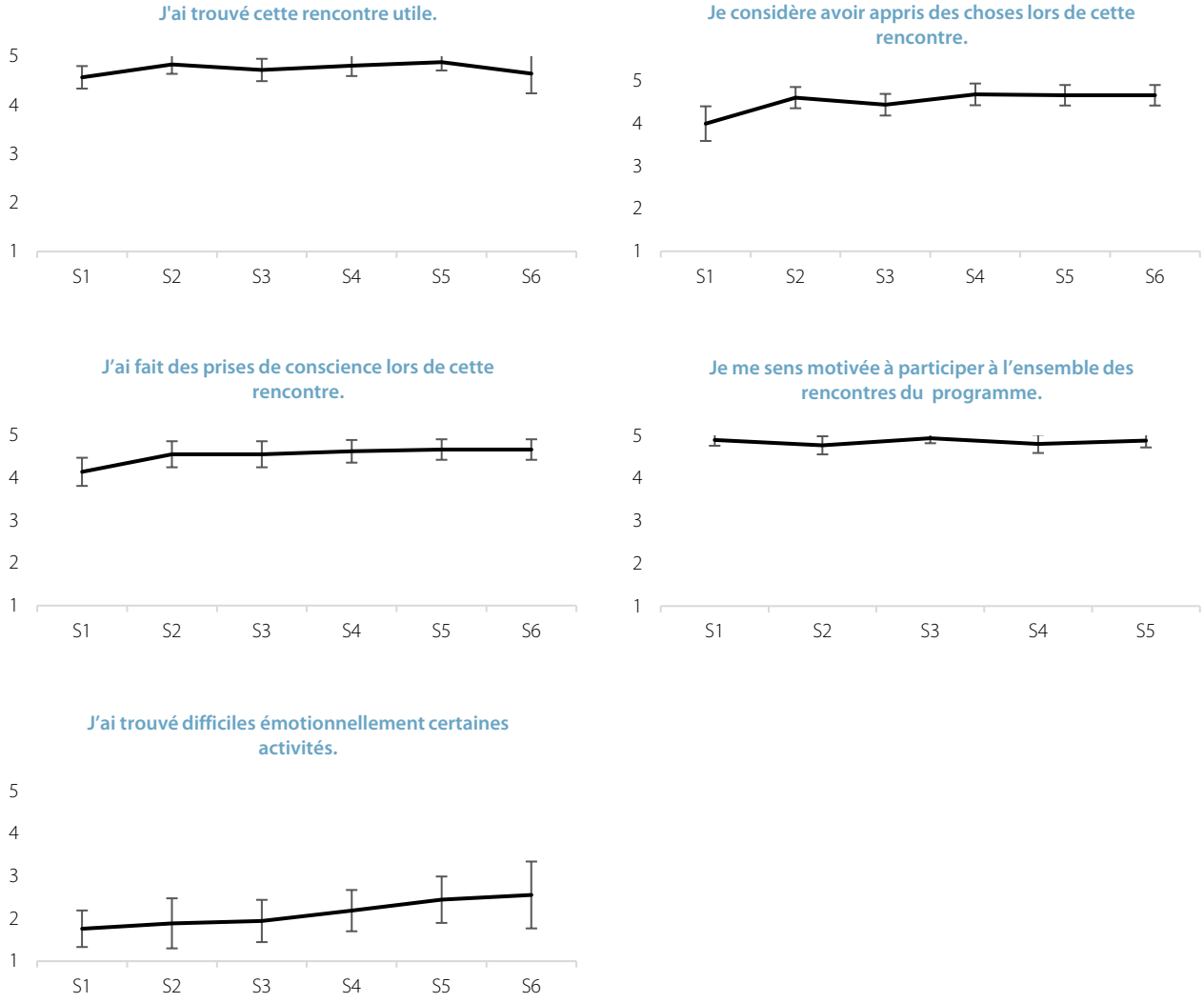
Comme illustré à la Figure 2, les participantes rapportent de hauts niveaux de satisfaction face à chacune des rencontres. Toutes les séances ont été jugées utiles ($M = 4{,}74$, $ÉT = 0{,}50$), instructives ($M = 4{,}50$, $ÉT = 0{,}63$) et favorisant de nouvelles prises de conscience ($M = 4{,}52$, $ÉT = 0{,}60$). Les participantes rapportaient une grande motivation à poursuivre l'ensemble du programme ($M = 4{,}87$, $ÉT = 0{,}34$). Finalement, le niveau d'activation émotionnelle durant les rencontres était en général modéré ($M = 2{,}12$, $ÉT = 1{,}15$). Au terme du programme, la satisfaction était très élevée : toutes les participantes ont remarqué des changements positifs dans la façon dont elles se sentaient par rapport à elles-mêmes ($M = 4{,}71$, $ÉT = 0{,}47$) et à la maternité ($M = 4{,}82$, $ÉT = 0{,}39$) et ont reconnu être plus conscientes de leurs forces en tant que mères ($M = 4{,}76$, $ÉT = 0{,}43$).

Symptômes psychologiques, mentalisation et résilience

Sur les 18 participantes ayant complété le programme, une participante a été exclue des analyses en raison de complications de grossesse importantes qui ont mené à une hospitalisation en fin de grossesse. Comme illustré à la Figure 3, des test-*t* pour échantillons appariés indiquent une diminution marginalement significative des symptômes anxio-dépressifs [$t(16) = 1{,}99$, $p = 0{,}06$], une diminution significative des symptômes de stress post-traumatiques [$t(16) = 2{,}16$, $p = 0{,}05$] et une amélioration significative des fonctions réflexives [$t(15) = 7{,}43$, $p < 0{,}001$] entre le début

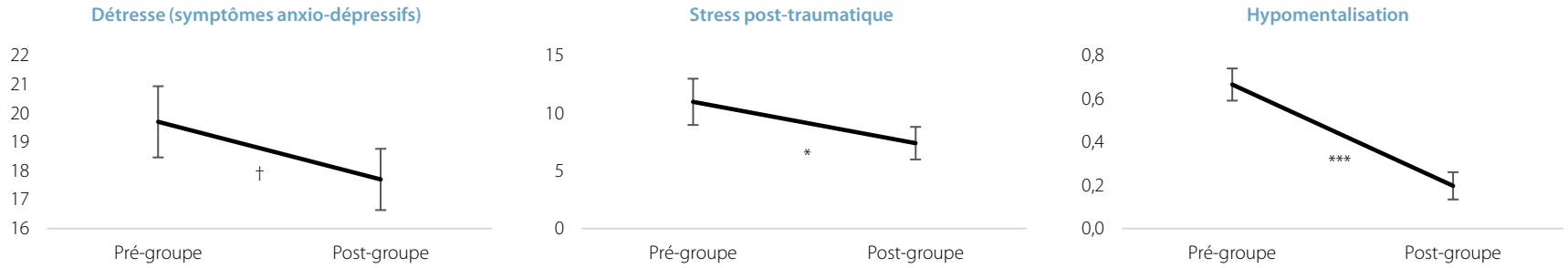
et la fin du programme. Comme rapporté à la Figure 4, les participantes ont constaté des changements positifs sur plusieurs sphères de fonctionnement associées à la résilience au terme de l'intervention.

Figure 2. Évaluation de chacune des rencontres par les participantes au programme STEP-COVID



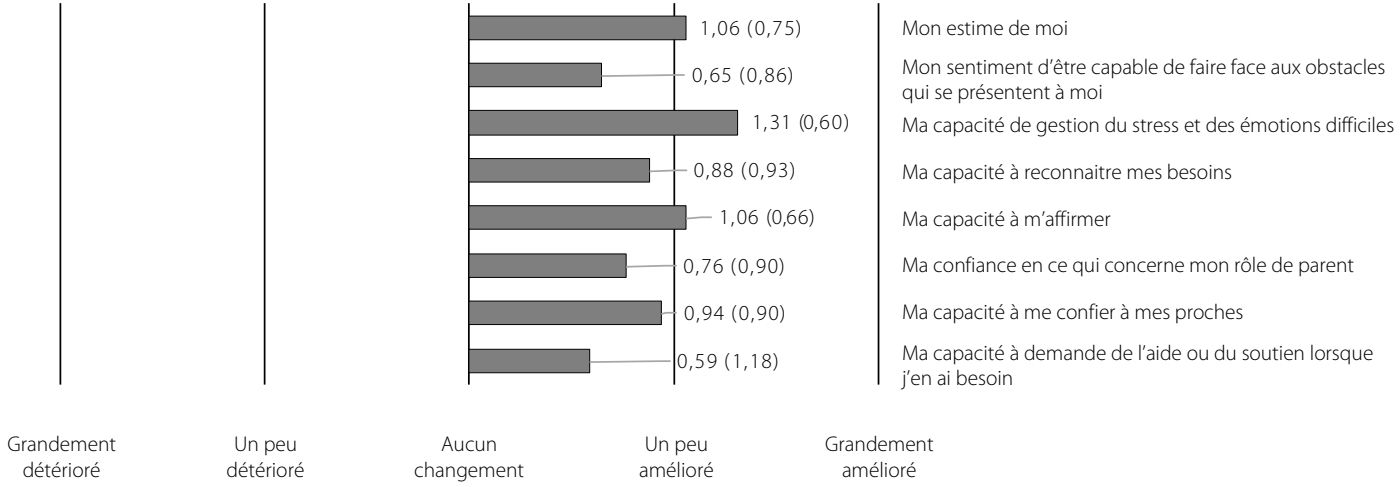
Notes. L'échelle de satisfaction varie entre 1 (Totalement en désaccord) et 5 (Totalement en accord).
Les barres d'erreur représentent l'intervalle de confiance de la moyenne (IC 95 %).

Figure 3. Changements observés entre le début et la fin du programme en termes de symptômes anxio-dépressifs, de symptômes post-traumatiques et de capacités réflexives



Notes. Les 18 participantes ayant complété le programme sont incluses dans ces analyses.
Les barres d'erreurs représentent l'erreur standard de la moyenne.
$^{\dagger}p = .06$; * $p \leq .05$; *** $p \leq .001$

Figure 4. Perception des changements dans des domaines de fonctionnement associés à la résilience



Notes. Les barres représentent la moyenne des 18 participantes ayant complété le programme sur une échelle de type Likert variant de -2 (Grandement détérioré) à 2 (Grandement amélioré).
Les écarts-types sont entre parenthèses.

Discussion

Les résultats soutiennent l'acceptabilité du programme STEP-COVID. D'abord, la totalité des participantes au programme rapporte avoir apprécié leur expérience, tel que le suggèrent les évaluations complétées après chacune des rencontres et au terme du programme. En effet, les participantes ont indiqué que chaque rencontre avait été utile et leur avait permis d'apprendre des choses et de faire des prises de conscience. Le degré de motivation à participer à l'ensemble des rencontres du programme demeurait élevé de la première à la dernière rencontre. De plus, les rencontres n'étaient pas jugées comme stimulant un niveau d'activation affective trop élevé. À la suite de la dernière rencontre, les participantes rapportaient que STEP-COVID leur avait permis de constater des changements positifs dans leur façon de se sentir par rapport à elles-mêmes et à la maternité. Le fait que le programme ait eu des retombées constructives pour les participantes tout en gardant un niveau d'activation émotionnelle modéré représente une force majeure de ce dernier. En effet, des niveaux d'activation affective trop faibles ou trop élevés sont des conditions peu propices au maintien ou au développement de capacités de mentalisation (Bateman et Fonagy, 2012).

Les données quantitatives collectées suggèrent que le programme STEP-COVID pourrait favoriser un sentiment subjectif de bien-être, comme démontré par la diminution des symptômes anxio-dépressifs et post-traumatiques entre le début et la fin de l'intervention. Il s'agit d'une observation importante considérant qu'une hausse des symptômes anxio-dépressifs et post-traumatiques a été rapportée chez les femmes enceintes québécoises et canadiennes au cours de la pandémie (Bérard et al., 2022; Berthelot, Lemieux, et al., 2020; Lebel et al., 2020).

Une amélioration des fonctions réflexives, prenant la forme d'une diminution de l'hypomentalisation, a également été observée au terme du programme. Il s'agit d'un constat intéressant considérant que les fonctions réflexives sont un important déterminant de la résilience face à des situations déstabilisantes et sont connues pour favoriser l'expression de comportements parentaux sensibles (Luyten et al., 2017). De plus, les participantes ont identifié des changements positifs en ce qui a trait à leur résilience. En effet, au terme de l'intervention, les participantes observaient des changements positifs en ce qui a trait à leur estime d'elles-mêmes, leur perception d'être en mesure de faire face aux obstacles, leur ouverture à aller chercher de l'aide en cas de besoin et à se confier à leurs proches, leur confiance dans leurs habiletés à prendre soin de leur enfant, leur aptitude à identifier leurs besoins, leurs capacités d'affirmation de soi et leurs habiletés de gestion du stress et des émotions désagréables. La pandémie de COVID-19 et l'arrivée d'un enfant sont deux contextes hautement déstabilisants et engendrant de multiples défis auxquels les parents doivent faire face. Ceux-ci sont donc à risque de se sentir surchargés et de subir plus de répercussions négatives sur leurs comportements parentaux. Ainsi, le fait que les participantes se considèrent davantage outillées sur le plan psychologique pour faire face aux obstacles, combiné à l'amélioration significative des fonctions réflexives observée au terme du programme apparaît comme une retombée importante de l'intervention.

Il est surprenant de constater qu'après près de deux ans de pandémie, la présente étude est la première, à notre connaissance, à évaluer une intervention en mode synchrone destinée aux femmes enceintes. Le suivi de l'état psychologique des femmes enceintes durant la pandémie de COVID-19 et l'offre d'interventions visant à réduire leur détresse psychologique ont pourtant été identifiés comme des priorités dès les premiers mois de la pandémie (Buekens et al., 2020; Thapa et al., 2020). Il apparaît primordial d'offrir de telles interventions pour deux raisons. D'abord, nos données suggèrent que des interventions prénatales en ligne sont susceptibles de recevoir un accueil très favorable dans la population. En effet, en l'espace d'environ six semaines, 139 femmes enceintes ont manifesté leur intérêt à participer au programme STEP-COVID (voir Figure 1), alors que la diffusion du programme se limitait à une annonce sur les réseaux sociaux. Cela suggère que plusieurs milliers de femmes enceintes souhaiteraient probablement participer à un tel programme si ce dernier était implanté à plus large échelle, facilement accessible et offert dans le réseau de la santé et des services sociaux ou dans le réseau communautaire. Deuxièmement, comme mentionné précédemment, plus d'une dizaine de revues systématiques confirment une augmentation des symptômes anxieux et dépressifs chez les femmes enceintes pendant la pandémie de COVID-19, partout à travers le monde (Ahmad et Vismara, 2021; Campos-Garzon et al., 2021; Chmielewska et al., 2021; Demissie et Bitew, 2021; Fan et al., 2021; Feduniw et al., 2021; Sun et al., 2021; Tomfohr-Madsen et al., 2021; Vieira et al., 2021; Yan et al., 2020). De plus, de récentes études suggèrent que ces symptômes risquent ultimement d'entraîner des répercussions sur le développement ultérieur de leur enfant (Duguay et al., 2022; Jeličić et al., 2021; Provenzi et al., 2021). Les présents résultats indiquant qu'une brève intervention en ligne soit susceptible de contribuer à une diminution de la détresse psychologique prénatale, à une augmentation des habiletés réflexives et à une augmentation de la résilience psychologique ont donc des implications importantes en termes de santé publique.

La présente étude comporte certaines limites. D'abord, le protocole de recherche mis en place était adéquat pour recueillir des données préliminaires sur l'acceptabilité du programme STEP-COVID. En revanche, les participantes ont été recrutées de façon volontaire sur la base de leur intérêt à participer au programme et n'ont pas été assignées aléatoirement à une condition expérimentale ou contrôle. Ainsi, il est impossible de déterminer si les changements observés sont supérieurs à ceux qui auraient été observés avec le simple passage du temps et avec l'avancement de la grossesse. De plus, la taille de l'échantillon est modeste et ne permet pas de mener des analyses d'association entre les caractéristiques psychosociales des participantes et leur réponse à l'intervention.

Implications

La présente étude représente une étape initiale dans une logique d'implantation de programme et devrait ouvrir la voie à de nouvelles études. D'abord, des recherches qualitatives devraient viser à mieux comprendre l'expérience des participantes durant l'intervention. Ensuite, des études quantitatives basées sur un devis randomisé devraient viser à évaluer l'efficacité du programme STEP-COVID. Les données obtenues suggèrent que l'offre d'une intervention brève en ligne en mode synchrone est susceptible de recevoir un accueil favorable par la population concernée et pourrait accroître le bien-être des femmes enceintes, favoriser l'essor de leurs habiletés de mentalisation et soutenir leur résilience. Un tel soutien aux femmes enceintes dans le contexte de la pandémie de COVID-19 apparaît nécessaire considérant l'étendue des données confirmant une hausse de la détresse dans cette population à travers le monde et pourrait entraîner des répercussions positives importantes pour une génération d'enfants. Dans l'éventualité où un tel programme était diffusé à large échelle, il pourrait entraîner des répercussions positives importantes en termes de santé publique.

Il est toutefois à noter que le concept de résilience renvoie à un processus dynamique, multifactoriel et multisystémique favorisant l'adaptation face à des stresseurs ou des événements traumatiques (Denckla et al., 2020). Ainsi, le concept de résilience inclut des dimensions interpersonnelles, biologiques, et systémiques et ne peut être réduit à sa dimension psychologique et intra-individuelle. En ce sens, des interventions psychosociales telles que le programme STEP devraient être vues comme un élément d'une plus vaste stratégie visant à soutenir la résilience des familles pendant la pandémie de COVID-19.

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Conflits d'intérêts

Les auteurs n'ont pas de conflits d'intérêts à déclarer.

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Preventing and Appeasing COVID-19 Vaccine Tension in Schools to Protect the Well-Being of Children and Adolescents in Québec, Canada

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Abstract

Objectives: This article describes an intervention that took place in Québec, Canada, to mitigate COVID-19 vaccine tension in schools, exacerbated by the 12-17 years old vaccination campaign. Building on this initiative, it proposes guiding principles for prevention and intervention in conflict around COVID-19 vaccination in and around schools.

Intervention: Three complementary tools were developed by a community program, CoVivre, in collaboration with an interdisciplinary team, to help practitioners and parents understand vaccine tensions and their impact on youth, and to suggest simple ways to prevent and intervene in vaccine related conflicts.

Recommendations: A thorough research evaluation could not be performed due to the rapid crisis response; however, the tools received positive feedback by practitioners, institutions, and decision makers. Recommendations were structured around the following principles: (a) fostering transparent and nuanced health communications; (b) avoiding confrontation and refusing to escalate while strongly condemning criminal acts; (c) encouraging open dialogue; and (d) preserving relationships.

Implications: Mental health consequences of public health interventions should be considered at inception to avoid collateral damages. Removing children from the heart of societal conflict and maintaining the family-school relationship is crucial to child development. It is imperative to engage interdisciplinary teams to protect youth from societal polarization, and provide an opportunity for growth and resilience. This initiative suggests that more research is needed on the impacts of encouraging an open dialogue around vaccination, and adopting an empathetic approach amongst youth towards others who may not share the same opinion.

Keywords: Vaccine tension; school intervention; COVID-19; social polarization; health communication.

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Introduction

This article describes an intervention that took place in Québec, Canada, as a rapid non-repressive response to mitigate COVID-19 vaccine tensions in and around schools, as these tensions unfolded in early Fall 2021, and as they were exacerbated by the 12- to 17-year-olds vaccination campaign. Building on this initiative, this article proposes guiding principles for action, as well as interventions to prevent and intervene in and around schools, on conflicts related to COVID-19 vaccination, at a time when society was highly divided about vaccination. It suggests more research is needed on the impacts of this approach on youth and schools.

Vaccines are a safe and effective way to protect against viral infections and reduce transmission (Vetter et al., 2018). Vaccination in children has been used for decades to protect against severe illness including polio, tetanus, mumps, measles, rubella, varicella, and more (Vetter et al., 2018). Historically, parents have been hesitant to vaccinate their child for various reasons including health safety, religion, social factors, and past experiences (Dubé et al., 2013). Prior to the COVID-19 pandemic, over 100 countries already had vaccine mandates, mainly around childhood vaccination (Gravagna et al., 2020).

Since March 2020, the widespread transmission of the SARS-COV-2 virus, referred to as COVID-19, has led to the adoption of several public health measures and governmental guidelines, to maintain the safety and well-being of the population worldwide (Ayouni et al., 2021). Following the rapid and effective development of several vaccines against the COVID-19 virus, these vaccines became available within Canada, in November 2020 for adults (18 years old and over), in May 2021 for children aged 12 to 17 years old, and in November 2021 for children 5 to 11 years old (Health Canada, 2022). Within just a few weeks, vaccination in Québec schools increased vaccine coverage among youth to that of the adult population (Morissette et al., 2022).

Growing COVID-19 Vaccine Tension

In August 2021, "vaccine passports" were announced for adults and children aged 13 years and older in the province of Québec, Canada, to access "non-essential" public spaces and services, and to participate in extracurricular activities (Government of Quebec, 2022). This appeared to create two unequal groups of citizens: the vaccinated and the unvaccinated (Labbé et al., 2022; Maclure & Bisson, 2022). The introduction of vaccine passports was contrasting with the approach taken at the start of the vaccination campaign, when vaccination was not mandatory and the Québec population was being highly encouraged to get vaccinated through various strategies (a Québec-wide lottery for instance; Government of Quebec, 2022; Lord, 2022). With the inception of the vaccine passport and the political discourse strongly in favor of vaccination, the approach seemed to move from using incentives (i.e., vaccine lottery) to using rules and regulations in efforts to "convince" people to get vaccinated, or else there would be consequences to what they could do in society (Dubé et al., 2022; Lord, 2022). The introduction of the vaccine passport led to either silent or vocal social tension, polarization, and radicalization (Bardosh et al., 2022; Labbé et al., 2022). This tension was accompanied and partly nourished by a shrinking of the democratic space (Bardosh et al., 2022), as has been observed in many countries since the beginning of the COVID-19 pandemic (Braillon, 2021). The existence of a real democratic space around vaccination would have allowed the population to discuss measures and consensus, and to respectfully express different visions and positions around the pandemic and how to move forward (Tworek et al., 2020).

In this increasingly polarized sociopolitical context around vaccination against COVID-19 in Québec, the Greater Montreal Area experienced several events in the Fall of 2021. Specifically, events took place around schools and included anti-vaccination protests, intimidation of youth and teachers, vandalized schools, rallies, and even face-offs in front of schools between "anti-vaxxers" and "pro-vaccine" parents who aimed to defend their children from disinformation and intimidation (Aubin, 2021; Morin-Martel, 2021; Scali, 2021). To appease parents' and schools' worries, the provincial government passed a decree forbidding protests (when linked to COVID-19 infection-control measures and vaccination) 50 meters or less from schools (National Assembly of Quebec, 2021).

Vaccine tension around schools, in Fall 2021, in Québec, could have been predicted. Children may be minimally affected by the COVID-19 virus, yet epidemiological data on its transmission warrants vaccination of this age group within Québec (Health Canada, 2022; Sauvageau et al., 2021). The pragmatic choice to vaccinate youth in schools, as done with other vaccine rollouts, increases accessibility for many families, thus, having the potential to increase the vaccination rate significantly, as seen in previous vaccination campaigns (Cheung et al., 2015), and more recently in Québec with COVID-19 vaccination (Morrissette, 2022). In a polarized social context, this practice may, however, shatter the relative emotional safety of the school environment (Catalano et al., 2004). Considering that

children and youth carry an important symbolic value and that society is especially invested to protect their well-being, they have often been at the heart of debates around vaccination (Mckee & Bohannon, 2016). Some families and school staff may feel that the school neutrality is lost when COVID-19 vaccination is promoted in this space, and that this is endangering the freedom of their choice. Due to this context, vaccinating in schools can both fuel school community tensions, and displace larger social tension around vaccination in and around schools. Thus, schools can then become a symbol of the struggle against vaccination and against sanitary measures.

Vaccine Tensions Impact on Children and Adolescents

Vaccine tensions impacts have been documented in children and adolescents, such as bullying among peers, increased feelings of social exclusion, and decreased cohesion within the school team (Labbé et al., 2022; Lachapelle, 2021). These impacts are to be added to the emotional distress, anxiety, or depression experienced by youth from the earlier stages of the COVID-19 pandemic, including social isolation, grief, fear, and loss, without youth and their families necessarily having effective coping strategies to address this distress (Hsieh et al., 2021; Loades et al., 2020). A Canadian cross-national study has also highlighted mental health decline in families with children under the age of 18 (Gadermann, et al., 2021). Vaccine tension has added an extra layer of burden on children, parents, and school teams, with loyalty conflicts between the family and school, as well as increased stress-related symptoms among youth (Bardosh et al., 2022; Lachapelle, 2021). Just as they must be protected from other types of tension, children and adolescents need to be shielded from COVID-19 vaccine tension, through targeted prevention and intervention strategies in and around schools. The current literature has, so far, minimally documented the impact of vaccine tension in youth, and the ways their well-being can be protected from this tension.

The CoVivre Program

The CoVivre program is an independent emergency intervention project put in place during the first wave of the COVID-19 pandemic in the Greater Montreal Area, Québec, Canada. The program has acted as a facilitator and accelerator in supporting initiatives aimed at reducing socioeconomic and health disparities caused by the pandemic (CoVivre, 2022). CoVivre has had the flexibility to respond to current needs on the ground, in a timely manner, and the discussed intervention came as a rapid response to the growing tension and polarization around COVID-19 vaccination, in Québec, at the end of Summer 2021. The objective of the intervention was to rapidly develop adapted tools and resources for schools and professionals in contact with youth, and in doing so, to support them in understanding, preventing, and diminishing vaccine tension. The purpose of this article is to document the steps of this rapid-response intervention, while acknowledging the methodological limits of an emergency intervention, and to describe and discuss the proposed solutions to deal with vaccine tension in and around schools, in order to inform future vaccination campaigns for youth in Canada and elsewhere.

Intervention: Preventing and Appeasing COVID-19 Vaccine Tension in Schools

The CoVivre program began documenting vaccine tension in and around schools, and how they impacted youth, as a result of observations made by the team and its community, and institutional partners, at the end of August 2021. With mass vaccination taking place in high schools and CÉGEPS in September 2021, the team focused on children and adolescents with the intention to help protect the most vulnerable from tension (CoVivre, 2022). To document vaccine tension in and around schools, the CoVivre team collected testimonials, between August and October 2021, in diverse settings including high schools, during extracurricular activities, and in discussions with other specialists.

Forming an Interdisciplinary Team

Once the relational and emotional consequences of vaccine tension on children and adolescents had been documented, CoVivre brought together an interdisciplinary team of scholars with whom to collaborate in order to develop the desired tools, guiding principles, and prevention and intervention strategies. This approach aimed to weave together perspectives from different yet complementary disciplines to address a complex situation from various angles. The transdisciplinary expertise spanned from pediatric psychiatry, public health, pediatric microbiology and infectiology, to medical anthropology, health history, cultural mediation, and communication. In collaboration with these scholars, CoVivre developed a tool to understand, prevent, and act on vaccine tension in the school setting (see Appendix A). In addition to the integral version of this tool, a two-page summary was developed to facilitate the use of the resource for schools and professionals in contact with youth (see Appendix B), as well as an illustrated annex with

vignettes describing the documented vaccine tension (see Appendix C). In complement to these documents, four videos explaining the tool's key points were produced (see Appendix D).

Developing and Disseminating the Tools

After describing the social and political context around COVID-19 vaccination in Québec, in August 2021, the team analyzed the processes by which vaccine tension escalated in different social spaces, including around schools, and stated that this tension had documented impacts on children's and adolescents' well-being and on school teams' cohesion. With these observations as a basis, the team proposed guiding principles for preventing vaccine tension in the school community, and for intervening when conflict arises. The creation of the vignettes was facilitated by testimonials received by the CoVivre team. To preserve confidentiality, the vignettes' verbatim were slightly modified and pseudonyms were used.

The target population for this resource included schools and professionals in contact with youth, policy makers, public health officials, and health institutions responsible for putting in place the mass vaccination campaign. "Schools" included but were not limited to primary education, high schools, vocational schools, and post-secondary programs called "CÉGEPS". Children and adolescents affected by vaccine tension, and thus targeted through those intervention tools could be anywhere between the ages of 5 and 17.

These resources were presented (online) to institutional partners (health, school boards, police, government) and to community partners through youth- and school-oriented concertation tables in the Greater Montreal Area. Videos (French only) presenting the tools' main ideas were produced and made available online, to make the material accessible to a wider audience (in terms of age, literacy level, time availability, etc.), and to humanize the intervention through the voice and image of one of its main investigators. The written tools were made available in French and English to reach most schools in the province. The dissemination of these resources was primarily done through the above-mentioned concertation tables, through contacts at the Ministry of Education (provincial level), through school boards, and through CoVivre's partners in regional health institutions, in local public health teams, at the city level, and in pre-existing community groups and organisms, and with community or religious leaders.

Description of the Tools' Content

This section presents an overview of the vignettes tool developed by the CoVivre program, as well as the two-page summary of the main intervention tool. Both tools were illustrated in a way to make them easily accessible for professionals working in school settings or around children and families. For detailed context and suggestions for prevention and interventions in schools, please refer to the main interventional tool by Rousseau, Vanier-Clément et al. (2021; see Appendix A).

Vignettes

The proposed vignettes brought to life real perspectives, experiences, and feelings around vaccine tension and its impacts, and could serve as a starting point to initiate dialogue in the classroom and to create empathy between children and adolescents around various vaccine positions. They explored the relational and emotional consequences of the COVID-19 vaccine debate and associated tension, for children and youth. The vignettes showed different types of relations and settings in which vaccine tension and their impact were at play: in peer relations; in youth's relations with teachers at school; in relations involving the family, peers and schools; in relations within the school team; and lastly, in the school environment. Examples of the vignettes can be found in Table 1, and the tool can be found in Appendix C.

Table 1. Vignettes examples describing vaccine tension (see Appendix C)

Type of Relations	Vignette Examples
Peer Relations	*"I can't stand to hear people argue about the vaccine and the vaccine passport. It's really stressing me out. Why is it so complicated to get along?" – Amelia, age 17*
	"Dance saved my life a few years ago. I don't want the vaccine, but the idea of being locked up at home for another year is unimaginable. I guess a vaccine against my will to attend dance is better than dealing with the difficulties at home. It just makes me angry." – Helen, age 15
	"I feel like I'm hurting people around me because they tell me it's selfish not to get the vaccine… but the vaccine scares me, and I don't know what to do. I don't know who to talk to about it." – Marylena, age 17
	"Even though I am vaccinated, I have doubts and questions about the vaccine. My friends often talk about it, but I'd rather not say anything because I'm afraid they'll make fun of me." – Sebastien, age 16
	"My boyfriend says I'm a 'chicken' because I'm vaccinated. A 'loser' who does what everyone else does!" – Adam, age 15
Youth in Schools	*"My teacher told me that if I wasn't vaccinated, I wouldn't be able to participate in the assignments (outside of school) and that I would fail my class. I feel pressured to get vaccinated." – Sam, age 14*
Family, Peers, and Schools	*"I would really like to get vaccinated so I can do activities like all my friends, but I can't do it without my parents' permission, and they won't allow it." - Audrey, age 13*
	"The kids in my class call my family 'idiots' because they don't believe in the vaccine. It makes me want to fight." – Justin, age 12
	"I'm on the neighborhood baseball team, the end-of-season games have started, but I can't participate because I only have one dose. Why did my parents wait so long to get me vaccinated? I feel like I'm letting my team down." – Fred, age 13
	"My parents don't want me to be around 'unvaccinated' people, nor do they want them to come to my house. My best friend is not vaccinated, but I want to say that he is, so I can continue to hang out with him." – Noah, age 15
School Team	*"My colleagues laugh and insult the 'anti-vax' people, as they say, so I don't go in the teacher's lounge anymore. I'm really afraid of their judgment, and not really in the mood to come to work." – Issa, age 37*
	"I think some of the staff are not even vaccinated! It's not right, they're putting me in danger, I'm afraid for my family." – Javier, age 32
School Environment	*"I've seen demonstrations on TV in front of schools. It's violent, it scares me, I'm afraid it's going to happen in my school. I asked my parents to stay home." – Edith, age 13*
	"We can't even protest now; we can't say anything! It's not right." – Simon, age 32

Two-Page Summary of the Intervention Tool

The two-page summary addressed the impact of vaccine tension on children and adolescents, the polarized socio-political context around vaccination, guiding principles for action in schools, and measures for prevention and intervention on vaccine tension in school settings (see Appendix B). Here we elaborate on the development of these guiding principles and suggested intervention measures.

Context of Vaccine Tension Around Schools in the Fall of 2021 in Québec. In the Fall of 2021, in Québec, social and political processes at play increased vaccine tension into a polarized debate between "pro-vaccines" and "anti-vaccines". An escalation was seen between these two groups in the political discourse, in the media, and in society at large (Bardosh et al., 2022). Both positions were moralized (a "good" and solidary decision versus a "bad" and individualistic decision), generalizations and oversimplifications were made (i.e., all vaccinated people are "like this", and all unvaccinated people are "like that"), and disqualifying language, insults, and other verbal violence was tolerated and used in social and mainstream media and by public figures. All the while, democratic space to express doubts, preoccupations, or critiques about vaccines, or the measures shrunk (Bardosh et al., 2022; Lachapelle, 2021; Lord, 2022).

As a growing proportion of the eligible Québec population became vaccinated, several citizens supported the increasingly constraining measures adopted by the government in relation to vaccination. Other citizens, especially the non-vaccinated, but also many vaccinated, worried that two classes of citizens with different privileges were being created according to vaccination status. This held the risk of: increasing discrimination and marginalization of already marginalized groups; social fracture and social unrest; and decreased trust in the government, institutions, health professionals or vaccines, in the short or longer term.

Other underlying factors for the tension were the chronic stress caused by the pandemic, the lack of recognition of the emotions and distress motivating positions, the lack of historical perspective about pandemics and the role of vaccines, and the lack of understanding of the complexity and heterogeneity of vaccine hesitancy or refusal. This polarized sociopolitical context around vaccination against COVID-19 did percolate around and into school environments, especially considering the important symbolic value children and youth carry in our society, and given vaccination of 12- to 17-year-olds was massively starting in schools in September 2021.

Principles for Action. Four guiding principles were elaborated from theories and intervention approaches in interdisciplinary fields, with the goal of preventing and intervening on vaccine tension in and around schools. Firstly, it was encouraged to foster transparent, caring, and nuanced health communications (Tworek et al., 2020) by recognizing that the scientific knowledge behind institutional choices about vaccination was still limited in terms of immunization and health measures (Malecki et al., 2021), by ensuring governmental measures were followed while allowing for their respectful criticism, and by avoiding generalizations about the reasons behind individual and parental positions and choices regarding vaccination.

The second principle was to avoid confrontation and refuse escalation while strongly condemning criminal acts such as threats, vandalism, and aggression. At the same time, it was recommended to re-establish a respectful dialogue between divergent positions and normalize these differences (Capizzo, 2018).

Since safe spaces are effective foundations for anti-bullying approaches in schools (Ansary et al., 2015), the thrid principle encouraged safe spaces for individuals to speak, while restoring the legitimacy and respect for individual or parental rhythm and choice around vaccination (Capizzo, 2018; Gagneur, 2020). These spaces should have emphasized the legitimacy of the individual or parental choice (even if this choice could be worrisome), while reminding people of their obligations towards collective well-being, all of which requiring delicate negotiations (Korn et al., 2020).

The last principle emphasized the preservation, even the nurturing, of relationships beyond existing disagreements. Indeed, although political, linguistic, organizational, religious, and other disagreements have always been present between people, social cohesion remains possible (Jupp et al., 2007). This guiding principle emphasized the need to recall, especially at a time of crisis, the crucial social and psychological role of these bonds (between youth, parents, school colleagues, children and school staff, school staff and parents, etc.), and to prioritize these relationships over visions, positions, and decisions around vaccines or health measures (Catalano et al., 2004). In the case of the school team, this meant uniting first and foremost all school personnel around their mandate (i.e., the education and development of children, adolescents, and young adults) especially as the centrality of this mandate was being more than ever demonstrated with pandemic-related school closures (Catalano et al., 2004; Gilligan, 1998).

Preventing Tension in Schools. Proposed measures were formulated for different settings to appease tension and prevent conflict, including within the school administration, the school team, and in the classroom.

At the school administration level, it was proposed to send a message to parents that: (a) encouraged reserve and kindness in discussions to maintain an atmosphere of tolerance and respect, (b) encouraged vaccination but also respected individual and parental choice and rhythm while protecting youth and families from exclusion, while at the same time (c) reassuring parents and teachers that health measures were applied in the school.

Within the school team, conflict prevention efforts included recognizing the right to individual choice, and encouraging respect for different visions and choices regardless of what one might think is right. It was also recommended to acknowledge tensions (if they existed), and try to normalize them, while working to maintain cooperation and cohesion among coworkers.

In the classroom, it was suggested to provide students with safe and respectful spaces for exchange around vaccination and possible vaccine tension, using for example the vignettes tool to initiate dialogue, and to normalize the different visions and experiences students may have (see Appendix C). It was recommended to enter in respectful, caring, and non-judgmental dialogue with students, and to present individual or parental choice about vaccines as legitimate. Age-appropriate information on vaccines and their purpose could be provided based on the students' interest and needs, all the while continuing to restrain from judgmental and moralistic language.

Moreover, the concept of vaccine hesitancy could be introduced and discussed to familiarize students with the fact that choosing to get vaccinated or choosing not to is a normal and dynamic decision-making process involving weighing advantages versus potential risks of vaccination, and that getting vaccinated is often not just a matter of

willingness (Rousseau, Monnais et al., 2021). It could also be said that the decision has a legitimate complexity because of the different aspects it touches upon, for example the lack of or difficult access to vaccination and to adapted information about vaccines, as well as personal, family, or collective past or present experiences with the health system or with vaccination itself. In addition to this, social pressure and various beliefs may come into play when considering to get vaccinated or not (Dubé et al., 2016; Rousseau, Monnais et al., 2021).

Youth were encouraged to be empathetic and respectful towards those who might not have the same perspectives as themselves. In efforts to reduce tension and feelings of divide or exclusion among students, it was recommended to carry out inclusive activities that do not distinguish between vaccinated and unvaccinated youth. Moreover, in the case where the family unit did not agree on a common choice regarding a child's vaccination (i.e., parental consent was necessary for the vaccination of youth 13 years-old and under), preserving the family's cohesion and relationship should be put forward, and mediation should be recommended, if needed.

Intervening When Conflict Arises. Despite prevention and mediation efforts and measures, in the case of a demonstration or protest near a school, or in the case of an internal incident, it was suggested to first reassure children or teenagers, and to explain the situation to them at an age-appropriate level, bringing back the concept that disrespect or violence cannot be justified by disagreement or opposing opinions. The team also insisted on the importance to remain specific, to avoid generalizations about any position, and to refrain from using degrading or stigmatizing expressions (for instance, avoid using "anti-vaxxer", "pro-vax" or similar terms). If an incident were to occur within the school community, the primary suggestion was to ensure that the school team cohesion was maintained throughout the response. Also, appropriate consequences were to be encouraged independently of individual positions, while minimizing exclusionary measures. Where possible, it was recommended to mediate and promote open dialogue between those involved (whether it be students, staff, or parents) rather than divide them, encouraging first and foremost the maintenance of the relationship.

The Intervention's Scope: Reception of Intervention by Partners

The current intervention rapidly addressed the COVID-19 little spoken vaccine tension in and around schools in Québec, and its impact on youth and school teams, in Fall 2021. It encouraged actors at the macro-level (political decision-makers, ministries, health institutions, public health, school boards) and at the micro-level (school teams and other professionals working with youth), to be attentive to possible vaccine tension and their impacts on youth, and to try preventing or acting on them. The intervention provided professionals and policymakers with tools, including guiding principles and strategies, to help understand, prevent, and intervene on tensions. Given these tensions were poorly documented, and school teams were either frightened and relatively helpless or sometimes in denial of any vaccine tension, this initiative was listened to and overall welcomed. However, it elicited questions and concerns: what was the school's appropriate role and position in this urgent mass vaccination campaign (promoting vaccination, hosting vaccination clinics, remaining "neutral"); was there really a problem in and around schools (tension, polarization and their impact) and would talking about it make it worse?

Although this intervention project was implemented in urgency without the ability to have a structured research method, it took a reflexive approach. The intervention was put forward as the need presented itself, and no formal evaluation of its impact has yet been made. Observations and feedback from partners, through online and in-person meetings, phone calls, and email exchanges, were documented by the CoVivre team to improve resources and answer questions. Initial findings showed a mixed reception from school partners, questioning whether these partners considered vaccine tensions existed and had an impact in school settings: while some welcomed the tools with an apparent relief (possibly because they saw or experienced some of those vaccine tensions), the majority initially remained silent and made few comments. We presume the initial silence could mean several things: a form of disagreement (i.e., they didn't think there were tensions), surprise, or an uneasiness to discuss disagreements in the context of a crisis, in which everyone was being instructed to work together in solidarity to overcome the pandemic (i.e., at that point, "working together" translated into promoting vaccination). Final feedback and reactions to the intervention were constructive and appreciative, implying they were distributed and used widely, paving the way for an impact on youth, families, teachers, and decision makers. A key limitation to this intervention remains that this impact was not measured.

The Teachers

At the level of the teachers, attitudes varied regarding whether vaccine tensions existed at school or not. While it was generally accepted that there were vaccine tensions and exclusion processes between parents and in the population, teachers did not necessarily see these tensions or exclusion processes at play, between children or between students and staff at school. Some said for example, that regardless of a family's position on vaccination and regardless of vaccination status, they wanted to focus on their students' needs and provide them with a reassuring and positive environment, especially in the context of a crisis. They also mentioned that considering this difficult context and the extra pressure that it put on them, they did not have energy to give to vaccine tensions between parents. Nevertheless, they stated that they would certainly intervene if they saw or were informed of a situation of exclusion or bullying between children, due to parental position over vaccines or to vaccine status, as they would in any other similar intimidation or bullying situation. A thorough evaluation of the usefulness for school professionals of the CoVivre program's tools would certainly shed light on how these tools could be adapted to teachers' and school professionals' realities.

The Institutional and Community Partners

In this health crisis, in which scientific knowledge and governmental actions have been evolving daily, it has been difficult to analyze (with little or no ability to take a step back) the complex political and social dynamics associated with the rapid changes, and to know how to best respond to them without taking too many wrong turns. The documents developed by CoVivre with various scholars, and widely distributed to institutional and community partners, rapidly offered school professionals tools to help them make sense of the ever-changing and complex social situation linked to vaccination in the school context and their effects on youth. Working in collaboration with university experts from different disciplines, from health sciences and social sciences, was necessary to develop tools trying to help understand and respond, from different vantage points to a complex social situation requiring these multiple perspectives. In fact, integrating interdisciplinary teams in public health initiatives and mediation efforts is imperative to develop this type of intervention, and, at another level, to protect youth from societal polarization and its effects, and to provide them with an opportunity for growth and resilience.

Overall, the tools were meant to reinforce school professionals' resilience to the stressful, demanding, and conflictual context of mass vaccination during a pandemic, and consequently, through those professionals, to have a ripple effect on children and adolescents, helping them become more adaptable and resilient to the uncertain and conflictual context. Considering that the consequences of vaccine tension on youth are often kept in silence and remain invisible both in the short- and long-term, it is necessary that they be considered in governmental, institutional, and public health approaches to vaccination, as well as by school actors working more closely with youth. We believe that the observations made around and during this intervention are likely to apply to other school settings outside of Québec and Canada, and should thus be taken into consideration when promoting vaccination for youth. In future interventions, it could be beneficial to find ways to also raise awareness among parents about vaccine tensions and their impact on youth and schools, to have a more comprehensive approach to protect children, their families, and schools from these tensions and their impacts.

Implications

The current intervention intended to respond to an urgent situation of growing social division and polarization around the COVID-19 vaccination that manifested itself in and around schools, and that had documented impacts on youth and schools, in Fall 2021. As it is often the case, schools revealed themselves as microcosms of society, and vaccine tensions in and around the Greater Montreal Area schools in early Fall 2021, were a warning signal of growing dissatisfaction and social division. Indeed, the anti-COVID-19 vaccine mandates movement that culminated in early 2021 in weeks-long protests in Ottawa and other Canadian cities (Dyer, 2022), confirmed the social polarization and radicalization around vaccines and vaccine mandates in Canada, the accompanying social fabric deterioration, and the ever-growing need for and importance of opponents to be heard, respectfully, in a democratic society.

While there are limits to this intervention, especially in terms of the little documentation collected and the absence of an evaluation, because of the emergency pandemic context and the CoVivre program's mandate, this article highlights the importance of documenting the intervention process and results. It indicates the need for research on eventual vaccine tension emerging in and around schools, especially in a crisis context with limited time to offer adapted public vaccine education, and in which the population and resources are already, at various levels, under

heightened pressure. Future research and interventions should integrate an evaluative component to provide insights on the impact of youth protection brought through encouraging caring, nuanced, and transparent health communications, and team cohesion in schools.

Truly grasping the complexity of public health crises requires the collaboration of interdisciplinary teams to ensure mental health and social factors are accounted for early on. The current intervention suggests there is potential for reducing vaccine polarization among citizens and youth, in and around schools, by nuancing and respecting positions on vaccination, and through adapted vaccine and vaccine hesitancy education. Maintaining a collaborative family-school relationship, and removing children from the heart of a polarized sociopolitical conflict is necessary to protect their well-being, foster their development, and strengthen their resilience. By encouraging open dialogue, and respect around vaccination within the school community and with the parents, the moral discourse around COVID-19 vaccines can be nuanced, and help youth feel comfortable sharing their views and experiences not only around vaccines, but eventually around other polarized topics. In the present societal context in Canada and elsewhere, capacity to show empathy towards those with different positions is imperative, and we must encourage such practices among youth at every jab there is.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Appendix A

Protecting the Well-Being of Children and Adolescents: Appeasing Vaccine Tension around Schools

This document is intended for Quebec schools and was developed in October 2021 by C. Rousseau (child psychiatrist, McGill U.) and the CoVivre program, in collaboration with È. Dubé (medical anthropologist, INSPQ and U. Laval), L. Monnais (health historian, U. Mtl) and C. Quach-Thanh (pediatric microbiologist-infectologist, CHU Ste-Justine). A 2-page summary sheet is also available, as well as an appendix illustrating the relational and emotional consequences of the debates surrounding the COVID-19 vaccine for children and youth.

1. - Context: Vaccine tension around schools in the fall of 2021

1.1 Vaccination of children and youth against COVID-19

- Vaccination of youth is warranted by available epidemiologic data about transmission of the virus by children, even if they are minimally affected by the virus.
- Using schools as a vaccination site is a pragmatic choice to offer vaccination to the largest number of youth as quickly as possible.
- Vaccination at school requires consent by the parents for those under 14 years of age and by youth 14 years of age and older.
- There are issues associated with using schools as vaccination sites in the current polarized context, namely a loss of the protective character of school for some, and the displacement of conflicts into the school environment.
- Children and youth carry an important symbolic value in our society and are at the heart of the current debates on the issue of vaccines. For both the vaccinated and the non-vaccinated, children represent a part of the population that we want to protect at all costs. There is resistance to the growing intrusion of the government into the family and private spheres of people's lives (parental rights and legitimacy). For some, there is also resistance to what is perceived as the "brainwashing and enslavement of young people", ideas at the heart of conspiracy and anti-system theories.
- Vaccination of 5- to 11-year-olds could accentuate these cleavages and should therefore be planned with this context in mind.

1.2 Escalating tensions between supporters and opponents of vaccination or other health measures, in a context where increasingly restrictive measures are perceived as disguised forms of vaccine obligation

- Different views of the seriousness of the health crisis and the dangers of the virus, and divergent views on which actions to prioritize and the choice of means and policies to implement. While there is a consensus on the desire to get out of the pandemic and to put an end to the limits imposed by the health measures, there is less consensus on the best way out of the crisis, and positions tend to crystallize around two poles. The government, relying on the advice of its Ministry of Health and that of the Public Health Department, has implemented solutions (sanitary measures, vaccination) that have the support of the vast majority of the population (90% of those aged 12 and over are vaccinated), but the disadvantages of these actions (or their collateral effects) are not usually considered in public discourse. A heterogeneous minority opposes these solutions using arguments putting forward the lack of transparency of institutions and a distrust of science and institutions. These debates lead to clashes and a lack of consideration on both sides.
- Use of disqualifying language and insults (idiots, stupid, morons, etc...) on both sides, as well as by the media, politicians, high profile people, and in the general population which, in combination with a position of blame, exacerbates anger and frustration. Unlikely to bring about changes in positions, this language can even exacerbate the crystallization of these positions and legitimize further forms of aggression and expression of hatred.
- Moralization on both sides: each position is associated with a moral valence, considers itself legitimate, and accuses, directly or indirectly, those holding the other position of being criminal.
- Polarization leads to a narrowing of the democratic space in which doubts and criticisms could be expressed in a respectful way.
- Widespread oversimplification of who constitutes the two groups (pro- and anti-vaccination), which are actually very heterogeneous.

- Lack of understanding of the structural barriers that influence choices about vaccination: these are seen as coming solely from the will of individuals. There is a lot of conflation: being hesitant or critical of the institution or government would mean being a conspiracy theorist; conversely, being vaccinated would mean adhering to vaccination without questioning and following the government's instructions without thinking.
- Loss of perspective on what vaccine hesitancy (VH) is: a multiple, complex and dynamic phenomenon that can be seen on a continuum from total acceptance of all vaccines to systematic refusal of vaccines, with a multitude of intermediate positions involving questioning, doubts, fears, delaying, etc., and possibly also, for example, acceptance of the COVID-19 vaccine for one's self and one's elderly parents but not for one's child. Vaccine hesitation is nevertheless normal and even healthy, since it is beneficial to ask questions and to be critical before making a choice.
- The pragmatic considerations needed to be taken into account by the government and various political stakeholders (allowing economic activity and a certain normality for the vaccinated, protecting the most vulnerable, protecting a weakened health system, politicizing the debate for electoral gain), seem to have led to a gradual loss of perspective in the Quebec public health approach to vaccination, which is traditionally based on prevention and awareness rather than coercion. Yet, evidence shows that a motivational approach to vaccine hesitancy ultimately produces better results than coercion or obligation, since it fosters lasting trust in institutions and encourages individuals to exercise choice.
- There seems to be a gradual shift towards a perception of vaccination as quasi-obligatory, through the rise of increasingly restrictive measures: vaccination passport for those aged 13 and over for activities deemed non-essential (including extracurricular activities), compulsory vaccination in certain workplaces, the ban on demonstrating against vaccination within 50 meters of certain places including schools (forms of institutional constraints), setting aside the basic principle that vaccination is an individual or parental choice even if it also implies consideration of collective well-being.
- These constraining measures, which can be seen as disguised forms of vaccine obligation, tend to cause tension among those who are hesitant or refuse vaccination. In other words, the consequences of choosing not to be vaccinated involve being excluded from society to a large extent, and are experienced and seen as a socially and politically accepted form of discrimination that goes beyond the simple public health objective of controlling the virus.
- In addition, several institutions, such as libraries and hospitals, have instituted their own policies with regards to the unvaccinated that further restrict their access to their services, creating for the unvaccinated more anxiety and a sense of exclusion from society.
- These institutional constraints can provoke either silence (among opponents who fear retaliation), or anger and frustration leading to public demands, associated in a small number of cases with violent deviations, or virtual or direct violent acts (threats and violence). The more implicit violence on the side of the vaccine supporters is minimized overall (insults- derogatory attitudes towards the sick, blame and scapegoating placed on the non-vaccinated).
- Vaccinating in schools, for a number of parents, is going to feel like an incitement, since somewhere along the line, public schools represent the State. These parents, who see vaccination in schools as the school's positioning in favor of vaccination, may see their trust in institutions (the government, the school) diminish, which could have non-negligible consequences on their children, who could be taken out of the school system (see point 2.8).
- Tensions and polarization are also related to the lack of recognition of the underlying emotions (fear, anger, frustration) on both sides. Underlying these tensions are fear (of contracting or transmitting COVID but also of never returning to "normal" life), psychological distress (at the thought of reliving isolation and lockdowns, lack of socialization, estrangement from loved ones, loss of activities). This emotional state, now often referred to as "pandemic fatigue," is related to feelings of frustration (arising from health measures and their consequences, or arising from the fact that unvaccinated people are "threatening" others and "delaying the return to normal life"). These emotions and distress, coupled with the gradual shift towards quasi-obligatory vaccination as the only way out of the crisis, provide fertile ground for polarization and the deterioration of social ties (already damaged by the previous waves and isolation measures). Kindness and empathy, which require tolerance in the face of disagreement, must be prioritized again.

2. - Impact of this context on children, adolescents and young adults

Tensions between supporters and opponents of health measures or vaccines are experienced around the school, but are also present among peers, within the school team, among parents and in the community around the school, weakening ties, leading to the creation of alliances (for or against vaccines) and polarizing the environment. This context has consequences for children's mental health and development.

The consequences described here were documented in the fall of 2021 on a repeated basis. The most frequent ones will be illustrated with anonymous vignettes in an attached document (peer relations; student-school relations; family-school-peer relations; school team; school environment).

2.1 Peer-to-peer bullying

- Unvaccinated or partially vaccinated youth may be ridiculed and insulted by their peers, either in groups or individually. These comments may be directed at their families (derogatory comments). The strength of the group heightens the hurtfulness of these interactions.
- Unvaccinated youth may be ostracized and isolated, peers being unwilling to sit near them.

2.2 Increased social exclusion

- Unvaccinated youth constitute a minority group, and are also vulnerable because they cannot participate in certain activities, which increases their sense of exclusion and exacerbates social inequalities, because of the association between vaccination status and parental education level, SES and diversity.
- Beyond the current context, these experiences will impact the perceptions that future parents (today's children) will have of vaccination, which is an important concern.

2.3 Family-School Loyalty Conflicts

- Many young people find themselves caught between their families, friends and school regarding vaccination. They feel like they have to take a stand or hide their family's position regarding the vaccine, as if it were shameful. Some youth 14 and over get vaccinated in secret (without their parents' knowledge).
- For young people in opposition-rebellion with their parents, or with the school, these divisions are an opportunity to aggravate cleavages and conflicts, with one side being protected over another. The school and family can no longer work as a team.
- When parents who disagree with vaccination end up having their children vaccinated so their child doesn’t get excluded at school or from other activities, the child may not feel safe, perceiving that his or her parents are concerned. This can undermine trust within the family.

2.4 Fragility of the school team and risk of polarization within it

- Conflicts between vaccinated and unvaccinated staff within the school team. Fear of the non-vaccinated who do not dare to say what their position is. Non-vaccination of some school team members can generate discomfort, tension or stigmatization.
- School teams are not homogeneous. The emotional charge of the debate and its moral character make it difficult to dialogue or even share positions. Tensions, said or unsaid, can affect the school team's ability to cope together with the situation.
- School teams are worn out by the burden of changing health measures. Current tensions can lead to avoidance or burnout.

2.5 Insecurity about the physical and social environment of the school

- Because of demonstrations against vaccines or health measures that have taken place around some schools (banned by the government within fifty meters of schools since then), students, parents, and professionals may feel that school is no longer a safe place to be. The media coverage of such incidents contributes to this feeling of insecurity.

2.6 Increased symptoms associated with stress among youth

- This environment of vaccine stress elicits or reactivates well-documented anxiety symptoms in youth during the pandemic, anxiety symptoms that did indeed increase significantly during the pandemic.
- This affects the readiness to learn of some youth: when a child or youth is stressed or preoccupied, they may have difficulty focusing on learning.

2.7 Increase in school phobia and behavioural problems for certain groups of young people who are more vulnerable

2.8 Risk of dropping out of school for some youth

- Some parents may choose to withdraw their child from regular school to home school or send him or her to a new type of school in line with their values against health measures or vaccination. The impact of this withdrawal from school could be significant, especially since these are usually children already in a position of social vulnerability.

3. - What to do ? Principles for Action

3.1 Foster transparent, caring, and nuanced health communications

- Recognize that the science behind institutional choices about vaccination is still limited in terms of immunization and health measures.
- Follow government measures while allowing for respectful criticism.
- Avoid generalizations.

3.2 Avoid confrontation and refuse to escalate while strongly condemning criminal acts (threats, vandalism, aggression)

- Re-establish a respectful language and discourse with regards divergent positions, and normalize these positions.

3.3 Encourage safe spaces for all to speak out and restore legitimacy and respect for individual or parental rhythm and choice

- These spaces should emphasize the legitimacy of the individual or parental choice (even if this choice may be worrisome), while reminding us of our obligations to the collective well-being and the fact that this requires delicate negotiations.

3.4 Preserving connections, beyond disagreements

- Disagreements have always existed (political, organizational and otherwise), but in most cases they do not interfere with the ability to maintain a bond. In light of the current situation, it is necessary to recall the crucial role of these bonds, which unite all school personnel around a precious mandate: the education and development of children and young people.

4. - How to do it ?

4.1 Preventing tensions at school

4.1.1 Within the school administration: messages to parents

- Invite restraint and kindness, and demand respect during exchanges
- Send a clear message to parents that: (1) while encouraging immunization, the administration respects individual or parental choice and protects families and youth from exclusion; (2) encourages tolerance and respect for positions on immunization or health measures; and (3) reassures parents and teachers that health measures are being enforced in the school.

4.1.2 Within the school team

- Recognize the right to individual choice and encourage respect for all choices.
- Work to maintain cohesion and cooperation despite possible tensions.
- Acknowledge tensions if they exist and normalize them (the school is a reflection of society).

4.1.3 In the classroom

- Provide safe and respectful spaces for exchanges by using, among others, the vignettes in the appendix to initiate dialogue.
- Approach vaccination in an open and caring manner and lead discussions about vaccines (what it's for, why it's a collective process, what is the immune system) and about the legitimacy of individual or parental choice (to avoid putting too much pressure to vaccinate, and to avoid parents reacting negatively to these class discussions).
- Offer more information about vaccines that is appropriate to the age and needs of students, moving away from judgmental or moralistic language.
- Familiarize students with vaccine hesitancy to encourage them to understand that it is normal, complex, dynamic, and not just a matter of willingness, and to encourage them to adopt an empathetic and respectful attitude towards those who might have different perspectives on the issue.
- Provide inclusive activities that do not distinguish between vaccinated and unvaccinated, to avoid feelings of exclusion.
- In the event of parent-student disagreement, opt for mediation rather than division, encouraging the preservation of the relationship.

4.2 Dealing with an incident at school

4.2.1 In the case of a demonstration

- Reassure students and explain what is happening according to their developmental stage.
- Remind them that disagreement does not justify disrespect or violence.
- Remain specific and avoid generalizing about any positions (do not say "anti-vaxxer").

4.2.2 In the case of an internal incident

- Ensure cohesion among the school team around the response.
- Implement appropriate consequences regardless of the position supported by the parties involved, but minimize exclusionary measures as much as possible.
- Propose a posture of mediation between the actors involved (youth, parents, schools) rather than being divisive, and encourage the maintenance of the bond.

Document developed by C. Rousseau and CoVivre, in collaboration with E. Dubé, L. Monnais, and C. Quach-Thanh, Oct. 13, 2021.

Appendix B

Protecting the Well-being of Children and Adolescents: Easing Vaccine Tension Around Schools

Vaccine Tension Impacts on Children and Adolescents

- Bullying among peers
- Increased feelings of social exclusion
- Decreased cohesion within the school team and risk of polarization
- Loyalty conflicts between family and school
- Increased stress-related symptoms among youth
- Increase in school-related anxieties and behavioural problems
- Security concerns about the school environment
- Risk of withdrawal from school

Illustrated in the appended document "The Relational and Emotional Consequences of the COVID-19 Vaccine Debate for Children and Youth"

Why is there tension around schools?

Vaccination of youth (12 years +) against COVID-19 is justified by the available epidemiological data and requires parental consent for those under 14 years of age or from youth as of 14 years of age.

- **Vaccinating in schools** is a pragmatic choice but is **associated with problems in a polarized context** (loss of the protective aspect of the school environment for some, displacement of conflicts to the school environment).
- Youth carry an important **symbolic value** in our society and are at the heart of debates (for or against vaccination).
- Vaccination for 5-11 years of age **could accentuate these divisions** and must be planned with this context in mind.

Escalation of Vaccine Tension Around Schools

- Different views, positions and decisions between supporters and opposers of vaccination or health measures (social duty versus individual right)
- Positions being moralized (blame, stigma)
- Generalizations and oversimplification of both groups
- Use of disqualifying language and insults
- Verbal violence from pro-vaccine advocates minimized
- Silence of some opposers who fear the consequences of their disagreement
- Public protests
- Virtual or direct violent acts

Beware of Generalizations!

- Not all non-vaccinated individuals are conspiracy theorists.
- Being vaccinated does not mean being in support of the vaccine passport.
- A parent (and even their own parents) may have been vaccinated, but refuse to vaccinate their child.
- Scientific experts may be in favour of vaccination of an age group, but against the coercive aspect of the vaccine passport for sports and cultural activities.
- Someone can be opposed to vaccines and unvaccinated but in favour of banning anti-vaccination demonstrations near schools.

Implementation of Measures that can be Constraining

Vaccination passport (13 years +) for activities deemed non-essential including extracurricular activities, mandatory vaccination in certain workplaces, ban on protests against vaccination within 50m of certain places including schools

Unintended Effects of These Measures

- Vaccination perceived as quasi-mandatory
- Risk of decreased trust in the government, institutions, science, health professionals or vaccines, in the short or longer term
- Risks of discrimination and marginalization of already marginalized groups
- Social unrest, polarization and risk of social fracture

Underneath These Tensions...

- Chronic stress caused by the pandemic and the challenge of learning to live with the virus
- Diminishing democratic spaces to express opinions and positions in a respectful manner
- Lack of recognition of the emotions (fear, frustration, anger) and the underlying distress that motivate positions
- Lack of awareness of the historical importance of vaccines
- Lack of understanding of the complexity and heterogeneity of vaccine hesitancy or refusal
- Lack of recognition of the contexts in which people do or do not choose to vaccinate, and of the structural barriers that exist - it is not all about individual will

Tool developed for schools by C. Rousseau and the CoVivre program, in collaboration with E. Dubé, L. Monnais and C. Quach-Thanh. Oct. 13, 2021; page 1/2

Preventing and Addressing Vaccine Tension in Schools

Guiding Principles

- Prioritize relationships despite disagreements
- Encourage and facilitate dialogue and respectful exchanges despite differences
- Bring back the legitimacy and respect of the individual or parental choice and rhythm, even if this choice can be concerning
- Avoid confrontation and refuse escalation
- Condemn criminal acts (threats, vandalism, aggression)
- Foster transparent, caring and nuanced health communications :
  - Recognize that the science behind institutional choices about vaccination is still limited;
  - Follow government measures while allowing respectful criticism;
  - Avoid generalizations.

Preventing Tensions at School

School Administration

Send a message to parents that :

- Encourages reserve and kindness in discussions to maintain an atmosphere of tolerance and respect;
- Encourages vaccination but also respects individual and parental rhythm and choice while protecting youth and families from exclusion;
- Reassures parents and teachers that health measures are applied in the school.

School Team

- Work to maintain cohesion and cooperation despite possible tensions

In the Classroom

- Provide safe and respectful spaces for discussion, using e.g., the attached vignettes to initiate dialogue
- Provide age-appropriate information about vaccines in a caring and non-judgmental manner
- Familiarize youth with vaccine hesitancy so that they understand that it is normal, complex, dynamic and not just a matter of willingness
- Encourage youth to be empathetic and respectful of those who have different perspectives than themselves
- Offer inclusive activities that do not distinguish between vaccinated and unvaccinated youth

Intervening

Dealing with a Protest

- Reassure young people and explain to them what is happening in an age appropriate way
- Remind them that disagreement does not justify disrespect or violence
- Remain specific and avoid generalizations (do not say "anti-vaxxer")

Dealing with an Incident at School

- Ensure school team cohesion around the response
- Implement appropriate consequences regardless of the position of the parties involved, minimizing exclusionary measures
- Mediate between the people involved rather than divide them and encourage the maintenance of the relationship

In Brief

Four Axes

1. Recognize the role of emotions
2. Discuss vaccines and health in a transparent, nuanced and caring manner
3. Raise awareness about vaccine hesitancy and vaccine refusal
4. Respect the rhythm and choice

To Achieve This

- Create safe and respectful spaces for dialogue
- Protect relationships
- Promote school team cohesion
- Avoid confrontation
- Avoid exclusion

Appendix C

The Relational and Emotional Consequences of the COVID-19 Vaccine Debate for Children and Youth*

Appendix to CoVivre's infosheet "Protecting the Well-Being of Children and Youth: Easing Vaccine Tension Around Schools"

Peer Relations

*Testimonials were collected by the CoVivre team in Sept. 2021. To preserve confidentiality, names of individuals have been changed and the verbatim of the vignettes has been slightly modified.

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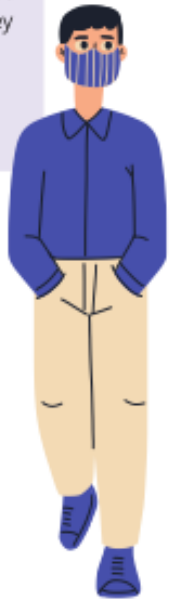
Peer Relations

"My friends don't understand why I am not vaccinated. At first we were all scared, but now I'm the only one in my group who isn't vaccinated. My friends don't talk to me about it, but I can see that they think I'm weird, they avoid me, and I feel alone. I avoid talking about COVID-19 and vaccines with them."
– Maxime, age 15

"My friends are involved in after-school activities, but I'm not vaccinated. I feel left out because I can't participate, and my friends talk to me less and less because I don't see them after school. I'm afraid I'll be alone. "
- Sabrina, age 13



"I feel like I'm hurting people around me because they tell me it's selfish not to get the vaccine...but the vaccine scares me and I don't know what to do. I don't know who to talk to about it."
– Marylena, age 17

Youth in Schools

"My teacher told me that if I wasn't vaccinated, I wouldn't be able to participate in the assignments (outside of school) and that I would fail my class. I feel pressured to get vaccinated."
– Sam, age 14

"My teacher is really afraid of the virus, she says non-vaccinated people are irresponsible criminals."
- Laurent, 17 years old

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Family, Peers, and Schools

"I would really like to get vaccinated so I can do activities like all my friends, but I can't do it without my parents' permission and they won't allow it."
- Audrey, age 13

"The kids in my class call my family 'idiots' because they don't believe in the vaccine. It makes me want to fight."
- Justin, age 12

"I'm going to be able to get the vaccine, but the other kids in my class are laughing at me because they've been vaccinated for a while already. I thought they would be happy for me, but now I'm ashamed that my parents took so long to decide."
- Joël, age 13

"I really want to continue soccer, it's such an important part of my life, but I'm not vaccinated because my parents are afraid of vaccines, and that makes me a little scared too. I'm going to find it very difficult, another year without soccer, it's going to be hard. I've been playing soccer since I was 3 years old, it motivates me a lot at school and it gives me energy."
– Brenda, age 13

"60 years of feminism in Quebec, 15 years of teaching my daughter that only she decides what she does with her body, and now I'm discussing with her that she should go get vaccinated against her will so she won't be excluded from society!"
- Mother of a teenager

Carmen, now 13 years old, wants to be vaccinated to visit her grandmother in her final weeks in the hospital, but she cannot do so because she is not vaccinated. Her mother agrees to let her be vaccinated but her father refuses.

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Family, Peers, and Schools

"My parents don't want me to be around 'unvaccinated' people, nor do they want them to come to my house. My best friend is not vaccinated, but I want to say that he is, so I can continue to hang out with him."
- Noah, age 15

"I'm on the neighborhood baseball team, the end-of-season games have started, but I can't participate because I only have one dose. Why did my parents wait so long to get me vaccinated? I feel like I'm letting my team down."
– Fred, age 13

School Team

"My colleagues laugh and insult the 'anti-vax' people, as they say, so I don't go into the teacher's lounge anymore. I'm really afraid of their judgment, and not really in the mood to come to work."
- Issa, age 37

"I think some of the staff are not even vaccinated! It's not right, they're putting me in danger, I'm afraid for my family."
- Javier, age 32

School Environment

"I've seen demonstrations on TV in front of schools. It's violent, it scares me, I'm afraid it's going to happen in my school. I asked my parents to stay home."
- Edith, age 13

"We can't even protest now, we can't say anything! It's not right."
- Simon, age 32

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Appendix D

Interview with Dr. Cécile Rousseau on Vaccine Tension in Schools (Oct.2021) (French only)

Four capsules addressing the following questions:

- Why are there vaccine tensions around schools?
- The impact of stress on children
- How to prevent tension at school?
- How to prevent tension at school? (summary)

https://sherpa-recherche.com/en/sherpa/partner-projects/covivre-program/#covivre-2-tab-5

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Physician Perspectives on the Implementation of a Trauma-Informed Care Initiative in the Maternity Care Setting

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Abstract

Objectives: To explore the barriers and facilitators from the perspective of family physicians on the implementation of a pilot trauma-informed care (TIC) initiative to promote resilience, with particular emphasis on asking about adverse childhood experiences (ACEs), in a maternity care clinic.

Methods: Using an exploratory qualitative design, in-depth semi-structured interviews were conducted with family physicians who were practicing in a maternity clinic in a large Canadian city. Interviews were audio-recorded and transcribed verbatim. Transcripts were reviewed by three coders and themes were extracted using thematic analysis.

Results: The analysis of 10 interviews yielded six thematic domains. Three domains pertained to perceived barriers to obtaining an ACEs history including: (1) concern about time management, (2) initial lack of physician comfort with TIC, and (3) cultural limitations of using the ACEs questionnaire. Three themes pertained to perceived facilitators of obtaining an ACEs history including: (1) the importance of a physician champion, (2) a supportive and flexible clinic environment, and (3) improved patient-physician relationships.

Implications: In the context of a broader TIC initiative within a maternity care setting, asking patients about ACEs was generally perceived positively by physicians. Ensuring a supportive clinic environment and adequate staff training may be critical factors that contribute to successful implementation. Future research focused on diverse physician experiences in different settings are needed.

Keywords: Trauma-informed care, qualitative, adverse childhood experiences, pregnancy, primary care.

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Introduction

Adverse childhood experiences (ACEs) including abuse, neglect, and exposure to family dysfunction, put individuals at risk of developing health and mental health difficulties across the lifespan (Felitti et al., 1998; Gilbert et al., 2009; Mersky et al., 2013). Indeed, ACEs have been identified as one of the most pressing public health concerns of our time costing Canadians upwards of 15 billion dollars in public expenditures (Bowlus et al., 2003). Exposure to ACEs, along with their health and mental health consequences, may put women at increased risk for health difficulties in pregnancy (Kern et al., 2022; Mersky & Lee, 2019), as well as disrupted postpartum mental health (Racine et al., 2020). A growing body of literature demonstrates that the impact of ACEs can also be transmitted across generations, whereby maternal exposure to childhood adversity puts her infant at-risk for poor developmental health (Ahmad et al., 2021; Cooke et al., 2021; Madigan et al., 2017; Racine et al., 2018). Thus, pregnancy and the postpartum period are critical periods for targeted intervention in order to mitigate the transmission of ACEs and promote resilience (Seng, 2015).

Given the implications of ACEs for maternal-infant health outcomes, there has been a rapidly growing movement to incorporate trauma-informed care (TIC) initiatives, including asking about ACEs, into the prenatal care setting (Flanagan et al., 2018). TIC initiatives are system-level approaches that seek to ensure that health care services are provided in a way that is understanding of the impacts of trauma on people's lives, is supportive, and avoids re-traumatization (Substance Abuse and Mental Health Services Administration, 2014). Specifically, TIC is considered to be a "universal precaution" or an approach that should be applied across all maternity clients regardless of their past experiences or presentation (Cuthbert & Seng, 2015; Racine et al., 2019). TIC initiatives can include: (1) training staff on trauma and its impact, (2) ensuring the clinic environment is safe and welcoming, (3) reviewing policies and procedures to ensure safety, (4) training in empathic and transparent communication styles, (5) assessing trauma, and (6) providing targeted interventions as needed (Sperlich et al., 2017). Increasingly, there are calls for the adoption and inclusion of TIC in the maternity care setting to promote resilience in mothers and their infants (Hall et al., 2021).

Research on the implementation of TIC initiatives have demonstrated promising implications for maternal-infant health. Qualitative research has shown that a TIC approach to maternity care is desirable and seen as beneficial by patients, particularly as it pertains to a trusting patient-provider relationship (Gokhale et al., 2020; Muzik et al., 2013). Studies have also demonstrated the positive influence of TIC on infant birth outcomes and maternal care access (Ashby et al., 2019; Racine et al., 2021). Taken together, there is preliminary evidence that TIC initiatives in the maternity setting are associated with enhanced maternal-infant health outcomes.

Although TIC initiatives may enhance maternal-infant health outcomes, it is also important to consider the feasibility and acceptability of its implementation. A TIC initiative can include asking about past and current traumatic experiences, which has been subject to debate in the literature (Finkelhor, 2018; McLennan et al., 2020; McLennan et al., 2019). Although most patients would feel comfortable discussing their ACEs with their healthcare provider (Flanagan et al., 2018; Olsen et al., 2021; Purkey et al., 2018), many healthcare providers do not incorporate asking about ACEs in their routine medical practice or feel comfortable discussing ACEs with their patients (Tink et al., 2017; Weinreb et al., 2010). A quantitative study conducted with 145 obstetrics and gynecology fellows found that less than 30% of physicians spoke to their patients about childhood trauma (Farrow et al., 2018). The largest barriers identified included insufficient time to assess and discuss child trauma with patients, a lack of services available for referral, and a lack of support from the staff. One quantitative study identified training, streamlined workflows, and availability of supports as key components for success of a TIC initiative (Flanagan et al., 2018). No research to date has used qualitative methodology to understand determinants of TIC implementation in the maternity care setting. Given that comfort from healthcare providers is integral to the implementation of TIC initiatives it is important to understand the perceived barriers and facilitators of asking patients about ACEs from the perspective of maternity care providers

Current Study

Building on previous quantitative work, the current study employed a qualitative methodology to identify both barriers and facilitators of asking patients about ACEs in a Canadian maternity setting from the perspective of family physicians. The ultimate goal of the current study is to inform the implementation and adoption of TIC initiatives in the maternity care setting.

Method

Study Design

Based on the identified research question, a qualitative research approach was used. One-on-one, in person, semi-structured interviews were conducted in October and November 2018. This design was used to facilitate brief discussions and allow participants to express barriers that might be difficult to share in a focus group. Ethics approval was obtained from the Institutional Review Board (REB18-0949), and informed consent was obtained prior to conducting interviews.

Participant Recruitment

A convenience sample was obtained from a maternity clinic in Calgary, Alberta, Canada, which offers low-risk obstetrics care to over 2500 pregnant women yearly. The maternity clinic includes a multi-disciplinary team of physicians, social workers, nurses, and mental health consultants that provide care to pregnant people who are: having a singleton pregnancy, intend to have a vaginal birth, < 42 years of age, have no major fetal or uterine anomalies, and do not have a history of pregnancy complications. On average, individuals referred to the clinic are between 18-20 weeks gestation. With regards to clinic demographics, on average individuals are 31 years of age, 43.4% identify as a racial or ethnic minority, 91% are in a relationship, 55% are having their first child, and 6% identify as having significant financial stress. In Summer 2017, the clinic embarked on a pilot project to implement a TIC initiative, including standardized mental health and ACEs history-taking. Physicians and staff received education and training regarding TIC, mental health screening, and ACE history-taking from a physician lead who championed the initiative (see T. Killam). Each patient attending the prenatal clinic completed a standardized ACEs questionnaire using pen and paper at their second maternity visit (see Supplemental Materials 1; Felitti et al., 1998). The physician reviewed all of the findings with the patient orally, assessed their needs, identified their strengths and resilience using supportive statements, and made recommendations and/or referrals accordingly. A recruitment email was sent to all family physicians working in the clinic ($N = 43$) explaining the current study and requesting participation. Interested participants directly emailed one of the researchers to arrange an interview time. Written consent was obtained at the time of the interview. A total of 10 family physicians agreed to participate in the study. Additionally, details on the TIC initiative and an evaluation of the maternal and child outcomes have been published elsewhere (Racine et al., 2021).

Data Collection and Analysis

One researcher (KH) conducted all interviews, which were audio-recorded, transcribed verbatim, and checked for accuracy. Information on participant demographics was collected at the beginning of the interviews. An interview guide developed by the research team for this study was used and consisted of six main questions (see Supplemental Materials 2) asking about barriers and facilitators of discussing ACEs and trauma with their patients, as well as their overall experience with discussing ACEs with their patients. Participants were encouraged to expand on their answers and to add additional comments. Interviews were conducted in a 30-minute time period at the convenience of the physician.

Thematic analysis was used to analyze the transcripts. Specifically, thematic analysis refers to the identification of recurrent themes and patterns in data (Braun & Clarke, 2022). The research team followed Braun and Clarke's six phases of thematic analysis, including familiarization, coding, searching for themes, reviewing themes, defining and naming themes, and writing the report (Braun & Clarke, 2006). Transcripts were independently analyzed by three research members: one family medicine resident (KH), one family physician (MK), and one psychologist (TH). Both MK and TH have experience and expertise with qualitative research. Coders reviewed the transcripts, provided semantic codes for each unit of analysis, and collated codes into potential themes. After individual analysis, the three researchers met to compare and review themes and ensure consistency across the dataset. In line with guidelines for qualitative research (Braun & Clarke, 2006), each theme was identified to be coherent, consistent, and distinctive from other themes. Based on the 10 participants who agreed to participate, thematic saturation was reached, with no additional or new themes being generated, suggesting that our sample size was sufficient.

Results

Participant Characteristics

Ten female family physicians participated in the study. The majority of participants were age 40 and older ($N = 6$, 60%) and the average years of practice amongst the participants was 17 years ($SD = 9.8$). Participants were representative of the physician demographic at the clinic, which is largely composed of senior female physicians.

Themes

Generally, the TIC initiative was well received within the maternity clinic. Physicians reported appreciating the trauma-informed training as well as increased use of screening tools and discussions about trauma with their patients (MacKinnon et al., 2021). A quality improvement project conducted by our group indicated that physician comfort with discussing and addressing trauma with their patients increased from 64% to 85% from pre- to post- TIC implementation (MacKinnon et al., 2021). Using thematic analysis, six themes were identified and classified by the researchers as three perceived barriers and three perceived facilitators related to asking patients about their ACEs. The three identified perceived barriers were: (1) concern about time management, (2) initial lack of physician comfort with TIC, and (3) cultural limitations of the ACEs questionnaire. The three perceived facilitators included: (1) the presence of a physician champion, (2) a supportive clinic environment that was open to change, and (3) improved patient-physician relationships. Definitions for each theme and illustrative examples are provided below.

Concern about time management. A common concern identified by physicians was the time-consuming nature of asking patients about their childhood trauma. Specifically, they shared concerns that being open and discussing trauma would be a time consuming and involved process. However, many participants indicated that asking about ACEs was not as time consuming as they had anticipated and not all patients required more time:

> *Well, at the beginning I was a little bit afraid that, you know, it was going to open this huge Pandora's Box and take me forever to ask it, but it hasn't turned out that way. So, the barrier was the fear, but I did it anyway.*

Another participant explained that for the majority of patients, additional time is not required to discuss past trauma experienced, but that a minority of patients do require additional time:

> *You can't just gloss over it, and I think the people who say it's not going to slow you down and it doesn't have to take a long time, well, I sort of think it does. It's like one in fifty, but those one in fifty are hard.*

Initial lack of physician comfort with trauma-informed care. Despite receiving training on TIC, participants were hesitant to begin asking their patients about ACEs. The notion of "getting thrown in there" was common: "You just wing it at the beginning, and I think most of us sort of learned from experience from the first few that we did". With practice, participants explained that they developed their own dialogue that worked for them and their patients.

The notion of learning through direct practice was also important and physicians identified that they became more comfortable as they implemented the trauma-informed practices over time, including asking about previous trauma. One participant compared ACEs history-taking to breaking bad news:

> *It's like your first appointments of breaking bad news. You get the education. That's great. It helps. But it's actually doing it. So, it's like the first time that you do expose a big trauma history that nobody's ever talked about before, that nervous of like am I going to know what to say? Am I going to know how to handle it? You're not, until it happens.*

Cultural limitations of the ACEs questionnaire. Several participants raised concerns about the western-centric characteristics of the questionnaire that was used to talk to patients about their trauma (i.e., the ACEs questionnaire). "[The questionnaire] is a bit outdated for today's world…there are a lot of immigrants and refugees…were you in a war…which we're not asking". Another participant explained there may also be differences in stigma about discussing past trauma for different cultural groups: "[For some culturally diverse individuals] it would be so unacceptable to air your dirty laundry in public".

Language was also noted as a barrier, as professional translators were seldom available. Additionally, participants identified a cultural disconnect, with some individuals from minority groups not understanding why they

were being asked about their trauma history: "I find that folks from [diverse groups] don't quite get it and wonder why you're asking".

Presence of a physician champion. All study participants expressed the benefit of having a colleague who was familiar with TIC, and provided support and encouragement where needed. The fact that the champion was a physician also was important. When one study participant was asked what helped them engage in discussing trauma with their patients, she replied, "A colleague testing it out first…who did it on her own first and figured out what worked, what didn't work…and having that positive testimony from a colleague that you respect".

Many study participants also commented on how smooth the implementation of the TIC initiative and the discussion of trauma with their patients had gone. This seemed to be a product of the upfront planning done by the physician champion. As one physician noted, "I think our apprehension, though understandable, was very quickly resolved, yes, because it did go well, and I think partly because there was really good planning and education and support".

A supportive clinic environment. Participants valued the supportive clinic environment and appreciated that asking patients about trauma was part of a broader TIC initiative. One participant explained:

> *Well, we had to [engage]. So, it's like I find that's often a very good thing in medicine. So, it wasn't something we spend too much time thinking about whether we were going to do it or not. We just had to. So, you just do it.*

Similarly, the initial apprehension around engaging in TIC was alleviated through a safe and supportive environment where clinicians could practice their skills. It was also helpful that the clinic philosophy fostered change. One participant explained that, "Our clinic is very accustomed to change and taking on new initiatives, and so we've done this side of things before". In essence, an environment conducive to change facilitated the implementation of the initiative.

Improved patient-physician relationships. Participants described improved relationships and encounters with their patients, as well as an increased understanding of how past trauma contributes to their patients' current behaviours:

> *I think, in general, becoming trauma-informed has been a really good clinical tool for seeing patients who had traumatic histories and how that impacts their behaviours now. I think just changing the subconscious perspective of both why they're doing the behaviours they are, or why they can't change the behaviours, leads to a much greater understanding and empathy.*

Discussion

The current study used qualitative methodology to identify both barriers and facilitators of asking about ACEs in the context of a broader TIC initiative, in a maternity setting from the perspective of family physicians. The findings of this study identify several perceived barriers and facilitators to implementing a TIC initiative in a low-risk maternity clinic. Building on previous research, physicians were concerned about the time required to engage in conversations about trauma with patients (Flanagan et al., 2018; Purkey et al., 2018). Interestingly, while time management was a concern, physicians also acknowledged that not every case required additional time. Specifically, some physicians identified that some patients may require more time to discuss concerns while others did not feel the need to have detailed discussions about their past experiences. These findings suggest that physicians may need to have a flexible and patient-centered approach when discussing trauma with their patients.

The physician champion was identified as a critical component for the successful and sustainable implementation of the TIC initiative. This finding is in line with recommendations and guidelines on the implementation of TIC in medical settings (Substance Abuse and Mental Health Services Administration, 2014). The champion helped to alleviate anxieties, and helped to increase comfort levels with talking about trauma with patients by providing practical scripts to initiate conversations with patients. The practice of ACEs history-taking was further reinforced by positive feedback from patients, and a perceived enriched patient-physician relationship. In line with positive outcomes described in previous studies (Purkey et al., 2018), physicians in the current study expressed a deeper understanding of their patients once they knew their histories more fully, which provided a context for future

encounters and conversations. The training and implementation of the TIC initiative was also noted to assist in the cultivation of physician empathy, which can contribute to better patient outcomes (Kim et al., 2004).

An important barrier identified in the current study was related to the limitations of the history-taking tool that was used. Specifically, the western-centric nature of the ACEs questionnaire was a barrier to fully engaging with culturally and ethnically diverse patients. Limitations of the ACEs questionnaire have been identified in previous work and point to the need to move beyond these simple items when discussing trauma (McLennan et al., 2020). Physicians identified barriers of talking about trauma with their culturally diverse patients, which is an important gap and future direction for training. Additionally, research has shown that asking about positive childhood experiences that are associated with resilience can be a culturally sensitive way of identifying protective influences from an individual's childhood (Merrick et al., 2019). The consideration of strength-based approaches as part of TIC initiatives is also an important future direction.

Limitations

Findings from the current study should be interpreted in the context of some limitations. First, the sample size is small and homogenous. Study participants were also self-selected, so there is a potential for selection bias. Participants were familiar with quality improvement projects and change. Additionally, all physician participants were women, which may have impacted their experiences of asking pregnant patients about trauma, as well as their perspectives. Thus, these findings are not likely generalizable to male physicians, clinics that have not prioritized or undergone trauma-informed training, and clinics that are less accustomed to change. Pregnant women in the current study were also at low medical risk. It is unknown if the experiences between these patients and the physicians in this study would translate to a general family practice setting.

Implications

This study adds to the growing body of literature on TIC in primary care, with a specific focus on the maternity setting. Physicians identified both barriers and facilitators to incorporating a TIC approach to their practice. A physician champion and adequate clinic supports were key to physician motivation and successful implementation of the initiative. Real-world practice was identified as one of the best ways to increase comfort for physicians and, therefore, future implementation initiatives would benefit from including in vivo scenarios or role-play to enhance this aspect of training. The goal should be to normalize talking about past trauma as part of a general patient history, in keeping with a trauma-informed approach to patient care. Cultural limitations continue to be a barrier, and future research should explore how to effectively have these conversations with diverse patients.

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Conflict of interest

The authors have no conflict of interest to disclose.

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Supplemental Materials 1

Adverse Childhood Experiences (ACE) Questionnaire

Adverse Childhood Experience Self-rating – Please check all that apply

While I was growing up, before I turned 18:

A parent or other adult in the household would often swear at me, insult me, put me down, humiliate me, or act in a way that made me fear I would be physically hurt.

A parent or other adult in the household would often push, grab, slap, or throw something at me or would hit me so hard that I had marks or was injured

An adult or person at least 5 years older than me touched or fondled me or had me touch their body in a sexual way or tried to or actually had oral, anal, or vaginal sex with me.

I often felt that no one in my family loved me or thought I was important or special or that my family didn't feel close or support or look out for each other.

I often felt that I didn't have enough to eat, had to wear dirty clothes, and had no one to protect me or that my parents were too drunk or high to take care of me or take me to the doctor if I needed to go.

I experienced a parental death, separation, or divorce.

My mother was often pushed, grabbed, slapped, or had something thrown at her or sometimes kicked, bitten, hit with a fist or something hard, or ever repeatedly hit over at least a few minutes or threatened with a gun or knife.

I lived with someone who was a problem drinker or alcoholic or who used street drugs.

A household member was depressed or mentally ill or attempted suicide.

A household member went to prison.

We respect your privacy. If you are not comfortable sharing the above details with your health care provider, please fold over the top, leaving only the Score visible. We encourage you to share this with your partner and have them discuss their ACE score with their family physician.

How many of these types of Adverse Childhood Experiences did I have as a child up until age 18? (how many circles did you check off)?

ACE Score _____

Supplemental Materials 2

Interview Guide

Date: _____

Sex: Male ☐ Female ☐

Age: 20 - 29 ☐ 30 - 39 ☐ 40 - 49 ☐ 50 - 59 ☐ 60 - 69 ☐ 70+ ☐

Years in practice: _____

Special training / interests: _____

1. **What helped you to engage in ACE history-taking at Riley Park Maternity Clinic?**

   _____
   _____
   _____
   _____
   _____
   _____

2. **What barriers did you experience in regards to ACE history-taking at Riley Park Maternity Clinic?**

   _____
   _____
   _____
   _____
   _____
   _____

3. **What has been your experience with the <u>process</u> of implementing ACE history-taking at Riley Park Maternity Clinic?**

   _____
   _____
   _____
   _____
   _____
   _____

4. **Do you have any general tips regarding ACE history-taking that have worked well for you?**

_____

_____

_____

_____

_____

_____

5. **What supports do you need to continue your clinical use of the ACE Questionnaire?**

_____

_____

_____

_____

_____

_____

Additional Comments

_____

_____

_____

_____

_____

_____

Supplementary Questions

1. If you had to choose, would you administer the ACE Questionnaire to all patients entering the clinic? Why or why not?
2. Have you made any changes to your community practice in regards to ACE history-taking?
3. Where would you like to see the ACE Pilot Project go next?