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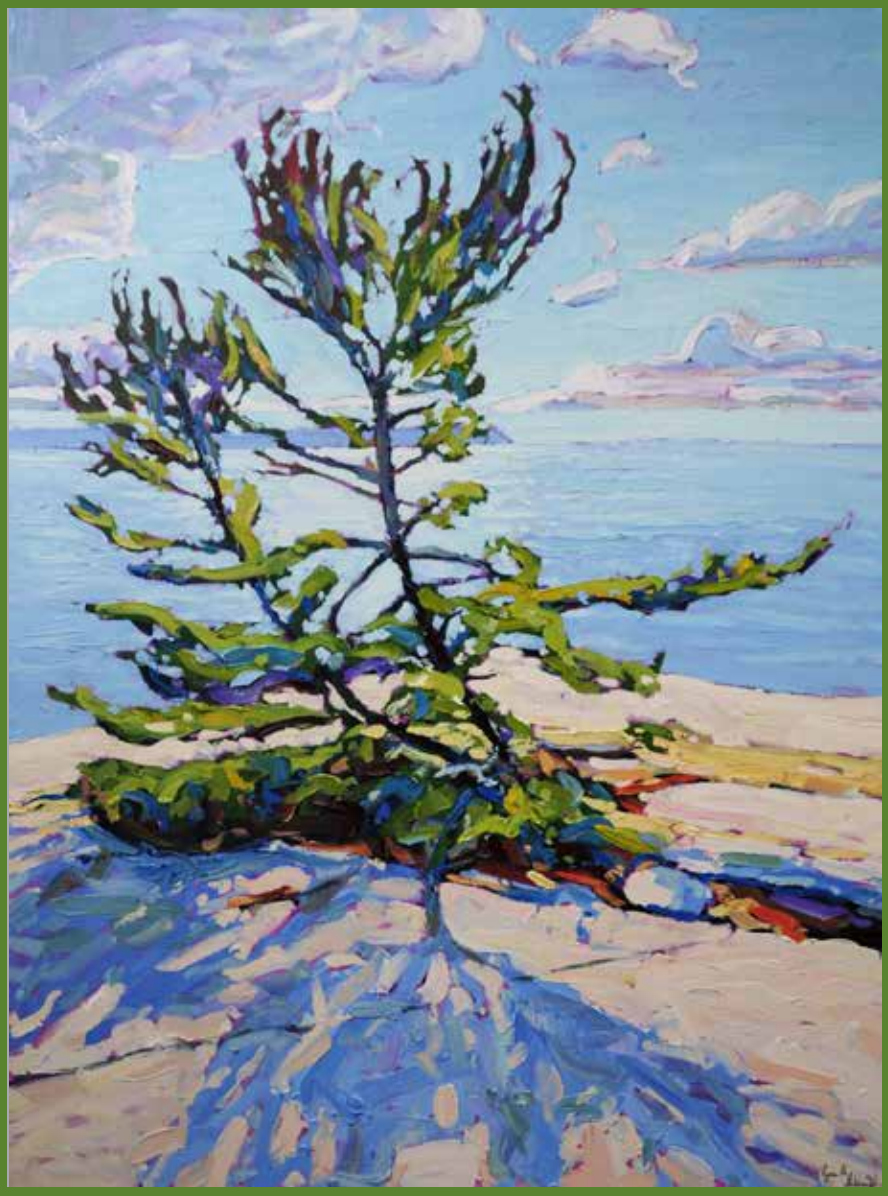

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Cover Illustration: The attached painting called 'Dancing Shadows' by Ryan A. Sobkovich, reveals a northern pine tree clinging to the granite rock on the north shore of Georgian Bay. Over many years this tree has revealed its resilience to nature's weathering. Strong winds, crashing waves and extreme temperatures continually test its resilience. Its beauty and strength is symbolic of nature's ability to win against all odds.

Ryan A. Sobkovich, born in 1995 lives in Wasaga Beach, Ontario. His passion for oil painting began at a very young age and he entered paintings in his first art gallery when he was sixteen. He enjoys kayaking and painting 'en plein air' around the shores of the great lakes. Famous artists who inspire Ryan are Tom Thomson and Claude Monet. "Ryan's goal as an artist is to re-connect the viewer with nature through his artworks. It is important to him that his paintings stimulate emotions, memories and thoughts allowing the viewer to create his/her own narrative." Ryan's art can be viewed at the Ryan Fine Art Gallery in Port Carling or on his website at www.ryanallensobkovich.com

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International Journal of Child and Adolescent Resilience

Resilience in Canadian Indigenous Youth: A Scoping Review

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Abstract:

Introduction: Contemporary definitions of resilience generally include personal, family, and community characteristics that contribute to individuals' abilities to thrive in the face of adversity. However, these definitions are derived largely from research involving non-Indigenous youth and may fail to incorporate unique characteristics from Indigenous perspectives. Understanding resilience in Indigenous youth by summarizing existing literature is an important next step in applied resilience-based research and intervention.

Methods: A scoping review of 33 published and grey literature sources on resilience in Canadian Indigenous youth was completed.

Results: Resilience among Indigenous youth included engagement in culture, having positive peer and family relationships, and having a positive self-identity, congruent with research involving non-Indigenous youth. Despite such similarities, unique factors to Indigenous youth were related to community-based resilience including autonomy and access, as well as support and connectedness.

Conclusion: Resilience is an important concept that can foster strength and support pathways to perseverance in Indigenous youth. Incorporating Indigenous models in applied resilience-based research and intervention should include relational approaches of measurement and collaborative research methods that engage Indigenous young people and their communities.

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Conflicts of Interest:

We have no conflicts of interest to declare.

Keywords:

Indigenous youth, resilience, community, land-based programs, CBT

Introduction

Indigenous youth in Canada experience increased adversity when compared to non-Indigenous youth (Reading & Wein, 2009). Indigenous youth are more likely to experience poorer health and wellbeing than non-Indigenous youth, which is demonstrated in higher rates of unstable housing (Status Report of the Auditor General of Canada, 2011), chronic illness such as diabetes (Smylie & Adomako, 2009), substance use (Elton-Marshall, Leatherdale, Burkhalter, & Brown, 2013), lower food security (Rudolph & McLachlan, 2013), and have an increased risk of experiencing sexual violence (Canadian Council, 2010). Research has aimed to identify components that assist in avoiding detrimental effects when such experiences are encountered (Ungar, 2013). The study of resilience can promote wellbeing within potentially vulnerable populations by identifying factors that increase the ability of an individual to successfully adapt in the face of adversity (Ungar, 2013).

Indigenous populations (in this paper, referring to First Nations, Inuit, and Métis peoples in Canada) indicate that identifying factors that promote resilience, and ultimately wellbeing, is a priority within communities (Dumont-Smith, 2005). Understanding Indigenous resilience is limited as much of the existing research neglects the unique cultural factors such as connection to the community, continuation of cultural identity, and historical language that influence a holistic model of resilience for these communities (Kirmayer, et al., 2011). The majority of resilience research is completed with non-Indigenous communities and does not incorporate specific adverse factors endured by Indigenous populations (Hu, Zhang, & Wang, 2015). For example, Indigenous people have experienced long-standing historical trauma associated with systematic colonization, marginalization, and discrimination by non-Indigenous mainstream society (The Truth and Reconciliation Commission [TRC], 2015). Thus, it is possible that factors, which contribute to Indigenous resilience, differ from non-Indigenous communities because of these historical traumas and holistic models of wellbeing.

The implementation of the residential school system in Canada, and the prioritization of colonizing practices within such institutions, have created residual effects that have proliferated throughout generations of Indigenous peoples. These adverse effects are commonly referred to as intergenerational trauma (TRC, 2015). Suppressing Indigenous cultural practices such as language, traditional teachings, and expression of spirituality, remain evident today (TRC, 2015) through a widespread loss of language and disruption of positive cultural identity (McIvor et al., 2009). Intergenerational trauma is associated with lower ratings of physical and mental health, increased risk for distress, and increased suicidal behaviours (Hackett, Feeny, & Tompa, 2016). This trauma is related to the high prevalence of other negative life experiences such as homelessness (Oelke, Thurston, & Turner, 2016), lower educational attainment (First Nations Regional Longitudinal Health Survey, 2005), and increased substance use (Ross et al., 2015). Intergenerational trauma has not been experienced universally among all Indigenous populations (TRC, 2015). Some people and communities have been protected from the detrimental outcomes more than others (Kirmayer Brass, & Tait, 2000). Indigenous communities within Canada have diverse cultural and spiritual practices, as well as unique histories of trauma and subsequent effects.

Given the unique risk factors experienced by Indigenous people in Canada, protective factors, and outcomes of resilience, must be reviewed considering the characteristics of this population (Brokenleg, 2012). Documentation of global experiences of resilience has indicated the importance of such a contextualization (Fleming & Ledogar, 2008; Ungar, 2013; Walls, Whitbeck, & Armenta, 2016). Although resilience factors can be similar among cultures, complex relationships exist between relevant stressors and resilience outcomes, modifying the effects of these factors within specific populations. Failure to incorporate such factors such can drastically change conclusions (Walls et al., 2016). What could be a protective factor in one instance could be a risk factor within another (Fleming & Ledogar, 2008). Culturally specific indicators of resilience have been observed and measured in relation to other populations such as commitment to culture, use of traditional language and practices, and connection to spirituality (Snowshoe et al., 2015). Consideration of dynamic resilience outcomes associated with diverse populations, including how outcomes are modified within the context of various cultural experiences, promotes positive health outcomes (Rutter, 2012; Ungar, 2013).

Models of Indigenous resilience emphasize traditional conceptualizations of health as holistic models of wellbeing. Rather than focusing on the absence of illness, the examination of Indigenous wellbeing provides strength-based measurement of individual, family, and community wellness (Assembly of First Nations & Health Canada, 2015). Indigenous models of resilience have aimed to incorporate Indigenous worldviews and "ways of knowing" that account for how individuals perceive, engage, interpret, and contextualize themselves and their relationships (McGuire-Kishebakabaykwe, 2010). The identification of protective factors, defined as specific components contributing to positive outcomes and adaptation, regardless of exposure to adversity, is a priority within a holistic wellness framework.

Promoting resilience within Indigenous youth has been prioritized by many communities as a way to promote overall Indigenous wellbeing over the lifespan. The

existence of unique cultural factors may mitigate the effects of adversity within Indigenous youth and promote wellbeing (MacDonald, Ford, Willox, & Ross, 2013; Ungar, 2013). Documenting and understanding these features can foster resilience within a potentially vulnerable population, ultimately promoting the health and wellbeing of Indigenous young people, and can also inform interventions for the general population. The objectives of this study were to explore existing literature pertinent to Indigenous youth that 1) defined resilience and how it was measured, 2) identified outcomes related to resilience and 3) reviewed protective factors that promoted resilience.

Method

Data Sources

A systematic search of published grey and peer-reviewed published literature was completed between September 1, 2015 and November 15, 2016. Reference reviews of obtained sources were also used to find additional literature. The databases used in the study can be found in Table 1. The search terms included: Aboriginal, First Nation*, Indigenous, Indian, Métis, Native, Inuit, and Resilien*.

Study Selection

To be included in this review, studies were related to Indigenous youth resilience in Canada. Articles published after 1980 were considered. The included studies referred

Table 1: Databases and search terms used to identify studies

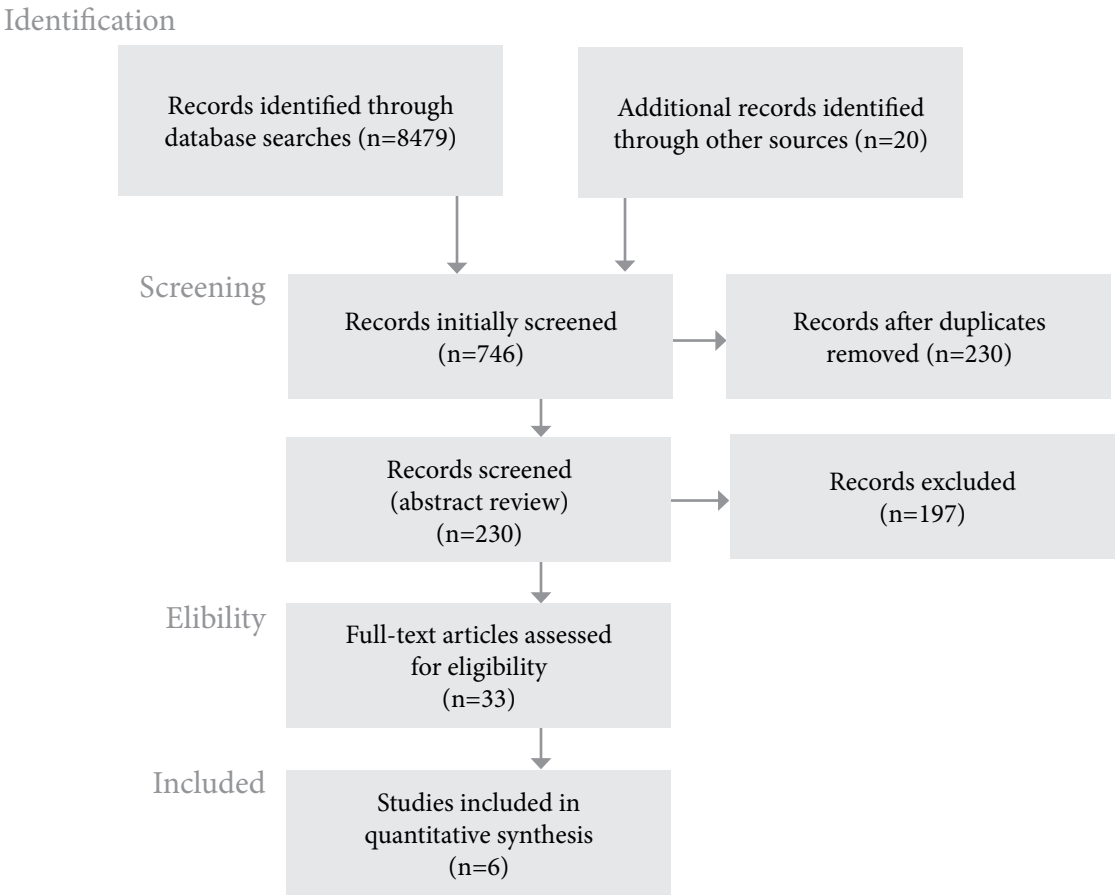
Databases	Grey Literature
Academic Search Premier	National Native Alcohol and Drug Abuse Program
Australian Indigenous HealthInfoNet	National Native Addiction Partnership Foundation
Bibliography of Native North Americans	Youth Solvent Abuse Program
CINAHL	National Native Mental Health Association
Cochrane Library	Assembly of First Nations
ERIC	National Aboriginal Health Organization
Health Canada-First Nations and Inuit Health	Thunderbird Partnership Foundation
Indigenous Studies Portal	Royal Commission on Aboriginal People
Manitoba Aboriginal and Northern Affairs	Aboriginal Healing Foundation
MEDLINE	National Collaborating Centre on Aboriginal Health
National Aboriginal Health Organization (NAHO)	Centre for Aboriginal Health Research
National Indian and Inuit Community Health Representative Organization (NIICHRO)	Chiefs of Ontario
Native Health Database	Métis Nation
ProQuest Dissertation and Thesis Database	Inuit Tapiriit Kanatami
PsychARTICLES	
PsychINFO	
Public Health Department of the Cree Health Board	
ScienceDirect	
Social Sciences Citation Index	
US Department of Health and Human Services- Indian Health Services	
Web of Science	

specifically to the connection of resilience in youth with either protective factors or related outcomes. Studies were excluded if they did not provide outcomes or protective factors related to resilience, if the target population was not youth (defined broadly between the ages of 12 to 30), or if the literature was not available in English. An initial search identified 230 potential sources (see Figure 1). Upon further review, 126 of those sources were excluded due to irrelevance. Of the 104 remaining sources, 71 of those were excluded due to not including Canadian youth. Of these international articles, there were 48 with relevant subject material; 52% of these (n= 25) examined US Indigenous samples, 40% (n = 19) looked at Australian samples, and 8% (n = 4) reviewed other countries (New Zealand, Norway, and Peru). The final review included 33 Canadian sources that met all study selection criteria, with 24 of these providing at least one outcome relating to youth resilience.

Data Extraction

The location, age, and Indigenous identity of participants were extracted when studies were reviewed. Additional data (Table 2) were extracted from studies and included methods,

Figure 1: PRISMA Diagram



definitions of resilience, and key findings related to either outcomes related to resilience or protective factors associated with promoting resilience. Comparisons between studies are made with caution as the reviewed studies assessed a wide array of Indigenous populations in Canada. These studies represented distinct populations and therefore, results were not necessarily uniform across these groups.

Results

See Table 2 (on following page).

Study Methods

The methods used by the included studies were quantitative (n= 6), qualitative (n= 13), mixed-methods (i.e., including both a quantitative and qualitative component; n=9), literature reviews/theoretical papers (n= 5), and program description (n = 1). Interviews and focus groups were the primary sources of qualitative data, and were chosen by researchers to provide a holistic and collaborative understanding of resilience in Indigenous communities. One study, reported the use of relational Indigenous epistemology, an Indigenous research method, as a framework for study design (Saskamoose et al., 2016).

The majority of studies (n= 12) used a community-based participatory research approach. Common steps within this approach included being supervised by a research advisory committee, having the community generate research questions, engaging with Indigenous stakeholders throughout the project, and obtaining community permission before engaging in research activities. Thus, measures were taken to ensure the results were valid and accurate according to community members' knowledge.

Six studies reported using a strength-based approach within their study design. Within these studies, the role of the strength-based approach differed, ranging from guiding the entire understanding of resilience (Dell et al., 2011), to simply identifying strengths by youth (Brooks et al., 2015). Strength-based frameworks were used within the literature to promote youth empowerment, build capacity, foster leadership skills, and increase collaboration. Dell and colleagues (2011) compared elements of a strength-based approach to positive psychology with values of Anishinabe culture and found similar elements contributing to quality of life. These elements included connection (i.e., spirituality, perseverance, hope, and wisdom), self-efficacy (i.e., future mindedness, and responsibility) and living a meaningful life (i.e., courage, and creativity; Dell et al., 2011).

Assessing resilience. Most studies engaged in qualitative data analysis, and included methods such as semi-structured interviews, focus groups, ethnographic methods, and arts-based methods, among others (see Table 2 for the specific methods used by studies). The questionnaires and qualitative research methods were primarily designed by the researchers and reflected a desire to capture rich, in-depth, lived experiences and values. Among the five quantitative studies, two (Ungar at al., 2008; Zahradnik et al., 2010) used the Child and Youth Resilience Measure (CYRM; Ungar et al, 2008), and two used the Cultural Connectedness Scale (Showshoe et al., 2015; Snowshoe et al., 2016), to measure outcomes related to youth resilience.

Table 2: Data Synthesis

Source	Indigenous Population & Other Characteristics	Age (years)	n	Method	Definition of Resilience	Key Findings
Ames et al. (2015)	Aboriginal Off-reserve	12-23	283	Quantitative Investigated if self-esteem & optimism moderated depressive symptoms & alcohol use	Not specified	Participants that reported high levels of optimism and self-esteem scored lower on depression, even when controlling for gender and alcohol risk. A correlation between heavy drinking and depression was not seen after including protective factors, suggesting a mediating effect from these factors. However, self-esteem was not significant & optimism could not be analyzed, but the authors suggest they might work together as mediators.
Andersson, et al. (2008)	Aboriginal	n/a	11 studies	Literature review	Provides a reference for an evolving framework of what resilience is, but note that resilience can be measured in relation to risk factors, social pressure, and opportunities.	There were associations between resilience and personal assets, and social resources. Personal assets included mastery, self-esteem, low distress, and pride in one's heritage are considered to be features of resilience in Aboriginal youth. Knowledge of adverse consequences was not associated with resilience. There was an association between church attendance and not smoking but church attendance was not protective of other risks.
Blackstock & Trocmé (2005)	Aboriginal	n/a	n/a	Literature review	Contends that child, family, and community resilience are interdependent	Stronger, more resilient, children come from strong communities, and interventions need to focus attention toward reducing community based risk factors to improve resilience for Indigenous youth.
Brokenleg (2012)	Not available	n/a	n/a	Theoretical	Closely intertwined with trauma. "The capacity for adapting successfully and functioning competently, despite experiencing chronic stress or adversity following exposure to prolonged or severe trauma" (p. 9)	Resilience allowed people to live life well and it comes from being able to get back up when life knocks you down. "Resiliency is being strong on the inside, having a courageous spirit." (p. 12) Youth are resilient when they develop a sense of belonging, mastery, independence, and generosity.
Brooks et al. (2015)	First Nations Saskatchewan Male Not in School	12-16	Quantitative: 332 Qualitative: 49	Mixed methods Community based participatory research Arts based Interviews Quantitative surveys	"Resilience is not just an individual's capacity to cope with adversity, but a community's capacity to extend resources to sustain well-being and provide these resources in culturally relevant ways " (p. 707)	Family, culture, and programming influence resilience, but also youth's own definition of resilience can influence results.

Caldwell & Maloney (2008)	Aboriginal	n/a	n/a	Qualitative Interview	None provided	Description of proram, none reported.
Dell, Dell, & Hopkins (2005)	First Nation On-reserve Residential inhalant abuse treatment centre	12-26	Not specified	Mixed	"Resiliency is viewed here in a holistic way, consisting of a balance between the ability to cope with stress and adversity (recognizing the consequent creation of a skill set of positive coping strategies) and the availability of community support." (p. 5) Resiliency is a shield to protect against any future drug use, as inhalant use is associated with increased rates of future drug use.	Resiliency was a holistic concept intended to strengthen youths' spirit as part of a residential substance-use treatment. The community was important to maintain gains and provided the youth with resilience when re-entering the community after treatment. Outcomes were related to abstinence from substances, with 82% of clients remaining abstinent after 6 months of treatment.
Dell & Hopkins (2011)	Aboriginal Volatile substance users in residential treatment	<18	154	Mixed Program evaluation of residential treatment with cultural emphasis	Defined resilience as an individual ability to overcome difficulties as well as the availability of community resources.	Almost half of the youth attending the program reported remaining abstinent 90 days after leaving and the majority returned to school.
Fanian et al (2015)	Tłįcho (First Nations)	13-20	4 Youth 5 Facilitators	Mixed Method: Questionnaires Focus groups Field notes Reflective practice notes Debriefing sessions	"Resilience can be understood as "both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways" (p. 2)	Involvement in the program was reported by youth to increase their confidence and skills. The youth reported that the activities were engaging, culturally relevant, and could be used to spread their messages throughout the community.
Filbert & Flynn (2010)	First Nations Living in out of home care	10-17	97	Quantitative	Successful outcomes or adaptation despite serious threats to development (p. 560).	Higher scores in youth's prosocial behavior, self-esteem educational performance, and behavioral difficulties (i.e., proxies of resilience) were associated with greater developmental assets.
Government of Canada (2005a)	First Nations Living on reserve Inuit Living in an Inuit community	10-30	n/a	Review	A capability of individuals that develops over time, helps in successfully coping with significant adversity or risk, contributes to overall health, and is enhanced with protective community and individual factors.	Provided recommendations to reduce suicide rates in Indigenous communities. Suggested that attention be placed on strengthening protective factors such as family connectedness, informal support networks, community cohesiveness, problem-solving skills, and a sense of personal autonomy. Adequate parenting support, including information on how to recognize suicidal behaviours or thoughts should be provided. Furthermore, structural issues of power impacts the resiliency of individuals (e.g. unresolved land claims, poverty and substandard infrastructure) need to be considered.

Hackett et al. (2016)	Inuit Suicidal youth	n/a	n/a	Program description	No specific definition defined. Aimed to build resilience through: "(1) enhance[ing] the mental, physical, and spiritual health of a group of "at-risk" youth; (2) build[ing] social connections between the youth and other community members; and (3) transmit[ing] environmental knowledge, skills, and values from experienced harvesters (i.e., Inuit mentors skilled in the areas of hunting, harvesting, navigation, and traditional knowledge) to youth." (p. 64)	No male school-aged suicides since April 2012. Reduction in clinic visits because of suicide attempts.
Hansen & Antsanen (2016)	Northern Manitoba Cree (First Nations)	Elders	5	Qualitative Ethnographic methods	Resilience was discussed as being a process that is acquired and developed by anyone. It is demonstrated when people are able to be flexible, have a vision for how to succeed, and when they flourish in the face of adversity. Resilience is embedded in the land and related to land-based practices.	Elders communicated that traditional educational practices fostered resilience through gentle and experiential methods, connected to the land, transmitted through family and community members, learning traditional languages, and communicating that wellbeing is a balance between the mind, emotions, physical health, and spirituality. The Elders suggested contemporary education can promote resilience through traditional teachings, culture, community members, first languages, spirituality and fostering a positive Indigenous identity. By also demonstrating respect for "the land, the self, the people, and the spiritual world" (p. 14)
Hopkins (2012)	Tłı̨cho (First Nations) High school graduates	Not specified	11	Qualitative Social phenomenology	Healthy resistance, autonomy and nonconformity. The continual construction and development of identity.	Resilience was demonstrated in regard to high school achievement and ability, but this resilience was not seen across time or situations. Three diverse, complex, and dynamic patterns of educational attainment resiliency were found in this study. The authors found many themes relating to educational resilience including: connections to ancestors, cultural sources/ learning, social referencing, perceptions of intellect, self-regulation, social world vigilance, reflective decision making process, citizenship, coping strategies (personally developed), self-advocacy.

Hudson (2016a)	Youth accessing a community program for Indigenous people	18-25	5-9 (varied daily)	Qualitative Arts based methods	Provided multiple definitions of resilience. Included the idea that resilience is the process of overcoming adversity to reach positive adaptation. Also included a connection to community, sense of identity of self and community through time, accessing personal and community strengths, and having insight into oneself and spirituality.	Throughout the project youth demonstrated their resilience by communicating holism and flexibility. They also demonstrated having interpersonal confidence and improved sense of self, although this was sometimes related to developing a dichotomous sense of self as an Indigenous individual as well as an urban young person. Youth also demonstrated a perseverance to succeed and a sense of personal power and influence over the future. Important to resilience was retaining distinctiveness, connection to ceremony, social advocacy, seeking the truth about culture, and having tenacity.
Kral et al. (2014)	Inuit	12-19	23	Qualitative Modified grounded theory	"Resilience is viewed less as an individual trait but rather through the social context as a process. Inuit see resilience as hope or niriumniq, and in the community of Igloolik also as tunngajuk or "having one's feet on the ground," being grounded, or having a foundation on which to live". (p.675) The authors also noted coping, going through a tough time that will pass: experience or healing, and being a strong person, either physically or spiritually as important cultural aspects for resilience.	Stressors were considered to be: bullying, substance abuse, school, domestic violence, romance. Talking to people (friends, family) and engaging in cultural activities (hunting, camping, and fishing) promoted resiliency.
Lafferty (2012)	Aboriginal	Grade 1-12	724 youth enrolled in the program	Mixed Program description Case presentations Initial outcome indicators Parent feedback	""Do Edàezhe" is a Dogrib expression describing a person who is capable, skillful, and knowledgeable: a person, who has the skills needed to survive in the world in the traditional Dene sense". (direct quote p. 217)	Involvement with the program was related to an overall improvement in attendance, decreases in the number of office referrals, and an increase in academic performance. (p. 226) Parent feedback identified a broad range of improvements in youth including more positive views of the self (i.e., increased self-esteem) and being more involved in activities.

Lalonde (2006)	Aboriginal On-reserve	12-18	Nearly 600	Mixed	Defined resilience as a process, and not specific attributes of a child, involving interactions with the environment, neighbourhoods, community, and family.	Indicators of cultural continuity account for increased levels of risk for suicide despite socioeconomic and community risk factors. This is attributed to a greater sense of personal persistence through time that is experienced by individuals in communities without cultural continuity. Individual resilience was related to community resilience.
Leibenberg et al. (2015)	Indigenous Remote community	*M* = 15.42 *SD* = 1.81	228	Mixed Case study	Reiterated the definition from Ungar et al. (2008), reflecting resilience as a transactional process between individuals and their community, the community's access to and allocation of resources, a holistic understanding of support, connections to ancestors, land, and language, and resilience being locally derived.	Speaking Inuttitut was associated with higher contextual resource scores, especially spiritual questions. Having a sense of responsibility, respect, and being able to listen contributed to a sense of identity, as well as control and power over one's life. The case study document resilience stemming from providing care, reciprocal teamwork, trust, support from others, sharing, patience, intergenerational connectedness, and a feeling of agency.
Oliver & LeBlanc (2015)	Indigenous and non-Indigenous homeless women Toronto	15-21	8	Qualitative Multiple case studies Life history interviews	Relied on Ungar's (2007) definition of resilience: "[R]esilience is the outcome from negotiations between individuals and their environments, to maintain a self-definition as healthy" (p. 87).	Women were able to maintain resilience their interactions with the community. They demonstrated resistance to colonialism and Eurocentric ways of knowing, as well as self-determination and resistance in their Aboriginal identities by reclaiming, owning, and practicing cultural traditions. The women also maintained involvement with potential sources for success despite chaos and found support through greater social networks as family (e.g., grandmothers, aunts, uncles, community members). Maintaining self-esteem, cultural identity, and a sense of belonging was also important.

Pearce et al. (2015)	Indigenous Vancouver, Prince George, and Chase, British Columbia Illicit drug users	14-30	191	Quantative	Resilience was defined as a personal characteristic of being able to positively adapt despite adversity, as well as cultural resilience, which is language, culture, and spirituality, buffering against adversity.	Greater resilience scores on the Connor-Davidson Resilience Scale were seen among youth who were never in foster care, as well as those who graduated high school. Low to moderate or severe emotional neglect was associated with lower resilience scores, as were experiencing sexual abuse, daily crack use, and blackout drinking. Higher resilience scores were also associated with greater endorsement of having a family that often or always lived by traditional ways, family speaking traditional languages, youth speaking traditional languages, living traditionally for the last six months, and accessing drug and alcohol treatment.
Petrasek et al. (2015)	Inuit Nunatsiavut	15-25	17	Qualitative Semi structured interviews Constant comparative method Explored mental health and well-being in relation to climate change Positive approach	Relied on examples: belief in self, positive role models, cultural traditions and practices	Five themes of mental health & well-being were identified: 1) being on the land 2) connecting to Inuit culture, 3) strong communities, 4) relationships with family and friends and 5) staying busy Challenges to resilience were: restricted travel, access to the land, threats to traditional ways and worry due to climate change.
Riecken (2006)	First Nations University Students	Secondary High School Students	28 videos 29 interviews	Qualitative Community based participation research	The ability to overcome adversity. (p. 10) "Resiliency is an approach that expands our thinking about students, schools, and communities beyond problem identification and resolution to strengths identification and actualization." (p.10)	Participant relationships with communities were improved, across generations, and within a diverse group of community members. Participants improved sense of culture, and self.

						"Six key elements of resilience identified by Henry and Milstein (2004) are positive connections and relationships; nurturance and support; purposes and expectations; clear, consistent and appropriate boundaries; life-guiding skills; and meaningful participation." (p.10)	
Ritchie et al. (2014)	First Nations	12-18	59	Mixed Concurrent embedded strategy Longitudinal	"The ability to successfully cope with change or misfortune." (p. 4)		Resilience was increased between the first day of the program & one month later for youth (resilience scores reverted back to similar level after a year). Changes in family and living situation were the most commonly noted factors affecting resilience. Although, recent fatalities, life stressors, and bad influences leading to bad decisions also affected resilience. Community and school programs had a positive influence on resilience.
Sam et al. (2015)	Indigenous Attending a secondary school in British Columbia	14-17	136	Quantitative	Resilience is a person's ability to overcome adverse events. (p. 240)		A secure attachment pattern was associated with higher levels of attachment in comparison to insecure attachment pattern. The insecure attachment patterns were associated with lower resilience scores Preoccupied attachment associated with lowest mean resilience scores, second was dismissing attachment, and fearful attachment after controlling for gender, socioeconomic status, and age. Preoccupied attachment was associated with the lowest mean resilience scores, second was dismissing attachment, and third lowest resilience scores were associated with fearful attachment.

Saskamoose et al. (2016)	First Nation & Metis Attending an Indigenous youth health & wellness program	14-17	13	Qualitative Relational Indigenous epistemology Participatory action research	Resilience was defined as the ability of an individual to navigate to resources, positively adapt despite adversity, as well as the environment's ability to provide necessary resources. Resilience was also conceptualized as being related to cultural connectedness, community, family, and cultural values, as well as efforts to revitalize language, spirituality, and culture.	Youth viewed their connection to culture, relationships with elders & role models, navigating addictions, and engaging in nuerodecolonizing activities (e.g. yoga & sports; supporting a balance between the 4 aspects of health) as supporting resilience.
Shea et al. (2013)	First Nations On-reserve Female	13-16	20	Qualitative Community based participation Photovoice Sharing Circle Surveys Exploring healthy bodies & body image from a female First Nation point of view	Resilience was defined as: "[p]ositive adaptation despite adversity" (p. 3), although the authors recognized that contemporary definitions encompass the family and community. Additional factors included: "1) connection to the land and a sense of place; 2) restoration of tradition, language, spirituality, and healing as personal and collective resources; 3) stories and storytelling as a privileged way of knowing and transmitted collective identity; and 4) political activism as a source of collective and individual agency." (p.10)	Having a healthy body, and healthy body image, was related broader social and community issues (such as loss and substance abuse), not just the physiological body. Healthy body image was tied to the ability to refrain from using addictive substances. Many participants struggled to define body image; the girls challenged societal ideals about beauty & defined it more broadly; incorporated ideas of health into their definitions of beauty.

Snowshoe et al. (2015)	Aboriginal Mostly on-reserve	11-29	319	Mixed Interviews Focus groups Develop a scale that measures connection to culture in Aboriginal populations Strengths based approach	"Positive adaptation despite adversity" and a "natural, human capacity to navigate life well." (p.250)	A 3 factor model that explained the Cultural Connectedness Model; the resulting factors were labeled identity (Factor 1: positive sense of exploration and commitment to one's culture, 14 items), traditions (Factor 2: utility of traditional practices and language, 15 items), and spirituality (Factor 3: connection to the spirit world through an adoption of a FN worldview, seven items).
Snowshoe et al. (2016)	Indigenous Rural Saskatchewan & SW Ontario	11-24	290	Quantitative	Resilience was defined as an Indigenous person's ability to thrive despite the history of colonial influences and the effects of this history, as well as cultural connectedness and revitalization of First Nation culture.	Cultural identity was significantly positively correlated with self-efficacy, sense of self in present, sense of self in future, school connectedness, and life satisfaction. Traditions were significantly positively correlated with self-efficacy. Spirituality was significantly positively correlated with sense of self in the future and school connectedness. Incorporating cultural connectedness measures accounted for more variance in cohesive self-concept (with identity & spirituality contributing), school connectedness (identity, traditions, and spirituality), life satisfaction (identity, traditions, and spirituality).
Sutherland (2005)	First Nations On-reserve	11-15	20	Qualitative Semi-structured interviews Critical incidents Positive/strength based approach	Resilience was measured based on individual protective factors (school engagement, future orientation, intrinsic motivation toward school, and extrinsic motivation toward school) and micro-system factors (the importance placed on grades, the importance placed on approval by family, and teachers and self-monitoring of schoolwork completion).	Students with more protective factors could define science & distinguished between science & traditional knowledge (it was an additive effect); intrinsic motivation was higher for collateral learners. Students had a tendency to work together on more difficult assignments. Students were better able to recount the informal experiences that they had in relation to science as opposed to the formal knowledge they had learned.
Tait & Whiteman (2011)	First Nation and Metis	n/a	n/a	Theoretical Book introduction	None reported	N/A

Ungar et al. (2008)	Aboriginal	15-18	19	Community based participation research Qualitative Open-ended interview Constant comparative method Axial coding Identify characteristics of resilience as defined by youth who are coping well	Capacity to navigate to resources that sustain wellbeing, the capacity of the person's social and ecological environment to provide resources, and the capacity of individuals, families, and communities to negotiate for resources to be shared in culturally and contextually meaningful ways (p. 2)	7 tensions (different degrees of access) were identified as contributing to wellness for all individuals: access to material resources, access to supportive relationships, development of a desirable personal identity, experiences of power and control, adherence to cultural traditions, experiences of social justice, and experiences of a sense of cohesion with others.
Zahradnik et al. (2010)	First Nations	≥14	126	Quantitative	"Ability to thrive in the presence of adversity" (p. 409) An interaction between individual factors and environmental factors that individuals and communities use to navigate and negotiate toward wellbeing.	Found a negative correlation between resilience and PTSD, PTSD symptoms, as well as exposure to violence.

Definition of Resilience (Conceptualization and Measurement)

Some studies defined resilience in terms of how it was measured, or as the ability to successfully adapt in the face of adversity (Government of Canada, 2005a ; Sam et al., 2015; Snowshoe et al., 2015; Snowshoe et al., 2016; Ritchie et al., 2014; Zahradnik et al., 2010). Other studies provided more diverse and complex definitions. The complex definitions identified resilience as dynamic, being affected by many individual and community factors, as well as continuously changing and developing (Blackstock & Trocmé, 2005). Definitions of resilience were related to individual factors that encouraged the development of protective factors (i.e., that promoted resilience) to increase successful outcomes for youth (Filbert & Flynn, 2010). Specific skills, such as the ability to use available resources and having a strong sense of agency, were viewed as concepts that increased resilience and positive outcomes for youth (Lafferty, 2012; Ungar et al., 2008). Activities and feelings of interconnectedness were also articulated in terms such as meaningful participation, political activism, and meaning and purpose. A sense of belief in oneself as well as in spirituality was also important to the concept of resilience (Saskmoose et al., 2016; Snowshoe et al., 2016).

A unique view of resilience in Indigenous populations is evident through the incorporation of community-related resilience factors (Brooks et al., 2015; Dell et al., 2005). These community factors can be viewed as either autonomy and access factors or support and connectedness factors. Factors noted in the autonomy and access theme include community ability to provide necessary or helpful services, accessing resources in culturally meaningful ways, and being able to remain autonomous, resistant, and non-conforming (Hudson, 2016b; Hopkins, 2012). Within the support and connectedness theme the factors that emerged are: connection to the land and sense of place, collective identity, nurturance and support, as well as ecological and social interconnectedness (Hansen & Antsanen, 2016; Kral et al., 2014; Shea et al., 2013; Lalonde, 2006). The combination of individual factors with community and culturally based factors provides a more accurate, holistic model, of Indigenous resilience.

Identified Outcomes Related to Resilience

Promoting youth resilience in substance misuse residential treatment has been associated with positive outcomes (Dell & Hopkins, 2011). Approximately half of the youth surveyed by Dell and Hopkins (2011) reported abstinence 90 days after treatment, which increased to about 74% remaining abstinent after 180 days, and 84% of youth attending school. Similar to these promising overall outcomes, resilience scores have been associated with reductions in specific symptoms as well. For example, Ames et al. (2015) found that higher levels of optimism and self-esteem were associated with lower depressive symptoms. Resilience was also found to moderate re-experiencing symptoms after exposure to violence (physical, sexual, and emotional abuse; exposure to domestic violence), with lower levels of overall resilience being associated with increasing re-experiencing symptoms as the frequency of violence exposure increased (Zahradnik et al., 2010). These findings reinforce and extend the existing research, positioning resilience as an important feature for successful coping, into Canadian Indigenous samples.

Positive outcomes related to increased wellbeing of Indigenous youth have been reported. Increased resilience has been associated with improvement in school attendance, decreases in the number of office referrals, and increased academic performance in Language Arts and Math (Lafferty et al., 2012). Resilience was associated with increased confidence and skill development for youth engaging in a strength-based creative arts program (Fanian et al., 2015). Participation in the program, and the creative arts, was associated by the study authors to foster resilience, form relationships, and stimulate communication within northern communities.

Protective Factors That Promoted Resilience

Factors that promoted resilience for youth included: participating in community programs and activities, positive personal identity, relationships that foster community connectedness, positive peer and family relationships, engaging in cultural activities, creating connections and a sense of place, having positive experiences of social justice, and access to material resources (see Table 3 for an outline of resilience factors within studies). These resilience factors were associated with positive outcomes in school settings, substance use intervention programs, and mental health research. For example, an increased number and higher rating of protective factors (engagement with school, future orientation, intrinsic-, and extrinsic-motivation for school) was associated with higher rates of collateral learning strategies for scientific concepts (Sutherland et al., 2004). This finding suggests that youth were able to identify when it was appropriate to use and apply Indigenous knowledge, or non-Indigenous knowledge, and possibly be able to reconcile differences between them (Sutherland et al., 2004). Challenges to promoting resilience within Indigenous youth were described by Petrasek et al., (2015) and included restricted travel, access to the land, and ongoing difficulties engaging with traditional activities.

Discussion

The reviewed studies found that fostering resilience as a way to produce better mental health outcomes for Indigenous youth. Most studies suggested the use of a collaborative approach that engages community-based perspectives of culture to create a holistic model of resilience and wellness. The majority of studies described the role of resilience in facilitating better mental health outcomes for Indigenous youth in Canada. Resilience was described as a central component to fostering youth success. Although the definition and conceptualization of resilience varied across studies, it remained a valued factor in the promotion of positive mental health outcomes for youth. Facilitating youth success by fostering factors that promote resilience was deemed to be beneficial by the reviewed studies. Resilience was related to positive longitudinal wellbeing for youth, (Ritchie et al., 2014; Dell et al., 2005) being expressed as a way that youth cope with, and recover from, trauma in their life.

Many studies relied on participants to individually define and discuss resilience, rather than conceptualizing the term for participants. Within many studies, a collaborative approach allowed youth to speak about resilience in a relatively unstructured manner (Saskamoose et al., 2016; Petrasek et al., 2015; Riecken, 2006). Participants were able to utilize their own

Table 3: Factors Promoting Resilience

Factor	Studies Identifying Factor
Participating in community programs and activities	Brooks et al., 2013 Lafferty et al., 2012 Petrasek et al., 2015 Ritchie et al., 2014
Positive personal identity (related to body image, self-esteem, confidence, etc.)	Anderrson et al., 2008 Dell & Hopkins, 2011 Fanian et al., 2015 Shea et al., 2013 Snowshoe et al., 2016 Ungar et al., 2008
Relationships that foster community connectedness	Hackett et al. 2016 Leibenberg et al., 2016 Riecken et al., 2006 Saskamoose et al., 2016 Snowshoe et al., 2016
Positive peer and family relationships	Brooks et al., 2015 Kral et al., 2014 Leibenberg et al., 2016 Pearce et al., 2015 Petrasket et al, 2015 Ungar et al., 2008
Engaging in cultural activities	Dell & Hopkins, 2011 Hackett et al. 2016 Kral et al., 2014 Leibenberg et al., 2015 Pearce et al., 2015 Petrasek et al., 2015 Saskamoose et al., 2016 Shea et al., 2013 Snowshoe et al., 2016 Ungar et al., 2008
Creating connection to land and a sense of place	Dell & Hopkins, 2011 Hackett et al., 2016 Leibenberg et al., 2016 Pearce et al., 2016 Shea et al., 2013
Having positive experiences of social justice	Ungar et al., 2008
Access to material resources	Ungar et al., 2008 Pearce et al., 2016 Saskamoose et al., 2016

personal definition of resilience, and associate it with their own outcomes of success. In some of the quantitative studies, the measures used were either created by the study investigators based on the needs of the communities (e.g., Snowshoe et al., 2016) or previously validated within a Canadian Indigenous population (Ungar at al., 2008; Zahradnik et al., 2010). A collaborative and flexible approach allowed communities to be independently engaged in discussions relatively unhindered by researcher conceptualizations of this construct.

Examining resilience using collaborative approaches within Indigenous communities has identified definitions of resilience that have deviated from previously conceptualized non-Indigenous models (Kirmayer et al., 2011). Within these non-Indigenous constructs of resilience, less emphasis is placed on the complexity and dynamic nature of greater systems outside an individual, such as family and community. Individual characteristics such as

hardiness or intelligence fail to account for environmental protective factors, such as cultural identity or land-based activities, which are typically discussed within Indigenous definitions of resilience. Non-Indigenous conceptualizations of health and physical adaptation may not be applicable within an Indigenous context. Greater meaning has been given to the definition of resilience for Indigenous populations through the use of collaborative community methods, such as narratives related to stories of self-identity, personal histories, and cultural teachings (Kirmayer et al., 2011).

Although conceptualizations of Indigenous youth resilience in the retrieved studies often did align with existing non-Indigenous definitions of resilience, there was a unique prioritization Indigenous culture reviewed in many studies. Engagement in culture, and promoting a positive cultural identity was both a factor that promoted resilience and an outcome variable that demonstrated resilience in youth. Often considered to be a factor in traditional models of wellbeing (Ungar et al., 2008), engagement in culture was not simply one factor related to Indigenous youth resilience, it was a key factor. The promotion of resilience was considered dynamic and particularly dependent upon the cultural context in which it was fostered. Resilience in youth was associated with their engagement in culture, such as participation in land-based activities, traditional language use, or ceremonies.

This finding is similar to research that has identified how engaging with culture has facilitated positive outcomes for Indigenous youth. Cultural continuity, described as processes of transformation within past of traditions, has been identified as a protective factor against Indigenous youth suicide (Chandler & Lalonde, 2008). A review of the effects of traditional language use by Indigenous youth found language use was associated with positive physical effects such as reduced smoking, better self-reported wellness, and less rates of diabetes (Whalen, Moss, & Baldin, 2016). A program that promoted a strengths-based approach to increasing physical activity in First Nations youth found that physical activity was predominately associated with cultural activity, through active community contributions, land-based activities, and other wellness initiatives (Baillie et al., 2016).

A holistic understanding of wellness was used in almost all studies. Resilience was associated with promoting the overall wellbeing of individuals by fostering a balance between emotional, physical, mental, and spiritual elements. The successful promotion of resilience was associated with increased wellbeing of youth that can be seen in a greater sense of self confidence, a sense of positive identity, as well as connectedness to family and the greater community. This holistic perspective of wellbeing and resilience suggests that the key factors in resilience vary between Indigenous and non-Indigenous communities.

The prioritization of Indigenous measures of wellbeing and individualized markers of success aligned with community-based participatory approaches of the reviewed studies. Most studies used a collaborative approach to completing their research goals. Research questions were often defined by communities. Studies engaged community stakeholders throughout the research process, and promoted youth to guide the research questions and study design. Incorporating community members and youth into these projects ensures that the methods and results align with cultural values and beliefs, suggesting that an accurate portrayal of Indigenous resilience has been demonstrated.

Study Limitations

Due to the wide variance of study methods and approaches, it was difficult to compare resilience protective factors and youth outcomes across studies. Studies could not be quantitatively compared or rigorously assessed using typical review standards due to the limited availability of studies. If such standards were applied, such as those indicated by the Cochrane Review (Higgens & Green, 2008), no studies would have met criteria.

Additional factors that have been previously identified as protective factors or factors that promote positive outcomes in youth functioning, within Indigenous populations were not included in this study. Prior research regarding the promotion of a common cultural identity, including a shared connection to the land (Turner, 2014), language use (Ball & Lewis, 2014), and positive body image (McHugh, Coppola, & Sabiston, 2014) have been associated with increased Indigenous youth wellbeing. For example, for First Nations youth, family assistance with homework, participating in sports, having positive peer relationships, and having a positive school environment were associated with positive mental health outcomes (Guèrevemont, Arim, & Kohen, 2016). Although factors such as these have been identified as protective factors within Indigenous youth populations, studies were not included in the review unless results were explicitly associated with resilience. It is likely that some protective factors and positive outcomes that demonstrate overlap with the construct of resilience were missed due to an absence of these specified search terms.

The variety of populations within this study reduced the feasibility to generalize the study results. The current research surrounding Indigenous resilience surveyed youth living in remote communities, urban areas, and attending residential treatment programs. This breadth in contextual factors, in light of the holistic nature of resilience in Indigenous communities, makes broad generalizations difficult. Furthermore, the inclusion of additional search terms, such as "coping skills", or "protective factors", may have retrieved more studies that may not have explicitly referred to resilience, but were nonetheless, assessing it. Interpretation of the results presented should take these limitations into consideration.

Future Directions

This review provided a number of factors that promoted resilience for Canadian Indigenous youth, as well as outcomes related to those youth that demonstrated resilience. Best practices for the measurement of resilience within Indigenous youth populations is an area the future research should seek to examine. The concept of resilience remains inconsistently defined among studies. This could be due to the various meanings across populations, but also could indicate a disjointed collaborative understanding. Assessing more youth definitions of resilience across Canadian Indigenous populations would be a valuable contribution to existing literature.

Applying non-Indigenous indicators of resilience to those that are previously defined within an Indigenous framework would be a valuable contribution. Indigenous indicators of wellness, such as those defined within the First Nations Mental Wellness Continuum Framework, may offer further indicators of resilience in Indigenous populations (Assembly

of First Nations, 2015). Purpose, Hope, Belonging, and Meaning have been identified as measurable indicators of Indigenous wellbeing, but how such factors promote resilience within Indigenous populations has yet to be identified. Some studies in the current review have described similar factors to these indicators and further research illustrating outcomes related to these constructs could be examined. Given existing knowledge of how factors that foster resilience vary significantly within cultures (Walls et al., 2016), further examination of indicators of success for Indigenous populations is required.

Many studies reported protective factors that promoted resilience for youth, or outcomes due to high resilience, but few reported both process and outcome variables. Longitudinal studies that report Indigenous youth resilience factors and subsequent outcomes could provide evidence for development of future practices that support and promote youth resilience. The age range of populations classified as youth studies was high, ranging from 12 to 30. Recognizing and researching the evolving needs of various age groups as youth mature would also be beneficial.

Examining population differences, such as between urban and rural youth, Elders, or residential school survivors could identify generational differences in resilience within Indigenous communities. For example, it is recognized that the location of youth can directly influence their development of protective factors, development of resilience factors, and subsequent mental health outcomes. Having access to adequate services, support networks, and other programs or services, can vary significantly based on where youth reside.

Research evidence about how reported needs, strengths, and barriers to success affect these populations could be useful to inform local youth programs and services. Ongoing program evaluation and reporting of youth outcomes remains necessary. Of the programs reviewed, many reported increasing resilience in youth, but did not report measurable outcomes. Specific components of programs that are associated with better outcomes for youth could be provided.

Conclusion

The literature reviewed reported factors related to increased resilience and outcomes related to resilience for Canadian Indigenous youth. Definitions of resilience demonstrated complexity and pervasiveness, and numerous contributing factors, for Indigenous youth. Current resilience frameworks are conceptualized as resulting from exposure to negative life events and successfully navigating past them. Within Indigenous models, consideration of the context by which an individual emerges is fundamental to the development of resilience. A continuous exploration of how existing resilience frameworks integrate within an Indigenous perspective is required. With respect to Indigenous populations, particularly those that are characterized as enduring greater levels of adversity as compared to non-Indigenous communities, resilience remains fostered in the presence of hardship. When Indigenous communities are privy to the same amenities as non-Indigenous ones, existing factors of resilience may require re-conceptualization. As it stands, Indigenous resilience research indicates that individuals, families, and communities, do not only cope with adversity, they can thrive within these circumstances.

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Evolution over a year of individual protective factors in preschool victims of sexual abuse

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Abstract:

Objectives: While protective factors associated with resilience have been well-documented (e.g., initiative, self-regulation, attachment), less is known about their comparative levels in children exposed and not exposed to trauma. Given the relevance of examining this issue to enhance our understanding of mechanisms underlying resilience, the objectives of this study were to: 1) examine and compare individual protective factors in sexually abused and non-abused preschoolers over the course of one year; and 2) investigate the impact of sexual abuse (SA) characteristics on protective factors.

Methods: Sexually abused (n = 109) and non-abused preschoolers (n = 78) (M = 4.38; SD = 0.95) were recruited at Time 1 (T1), and assessed in a follow-up one year later (T2; n = 56 abused and n = 74 non-abused children). Parents completed the Devereux Early Childhood Assessment (LeBuffe & Naglieri, 1999) at T1 and T2, to assess their levels of Initiative, Self-Control, and Attachment. SA characteristics were coded from clinical files (History of Victimization Form; Wolfe, Wolfe, Gentile, & Boudreau, 1987).

Results: Abused children were more likely than non-abused children to present low levels of Initiative, Self-Regulation, and Attachment both at T1 and T2. Analyses indicated that while levels of protective factors increased over the year, abused children still presented lower scores at T2 compared to non-abused children. Severity of abuse tended to be positively related to Initiative, duration of the abuse was negatively associated with Self-Control at T2, and intra-familial abuse tended to be associated with higher levels of Attachment at T2.

Conclusion and Implications: While the presence of protective factors is deemed essential to achieving positive psychosocial adaptation following SA, preschool victims

presented lower levels of protective factors at T1 and T2. This should be accounted for in interventions that aim at fostering resilience in young children.

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Authors declare no conflict of interest.

Keywords:

child sexual abuse, protective factors, resilience, preschool

Introduction

Child sexual abuse (SA) affects approximately one in five women and one in ten men worldwide (Stoltenborgh, van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011). Child SA has been associated with a plethora of psychological, behavioral, and physical health difficulties in children and adults such as internalizing problems (e.g., depression, anxiety), externalizing problems (e.g., aggression, delinquency), at-risk sexual behaviors (e.g., unprotected sexual relationships, high number of partners), and chronic health conditions (e.g., Hébert, Daigneault, Langevin, & Jud, in press; Hébert & Langevin, 2016). While a large body of scholarly research has examined correlates of child SA in adulthood, less is known about the short-term correlates in childhood. The preschool population is particularly understudied even though preschoolers constitute a non-negligible proportion of abused minors (14-30% depending on the studies; Statistique Canada, 2010; U.S. Department of Health and Human Services, 2013). Available studies show that preschool victims of SA present more internalizing and externalizing problems (Hébert, Langevin, & Bernier, 2013), and greater emotion regulation deficits (Séguin-Lemire, Hébert, Cossette, & Langevin, 2016) than non-abused children. In addition, SA is linked to dissociation symptoms (Bernier, Hébert, & Collin-Vézina, 2013) as well as sleep difficulties (Langevin, Hébert, Guidi, Bernard-Bonnin, & Allard-Dansereau, in press) in young victims.

While an important proportion of sexually abused children present difficulties following the abuse, studies report that between 10 to 53% of SA survivors appear

asymptomatic (Dombhart, Münzer, Fegert, & Goldbeck, 2015). While this finding may reflect possible latent effects, it also raises the question of the potential protective factors linked to adaptation following such a traumatic event. Resilience has been defined by Cicchetti (2013) as "a dynamic developmental process encompassing the attainment of positive adaptation despite exposure to significant threat, severe adversity, or trauma that typically constitute major assaults on the processes underlying biological and psychological development" (p. 404). Per that definition, these asymptomatic children, could be labeled resilient.

Protective factors associated with resilience have been studied extensively in the last decade with community samples or at-risk samples of youth. At the community level, protective factors include, among other elements, early intervention and prevention programs, and accessibility to resources (Zolkoski & Bullock, 2012). At the family level, the importance of having a stable and supportive relationship with a caregiver, family cohesion, and the presence of a stimulating environment are among the factors fostering resilience (Zolkoski & Bullock, 2012). Personal characteristics, such as temperament, coping skills, self-regulation, sociability, and autonomy are also identified as critical protective factors for children confronted with adverse life events (Zolkiski & Bullock, 2012).

Studies specifically investigating protective factors among maltreated or sexually abused children are sparser, and none, to our knowledge, have studied their evolution over time. Yet, one factor consistently associated with positive adaptation in maltreated children is the presence of a supportive and stable caregiver (Afifi & MacMillan, 2011; Cicchetti, 2013). Quality of the child-parent attachment per se appears to be the critical variable (Bolen & Lamb, 2007). At the individual level, numerous factors have been associated with adaptation following a trauma including coping strategies, trust in others, easy temperament, empowerment, and social connections (Afifi & MacMillan, 2011). Characteristics linked to the SA itself (e.g., less severe abuse) have also been associated with resilience in abused girls (Afifi & MacMillan, 2011). Of interest is that one study of maltreated children found relational factors to be less predictive of positive adaptation in maltreated children than in non-maltreated children (Kim & Cicchetti, 2003). Conversely, individual protective factors (e.g., self-esteem) were identified as more closely related to resilience in maltreated children.

Empirical studies relying on a typological approach have highlighted a diversity of profiles in SA victims, and attempted to identify the factors that could explain this diversity (e.g., Hébert, Langevin, & Charest, 2014). One of these studies (Hébert et al., 2014) - the only one to our knowledge using a sample of preschool victims of SA - identified three subgroups of abused children: one presenting moderate (mostly externalizing problems) levels of symptomatology (37.1% of abused children), one presenting high levels of internalizing and externalizing symptomatology (21% of abused children), and one described as the resilient subgroup (41.9% of abused children), involving children presenting levels of symptomatology similar to those of the comparison group of non-abused children. One of the key elements that discriminated this resilient subgroup from the two other groups of sexually abused children was the presence of higher levels of individual protective factors as measured by a parent-reported questionnaire. Indeed, resilient abused preschoolers were found to present greater levels of self-control, more initiative, and more positive and stronger relationships with adults and peers than children in the other two subgroups.

Despite wide interest in the concept of resilience and its relevance to the study of several health issues, life events and specific conditions, surprisingly few measures are available to assess the construct (Békaert, Masclet, & Caron, 2011). In their systematic review, Windle, Bennett, and Noyes (2011) identified only 15 such measures, the majority of which were designed for adolescent or adult populations. There exists few standardized measures that evaluate the presence of protective factors in younger children (LeBuffe & Shapiro, 2004). The Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999) is one of the rare evaluation tools addressing resilience factors in preschool populations focusing on three components: self-control, initiative, and attachment. As findings from scholarly reports suggest that elements of mastery/initiation, relatedness/attachment, and behavioral control are central to resiliency (Prince-Embury, 2010), the DECA appears to be a relevant tool to assess protective factors in young children confronted with adversity. In one study of 1,344 developmentally and economically at-risk preschool children, a confirmatory factor analysis indicated the proposed three-factor structure fitted the data best (Ogg, Brinkman, Dedrick, & Carlson, 2010).

While we know that abused children presenting a higher number of protective factors are more likely to display adaptation following the trauma, it has also been suggested that maltreated children, to begin with, present with lower levels of these protective factors than children in the normative population. This is due in part because maltreatment itself can have a detrimental effect on factors such as self-regulation, relationship quality, and self-esteem, but also because difficulties in these areas are known risk factors for SA in childhood. While this appears to be a necessary first step in understanding the mechanisms underlying resilience in abused children, few studies have compared the presence and levels of protective factors in maltreated and non-maltreated children, and even less have done so using a longitudinal design. Trauma and events following disclosure may further hinder resources, and thus levels of protective factors may even decrease over time. Daigneault, Dion, Hébert, McDuff, and Collin-Vézina (2013) assessed resilience features in adolescents with the Child and Youth Resilience Measure (CYR-M). In their sample of 589 youth in grades 10-12, 12% of adolescents reported a history of child sexual abuse. In their first study, victims of SA obtained lower scores, when compared to non-abused peers, on individual/social, familial, as well as community features associated with resilience. Yet, the study relied on a cross-sectional design, and therefore evolution of protective factors was not investigated.

Against this backdrop, the present study aims to describe the presence of individual protective factors (initiative, attachment, self-control) in a group of sexually abused preschoolers as compared to a group of non-abused children. A novel contribution is to assess how protective factors evolve over a year. An additional objective was to explore whether characteristics of the SA experienced related to levels and evolution of protective factors.

Method

Participants

A sample of 187 children (109 sexually abused children; 78 non-abused children) aged 3½-7 years old (M = 4.38; SD = 0.95) and their caregivers (non-offending parents in the SA

group; 91.85% a maternal figure) was recruited for this study at Time 1 (T1). The SA group included 25 boys and 84 girls, while the comparison group included 21 boys and 57 girls. Families were evaluated again approximately one year later (M = 5.28 years old; SD = 0.86) for a second assessment (T2), and 130 children participated in this follow-up assessment (56 abused children; 74 non-abused children). The reasons for dropping out of the study were: one unsubstantiated SA (this participant was excluded from the analyses), 28 refusals, and 16 families were unreachable. Missing information was present for 12 participants. Children who participated at T1 and T2 were compared to those who dropped out of the study on sociodemographic characteristics at T1 (sex, age, family structure, maternal level of education, annual income) for both groups separately. No differences were found. Abuse characteristics (severity, duration, relationship with the perpetrator) were also compared for sexually abused children and no differences were identified. There were no differences on initial scores of Initiative, Self-Control, and Attachment between children who participated in the one-year follow-up assessment and those who did not.

Abused and non-abused groups were compared on sociodemographic variables at T1 and no differences were found regarding children's sex and age. However, children in the SA group were less likely to live with both of their biological parents ($\chi 2(186) = 74.00$, $p < .001$), their mothers reported lower levels of education ($\chi 2(181) = 78.67$, $p < .001$), and lower annual income than non-abused children ($\chi 2(174) = 77.36$, $p < .001$). Sociodemographic and SA characteristics are presented in Table 1.

Measures

Sociodemographic questionnaire. At T1 and T2, caregivers completed a questionnaire gathering sociodemographic information about the participating child and his/her family (e.g., age, sex, annual family income, maternal level of education, family structure).

Sexual abuse characteristics. SA characteristics were obtained through the child's medical or clinical file using the History of Victimization Form (HVF; Wolfe, Wolfe, Gentile, & Boudreau, 1987) completed by a research assistant. Characteristics coded included the severity of the acts involved (clothed touching, unclothed touching, attempted penetration/penetration), the duration of the abuse (one occurrence or several), and the nature of the relationship with the perpetrator (intrafamilial or extrafamilial). A prior analysis of interrater agreement based on 30 records indicated high agreement using this form (median intraclass correlation = .86). Complementary information was obtained through caregivers' reports when necessary.

Individual protective factors. Caregivers assessed the level of individual child protective factors using the DECA (LeBuffe & Naglieri, 1999). The DECA is a 27-item measure including a total score and three subscales: Initiative (11 items), Self-Control (8 items), and Attachment (8 items). Caregivers rated the child's behaviors using a 4-point frequency scale. T-scores ranging from 28 to 72 were derived for each scale, with higher scores reflecting higher levels of protective factors. The Initiative subscale reflects the use of independent thoughts and actions on the part of the child to meet his/her needs (e.g., "keep trying when unsuccessful (act persistent)."). The Self-control subscale refers to the child's

Table 1. Sociodemographic and Abuse Characteristics of Participants

Variable	SA group (M/%)	Comparison group (M/%)	Statistical test
Child age T1	4.50	4.23	$t(184) = -1,94$, ns
Child age T2	5.32	5.24	$t(128) = -0.51$, ns
Child gender T1			$\chi^2 (1, N=186) = 0.35$, ns
Girls	76.9%	73.1%	
Boys	23.1%	26.9%	
Family of origin (yes)	25.9%	89.7%	$\chi^2 (1, N=186) = 74.00, p < .001$
Maternal education level			$\chi^2 (1, N=181) = 78.67, p < .001$
Elementary (max. 6 years)	4.9%	0.0%	
High school (max. 11 years)	39.8%	2.6%	
College (max. 14 years)	35.0%	12.8%	
Undergraduate (max. 16 years)	15.4%	46.2%	
Graduate (max. 22 years)	4.9%	38.5%	
Annual family income			$\chi^2 (1, N=174) = 77.36, p < .001$
< 20,000$	38.8%	5.3%	
20,000 - 39,999$	23.5%	5.3%	
40,000 - 59,999$	25.5%	15.8%	
60,000 - 79,999$	5.1%	13.2%	
80,000 - 99,999$	5.1%	19.7%	
100,000 - 119,999$	0.0%	17.1%	
120,000 - 139,999$	2.0%	9.2%	
≥ 140,000$	0.0%	14.5%	
Severity of SA			
Clothed and unclothed touching	45.9%	NA	
Penetration or penetration attempt	54.1%	NA	
Duration of SA			
One occurrence	38.6%	NA	
More than one occurrence	61.4%	NA	
Relationship with the perpetrator			
Member of the family	70.6%	NA	
Not a member of the family	29.4%	NA	

Note. ns = not significant. NA = not applicable. $ = Canadian dollars.

ability to self-regulate his/her behaviors and affects and to express feelings appropriately (e.g., "handle frustration well."). Finally, the Attachment subscale assesses the quality and mutuality of the child's relationship with other children and adults (e.g., "respond positively to

adult comforting when upset."). The DECA is a validated questionnaire presenting acceptable psychometric properties (LeBuffe & Naglieri, 1999), and had shown high internal consistency coefficient with a sample of sexually abused children (α = .78 to .88, see Hébert et al., 2014). Following authors' guidelines, using a cut-off point of T-score < 40, children are labeled as presenting concerning levels of Total Protective Factors, Initiative, Self-Control, and Attachment.

Procedure

Children from the SA group were recruited at two intervention centers offering services to sexually abused children (CHU Ste-Justine and Centre d'expertise Marie-Vincent). At T1, parents in the SA group completed the questionnaire at the intervention center with the assistance of a trained research assistant if necessary. At T2, these families were met at home. Children in the comparison group were recruited from daycare centers and kindergartens from the Montreal, Quebec area, and were met at home at T1 and T2. Inform written consent was obtained prior to the assessment. A small financial compensation was offered to participating parents (20$). The Ethic Committees of the CHU Ste-Justine and Université du Québec à Montréal approved this study.

Results

All statistical analyses were performed using SPSS 20.

Preliminary Analyses

All variables were distributed normally; hence no transformation was required. No outliers were identified. Simple imputations using the Markov Chain Monte Carlo algorithm in SPSS were used to impute missing data (31% of the data for DECA T2). This method consists in replacing each missing value with a plausible value by performing simulations from a Bayesian predictive distribution under normality hypothesis of the data. All of the study's variables were included in this procedure, as well as other sociodemographic (e.g., number of children in the family, mother's age) and behavioral scores (e.g., levels of internalizing and externalizing problems, emotion regulation competencies, dissociation symptoms) that were available and could be associated with the DECA scores or the missingness. This allowed to conduct analyses on the complete sample of children, even when T2 variables were included.

Correlations between study variables indicated that the DECA subscales were positively correlated to one another at T1 and T2 (r between .29 and .69, $p < .001$). Correlations between levels of a same protective factor at T1 and T2 were also positive for the three DECA subscales: $r = .51$ ($p < .001$) for Initiative, $r = .61$ ($p < .001$) for Self-Control, and $r = .45$ ($p < .001$) for Attachment. Correlations were also performed between children's age and DECA scores. Results indicate that age was not related to Initiative, Self-Control, and Attachment at T1, but that it was correlated with Self-Control at T2 ($r = .25$, $p = .004$).

Bivariate analyses were performed to assess if family structure (family of origin vs. not), annual family income, and maternal education were related to DECA T-scores, given the differences between the SA group and the comparison group on these sociodemographic

Table 2. Range, Mean, Standard Deviation, and Percentages of Concerning Scores for the DECA Subscales

Variable	Minimum	Maximum	M	SD	% Concerning scores
Sexual abuse Group					
DECA - Initiative T1	28	70	47.80	10.71	25.3%
DECA - Initiative T2	28	72	52.07	11.73	29.1%
DECA - Self-control T1	28	72	50.03	11.08	23.2%
DECA - Self-control T2	28	72	53.26	11.75	23.6%
DECA - Attachment T1	28	72	46.38	10.40	28.3%
DECA - Attachment T2	28	72	51.90	11.08	20.0%
Comparison Group					
DECA - Initiative T1	28	72	54.82	9.11	6.4%
DECA - Initiative T2	30	72	57.45	8.97	4.1%
DECA - Self-control T1	40	72	59.31	7.44	1.3%
DECA - Self-control T2	38	72	61.97	7.56	2.7%
DECA - Attachment T1	28	72	55.13	11.10	5.1%
DECA - Attachment T2	30	72	56.68	12.09	8.1%

Note. M = mean. SD = Standard Deviation. T1 = time 1. T2 = time 2.
DECA = Devereux Early Childhood Assessment.

variables. A T-test showed that family structure was significantly related to all DECA scores at T1 and T2, except for Initiative T2, with children living in their family of origin presenting higher scores. Results from an ANOVA indicated that maternal education was significantly and positively related to all DECA scores at T1 and T2, except for Attachment T2, and that annual family income was significantly and positively associated with all DECA scores at T1, and with Self-Control at T2. For the sake of parsimony, it was elected to keep only Family Structure as a control variable for the main analyses, as this variable was strongly correlated with annual income ($r = .66$, $p < .001$) and maternal education level ($r = .58$, $p < .001$).

Description of the Evolution of Protective Factors

Means and standard deviations of DECA scores at T1 and T2, as well as percentages of children presenting concerning levels of each protective factors, separated by group, are presented in Table 2. Data in this table show that children in the SA group presented lower scores on the three subscales of the DECA at both T1 and T2. Standard deviations are higher in the SA group, indicating a more diverse distribution of scores. A higher percentage of children appears to present concerning levels of Initiative, Self-Control, and Attachment at both measurement times in the SA group, as compared to children in the comparison group. As for the total DECA score, close to one in three sexually abused children (32.3%) presented concerning levels of protective factors, while only 2.6% of comparison group did at T1. At T2, 30.9% of sexually abused children scored in the concerning range while only 4.1% of non-abused children did so.

A crosstab analysis was used to assess the trajectories in terms of concerning versus normal levels of DECA scores between T1 and T2. For Initiative: 15.7% of abused children and 1.4% non-abused children had scores within norms at T1 but concerning levels à T2, 13.7% of abused children and 2.7% of non-abused children remained with concerning levels between T1 and T2, and 7.8% of abused children and 4.1% of non-abused children started with concerning levels and ended with levels within norms at T2. Regarding Self-Control: 9.8% of abused children versus 2.7% of non-abused children presented levels within the norm at T1 but concerning levels at T2, 15.7% of abused children versus 0% of non-abused children remained with concerning levels between T1 and T2, and 2.0% of abused children versus 1.4% of non-abused children presented scores in normative levels at T2 while presenting concerning levels at T1. Finally, for Attachment: 15.7% of abused children and 6.8% of non-abused children achieved scores in normative levels at T1 but concerning level at T2, 3.9% of abused children and 1.4% of non-abused children remained with concerning levels between T1 and T2, and 17.6% of abused children and 2.7% of non-abused children presented concerning levels at T1 and then scores within norms at T2.

Protective Factors over a Year

Repeated measures ANCOVAs were performed using the T-scores for Initiative, Self-Control, and Attachment, to assess the evolution of these scores over a year as a function of the group. Family Structure was entered as a control variable. Significant Time x Family Structure interactions were found for all the DECA subscales, indicating that the difference between children living with their family of origin versus not decreased over the year, but

Table 3. Summary of the results from the repeated measures ANCOVAs comparing abused and non-abused children (n =186)

DECA subscales	F (*df*)	p	η2partial
Initiative			
Time x Sexual Abuse	2.14 (1, 183)	.145	.012
Time	30.75 (1, 183)	<.001	.144
Sexual Abuse	6.66 (1, 183)	.011	.035
Family Structure	2.92 (1, 183)	.089	.016
Self-Control			
Time x Sexual Abuse	2.34 (1, 183)	.128	.013
Time	22.73 (1, 183)	<.001	.110
Sexual Abuse	21.85 (1, 183)	<.001	.107
Family Structure	1.31 (1, 183)	.254	.007
Attachment			
Time x Sexual Abuse	0.19 (1, 183)	.664	.001
Time	15.59 (1, 183)	<.001	.078
Sexual Abuse	5.52 (1, 183)	.020	.029
Family Structure	5.50 (1, 183)	.020	.029

these results are not detailed here given the objectives of this study. Results described below are presented in Table 3.

Results of the analysis pertaining to Initiative showed a significant main effect of Time indicating an increase in Initiative scores between T1 and T2 in both groups. A significant main effect of SA was also found with abused children presenting lower levels of Initiative both at T1 and T2. No Time x Group interaction was found and the effect of Family Structure was only marginal. Partial eta squared indicated a small to medium effect of SA and a large effect of Time.

Self-Control was significantly associated with Time and SA. Here again, T-scores increased over the year, and SA was associated with lower levels of Self-Control both at T1 and T2. No Time x Group interaction was found and the effect of Family Structure was not significant. The effect of Time and SA were medium to high.

Finally, the analyses of Attachment scores indicated a significant main effect of Time, with attachment scores increasing over the year in both groups. A significant main effect of SA was also identified, with abused children presenting lower levels of Attachment. Family Structure was significantly associated with attachment scores. Children living in their family of origin, with both their parents, presented higher levels of Attachment. No Time x Group interaction was found. Effect sizes for SA and Family Structure were small to medium, while the effect of Time was medium to large.

Association with Sexual Abuse Characteristics

To assess the effect of SA characteristics on DECA T-scores and their evolution, repeated measures ANOVAs were performed, with the abuse characteristic (severity, duration, relationship with the perpetrator) as the grouping variables. Therefore, only the 108 sexually abused children were included in these analyses. Detailed results are presented in Table 4. Significant main effects of Time were found for every DECA subscales, a finding that was expected given results of prior analyses. Only significant results regarding the abuse characteristics will be reported here.

A significant Time x Duration of the abuse interaction was found for the Self-Control T-scores with a small to medium effect size. A post-hoc analysis indicated that while the duration of the abuse (one episode vs. more than one episode) was not associated with Self-Control at T1 ($F(1, 106) = 0.02$, $p = .903$), a significant difference was found at T2 ($F(1, 106) = 4.04$, $p = .047$) with children having sustained SA on more than one occasion (T1estimated marginal mean = 49.93; T2 estimated marginal mean = 51.51) presenting lower scores than children abused once (T1estimated marginal mean = 50.20; T2 estimated marginal mean = 56.12). In other words, levels of Self-Control in children abused more than once by their perpetrator showed a smaller increase between T1 and T2. A significant main effect of the relationship with the perpetrator was found for Initiative. This effect indicated that victims of intrafamilial abuse presented higher levels of Initiative at T1 and T2 than victims of extrafamilial abuse. Effect size was small to medium.

Table 4. Summary of the results from the repeated measures ANCOVAs with abuse characteristics (n =108)

DECA subscales	F (*df*)	p	η2partial
Severity			
Initiative			
Time x Severity	1.96 (1, 106)	.164	.018
Time	12.38 (1, 106)	.001	.105
Severity	3.20 (1, 106)	.077	.029
Self-Control			
Time x Severity	0.64 (1, 106)	.425	.006
Time	9.73 (1, 106)	.002	.084
Severity	0.00 (1, 106)	.980	.000
Attachment			
Time x Severity	0.73 (1, 106)	.395	.007
Time	20.92 (1, 106)	<.001	.165
Severity	0.06 (1, 106)	.807	.001
Duration			
Initiative			
Time x Duration	0.20 (1, 106)	.658	.002
Time	12.98 (1, 106)	<.001	.109
Duration	0.01 (1, 106)	.936	.000
Self-Control			
Time x Duration	4.14 (1, 106)	.044	.038
Time	12.37 (1, 106)	.001	.105
Duration	1.52 (1, 106)	.221	.014
Attachment			
Time x Duration	0.33 (1, 106)	.568	.003
Time	20.42 (1, 106)	<.001	.162
Duration	0.02 (1, 106)	.877	.003
Relationship with perpetrator			
Initiative			
Time x Relationship	3.52 (1. 106)	.063	.032
Time	6.97 (1, 106)	.010	.062
Relationship	4.90 (1, 106)	.029	.044
Self-Control			
Time x Relationship	0.04 (1, 106)	.844	.000
Time	8.39 (1, 106)	.005	.073
Relationship	1.45 (1, 106)	.231	.014
Attachment			
Time x Relationship	0.14 (1, 106)	.708	.001
Time	18.50 (1, 106)	<.001	.149
Relationship	0.84 (1, 106)	.362	.008

Discussion and Implications

The aim of this study was to examine individual protective factors (initiative, attachment, self-control) in a group of sexually abused preschoolers as compared to a group of non-abused children and to explore their evolution over time. Our results show that sexually abused children presented lower levels of protective factors both at initial and follow-up assessments, and were more likely to be categorized as presenting concerning levels of Initiative, Self-Control, Attachment, and Total Protective Factors than non-abused children. These results are consistent with those reported by Daigneault and colleagues (2013) in one of their samples indicating that abused adolescents presented lower scores on a resilience measure. When compared to a sample of Head Start children, our sample of sexually abused preschoolers seems to present concerning levels of Total Protective Factors in a greater proportion at T1 and T2 (32.3% and 30.9% vs. 23%) (Brinkman, Wigent, Tomac, Pham, & Carlson 2007).

Results also suggest that while mean levels of Initiative, Self-Control, and Attachment increased over time in both groups, sexually abused children did not catch-up with non-abused children over the year and still presented lower mean levels of protective factors at T2. This increase in competencies is to be expected given the rapid socio-emotional development that takes place in the preschool period (Luby, 2006). However, a non-negligible proportion of abused children - more so than in the comparison group - were found to be in a trajectory of normative levels of Initiative, Self-Control, and Attachment at T1, to concerning levels at T2. This is compounded by the fact that a higher proportion of abused children presented low levels of individual protective factors at both assessment times. Hence, while protective factors are deemed essential to overcoming a trauma such as a SA in early childhood, children who could benefit the most from these protective factors appear less equipped to do so.

Our investigation of the relevance of SA characteristics in understanding levels of individual protective factors in abused children resulted in some interesting and somewhat surprising findings. However, these results must be considered with caution given the high attrition in the SA group. While it appears intuitive that a more severe and chronic SA, as well as a SA perpetrated by a family member would be associated with lower protective factors, data reveal several non-significant findings. Severity of the abuse was not related to any DECA scores; duration was not associated with Initiative and Attachment scores; and relationship with the perpetrator was not associated with Initiative nor Self-Control. These results are coherent with those of numerous studies showing that, especially in young children, SA characteristics may not be associated with outcomes (Bernier et al., 2013; Hébert et al., 2014; Yancey & Hansen, 2010).

One significant finding with a direction of effect contrary to what we would have expected was identified. Intrafamilial abuse was associated with higher levels of Initiative than extrafamilial abuse. However, a marginal Time x Relationship with perpetrator was also identified, indicating steeper increases of Attachment over the year. It is worth mentioning that Child Protection Services are more likely to be involved in intrafamilial cases, hence more psychosocial services might have been provided to these families. Moreover, it is more likely that major changes in the family environment had occurred following an intrafamilial sexual abuse, changes that may have translated into positive impact on relationship quality,

cohesion, and support in the family. The effect of Duration on Self-Control scores was in the expected direction. These results are consistent with those of Hébert et al. (2006), indicating a positive association between the duration of the SA and externalizing symptoms such as sexualized behaviors and aggression, and suggest that victims of SA of longer duration are less likely to be able to self-regulate behaviors and affects.

Limitations

The present study has limitations that must be considered before generalizing the results. While the inclusion of a comparison group offers means to contrast abused and non-abused children on variables of interest, important sociodemographic differences were present on potentially confounding variables. Age range of participants was wide and attrition level in the SA group was quite high, but it is often the case with the difficulty in conducting longitudinal studies with SA victims. In addition, subsequent analyses need to be conducted to explore possible gender difference as previous studies identified such differences in protective factors (Ogg et al., 2010). Furthermore, past studies found gender differences in some correlates of SA and their evolution (Bernier et al., 2013; Séguin-Lemire et al., 2016). This longitudinal study is correlational, thereby preventing us from deriving conclusions about causality. While SA can impact self-regulation, relationship quality, and self-esteem, children who present a lack of these protective factors may also represent a vulnerable or targeted population for sexual predators. Unfortunately, the current study could not address this issue, and only prospective studies could do so.

Finally, resilience is clearly a multidimensional construct and unfortunately the different features related to resilience were not integrated in the present analysis. Contemporary perspectives of resilience suggest a multidimensional operationalization (Bonanno, Brewin, Kaniasty, & LaGreca, 2010). Currently, no psychometrically-sound measure appears, by itself, designed to evaluate both adversity and competence in addition to all the different levels of factors (individual, familial, community, cultural) associated with resilience (Windle et al., 2011). The DECA is similar to the majority of existing measures assessing exclusively individual resilience features.

Implications

Despite these limitations, the data gathered in the present study offers preliminary cues to understand the association between the trauma itself and the presence, levels, and evolution of individual protective factors. Results underline the relevance of investigating this association in a more detailed fashion by including variables such as gender and measures of protective factors at various levels of the social ecology. Studying the factors associated with the various pathways (e.g., normative levels at T1 to concerning levels at T2) of individual protective factors (e.g., provision of services, other adverse life experiences) would also be informative. In terms of practical implications, these results suggest that practitioners working with sexually abused preschoolers should assess protective factors prior to treatment. This assessment could allow for a more accurate prognostic and inform treatment orientation and plans. The most established psychotherapy for SA victims, Trauma-Focused Cognitive-

Behavioral Therapy, already includes components that could help foster self-control and attachment (i.e., parenting skills training, relaxation techniques, affective regulation, coping, and conjoint parent-child sessions). Children presenting to treatment with deficits in those areas could benefit from a more specific focus on these treatment components. Given that factors such as levels of initiative, self-control, and the quality of interpersonal relationships could foster resilience in traumatized young children, enhancing these individual and interpersonal skills via prevention and/or curative interventions could have a positive impact on the developmental trajectories of these children and favor positive adaptation.

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Violence and Resilience: A Scoping Review of Treatment of Mental Health Problems for Indigenous Youth

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Abstract:

Indigenous communities have sustained multiple layers of trauma across generations in their lands and social ecology. Considering services utilization as a potential resilience process and cultural as a resilience resource, Western mental health approaches have been modified and applied to Indigenous youth. A scoping review framework was utilized to explore the available research evidence regarding mental health treatment for Indigenous youth; eight articles were reviewed. The majority of interventions were based in a Cognitive Behavioural Therapy model. These interventions were effective and perceived as culturally acceptable. The results support incorporating traditional cultural activities in the treatment of mental health concerns. Development of traditional and cultural applications, especially those that may serve to bolster resilience, and measuring resilience as an outcome, is needed.

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The authors have no conflicts of interest to declare with respect to this manuscript.

Keywords:

Indigenous youth, trauma, resilience, traditional healing

Introduction

The Indigenous[1] population in Canada composes 4.3% of the total population and this proportion is growing rapidly; youth aged 14 and under compose 28% of this population, while those ages 15-24 account for an additional 18.2% (Statistics Canada, 2011). Across Canada, 49.3% of First Nations people reside on-reserve, however this does vary across the provinces (Statistics Canada, 2011). And nearly half of these individuals experience mental health difficulties, compared to only one-third of the majority Canadian population (First Nations Information Governance Centre [FNIGC], 2012; Snowshoe, Crooks, Tremblay, Craig, & Hinson, 2015). This is due, in part, to the sustained rates of sexual and non-sexual violence for Indigenous youth (25.4% of Indigenous individuals, compared to 19.4% of Non-Indigenous individuals; Brownridge et al., 2016). The need to bolster mental health resources in meaningful ways within Indigenous communities has also been recognized (Kielland & Simone, 2014).

Adolescence marks the time when mental health difficulties originate or become particularly challenging, and the risk for death by suicide is relatively high (Mental Health Commission of Canada, 2015). Indigenous children are at an increased risk for poor mental health outcomes, which can be partially attributed to the historical, systemic violence directed at this group, including physical, sexual, emotional abuse, and neglect in being removed from family and community, as well as being second or third generation residential school survivors (Statistics Canada, 2011). Prior generation residential school attendance impacts contemporary health and well-being for off-reserve First Nations, Métis and Inuit Canadians (Hackett, Feeny, & Tompa, 2016). This attendance disrupted family relationships and is part of the sequelae of historical trauma faced by peoples following the displacement of

1 The term "Indigenous" is used internationally to describe those people native to a specific geographic location. The term "Aboriginal" refers to those peoples who are indigenous to North America and encompasses First Nations, Métis, and Inuit people (Indian and Northern Affairs Canada, 2002).

communities and placement of children outside of community, and an overwhelming burden of suffering in day-to-day living due, in part, to the context of no, delayed, limited or contentious resources (Brave Heart, 2003). Second generation survivors of residential schools experience a variety of poor outcomes directly related to this intergenerational trauma including greater depressive symptoms and an increased likelihood of attempting suicide (Bombay, Matheson, & Anisman, 2011; First Nations Information Governance Committee [FNIGC], 2005).

Indigenous children and youth are also subject to re-victimization patterns from child maltreatment to adult intimate partner violence (Kong, Roh, Easton, Lee & Lawler, 2016). Poor mental health outcomes arising from this exposure include depressive symptoms and fearful attachment, raising concern as to how to ensure that a trauma-informed approach is prioritized and appropriately contextualized (Kong et al., 2016). Children and youth living within Indigenous communities are also exposed to land-based trauma, where the ongoing requirement to defend and protect land and water resources is heightened with environmental concerns over corporate and governments challenges to treaty rights (King, Smith, & Gracey, 2009; Kirmayer, Gone, & Moses, 2014).

Indigenous women and girls also experience disproportionally greater violence compared to both non-Indigenous and male counterparts. The results of this violence include reduction in leadership roles, degraded sexuality, and attempts at undermining resilience factors, such as connectedness and cultural practices (Oliver et al., 2015). Further, while homicide rates have declined for the general population, they have remained unchanged for Indigenous females. In this light, addressing gendered violence is not only a justice issue, but also a public health concern (Patrick, 2016). Finally, there are challenges to effectively obtained federally-approved supports for health.

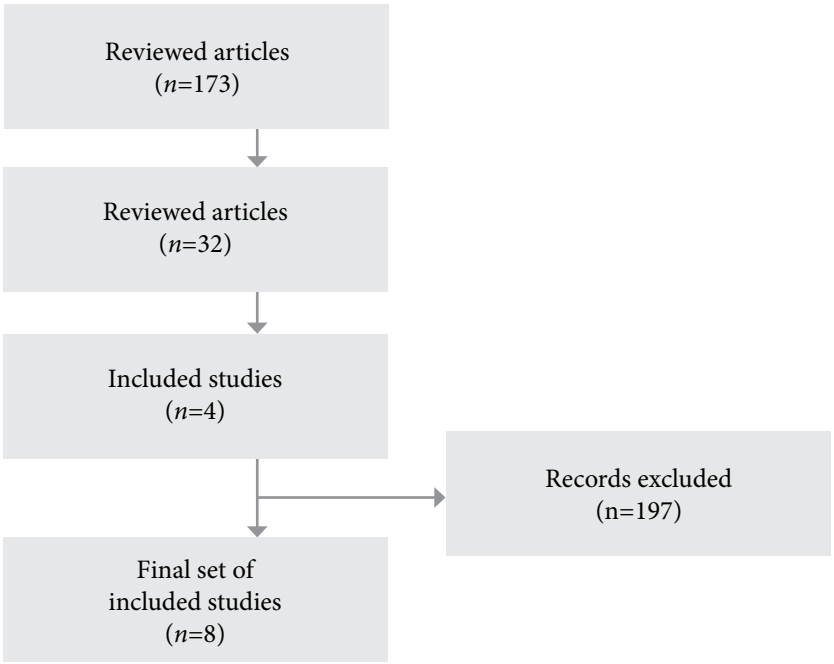
It is clear the Indigenous peoples in Canada, particularly youth, have been and continue to be exposed to various forms of violence and trauma, which in turn result in results in poor mental health. Therefore, it is important that researchers and clinicians are engaged in determining relevant interventions that demonstrate long-term improved mental health and resilience outcomes for victims of these traumas (e.g., sexual abuse survivors, mindfulness-based therapy; Earley et al., 2014). The focus of the current review is evidence-based applications for Indigenous youth experiencing traumatic events with the goal to: (1) determine interventions to support their mental health and resilience, and (2) consider to what extent Indigenous culture and traditional healing practices have been incorporated. A scoping review approach was chosen given the relative paucity of empirical evaluations within Indigenous communities that provided outcome information in both mental health and resilience-related factors. This approach is appropriate when the evidence base parameters are unknown and the state of evidence has moved beyond a narrative review, but has not yet reached the depth necessary for a systematic review (Levac, Colquhoun, & O'Brien, 2010).

Method

We proceeded through the four sequential steps of a scoping review recommended by Lande et al. (2011). Candidate studies were identified through a search of the PsycINFO

database using the search terms (intervention OR treatment OR program) AND (indigenous OR aboriginal OR first nation* OR native american OR american indian) AND (youth OR adolescen*) in the title of the articles. This search resulted in 173 articles, four of which were retained following review of abstracts. Results were limited to peer-reviewed, scholarly sources. Reference sections of identified treatment and review articles were also manually searched. As a result of this process, as well as the authors' involvement in the literature, an additional four articles were included in this review, for a total of eight studies (see figure 1).

Figure 1: Flow diagram for study selection



Studies were included if they reported evaluative (quantitative or qualitative) findings focused on the psychosocial treatment or targeted prevention of mental health disorders in Indigenous youth. Articles that were exclusively descriptive, including those detailing the development of culturally based interventions, were not included.

Results

See Table 1 (on following page).

Trauma

Trauma-focused cognitive behavior therapy (TF-CBT) is a well-established intervention for treating children who have been exposed to trauma (Cohen, et al., 2010; Silverman et al., 2008), including for culturally diverse youth in foster care (Weiner, Schneider, & Lyons, 2009).

Table 1: Results Table

Authors (year)	Name of Program	Sample Characteristics	Outcome Measure(s)	Findings
Morsette et al. (2009)	Cognitive Behavioral Intervention for Trauma in Schools (CBITS)	4 American Indian youth	Life Events Scale; Childhood PTSD Symptom Scale	PTSD & depressive symptoms were reduced for 75% of students
Morsette et al. (2012)	Cognitive Behavioral Intervention for Trauma in Schools (CBITS)	43 American Indian youth	Life Events Scale; Childhood PTSD Symptom Scale; Children's Depression Inventory	67% showed decrease in PTSD symptoms 38% showed decrease in depressive symptoms
Goodkind et al. (2010)	Cognitive Behavioral Intervention for Trauma in Schools (CBITS)	24 American Indian youth	Recent Exposure to Violence Scale; Childhood PTSD Symptom Scale; Children's Depression Inventory; Children's Coping Strategies Checklist	Significant decrease in symptoms of PTSD and anxious symptoms Slight decrease in depressive symptoms Improved symptoms of depression were maintained at six month follow-up
Woods & Jose (2011)	The Kiwi ACE program	24 Maori and Pacific youth	Children's Depression Inventory	Significant decrease in depressive symptoms post-treatment and at one-year follow-up
LaFromboise & Howard-Pitney (1995)	The Zuni Life Skills Development curriculum	98 Zuni youth	Suicide Probability Scale; Beck Hopelessness Scale; Indian Adolescent Health Scale; life skills (suicide prevention skills, active listening, problem solving); Observed role-play	Participants did not gain skills within the domains that the program targeted including self-esteem, recognizing and eliminating self-destructive behaviour, or identifying stress When assessed via a role-play, the intervention group was more skilled in suicide intervention and problem-solving
May et al. (2005)	Adolescent Suicide Prevention Project	American Indian youth (Western Athabaskan tribal nation)	Suicide gestures, attempts, & completions	Decrease in suicidal gestures and attempts No change in deaths by suicide
Le & Gobert (2013)	Mindfulness-based suicide prevention program	8 American Indian youth	Patient Health Questionnaire (PHQ-9)	The program was perceived as helpful Decreased suicide ideation Some improvement in depressive symptoms
Dickerson et al. (2012)	Drum Assisted Recovery Therapy for Native Americans	6 American Indian youth with substance use disorders, 8 substance abuse treatment providers, and 4 community members	Focus group questions	The program was deemed to be helpful and culturally appropriate
Desmond (2011)	The Urban Trails Project	40 American Indian youth	Child Behaviour Checklist; Behavioral and Emotional Rating Scale	Significant decreases in both internalizing and externalizing problems The youth also reported significant gains in behavioural and emotional strengths

Cognitive behavior therapy in schools (CBITS; Jaycox, 2004) has been adapted from TF-CBT, and is one of the most widely-researched group interventions for youth who have experienced trauma. CBITS consists of up to ten weekly school-based sessions (4 group session; 3 individual; 2 parent sessions; one teacher session). This program was originally designed for traumatized immigrant youth in inner-city schools, and has been successfully used to treat youth from ethnic minorities including African American and Hispanic youth (Stein et al., 2003).

The impact of CBITS delivered by school counselors to American Indian youth with a high level of exposure to violence and living on-reservation in the United States has been studied in Montana (Morsette et al., 2009), Nebraska (Morsette, van den Pol, Schuldberg, Swaney & Stolle, 2012), and in rural New Mexico (Goodkind, LaNoue, & Milford, 2010). In an initial study with four students, 75% reported substantial decline in PTSD or depressive symptoms following completion (Morsette et al., 2009). In a subsequent study, 67% of the 43 students who completed the program demonstrated improvements in symptoms of PTSD and 38% showed improvements in symptoms of depression (Morsette et al., 2012). An intent-to-treat analysis indicated improvement in PTSD symptoms following and minimal change in symptoms of depression (Morsette et al., 2012). Goodkind et al. (2010) reported that within their sample of 24 American Indian youth, there was a significant decrease in symptoms of PTSD and anxious symptoms, and a slight decrease in depressive symptoms. While gains in terms of improved symptoms of depression were maintained at six month follow-up, gains in PTSD symptoms were not (Goodkind et al., 2010).

Suicidality

Woods and Jose (2011) examined the impact of a school based early intervention program for symptoms of depression in grade ten Maori and Pacific Islander adolescents. The intervention was the Kiwi Adolescent Coping with Emotions (Kiwi ACE) program, a cognitive behavioral and psycho-educational intervention. Treatment consisted of eight, 90-minute group sessions facilitated by school counselors. Although the study only reported results of Indigenous youth, the intervention was offered to students of all ethnicities, and was not culturally tailored for Indigenous youth. Participants were randomly allocated to intervention and usual care (i.e., sessions with a school counsellor) control groups, with data available for 12 participants in each group. Analysis revealed outcomes favoring youth participating in Kiwi ACE program over those receiving usual care, with greater symptom reduction post-intervention and at two and 12 month follow ups (Woods & Jose, 2011).

The Zuni Life Skills Development Program (ZLS) is a school-based intervention program aimed at reducing suicide in Zuni pueblo youth (LaFromboise & Howard-Pitney, 1995; LaFromboise, 2008). The 98 Zuni youth who completed the program reported feeling less suicidal and less hopeless compared to the youth who did not receive the intervention; however there was no difference in depression scores between the two groups (LaFromboise & Howard-Pitney, 1995). The youth who completed the program also did not report any gains in the skills the program targeted including self-esteem, recognizing and eliminating self-destructive behaviour, or identifying stress, however when assessed via a role-play, raters significantly evaluated the intervention group as more skilled in suicide intervention and problem-solving (LaFromboise & Howard-Pitney, 1995).

One study was completed using the Adolescent Suicide Prevention Project, which is a public health initiative designed to support American Indian youth in Western Athabaskan tribal nation in rural United States (May, Serna, Hurt, & DeBruyn, 2005). A quasi-experimental evaluation found that the implementation of this public health approach (including universal, selective, and indicated interventions) was associated with substantial reductions in suicidal gestures and attempts (although not deaths) in youth (May et al., 2005).

An innovative pilot feasibility study examined the acceptability of implementing a mindfulness-based suicide prevention program with American Indian youth (Le & Gobert, 2013). Eight youth attending a Native American school in rural Montana participated in the program as part of a more comprehensive, community-wide suicide prevention initiative. The program was a universal intervention, delivered as a class curriculum, for 55 minutes, four days a week for nine weeks within a reservation–based school. Mixed method analysis indicated that program content was perceived as helpful and culturally acceptable by participants. Participants also reported improvements in mindfulness practice, decreased suicidal ideation, and slight improvement in symptoms of depression.

Evidence-Based Traditional Activities

American Indian youth participants in one study perceived that participating in American Indian/Native American traditional activities (through The Urban Trails project) was helpful in connecting them with the larger American Indian community (Dickerson & Johnson, 2011). The Urban Trails project was a children's mental health program for American Indians, and made use of a culturally informed holistic system of care for intervention. Forty youth participated in the entire study (including follow-up every six months for three years) and showed significant decreases in both internalizing (depressive, anxious, and somatic symptoms) and externalizing (rule breaking and aggressive behaviour) problems (Desmond, 2011). The youth also reported significant gains in terms of behavioural and emotional strengths (Desmond, 2011).

Dickerson et al. (2012) conducted a qualitative study examining the perceived acceptability and helpfulness of Drum Assisted Recovery Therapy for Native Americans (DARTNA) when used with urban American Indian and Native American youth with problematic substance abuse. The DARTNA program involved using drumming as part of a culturally adapted 12-step program, talking circles, and medicine wheel teachings (White Bison, 2007 in Dickerson et al., 2012). Accommodations were made to address the fact that drumming is traditionally a male-only activity. The professionals, youth, and community advisory board members perceived DARTNA to be helpful and culturally appropriate (Dickerson et al., 2012). Specific benefits included: healing, development of positive cultural identity, and creating a connection to culture (Dickerson et al., 2012).

Discussion

Widespread family and community disruptions place Indigenous youth at increased risk of exposure to traumatic events, including abuse and family violence, however it does appear that there are interventions that may serve to improve mental health outcomes and resilience following exposure.

Trauma

Culturally adapted CBITS programs were associated with improvement in mental health symptoms (Goodkind et al., 2010; Morsette et al., 2009; Morsette et al., 2012). Within the three implementations of this program, the core content of CBITS was maintained alongside the cultural adaptations including using culturally relevant examples, adding native linguistic concepts, embedding local history within the intervention (Morsette et al., 2009), utilizing stories and examples based on cultural teachings, as well as inviting Native elders to speak about Native perspectives of trauma, conduct healing ceremonies during sessions, and conduct ceremonies at the group graduation (Morsette et al., 2012), as well as considering the appropriateness of speaking about someone who had died (Goodkind et al., 2010). The majority of students who commenced treatment finished (Goodkind et al., 2010; Morsette et al., 2012), and counselors reported that they perceived CBITS was an acceptable match to their community (Morsette et al., 2012). Youth participants also indicated that the intervention was beneficial and enjoyable (Goodkind et al., 2010).

Goodkind et al. (2010) found that symptoms of PTSD improved during the course of treatment, but that these gains were not maintained at 6 months post-treatment. They speculated that this may have been due to experiencing trauma near the end of treatment or may reflect the chronicity and complexity of the trauma experience in Indigenous youth. Authors noted, however, that the logistics of gaining approval for the study from tribal councils, and the process of obtaining consent from participants and their parents was onerous. There was concern over the proportion of youth who displayed symptoms of PTSD, but did not participate in the study. For instance, 10% of youth eligible for the intervention did not participate because they did not feel comfortable with the group format. Further, many youth who reported high levels of exposure to traumatic events at initial screening were ultimately not eligible for treatment. Participants who had only experienced sexual abuse, or whose PTSD symptoms were due to grief or loss as opposed to exposure to violence were excluded. This criteria may have unfortunately excluded the majority of children, as rates of poly-victimization in youth are quite high (56.8%); it is likely that if a youth was exposed to violence, they have suffered another form of victimization (Hamby, Finkelhor, Turner, & Ormond, 2010).

Authors concluded that while they had made superficial adaptations to CBITS, given difficulties with recruitment and retention, deeper structural adaptations may be warranted (Rescinow, Soler, Braithwaite, Ahluwalia, & Butler, 2010). This also highlights the requirement that program developers consider the ethical implications of youth research participants who do not consent to become study participants and ensure they have the proper clinical protocols and individual intervention efforts available for these youth. Given that TF-CBT is considered a gold standard intervention, further research into assessing its acceptability and feasibility with Indigenous youth is warranted.

Overall, results of empirical evaluations of treatments to address trauma in Indigenous youth are promising. However, there are no studies conducted within community agencies. This is relevant since not all youth are comfortable in group settings, and with the relative lack of privacy offered within school settings. Further, there is a lack of guidance regarding

treatment planning for youth presenting with comorbid conditions or complex trauma (as defined as recurrent and cumulative exposure to trauma, which results in a widespread difficulties in a variety of functions including attachment, emotion regulation, and self-perception; Courtois, 2004). Difficulty in recruitment and retention suggests a need to generate strategies to improve youth engagement. Overall, results of the treatment of trauma in Indigenous youth support the use of manualized CBT based interventions with cultural adaptations.

Suicidality

Indigenous youth have one of the most elevated risks for suicide in the world (Kirmayer, 1994). There have been numbers of proposed prevention programs to address this extremely serious and pervasive issue. Recently a "review of reviews" of suicide prevention interventions for Indigenous youth was conducted (Bennett et al., 2015). Twenty-eight reviews of suicide prevention programs were included and a number of recommendations were generated included the consideration of suicide awareness curriculum in conjunction with screening, skills and 'gatekeeper' training, including peer support. There were no specific recommendations regarding Indigenous peoples or youth. However, Bennett et al. (2015) discussed the importance of Indigenous and non-Indigenous service providers to review the general recommendations in order to determine applicability. The lack of robust evidence to support particular prevention efforts for Indigenous youth makes on-going rigorous evaluation of local prevention efforts particularly important (Bennett et al., 2015).

Kirmayer, Fraser, Fauras and Whitley (2009) conducted one the most comprehensive reviews of suicide prevention programs for Indigenous communities thus far. They identified 30 suicide prevention programs for use with Indigenous populations and, although relatively few had been evaluated, 11 of them were described as "promising" (Kirmayer et al., 2009). Key elements, informed by research, emphasized the importance of moving beyond individual-level interventions to include systems-level initiatives. Kirmayer et al. (2009) noted that the most important characteristics of programs seemed to be community initiative and investment in the process, rather than the content of the intervention per se. Given the work to date, it seems critical that such promising approaches continue within a program of research to establish best-fit practices for Indigenous communities.

Holistic approaches to suicide prevention also include opportunities to participate in family and community activities, centered on sharing cultural knowledge and values. This approach implicitly acknowledges that suicidality can reflect socially-mediated (rather than psychologically) distress, including cultural and community disruption (Wexler & Gone, 2012). Interest in traditional healing and cultural activities as part of suicide prevention efforts are consistent with findings that lower rates of suicide within Indigenous communities are associated with enhanced cultural continuity (Chandler & Lalonde, 2008).

In this paper, four culturally adapted programs aimed at reducing Indigenous youth suicide were reviewed. Results from all four indicated improved mental health symptoms and/or reduction in suicidal ideation or gestures following completion (LaFromboise & Howard-Pitney, 1995; Le & Gobert, 2013; May et al., 2005; Woods & Jose, 2011). Participants

across all four programs also deemed the cultural adaptations to be acceptable. Most of these cultural adaptations referred to additions of ceremony or counseling from Elders to the intervention protocol, however one study examined the acceptability of mindfulness with American Indian youth (Le & Gobert, 2013). Within this mindfulness program ceremonies such as smudging and prayer were also incorporated and adaptations deemed appropriate (Le & Gobert, 2013). The study by May et al. (2005) was also unique in that the researchers examined trends in data over the eight years that had elapsed since the implementation of a program for American Indian youth. This population-based research is important for demonstrating long-term, sustainable effects of suicide prevention programs for Indigenous youth.

Overall, it appears the seriousness and pervasiveness of the issue of youth suicidality has driven implementation of prevention measures ahead of evaluation of the effectiveness of these prevention efforts. Comprehensive programs include awareness; screening; gatekeeping (peers and primary care providers); and treatment of psychiatric disorders. There is some limited evidence for incorporation of cultural-specific content within interventions. However, there is a pressing need for on-going evaluation of any suicide prevention efforts.

Evidence-Based Traditional Activities

A growing number of services and programs are incorporating traditional healing practices into treatments to address the mental health needs of Indigenous adults and youth. This is done in a variety of ways (Oulanova & Moodley, 2010; Trimble, 2010); some agencies use a holistic model of service, whereby a number of intervention components, including Western and traditional, are made available under the auspices of a single organization (Nebelkopf & Wright, 2011). Alternatively, there can be active collaboration between Western therapists and traditional healers, even if this does not occur within the same agency (e.g. Puchala, Paul, Kennedy & Mehl-Madrona, 2010). Western therapy can be adapted and augmented to incorporate traditional elements (e.g., culturally-based stories or symbols) to illustrate concepts within therapies (BigFoot & Schmidt, 2009; Kumpfer et al., 2002; Saylors & Daliparthy, 2004). Other services focus on participation in traditional healing and culturally-based activities (such as land-based or drumming) (Dickerson, Robichaud, Teruya, Nagaran, & Hser, 2012). Lastly, integrative therapies have been developed, whereby a hybrid model of therapy is generated by integrating Indigenous spirituality with Western-based therapies (e.g. Duran, 2006 in Gone, 2010).

Oulanova and Moodley (2010) conducted a qualitative study with Canadian practitioners (7 Indigenous; 2 European origins) to examine the way in which they integrated traditional healing and Western interventions, when delivering mental health services to Indigenous adults in Canada. Therapists reported that they generally used their own judgment to decide when (and whether) to integrate traditional healing methods into counseling. Interestingly, they also mentioned the helpfulness of traditional healing in the counselors' self-care. Other researchers have noted that the involvement of traditional healing might be perceived as appropriate for some concerns (e.g., emotional distress) but not others (e.g., infectious diseases) (Wyrostok & Paulson, 2000).

Evaluation of the impact of traditional healing on mental health is limited – possibly because such studies may be particularly ethically and logistically challenging (Puchala et al., 2010). Nonetheless, research generally suggests that use of culturally specific-programs or culturally-adapted elements appears to encourage engagement and retention, although not necessarily improved outcomes. For instance, a review of counseling literature by Trimble (2010) suggested that incorporation of cultural elements to interventions improves development of rapport, trust and empathy. Specific cultural activities that have been used in therapeutic contexts include talking and sharing circles, smudging, prayer, pow wows, sweatlodges, drumming, bead and jewelry making, and land-based activities, such as hunting and tundra walks (Mills, 2003; Nebelkopf & Wright, 2011; Portman & Garrett, 2006). One pragmatic challenge to incorporating cultural elements in treatments for Indigenous youth is the diversity of communities and, hence, traditions and ceremonies from which they might be drawn. The use of healers who can minister across tribes, and selection of and practices common to many Indigenous communities are some ways to attempt to pragmatically address this challenge (Dickerson et al., 2012; Hartmann & Gone, 2012).

Several studies also exist that evaluate the helpfulness of traditionally-based interventions with adult participants. A clinical case series conducted in Aboriginal communities in Saskatchewan, Canada examined the impact of augmenting psychiatric care with routine involvement of elders and traditional healers when addressing domestic violence (Puchala et al., 2010). The work of psychiatric and community healers was conducted jointly in some instances (e.g., family sessions) and separately in others (e.g., praying or ceremonies) While specific content of traditional spirituality was individualized for each participant, commonalities across cases included adopting a non-judgmental, non-blaming approach to perpetrators of domestic violence and involving families of both the perpetrator and the subject of violence in discussions. Therapy involved changing the narrative and co-constructing a 'redemptive script' about the violence. This redemptive script sometimes included an appeal to values and roles illustrated within traditional stories (e.g., core Aboriginal values such as respect for women; use of 'talking circles', rather than violence, to solve problems). Sixty-two percent of the adults in the study showed a "dramatic" improvement in rates of domestic violence, including 29 who had virtually ceased altogether (Puchala et al., 2010).

Schif and Moore (2006) conducted a quasi-experimental study of the immediate impact of sweat lodges on adult participants (59% of whom were Indigenous). Consistent with previous research (Ross & Ross, 1992; Colmant & Merta, 1999), short-term improvements in spiritual and emotional wellbeing were reported, although there were no follow up ratings. A retrospective study also examined the accounts of Indigenous adults speaking about their healing journeys (McCormick, 1995). More than 50% mentioned establishing a connection with nature as pivotal in their personal journey (McCormick, 1995).

Three articles were included in this review that specifically utilize traditional healing to address mental health issues and improve resilience in youth. When Indigenous youth participated in traditional activities, they reported experiencing a greater connection to the larger Indigenous community (Dickerson & Johnson, 2011; Dickerson et al., 2012). Further, it

does seem that connecting to culture and engaging in traditional activities can have a positive impact on mental health outcomes and resilience (ADULT refs). While only one study evaluated the affect that traditional activities has on youth mental health, significant gains were made in internalizing and externalizing problems, as well as behavioural and emotional strengths (which can be viewed as resilience factors; Desmond, 2011).

Despite these positive preliminary results, caution needs to be exercised when considering incorporation of traditional healing in mental health interventions. Researchers have warned against non-Indigenous practitioners making use of traditional cultural practices and some describe this as a form of cultural appropriation (Gone, 2010; LaDue, 1994; Oulanova & Moodley, 2010). Details regarding the specific nature of particular traditional healing practices might not be documented in writing, to avoid appropriation (Gone, 2010) or because, in some cultures, it is only appropriate for certain subgroups to have or make use of knowledge of particular cultural practices (Brady, 1995). Hartmann and Gone (2012) note that traditional healing activities should be carefully chosen, particularly with Indigenous youth without extensive previous exposure to traditional activities. There is also concern that traditional healers be vetted in some way to ensure the authenticity of their knowledge, and avoid exploitation of Indigenous communities. It is also important to consider that an introduction to cultural activities per se is not necessarily healing. Success in addressing addictions and other mental health problems success may be limited by the extent that peer groups support changes in the youth's behavior (Brady, 1995). Lastly, Oulanova and Moodley (2010) mentioned some practitioners were concerned about the potential responses of their regulatory colleges to use of traditional methods within therapy.

Future Directions

Several interventions have been developed to address the common problems with which youth typically present, however many of the interventions have often not been extensively evaluated, and this remains a priority for future work. Many of the studies included in this scoping review suffered from small sample sizes (Desmond, 2011; Dickerson et al., 2012; Goodkind et al., 2010; LaFromboise & Howard-Pitney, 1995; Le & Gobert, 2013; Morsette et al., 2009; Morsette et al., 2012; Woods & Jose 2011), which limited the statistical analysis that could be completed and conclusions that could be drawn from the findings. Additionally, none of the studies utilized a randomized controlled trial design. Future research regarding interventions aimed at enhancing mental health outcomes and resilience in Indigenous youth should utilize more rigorous methods and statistical techniques to improve the quality of the evidence.

Surprisingly, there were no interventions directed at youth that utilized alternative or technology-based delivery methods and as nearly half (49.3%) of First Nations people in Canada live on-reserve, this format for intervention may be appropriate (Statistics Canada, 2011). Therefore, future research in this area should consider other formats for treatment delivery including bibliotherapy, computers (and DVDs), the internet, telephone and/or telehealth. A recent review of 11 self-directed interventions to prevent externalizing disorders in children found that self-directed interventions to reduce externalizing behaviors in youth

generated large effect sizes for parent-reported child externalizing behavior, when compared to wait-list control groups (Tarver, Daley, Lockwood, & Sayal, 2014). Unfortunately, there were no comparisons between the effectiveness of self-directed and in-person therapy for externalizing disorders in youth (Tarver et al., 2014). A recent review with adults with mental health difficulties revealed that cognitive behavior therapy (CBT) delivered in alternate formats could achieve comparable outcomes to those delivered face-to-face (Andrews, Cujipers, Craske, McEvoy, & Tiov, 2010). Of course, utilizing alternative delivery for treatments comes with additional challenges regarding literacy, computer or internet access, and confidentiality. Despite these caveats, it is possible and likely that use of books, DVDs, internet sites, telehealth. and other resources may be helpful adjuncts for a proportion of Indigenous rural and remote populations, and are consistent with a public health model for intervention where higher functioning individuals can be assisted with more minimal support (Currie, McGrath, & Day, 2010).

Conclusion

Indigenous youth are at increased risk of mental health challenges and it is imperative that this risk is addressed in an evidence-based way. Unfortunately, the quantity and quality of evidence available to bolster mental health and resilience in youth, particularly those exposed to violence or trauma, is low. Many studies had small samples sizes and none employed more rigorous statistical techniques. Therefore, the conclusions that can be drawn from results are limited. Despite these drawbacks, many studies reported positive feedback from youth and relevant adults regarding the cultural adaptations made to enhance suitability of the programming. The depth of these adaptations ranged from minimal to quite deep; this range included encouraging Elders to attend intervention sessions (Morsette et al., 2009; Morsette et al., 2012), incorporation of traditional healing ceremonies (Goodkind et al., 2010) or cultural norms (LaFromboise & Howard-Pitney, 1995; LaFromboise, 2008), involvement of tribal leadership (May et al., 2005), and the utilization of cultural stories (Le & Gobert, 2013).

In sum, there is evidence that adapted interventions with widely established empirical bases in other cultures are helpful when used with Indigenous youth and their families, particularly for youth who have experienced trauma. This review draws upon the small, but growing body of literature documenting the benefits of adaptive interventions to suit the needs of Indigenous youth.

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"The lie is that it's not going to get better": Narratives of resilience from childhood exposure to Intimate Partner Violence

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Abstract:

Objectives: The welfare of children exposed to intimate partner violence (IPV) has been identified as an area needing further investigation to improve our knowledge base and services. This study sought to interpret experiences of adults who were exposed as children to IPV to explore factors of resilience identified; knowledge which may be used to inform practice.

Methods: Using a Grounded Theory (GT) approach, 12 participants were interviewed about their experiences of being exposed to IPV in childhood. Interview questions elicited perceptions of how these experiences affected participant's: childhood/adolescence; family/peer relationships; parenting attitudes; and community contexts. Interviews were digitally recorded, transcribed verbatim, and analyzed thematically by three independent coders, who documented their decision-making processes.

Results: Analysis identified five distinct themes which identify resilience as residing within individual, familial, contextual and environmental factors from a social ecological perspective: (1) escapism; (2) insight and self-efficacy; (3) perseverance and hope; (4) desire not to repeat the cycle of abuse; and (5) positive caregiving, social support and community. Specific areas to foster resilience with vulnerable children include: increasing self-efficacy; connecting to positive adults; increasing community/social support;

labeling/validating feelings about violence and educating about healthy relationships.

Conclusion and Implications: This study contributes to a knowledge base of resilience factors and processes that may characterize the trajectory of children exposed to IPV, and may also help inform resilience focused programming. Adult narratives of resilience lend support to social ecological conceptual models for how resilience can be fostered and how the inter-generational transmission of violence may be interrupted.

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The authors declare no conflicts of interest.

Keywords:

child exposure to intimate partner violence, resilience, domestic violence, children's mental health, social ecological perspective, grounded theory method.

Introduction

For well over a decade a great deal of concern has been expressed over the welfare of children who are exposed to parental violence. With lifetime prevalence rates of 1 in 3 women worldwide experiencing domestic violence (World Health Organization, 2014), and estimates of half a million children exposed to IPV every year in Canada (Johnson & Dauvergne, 2001), these concerns are not unwarranted. In Canada and jurisdictions across North America this concern has translated into national policies aimed to protect children from IPV exposure, as well as the creation of services for children to address potential harmful impacts (Alaggia, Jenney, Mazzuca, & Redmond, 2007; Jaffe, Crooks, & Wolfe, 2003). Children exposed to IPV (CE-IPV) are at increased risk for depression, anxiety, attachment issues, externalizing behaviors, lower social competence, academic challenges, post-traumatic stress symptoms, and difficulties in regulating emotions compared to their non-exposed peers (Carpenter & Stacks, 2009; Holt, Buckley, & Whelan, 2008; Kimball, 2016).

However, some research also indicates that a considerable number of children do not exhibit these negative effects and do well over the long-term into adulthood (Gewirtz & Edleson, 2007; Graham-Bermann, Gruber, Howell, & Girz, 2009; Kitzmann, Gaylord, & Kenny, 2003). In a recent review by Laing, Humphreys and Cavanagh (2013) the authors found that 26%-50% of children exposed to domestic violence did not differ from those who were not exposed. Yet generally speaking, resilience has had little research focus. From the

few studies that are available, good maternal mental health, positive parenting skills, maternal attunement, and lower levels of maternal trauma have been correlated with higher levels of resilience in CE-IPV (Bogat, DeJonghe, Levendosky, Davidson, & Eye, 2006; Graham-Bermann et al., 2009; Howell, Graham-Bermann, Czyz, & Lilly, 2010; Laing et al., 2013). Indeed this is a complex issue because of the mental health effects IPV has on women such as trauma, depression and substance abuse. Additionally, while it is generally believed that the availability of a nurturing environment is a key component to good outcomes, with IPV the very nature of the adversity compromises such an environment in moments of distress for exposed children. Therefore, we were particularly interested in how children in these environments navigated this additional challenge.

A further area of impact is the long-term consequences of being exposed to IPV that relate to inter-generational transmission of violence. It has been posited that there is a risk for CE-IPV that through social learning, victim and perpetrating behaviours might be playing out in later adult relationships (Stith et al., 2000). These theories, with corresponding research, have influenced child welfare policies, which have evolved to give professionals the authority to intervene with families where IPV is detected, with the aim of interrupting violence transmission and other harmful impacts. Often child welfare involvement results in making referrals for therapeutic intervention aimed at potentially breaking the cycle of violence (Alaggia, Gadalla, Shlonsky, Jenney, & Daciuk, 2015). Our study aimed to discover whether or not adults reflected on how their experiences may have impacted on past or current relational patterns.

Some research has found that boys are at greater risk for developing externalizing behaviours, including aggression manifesting in their adult romantic relationships (Franklin, Menaker, & Kercher, 2012; Gonzales, Chronister, Linville, & Knoble, 2012). Exposure to traditional masculine socialization and violent male gender roles have been shown to play a part in less resilience with IPV exposed males, and higher adult perpetration by men; moreover, men who resisted traditional male gender roles exhibited greater resilience following exposure to IPV (Franklin et al., 2012). In the only longitudinal study of its kind, a 20 year follow-up study by Ehrensaft and Cohen (2012) found that IPV exposure in childhood tripled the odds of perpetrating violence against an intimate partner later in life. However, beyond a handful of these studies, theories of inter-generational violence transmission have not been well tested, and bear further examination especially in relation to resilience.

While there has been some focus on understanding the mediating and moderating influences on exposed children's responses (Fortin, Doucet, & Damant, 2011; Franklin et al., 2012; Kassis, Artz, Scambor, Scambor, & Moldenhauer, 2013; Tajima, Herrenkohl, Moylan, & Derr, 2010), much of this research has investigated intra- and inter-personal characteristics. Little research has probed for social ecological factors in violence exposure, especially for sources of resilience (Anderson & Bang, 2012; Boxer & Sloan-Power, 2013; Ungar, 2013; Ungar, Ghazinour, & Richter, 2013) which is critical in determining areas of influence to consider in terms of intervention. A conceptual framework for understanding children's exposure to violence nested within a social ecological approach is necessary to understand resilience to its fullest (Boxer & Sloan-Power, 2013). This may be best done using qualitative

inquiry as a means of discovering important contextual influences, processes and pathways to resilience; yet only a handful of current studies exist to explore these (Gonzales et al., 2012; O'Brien, Cohen, Pooley, & Taylor, 2013; Suzuki, Geffner, & Bucky, 2008).

Researchers and practitioners have suggested that a major shift is needed to improve the quality of research for IPV exposed children, in order to better inform programs and future policies (Kimball, 2016; Overlien, 2010; Rizo, Macy, Ermentrout, & Johns, 2011). One review of the literature notes "a disappointing level of attention to such a serious problem"(Rizo et al., 2011, p. 163). While there are a number of sound quantitative studies identifying resilience factors in IPV exposed children, few qualitative investigations are available on important resilience processes that also take into account the full ecology of the child. Recommendations for future research include taking a developmental life course perspective; exploring contextual, environmental and developmental factors that increase child vulnerabilities; identifying resilience factors in children and families and; collecting data directly from those who have been exposed to IPV; (Anderson & Bang, 2012; Kimball, 2016; Overlien, 2010; Ungar et al., 2013). Continued research in this area is particularly important since the numbers of children receiving services for IPV exposure have grown significantly due to greatly improved detection practices as well as development of intervention programs targeting this issue (Jenney & Alaggia, 2012). These notations on the current state of research and subsequent recommendations have laid the groundwork for designing a grounded theory study to answer the research objectives outlined below.

Objectives

Given the lack of exploration into contextual variables to promote resilience in CE-IPV populations, we sought to understand how adults view their experiences of being children who were raised in households where violence occurred between their parents – as defined by physical, emotional, psychological, financial abuse and coercive control. In this exploratory study, retrospective data were collected from a sample of adult survivors exposed to IPV as children. The following research questions framed the study goals:

1. What resilience factors and processes are identified by adults who were exposed as children to IPV?
2. What factors, identified by adult survivors of IPV exposure, appear to contribute to the disruption of the cycle of violence?
3. How might these data contribute to a knowledge base that may inform the development of programs and interventions?

Through identifying factors that promote or disrupt the development of resilience, ultimately the study aimed to assist helping professionals to better identify and respond to children and youth growing up in these families and improve the services that respond to them.

Method

A constructivist grounded theory (GT) method was chosen because of the over-arching

goal to build knowledge in the area of resilience in children exposed to IPV as well as the value this method places on subjective experience and participant expertise (Charmaz, 2006). After conducting a pilot phase to pre-test the interview guide and to explore theoretical sensitivity (Charmaz, 2006), modifications were made to the questions probed. Initially, participants were asked questions about their experiences; how these affected their childhood and adolescence; family and peer relationships; adult relationships, satisfaction with life; and how they coped throughout. In addition, we asked adult participants what they thought children who were currently experiencing IPV in their lives would need in order to get through this adversity. Of note, questions such as "What got you through the difficulties…?" "What about resources outside of the family/within community?" were added shortly after the first few interviews indicated these additional areas of inquiry to begin to take us beyond the more common focus of individual level factors, to those reflecting a social ecological perspective.

After receiving institutional ethics approvals, participants were sought equally from both clinical and community populations as a method of theoretical sampling to consider the potential for similar pathways for resilience across populations, and to allow for more nuanced understandings of contextual factors. Advertisements were posted in children's mental health agencies serving families, and non-offending fathers were specifically recruited from another research project as a means of engaging male participants as a critical component of inquiry. The community sample came from recruitment on a university campus. Due to the sensitive nature of the questions, researchers checked in with participants throughout the interview process and all participants were offered supportive resources as needed. Interviews were conducted and analyzed concurrently during the data collection process, with theoretical saturation, "defined as data adequacy" through the repetition of patterns occurring after 12 interviews (Morse, 1995, p. 147).

Data Analysis: The interviews were digitally recorded with the participants' consent and written permission and transcribed verbatim. Transcripts were, cleaned of identifiers, and read thoroughly to develop an initial coding framework and imported into a data management software program, N*Vivo, for coding and categorizing towards theme development. Three researchers independently conducted initial and focusing coding as recommended for grounded theory (Charmaz, 2006). Themes were identified, put forward for discussion, and refined through an iterative process that included presenting the findings in two separate forums to service providers and resilience researchers.

Sample Characteristics: The participants were evenly represented across gender (6 females/6 males) as well as clinical/non-clinical populations, with a mean age of 32.5 (range 18 – 47). Half of the participants self-identified as non-white. Although participants had a higher education level overall, they presented with lower income, likely due to the number of students in the sample. Over half were currently in university and the others represented varied employment experiences: salesperson, artist, contractor, and social worker. In terms of relationship status, seven were single, three married, and two divorced. Seven of the participants identified as being parents. Two self-identified as having formerly been perpetrators of IPV, and three self-identified as being victims of IPV at some point in their

lives. When discussing their respective experiences of child exposure to IPV, the majority identified their father or their mother's male partner(s) as perpetrators, with two identifying their mothers as the perpetrator, and one described the violence as mutually perpetrated by both parents.

Results

Data analysis identified five distinct themes related to a framework for resilience that emerged from the participants' narratives and were consistent with our study objectives in identifying what resilience factors and processes are identified by participants as contributing to the disruption of the cycle of violence. These themes were: escapism; insight and self-efficacy; perseverance and hope; and, desire not to repeat the cycle of abuse. In addition, an overarching theme of 'positive caregiving, social support and community' spoke to specific contextual socio-ecological factors that may inform the development of programs and interventions. These themes are elucidated below:

Escapism

A distinct theme of 'escape' emerged, reflecting an awareness that participants needed to find a way to take themselves out of distressing environments, either physically to external resources, such as this participant reflecting on public school experiences: *…when I went to school and if I saw my friends there I would pretend it was okay and then I was in this space where I could escape for a little while . . . I did treat school like an escape (1); or another identifying the ability to create their own space: When I was older I would just go to my friend's house, and stay there until, you know.* (11)

Some participants reflected on the capacity to create 'inner sanctuaries' to escape the reality of the environment they were currently living in: I *was an A student, I was always reading, writing, … It was actually my escape* (4)*; I was a bookworm, so for me a lot of it was escapism…trying to find an alternative from the reality I lived in (6); I had a world inside of me* (3)*;*

And in many instances, participants identified using both external and internal methods of escape. There seemed to be an active attempt to find safer spaces in which to allow themselves to grow and develop and a consistent message for others who might be going through a similar experience: *I would say that if you can try hard on one thing, try hard to escape, and find life from there.* (8)

Insight and Self-Efficacy

Narratives that reflected an ability to make sense of what was happening for participants that allowed them to act in ways that were protective, were coded as 'insight and self-efficacy'. Many participants described using other families as a benchmark for figuring out what is normal and what is not. They also talked about learning to anticipate and find the patterns of IPV in order to figure out how to make it better or to simply *'fly under the radar'* (2). Participants indicated strategies in order to placate or avoid abuse, *"you change your behavior based on what's happening"* (7). In some situations, it was a realization that they were not

actually in control of what was happening at home: *I was the rescuer…I tried for a really long time, and then I just gave up…* But that there was still hope in letting go of changing ones family and focusing on how they might survive the experience themselves, *"the lie is that it's not going to get better"* (3). Part of this self-efficacy was awareness that they could choose not to participate in the dysfunctional family dynamics and actively find meaning in those experiences in terms of self-acceptance:

> *When I learned that's what was happening to me I didn't feel like an outsider. I felt like there was a reason why. I always felt different than my family…I wasn't of that same cloth shall we say. (5)*

These experiences were directly related to participants reflecting on their own sense of perseverance and hope for a different future for themselves.

Perseverance and Hope

Participant statements that reflected a belief in something better, a reason to hope or believe in the possibility of change, were coded as 'perseverance and hope'. For example, one participant stated, *"I just never gave up"* (3), while another reflected on inner strengths, *"I have a lot of faith in myself and my abilities, and you know, the sort of ability to make friends and that kind of thing"* (12), and one participant even noted that something that was seen as a negative trait by her family, was in fact something that she saw as a very positive factor:

> *This is a quality that my parents saw in me …they knew that I would do what was best for myself, I would put myself first before my family and they labeled that as selfish…. I'm not going to sacrifice my happiness to keep the peace in this family. (6)*

Once again, there was a message in the advice participants had for the next generation of children, messages of perseverance and hope, such as this participant who advised, *"you are not defined by your past"* (6), or another one who wanted to get across that there were different realities and futures ahead:

There is a light at the end of the tunnel…they will grow up, they will, they can be successful, they can have good marriages… and don't be so sure that everything is rosy at someone else's house. You don't know that" (15). However, these narratives also revealed a cautionary note from some participants with increased vulnerabilities that should be taken into account. Their discourse indicated that as children, they were not always able to influence their environment, such as one participant who reflected, *"I never knew how to act"* (3), suggesting that efforts to placate or avoid abuse were unsuccessful; an important reminder that resilience is a dynamic concept influenced by both internal and external factors to the child. There were participants whose narratives indicated aspects of their early environments which made the above referenced strategies much less available to them, such as the presence of complex interpersonal trauma (e.g. sexual abuse), lack of supportive caregivers, a chaotic and unpredictable living environment, and a persistent sense of not belonging: *I don't think I had really good interpersonal skills. I don't think I ever developed them.* (15)

In addition, strategies for survival, such as avoidance or forgetting behaviours, did not always lend themselves to successfully processing their exposure to enable optimal future

relationships:

> *There are a lot of things that I just chose to forget so I actually did forget but that's one of the things that I still cling onto because some things you just can't forget but so I guess at first I was like okay if I just forget everything, if I just try really hard to just sleep or something I'll just let go of my memories and be a happier person but I realize that that's pretty immature because it's just not going to help me in any way to become a better person.* (8)

Perhaps as a result of the particular individuals who volunteered to participate in the study, there were multiple references to the importance of getting outside help in order to navigate negative family experiences:

> *I think it's important for families to know that they should get help when they need it and that it's not a shameful thing...I think that probably the families that need it most don't get the help that they need and unfortunately and it's nothing shameful about getting help, seeing somebody to talk about things. It's not a shameful thing at all.* (15)

Desire Not to Repeat the Cycle of Abuse

This theme reflects strategies that emerged from participants who evaded IPV later in life that included: conscious awareness, empathy, and intention. Two male participants stated the following as to how they understood their intentional choice to behave in non-abusive/ non-violent ways in their intimate relationships, which included empathy for victims and the insight to recognize abusive behaviour:

> *It just seems to be an instinctual feeling of this is not a right way to handle a situation. It could be empathy for the person on the receiving end of abuse that things were terrible.* (2)

> *Like, I usually see my dad's problems as his and not really impacting me in anyway except for how I interact with him. That's how I see it . . . that point of realizing that my dad is a violent guy.* (7)

Female participants described a conscious awareness of seeking safer partners, not accepting that their parent's way was the only way to be in a relationship and intention to do something different.

> *In terms of my boyfriend I basically picked someone who is the complete opposite of my father. So he's very reliable, dependable.* (6)

> *I was just self-motivated to look into things that my parents told me and I was very surprised to find they weren't necessarily true all the time.* (8)

It's important to note that themes do overlap as evidenced in these last few quotes that demonstrate a certain level of insight and self-efficacy to act in ways different than what they were exposed to.

Positive Caregiving, Social Support and Community

In keeping with current understandings of protective factors, social support was a

key factor in participant reflections of what helped participants navigate less than optimal environments. Participants spoke about various kinds of caregiving and social support, from parents or others in their extended families and communities. For example, one participant referred to a community of adult females that she could access:

> *All these women, they were these kind women, and they were just kind of in the community…they helped me – they validated me, they made me feel worthy again… they treated me like I was their daughter.* (3)

Another participant found the strengths within her own family, *"and the good thing about my family is that I had a large extended family and I had my grandmother and two other aunts* (4). While another identified a parent's new partner as a support:

> *I only consider [name of stepmother] recently to be like a stepmother. Like a mother type role. When I was a kid I didn't like, until recently right, say it and different things she's done to me that are almost like a mother would, right? And she would protect me.* (13)

Many participants mentioned the importance of teachers as role models as well as spiritual support systems:

> *I was the kid, luckily, who got sent to Sunday school…because I think all of that learning, and having that outlet to go to, because I was always in girl guides. I have positive role models and stuff too. Somebody I looked more towards, and people who I wanted to be like. … And I guess I'm a resilient person too…you have to find the positive in something, you can't let life get you down and stomp on you.* (5)

And the importance of having that social support was talked about by one participant who lacked supports growing up, but accessed some later in the form of a therapist to process what she had been through:

> *"Because in (country) there's a whole stigma of seeing therapists and getting help and that's really bad … so I had no extra help. I couldn't talk to my parents. I was not allowed to hang out with my friends. So no friends, no parents, no texting, no boyfriends, no teachers … it ended up destroying my life until I came here so I had to fix that all.* (8)

Discussion

This exploratory study, using the voices of 12 participants exposed to IPV as children and youth, necessitates the need to think about resilience from a social-ecological approach, which situates the development of resilience as a process and opportunity, not something children have or do not have. Five themes emerged, some of which are supported by previous investigations identifying similar areas of resilience revolving around individual, intra-personal factors (strengths, temperament, meaning-making); familial, inter-personal factors (attachment figures/available alternative caregivers); and environmental/social factors (social supports and competencies, communities)(Antcliff, Mildon, Baldwin, Michaux, & Nay, 2014; Boxer & Sloan-Power, 2013; Grych, Hamby, & Banyard, 2015).

Boxer & Sloan-Power (2013) propose a four-dimensional framework for understanding children's exposure to violence that is nested within a social ecological approach representing: context (the social setting), content (nature of the act itself), channel (the mode of exposure) and chronicity (frequency of exposure) (p.211). The current study findings complement this framework by providing research data to support aspects of their framework. For example, participant narratives identified attempts to understand and manage their experiences of violence that were very much related to the type of violence and their recollected exposure to it, from finding ways to escape the chronicity to ways of determining what was 'normal' and what was not, within a family setting.

As well Grych, Hamby and Banyard's (2015) concept of the "Resilience Portfolio Model" which proposes three areas for consideration when identifying pathways to resiliency: "regulatory, interpersonal, and meaning-making strengths" (p.343) is supported by the current study data, such as participants who discussed ways in which they coped internally and externally with their emotional lives; their reliance on relationships to both guide and support them; and narratives in which they understood, or gave meaning to these experiences was helpful.

In keeping with Prilleltensky, Nelson and Peirson's (2001) premise that "opportunities to experience power and control in one's life contribute to health and wellness," (p.143) our data indicate that the ability to find productive ways of escaping negative situations, and creating pro-social narratives that developed out of insight and self-efficacy, were factors allowing them as children to more adequately comprehend their situations in order to successfully navigate them.

These study data also offer important new avenues for considering inter-generational transmission of violence and how some participants avoided repeating perpetration or victimization in their adult relationships through the use of conscious awareness, empathy, and intention; aspects to consider in future interventions with young people exposed to violence. In addition, many participants described learning that there were families who were much different than their own and used these experiences to inform their approaches to current as well as future relationships – something that may also speak to the importance of environments and future service approaches.

Limitations

This was a qualitative study designed to elicit perspectives of adults on their experiences of exposure to IPV as children and how they felt they did (or did not) cope with it at times. The retrospective nature of this design can imply that there may have been recall issues. We did not use any psychometric measures to determine actual levels of adversity or measures of healthy functioning. There were times when despite a participant's perception that they were resilient, there remained many indicators of past and current struggles that suggests the concept of well-being remains subjective in many cases, and it is important to clarify the difference between survival and the ability to thrive after adversity. Grych, Hamby & Banyard (2015) have pointed out the need to conceptualize resilience as not just the absence of suffering, but also the presence of health and well-being. They also point out the importance of considering that protective factors are not always just the absence of a risk

factor.

We can expect that an adult's ability to make sense of a past event is not the same as the child's ability to make sense of that same event in that particular moment. In addition, these reported experiences are now being viewed from a lens that involves an overlay of additional experiences with relationships in adult life that likely inform reflections of the past.

Conclusion and Implications

In conducting this study we have contributed to a knowledge base that has been lacking in understanding resilience factors and processes in children exposed to IPV over the life course. Albeit retrospective studies bring with them recall issues they, however, provide important information from the perspective of those with lived-experience. By analyzing narratives of adults who were exposed as children, these data lend support to existing conceptual models for how resilience is developed and fostered in such environments; as well as ways in which inter-generational transmission of violence is interrupted. The importance of such interruption requires early prevention efforts with young people before patterns of IPV become established. Strengthening social supports and communities, and increasing resources may also provide avenues of escape for youth that may offer additional positive models of interacting in relationships. In this case, the reflections of adults about their childhood, has provided an invaluable avenue to approach current interventions with children and youth today.

Implications for Practice

There are interesting implications for practice that evolve from this work, in that resilience in children exposed to IPV can be fostered by service providers in multiple ways. For vulnerable children who enter services, it would be useful to include within assessment protocols the identification of protective factors that existed previously in order for practitioners to maintain or help reclaim them in therapeutic work. As well, these data point to specific areas practitioners can promote with vulnerable children to foster resilience, such as: facilitating esteem building activities through talents and skills to increase self-efficacy; making connections to supportive adults to increase social support; labeling and validating feelings about the violence; educating about healthy non-violent relationships to develop insight; and promoting resources in communities for access to child and youth activities so that avenues for healthy outlets may be developed. By the time child protection services identify and intervene in cases of IPV exposure, only a reactive stance is possible. Pro-active measures should also be considered to include prevention programs that promote healthy non-violent relationships.

Directions for Future Research

There are important areas arising from this data set that invite further inquiry. First, we need to think about memory, not just issues with retrospection and how participants might choose to remember an event, but also the reality of possible trauma and how that impacts on the development of memory. Many participants, when asked specifically about upsetting times in their lives demonstrated difficulty remembering, were not able to recall specifics, and experienced confusion when recounting events. Second, we would like to ask

more specifically about siblings in future research to consider additional perspectives of how potential individual differences can impact children within the same family. Third, it might be a valuable exercise to look at developmental levels as there appeared to be a trend in children's awareness of what was happening relationally in their families around the age of 10 years; rather there may be a point at which children are developmentally more aware of multiple perspectives relationally, which might also inform targeted interventions in the future. Finally, despite our current findings, further research needs to continue to investigate environmental/contextual impacts and barriers/facilitators to resilience.

Our knowledge about the impact of exposure to domestic violence over the past few decades has provided this opportunity to consider the application of concepts of resilience to innovations in our understanding and development of the most effective means of intervention with these children today. Using the voices of adult survivors of childhood exposure to intimate partner violence has offered up a unique opportunity to refine the level of knowledge and awareness not previously available and begin to apply it to current practice.

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Examining the Impact of Policy and Legislation on the Identification of Neglect in Ontario: Trends Over-Time

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Abstract:

Objectives: Reported neglect investigations were compared across a 20-year time frame using data from the five cycles of the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-1993 to 2013) in order to discuss the impact of significant policy changes on the Ontario child welfare system's response to child neglect.

Methods: Each OIS cycle used a multi-stage sampling design. A representative sample was selected from all mandated child welfare organizations. Cases were selected over a three-month period and then weighted to produce provincial estimates. The information was collected directly from child welfare workers at the conclusion of the investigation using a three-page data collection instrument.

Results: Changes in rates of reported neglect vary by form but overall there has been a significant increase in reported neglect in Ontario since 1993. There was a decline in investigations involving permitting criminal behaviour, which was the most investigated form of neglect in 1993 and least investigated in 2013. Physical and medical neglect increased dramatically between 1998 and 2003. Transfers to ongoing services for neglect investigations remained relatively stable despite the doubling of neglect investigations.

Conclusion and Implications: Transfer to ongoing services did not increase consistently with the investigation rate. This could be reflecting a significant resource gap, whereby the number of children and families receiving ongoing child welfare services is determined by capacity rather than need or it could mean that referral processes are

mistakenly identifying situations that do not need child welfare services. Further analysis is required to understand these trends.

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Keywords:

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Introduction

Using data from five cycles of the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-1993, OIS-1998, OIS-2003, OIS-2008, OIS-2013) this paper will compare neglect investigations across cycles of the study, to examine trends related to forms of neglect and the Ontario child welfare system's response to the identification of alleged neglect (Trocmé, McPhee, & Tam, 1995; Trocmé et al., 2002; Fallon et al., 2005; Fallon et al., 2012; Fallon et al., 2015). Neglect is one of the most frequently occurring child welfare concerns in Canada, cited in 34% of all substantiated child maltreatment cases (Trocmé et al., 2010). Persistent neglect has profound and long-term impacts on children that can result in a wide range of issues such as developmental delays, eating difficulties, inability to be soothed, aggression, depression, anxiety and other emotional functioning issues (Perry, 2002). Children who experience neglect are often younger and in more chronic situations (Mayer, Lavergne, Tourigny, & Wright, 2007). The definitions of child neglect are varied (Bundy-Fazioli, Winokur, & DeLong-Hamilton, 2009; Fallon, Trocmé, & Van Wert, 2014). In general, neglect is seen as a failure to provide basic physical, emotional or educational needs or to protect a child from harm regardless of whether harm is the intended consequence (Leeb, Paulozzi, Melanson, Simon, & Arias, 2008). Neglect can occur either through specific acts of the caregiver or a failure to act on the part of the caregiver (Fallon et al., 2014). In general, research in the U.S. has documented that sociodemographic conditions, including and especially poverty, are significant drivers of neglect (Ethier, Couture, & Lacharité, 2004).

Resilience is identified as arising from the "ordinary protective processes" that shelter human development in the face of diverse threats (Masten, Cutuli, Herbers, & Reed, 2009, p. 117). The greatest risk to children arises when these protective processes are undermined (Masten et al., 2009). The pervasive nature of childhood neglect chronically undermines such protective processes and has grave implications for an individual's ability to demonstrate

resilience. In addition to deficiency in environmental supports, when basic needs are not met over an extended period of time individual energy is drawn away from typical daily activities, such as school and social relationships, and absorbed by more basic concerns. Neglect erodes and depletes available individual resources leaving a child with few reserves from which to draw upon. When this occurs in childhood typical development is impacted. The earlier in a child's life this occurs the more profound the consequences (Landry, Smith, Swank, & Guttentag, 2008; van der Kolk, 2005). Understanding how the child welfare system responds to a child who has been identified for a concern regarding neglect is vital in identifying the need for specific interventions that can ameliorate negative outcomes of neglect.

The first incidence study to take place in Canada occurred in the province of Ontario in 1993 (Trocmé, McPhee, & Tam, 1995). Since 1993, the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS) has been conducted in 5 year increments (OIS-1993, OIS-1998, OIS-2003, OIS-2008 and OIS-2013). The primary objective of the OIS study has remained consistent for the past twenty years: to produce an estimate of reported child abuse and neglect. During this time there have been a number of definitional and methodological changes to the study's procedures in response to a changing child welfare practice and policy environment. Nonetheless, data from the Ontario Incidence Study of Reported Child Abuse and Neglect provides one of the few ways to track the incidence of reports of neglect in Ontario. The incidence of reported child abuse and neglect in Ontario doubled between 1998 and 2003. In 1998 there was an estimated 64,658 child maltreatment investigations conducted or 27.43 per 1000 children. In 2003 the number of investigations had increased to 128,108 or 53.59 per 1,000 investigations. Since 2003 the rate of investigation has remained stable (Fallon et al., 2015).

Ontario Policy Changes

Several major legislative and policy changes have occurred over the past 20 years in the Ontario child welfare system. In the 1990s, a series of inquests into the deaths of children whose families had been receiving child welfare services took place resulting in criticism of a focus on family preservation. This marked a shift from a family centred model to one with a greater focus on the immediate safety of the child. Partially in response to this changing emphasis in practice, standardized decision-making tools were adopted in Ontario and in 1998, and risk assessment tools were integrated into practice (Commission, 2012).

In 2000, the Ontario Child and Family Service Act (CFSA) expanded the definition of children in need of protection, and the paramount purpose of the Act, to promote the safety, well-being and best interests of children, was clarified. The inclusion of neglect as grounds for intervention was made more explicit and the threshold for intervention in cases involving "risk of likely harm" was clarified. This, coupled with an emphasis on duty to report resulted in an unprecedented increase in the number of child welfare investigations between 1998 and 2003 (Trocmé et al., 2005).

Since the year 2000, the government of Ontario and the child welfare sector have jointly implemented significant changes to the province's child welfare system (Ontario Association of Children's Aid Societies, 2014). In 2006, the Ontario Child Welfare Transformation Agenda

(Transformation Agenda) launched major policy changes, intended to foster a more balanced approach to child welfare practice by protecting children while promoting well-being and strengthening family and community capacity (Ministry of Children and Youth Services (MCYS), 2005). The Transformation Agenda's guiding principles for policy development and implementation included a focus on outcomes as well as building and sustaining research capacity (MCYS, 2005). In 2009, the Ontario Minister of Children and Youth Services established the Commission to Promote Sustainable Child Welfare (the Commission) to develop and implement changes to the child welfare system (Commission, 2012). Policy directions from the Transformation Agenda and the Commission have underscored the importance of preventing the deterioration of child and family circumstances through early identification, support and/or family preservation for at-risk and vulnerable children.

The objective of this paper is to present descriptive data about the incidence of reported neglect in Ontario over a 20-year time-frame in order to determine the impact on significant policy changes on reported neglect. Specifically, there are three main research questions addressed in this study:

1. Has there been an increase in the incidence of reported neglect in Ontario since 1993?
2. Has there been an increase or decrease of any of the eight specific forms of neglect measured in the OIS.?
3. Have there been changes in the child welfare response to neglect investigations, specifically substantiation, transfers to ongoing services, child welfare court, placement in out of home care, policy involvement and referrals to external/internal services?

Methods

Each Ontario Incidence Study of Reported Child Abuse and Neglect used a multi-stage sampling design. First a representative sample of child welfare sites was selected from a sampling frame that includes all mandated child welfare organizations in Ontario. The second sampling stage involved selecting cases opened in the study sites during the three-month period from October 1 to December 31 in the year the study took place. A three-month duration was considered optimal to ensure high participation rates and good compliance with study procedures. Screened-in investigations were evaluated by study staff to ensure that they met the OIS definitions of maltreatment and in 2008 and 2013 the definition of maltreatment was expanded to include risk of maltreatment. See Table 1 for the number of agencies and investigations in each study year.

Weighting

In each OIS cycle, the sample was weighted with regionalization and annualization weights to derive estimates of the provincial annual rates and characteristics of maltreatment investigations in Ontario. Data were weighted for bivariate analysis. The regionalization weight was developed to estimate the number of investigations completed within the

Table 1. Ontario Incidence Study of Reported Child Abuse and Neglect Sites and Sample Sizes

	OIS-1993	OIS-1998	OIS-2003	OIS-2008	OIS-2013
Site Selection	15/51	13/53	16/53	23/53	17/46
Case Selection	1898	2193	4175	4415	3118
Investigated Children	2447	3053	7172	7471	5265
Number of Children per Family	1.29	1.39	1.72	1.69	1.69
Estimate of Child Maltreatment Investigations	46,683	64,658	128,108	128,748	125,281

three-month data collection period by child welfare organizations across Ontario. The regionalization weight includes three components: (1) a sample weight that adjusts for the disproportional selection of agencies from the province, (2) a subsampling weight that accounts for random subsampling of investigations in agencies that investigated more than 250 cases during the three-month data collection period, and (3) an agency size correction, designed to adjust for variations in the size of agencies within a stratum. The annualization weight is used to estimate annual investigation volume based on the investigation volume during the three month data collection period. The annualization weight is the ratio of all investigations conducted by a sampled agency during 2008 to investigations conducted by the sampled agency during the case selection period (Fallon et al., 2015).

Data collection instruments

In each cycle, the information was collected using a three-page data collection instrument consisting of an Intake Face Sheet, a Household Information Sheet and a Child Information Sheet. This data collection instrument was completed by the investigating worker or the worker with primary responsibility for the investigation. The Intake Face Sheet collected information about the report or referral and partially identifying information about the child and household relationships. The Household Information Sheet collected detailed information on up to two caregivers living in the home, caregiver functioning, housing situation, and referrals to other services. The Child Information sheet documented up to three different forms of maltreatment and gathers information on child functioning, court activity and out-of-home placement.

Because of changes in investigation mandates and practices over the last fifteen years, the OIS-2008 was redesigned to separately track maltreatment investigations versus cases opened only to assess the risk of future maltreatment. Before the OIS-2008, cases that were only being assessed for risk of future maltreatment were not specifically included. Following the 2003 cycle of the OIS, validation tests demonstrated that child welfare workers were coding cases that did not involve specific incidents of abuse or neglect as "maltreatment investigations", because of the risk of future maltreatment (Fallon, et al., 2011). This led to the inclusion of a "risk investigation only" category in the 2008 cycle, under which 26% of all investigations fell (Fallon, et al., 2012). For the OIS-2008 and OIS-2013, investigating

Table 2. Ontario Incidence Study: Definitional Changes Forms of Neglect 1993-2013

	OIS-1993	OIS-1998	OIS-2003	OIS-2008	OIS-2013
Failure to Supervise: Physical Harm	The child has suffered or is at substantial risk of suffering physical harm caused by the caretaker's failure to supervise and protect the child	**Added**: Includes situations where a child is harmed or endangered as a result of the caregiver's actions	No Change	**Removed**: The word *substantial* to describe risk	No Change
Failure to Supervise: Sexual Abuse	The child has been or is at substantial risk of being sexually molested or sexually exploited where the caretaker knows or should have known of the possibility of sexual molestation and fails to protect the child adequately	No Change	No Change	No Change	No Change
Physical Neglect	The child has suffered or is at substantial risk of suffering physical harm caused by the caretaker's failure to care and provide for the child adequately. This includes inadequate nutrition/ clothing and unhygienic/dangerous living conditions. Note that there must be evidence or suspicion that the caregiver is at least partially responsible for the situation.	No Change	No Change	No Change	No Change
Medical Neglect	The child requires medical treatment to cure or prevent or alleviate physical harm or suffering and the child's caretaker does not provide or refuses or is unavailable or unable to consent to the treatment	No Change	**Added**: This includes dental services when funding is available	No Change	No Change
Failure to Provide Treatment	The child suffers from or is at risk of suffering from (1) emotional harm demonstrated by severe anxiety, depression, withdrawal or self-destructive or aggressive behaviour, or (2) a mental, emotional or developmental condition that, if not remedied, could seriously impair the child's development, and the caretaker does not provide, or refuses, or is unavailable, or unable to consent to treatment to remedy or alleviate harm. This category includes failing to provide treatment for school-related problems such as learning and behaviour problems as well as treatment for infant development problems such as failure to thrive	No Change	**Added**: Parent awaiting service should not be included in this category	No Change	No Change
Permitting Criminal Behaviour	A child has committed a criminal offence (1) with the encouragement of the child's caretaker or because of the caretaker's failure or inability to supervise the child adequately, or (2) services or treatment are necessary to prevent a recurrence and the child's caretaker does not provide or refuses or is unavailable or unable to consent to those services or treatment	No Change	**Removed**: (2) services or treatment are necessary to prevent a recurrence and the child's caretaker does not provide or refuses or is unavailable or unable to consent to those services or treatment	No Change	No Change
Abandonment	The child's parent has died or is unable to exercise custodial rights and has not made adequate care provisions for care and custody or the child is in residential placement and the parent refuses or is unable to resume custody	No Change	No Change	No Change	No Change
Educational Neglect	Caretakers knowingly permit chronic truancy (5+ days a month) or fail to enroll child or repeatedly keep at home, etc. If a child is experiencing mental emotional or developmental problems associated with school and treatment is offered but caretakers are not cooperating with treatment classify case under failure to provide treatment as well	No Change	No Change	No Change	No Change

workers were asked to complete a data collection instrument for both types of cases. For cases involving maltreatment investigations, workers described the specific forms of maltreatment that were investigated and whether the investigation was substantiated. While this change provides important additional information about risk only cases, it has complicated comparisons with early cycles of the study.

The definitions used to describe the eight forms of neglect remained relatively consistent across cycles. The definitions used to describe the service dispositions made at the conclusion of a child maltreatment investigation have also remained consistent across cycles. See Table 2 for a description the definition of the forms of neglect used in the analysis.

In each cycle for each investigation, workers were asked about several decisions they routinely make at the conclusion of child maltreatment investigation: substantiation, transfers to ongoing services, use of child welfare court, placement in out of home care and whether there was police involvement in the investigation. Although there have been some minor changes, the definitions of these service dispositions have been relatively consistent. The decision to substantiate maltreatment meant that the balance of evidence indicated that abuse or neglect has occurred. Investigating workers were asked whether the investigated case would remain open for further child welfare services after the initial investigation. Placement in out of home care included, informal kinship care (kinship out of care and customary care), foster care (kinship in care and non-family foster care), and group home/residential (group home and residential/secure treatment). For the purposes of this analysis, only formal care was assessed. Use of child welfare court meant that an application to child welfare court was submitted. Workers indicated whether police were involved in the investigation regardless of whether or not charges were laid. Workers also indicated whether they had made a referral for any family member to a service external or internal to the child welfare authority.

Analytic Plan

SPSS Statistics version 23 was used to conduct the analysis. Incidence rates were calculated by first dividing the child maltreatment estimate by the population of children 15 years of age and under in Ontario using Census Canada counts and multiplying by 1000 to produce a rate per 1,000 children. Although each cycle of the OIS produced estimates that are based on a relatively large sample of child maltreatment-related investigations, sampling error is primarily driven by the variability between the participating agencies. Sampling error estimates were calculated to reflect the fact that the survey population had been randomly selected from across the province. Sampling errors were calculated by determining the sampling variance and then taking the square root of this variance. The sampling variance and sampling error calculated were an attempt to measure this variability. The sampling variability that was calculated was the variability due to the randomness of the cluster selected. Thus, the measured variability is due to the cluster.

Analyses focused on changes in the rates of neglect investigations and the associated service dispositions across cycles of the OIS. Statistical tests of significance were used to assess differences in neglect investigations for the variable of interest. Statistical significance was calculated to examine whether there had been a change in the incidence for the variable of interest from the previous OIS cycle.

Results

Table 3 presents a summary of the incidence of reported neglect in Ontario by form. Between 1998 and 2003 the incidence of reported neglect investigations almost doubled, from a rate of 9.69 per 1,000 children in 1998 to 17.33 per 1,000 children in 2003. The rate of reported neglect investigations has remained fairly consistent since 2003 with no statistically significant differences between the 2008 and 2013 cycles.

Within forms of neglect, there have been several changes over time. The incidence of investigations involving a concern of failure to supervise leading to physical harm doubled between 1993 and 1998. In 1993, 2.40 per 1,000 children were involved in this type of investigation versus 4.98 per 1,000 children in 1998. The incidence of failure to supervise investigations has remained stable since 1998 with no statistically significant differences in subsequent cycles. Investigations involving failure to supervise leading to sexual abuse quadrupled between 1998 and 2003, from a rate of .30 per 1,000 children in 1998 to 1.27 per 1,000 children in 2003. In 2008, the rate for investigations involving failure to supervise leading to sexual abuse declined to one similar to that of 1998 cycle (.50 per 1,000 children).

Table 3: Incidence of Neglect Investigations by Primary Form of Maltreatment in Ontario: 1993, 1998, 2003, 2008 & 2013

	OIS-1993		OIS-1998		OIS-2003		OIS-2008		OIS-2013	
	Estimate	Rate per 1,000	Estimate	Rate per 1,000	Estimate	Rate per 1,000	Estimate	Rate per 1,000	Estimate	Rate per 1,000
All Neglect Investigations	13,933	6.36	23,175	9.69	41,424	17.33†	28,908	12.09	26,768	11.2
Failure to supervise: Physical Harm	5,258	2.4	11,753	4.98†	17,471	7.31	12,490	5.24	11,067	4.71
Failure to supervise: Sex Abuse	655	0.3	715	0.3	3,034	1.27†	1,192	.50†	1,599	0.68
Permitting Criminal Behaviour	6,236	2.85	5,106	2.17	500	.21‡	405	0.17	236	.10*
Physical Neglect	631	0.29	1,721	0.63†	11,863	4.96‡	9,156	3.84	7,869	3.35
Medical Neglect	421	0.19	415	0.18	3009	1.26†	1,761	0.74	1,775	0.76
Failure to Provide Psychiatric Treatment	524	0.24	1,561	0.66*	755	.32*	1,069	0.45	1,551	0.66
Abandonment	1,392	0.64	1,423	0.6	3840	1.61†	2,131	.89†	1,863	0.79
Educational Neglect	475	0.22	481	0.2	951	.40†	704	0.3	808	0.34

*p<.05.
† p<.01
‡ p<.001

Investigations where the primary focus is permitting criminal behaviour have had a dramatic decline. In 1993, the incidence of investigations involving permitting criminal behaviour was 2.85 per 1,000 children, the highest incidence of any form of neglect investigated. In 2013, investigations involving permitting criminal behaviour were .10 per 1,000 children, the lowest incidence of any form of investigated neglect. The dramatic decline began in 2003 when the rate changed from 2.17 per 1,000 children in 1998 to .21 per 1,000 children in 2003.

Both physical and medical neglect increased dramatically between 1998 and 2003. Physical neglect increased eight-fold from a rate of .63 per 1,000 children in 1998 to 4.96 per 1,000 children in 2003. Medical neglect increased seven-fold from a rate of .18 per 1,000 children in 1998 to 1.26 per 1,000 children in 2003 with no statistically significant differences in subsequent cycles from the 2003 incidence rate for both physical and medical neglect.

Investigations involving failure to provide psychiatric or psychological treatment increased nearly three-fold from a rate of .24 per 1,000 children in 1993 to .66 per 1,000 children in 1998. This rate fell to .32 per 1,000 children in 2003 and remained consistent for subsequent cycles of the OIS. Investigations involving abandonment doubled between 1998 (.60 per 1,000 children) to a rate of 1.61 per 1,000 children in 2003. In 2008, the incidence of abandonment investigations declined to .89 per 1,000 children and remained consistent in 2013. The incidence of educational neglect doubled between 1998 and 2003 – from a rate of .20 per 1,000 children to a rate of .40 per 1,000 children in 2003 and has remained consistent since 2003.

Table 4 describes the service dispositions (substantiation, transfers to ongoing services, placement in formal child welfare care, use of child welfare court, police involvement,

Table 4: Incidence of Service Dispositions in Neglect Investigations in Ontario in 1993, 1998, 2003, 2008 & 2013

	OIS-1993		OIS-1998		OIS-2003		OIS-2008		OIS-2013	
Service Disposition	Esti-mate	Rate per 1,000	Esti-mate	Rate per 1,000	Estimate	Rate per 1,000	Estimate	Rate per 1,000	Esti-mate	Rate per 1,000
Substantiation	4,415	2.02	7,237	3.07	15,660	6.55†	11,894	4.99	10,386	4.42
Transfer to Ongoing Services	1,443	0.66	6,688	2.84*	11,411	3.5	7,054	2.96	5,946	2.53
Child Welfare Court	766	0.34	1,175	0.5	1,818	0.76	1,227	0.52	1,401	0.6
Placement (Formal)	717	0.32	1,722	0.73†	1,932	0.81	1,660	0.7	2,136	0.91
Police Involvement	752	0.34	1,538	0.65†	4,895	2.05†	3,070	1.29*	3,456	1.47
Referral (Internal/ External Service)	336	0.15	9,786	4.15‡	26,055	10.90†	12,325	5.17*	10,769	4.58

*p<.05.

† p<.01

‡ p<.001

referral to an external or internal service) made at the conclusion of a neglect investigation over time. The incidence of substantiated neglect investigations doubled between 1998 (3.07 per 1,000 children) and 2003 (6.55 per 1,000 children). Transfers to ongoing services for neglect investigations increased from .66 per 1,000 children in 1993 to 2.84 per 1,000 children in 1998 but has essentially been stable in subsequent cycles of the OIS. The use of child welfare court is similar across cycles; the lowest incidence was in 1993 (.34 per 1,000 children) and the highest was .76 per 1,000 children in 2003. The incidence of placement in neglect investigations has also remained relatively stable with the exception of a doubling of the incidence of placement between 1993 (.32 per 1,000 children) and 1998 (.73 per 1,000 children). Police involvement in neglect investigations had the highest rate of police involvement in 2003 (2.05 per 1,000 children) before declining in 2008 (1.29 per 1,000 children). Neglect investigations involving referrals to an external or internal service had the highest rate in 2003 (10.90 per 1,000 children) before declining to 5.17 per 1,000 children in 2008.

Discussion and Implications

There are several significant findings when examining the change in the incidence of the Ontario child welfare system's response to a concern for neglect. In general, the increase in neglect investigations between 1998 and 2003 is consistent with the overall increase in the rate of report of child maltreatment in Ontario (Trocmé et al, 2005). Within the specific forms there are some findings that require a more in-depth analysis. The addition of the risk category to the data collection instrument in 2008 has clearly impacted two forms of neglect: failure to supervise leading to sexual abuse and failure to provide psychiatric or psychological maltreatment. In 2008, investigations involving both of these categories dramatically declined.

In Ontario in 2008 an estimated 41,723 investigations were categorized as risk investigations (Fallon et al, 2010). With the addition of the risk category to the data collection instrument, workers were able to better describe situations in which children have not yet been harmed, but are at risk of harm because of the combination of risk factors in the household. A toddler who has been repeatedly left unsupervised in a potentially dangerous setting may be considered to have been neglected, even if the child has not yet been harmed. Placing a child at risk of harm is considered maltreatment. In contrast, risk of maltreatment refers to situations where a specific incident of maltreatment has not yet occurred, but circumstances, for instance parental substance abuse, indicate that there is a significant risk that maltreatment could occur in the future. It may be that in situations where workers are assessing the caregiver's ability to provide treatment or to protect a child from sexual abuse, the focus is not on an incident of neglect, rather the likelihood that the child will be harmed in the future because of an inability to access the resources needed for the child's behaviour or emotional needs.

The dramatic decline in permitting criminal behaviour warrants further investigation. It appears that the Ontario child welfare system no longer intervenes in situations where the child, through omission or commission, is encouraged to permit a criminal offence. Interestingly the most dramatic decline was in 2003, prior to workers being able to describe the investigation as a risk assessment. There has been a parallel decline in youth court cases; in 2013 – 2014 there was the lowest number of completed youth court cases since this data

was first collected by Statistics Canada in 1991 – 1992 (Alam, 2015).

The pronounced increase in the rate of physical and medical neglect investigations between 1998 and 2003 far exceeded the overall increase in the rate of neglect investigations. The introduction of standard decision-making tools and removal of the word "substantial" from the "likely risk of harm" in 2000 from the CFSA likely resulted in the identification of situations where there was a concern that children did not have their basic or medical needs met by their caregivers. This represents a threat to an individual's ability to demonstrate resilience and an opportunity for the child welfare system to both identify need and provide instrumental support.

Despite the enormous variation in the rates of specific forms of neglect, the service dispositions examined are surprisingly stable over time, including transfers to ongoing services, use of child welfare court and placement. This finding could be interpreted in two very different ways. On one hand it could point to a significant resource gap in Ontario, whereby the number of children and families who receive child welfare services beyond investigation is determined by service capacity rather than service need. Within the time period of this analysis, overall funding for child welfare has become an increasing concern. In 2005/2006, the Multi-year Child Welfare Funding Model (CWFM) replaced the Funding Framework introduced in 1998/99 (Commission to Promote Sustainable Child Welfare, 2011). The CWFM was implemented in tandem with the policy changes of the Transformation Agenda, allowing for year to year changes in volume among child protection service agencies (Commission to Promote Sustainable Child Welfare, 2011). However, the Commission noted that while the Transformation Agenda encouraged options to support children within their families of origin, the ability to adequately provide this support varied across the province, and were dependent on the financial situation and priorities of individual child protection services (Commission to Promote Sustainable Child Welfare, 2011). A 2015 review by the Office of the Auditor General of Ontario identified that in 2013/14, child protection services received 4.5% less funding than the total funding they received in 2012/13; resulting in staff reduction and program discontinuation (Office of the Auditor General of Ontario, 2015).

Alternatively, referral and investigation processes could be mistakenly identifying a number of situations that do not need child welfare services. The policy changes of the late 1990's and early 2000's which specified "risk of likely harm" as a situation requiring further investigation and a more explicit definition of neglect as grounds for intervention, were likely contributors to the substantial increase in the incidence of reported neglect investigations between 1998 and 2003. With the relative stability of substantiation and transfers to ongoing services it is not clear if the increase of reported neglect investigations reflect appropriate referrals to child welfare. The Auditor General's report in 2015, found that despite reduced staff and discontinued programs, as a result of the reduction in overall funding, the ability to deliver legally mandated protection services was not affected (Office of the Auditor General of Ontario, 2015).

How funding and policy changes have influenced the Ontario child welfare system's response to child neglect is difficult to interpret given that the most significant increase in

substantiated neglect investigations and neglect investigations that resulted in a placement in out of home care were between 1993 and 1998, well before the major policy shifts described. The challenge facing child welfare is to protect children while avoiding the unnecessary stress and cost of investigation or ongoing child protection involvement in those situations which are not appropriate for child welfare services. These issues are inextricably linked, efforts to minimize one will generally impact the other (Mansell, Ota, Erasmus, & Marks, 2011). Concerns are emerging that child protection cases are being prematurely closed (Office of the Auditor General of Ontario, 2015). Further analysis of the families and children who have been previously referred to child welfare services is necessary in order to not only understand the nature of their issues but also what services have been provided to them.

Strength and Limitations

The OIS is an excellent source of information for this type of analysis, since it reflects data on children about the initial investigation stage. The OIS collects information directly from a provincial sample of child welfare workers at the point when an initial investigation regarding a report of possible child abuse or neglect is completed. The scope of the study is therefore limited to the type of information available to workers at that point. The study only documents situations that are reported to and investigated by child welfare agencies. The study does not include information about unreported maltreatment nor does it include cases that are only investigated by the police.

Similarly, the OIS does not include reports that are made to child welfare authorities but are screened out before they are investigated. While the study reports on short-term outcomes of child welfare investigations, including substantiation status, initial placements in out of home care, and court applications, the study does not track longer term service events that occur beyond the initial investigation. There have been some definitional changes to the variables used in this analysis which could result in error of the measurement of these constructs over time.

Conclusion

This paper provided a description of the rates of reported neglect in Ontario using a representative study conducted every five years. Changes in rates of reported neglect vary by form but overall there has been a significant increase in reported neglect in Ontario since 1993. Despite nearly two decades of significant policy changes, surprisingly little is known about the services provided to children and the subsequent impact on children's service outcomes and trajectories. Significant resources are required to support the promotion of evidence-based practice and these data assist researchers and service providers to better understand child welfare services and their role in promoting resilience in children and families.

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Mattering as a Unique Resilience Factor in Chinese Children: A Comparative Analysis of Predictors of Depression

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Abstract:

Objectives: The current research sought to establish the protective roles of individual difference factors associated with a positive self-orientation and also evaluate the role of personality vulnerability factors as predictors of depression in children from China. The main focus was on individual differences in feelings of mattering to other people.

Methods: A sample of 218 children in grade 5 classes in China completed a battery of measures that includes the General Mattering Scale as well as measures of self-esteem, unconditional self-acceptance, self-criticism, dependency, and depression.

Results: Analyses established that lower levels of depression were typically found among children who had elevated levels of mattering, self-esteem, and unconditional self-acceptance, and lower levels of self-criticism and dependency. The results of a regression analysis established that unique variance in depression was predicted by mattering, self-esteem, unconditional self-acceptance, and dependency.

Conclusion and Implications: These findings illustrate the protective role of mattering among children in China and suggest that mattering versus not mattering is a unique "double-edged" factor that can promote resilience for the child with a sense of mattering but can be a source of vulnerability for the child who has a diminished sense of mattering to others.

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Conflict of Interest:

The authors declare no conflicts of interest.

Keywords:

resilience, mattering, self-esteem, self-criticism, dependency depression

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Introduction

The role of mattering as a key orientation and element of the self and personal identity that underscores a resilient approach toward life and interpersonal relationships is a neglected topic in the psychology field. Rosenberg and McCullough (1981) defined mattering as "the feeling that others depend on us, are interested in us, are concerned with our fate, or experience us as an ego-extension" (p. 165). Mattering can be viewed as a key protective resource that should operate in a manner that is similar to other protective factors that underscore a resilience orientation (Masten, Best & Garmezy, 1990; Masten & Garmezy, 1985). Mattering is seen as similar to yet distinguishable from social support in that it can play a unique role in buffering life stressors and setbacks. Mattering is particularly relevant when confronted with interpersonal stressors because it can contribute to a form of interpersonal resilience that helps a person bounce back from adverse treatment and public embarrassments (Flett, Flett & Wekerle, 2015).

It is our contention that while establishing a sense of mattering is highly protective, mattering is "double-edged" in the sense that feelings of not mattering are highly destructive. Deficits in mattering typically reflect a less than optimal upbringing. Not surprisingly, initial data on not mattering and maltreatment indicate that emerging adults with a reported history of emotional abuse and emotional neglect during childhood also tend to have lower levels of mattering (Flett, Goldstein, Pechenkov, Nepon & Wekerle, 2016). Related research indicates that reduced levels of mattering to parents are associated with higher levels of parental alienation (Wu & Kim, 2009) as well as less parental acceptance and parental monitoring (Cookston et al., 2012).

Unfortunately, the role of mattering in resilience has not been examined extensively from a theoretical perspective. However, as alluded to earlier, in a recent conceptual analysis of interpersonally-based forms of resilience, Flett et al. (2015) posited that high social self-

esteem in terms of mattering to others is a key element in building resilience and resistance to interpersonal stressors, especially when this sense of mattering has become a stable and enduring part of someone's personal identity. In contrast, a sense of not mattering and having been treated in ways that convey the message "you don't matter" is a significant source of vulnerability.

Similarly, mattering has not been studied extensively as a resilience factor despite countless case illustrations of the transformative effects that follow from developing a sense of mattering after being treated in a loving manner by someone who truly cares. Implicit in the description of children identified as "cherished children" is that they have been able to withstand challenges and setbacks and demonstrate long-term adjustment because they have been treated in a manner that fosters a sense of mattering to others (Lee et al., 2015).

Some evidence of the protective role of mattering was provided by an investigation that focused on mattering as a coping resource among adults and found that mattering seemed to act as a buffer of the link between psychosocial stress and depression (Turner, Taylor & Van Gundy, 2004). Moreover, various studies have found that among adolescents and adults, higher levels of mattering are associated with lower levels of depression and lower levels of suicide ideation (e.g., Elliott, Colangelo & Gelles, 2005; Elliott, Kao & Grant, 2004; Flett, Galfi-Pechenkov, Molnar, Hewitt & Goldstein, 2012; Marshall, 2001).

The current study was conducted to extend research on the protective role of mattering by examining mattering and depression in children from China. The current study is unique in several respects. First, as suggested above, most research on mattering has been conducted with adolescents, university students, or adults from the general community, and there have been few attempts to examine mattering in children. The current study is particularly unique in that it focuses on children in China; the vast majority of research investigations of mattering have been conducted with participants from North America. The need to assess potential resilience factors by conducting research with Chinese adolescents was discussed at length by Wang, Zhang, and Zimmerman (2015). They noted that generalizability should be assessed rather than assumed and they highlighted unique contextual factors and situations that can impact the resilience factors among Chinese adolescents.

Our particular focus on children from China is due to the fact that Chinese children and adolescents face a number of stressors that point to the need to identify protective factors that promote resilience. There is now extensive evidence of the academic pressures that must be faced by children and adolescents from China (Quach, Epstein, Riley, Falconier & Fang, 2015). The stress experience can be further exacerbated by the strong sense of duty and obligation and the collectivistic emphasis on interdependence that exists among families as well as the pressures on individual children that can stem from China's one child policy (Hesketh, Lu & Xing, 2005). Given this interdependence, it seems apparent that deficits in feelings of mattering to significant others should be felt intensely by young people in China who define themselves in relation to significant others.

The current study is a follow-up investigation to an earlier study that assessed mattering in 232 Chinese high school students from advanced and non-advanced high schools (Flett, Su, Ma & Gu, 2014). Children in China are assigned to different schools based on their previous performance once they reach high school. There are two types of schools

-- advanced high schools or regular high schools. The decision is based primarily on the student's scores on tests for various school subjects (e.g., math, literature, English, physics, chemistry, biology, politics). Participants in our previous study completed measures of mattering, depression, shame, and social anxiety, as well as a measure of academic resilience (i.e., academic buoyancy). As expected, mattering was associated with lower levels of depression, shame, and social anxiety. It was also associated with higher levels of academic resilience. This general pattern was found for students from both advanced and non-advanced high schools.

In the current study, we examined the extent to which mattering is associated with lower levels of depression in Chinese children. In addition, we investigated the predictive utility of mattering by examining whether mattering could predict unique variance in levels of depression after taking into account other potentially relevant predictors. Most notably, we focused on whether mattering could be distinguished from self-esteem. Rosenberg and McCullough (1981) highlighted this key issue in their seminal chapter. They argued that mattering and self-esteem are unique factors and they described data from various samples of adolescents suggesting that a measure of mattering to parents predicted a number of important outcomes independent of levels of self-esteem. Subsequent research with adult participants has yielded additional evidence indicating that mattering and self-esteem are distinguishable (Dixon & Kurpius, 2008; Ueno, 2010).

We conducted a stringent test of the hypothesized unique predictive role of mattering by going beyond self-esteem and examining other potentially relevant predictors of depression in children from China. In addition to assessing self-esteem, we also included a brief measure of unconditional self-acceptance. Research derived from the rational-emotive perspective has shown that a measure of unconditional self-acceptance is associated negatively with psychological distress in university students (Chamberlain & Haaga, 2001; Flett, Besser, Davis & Hewitt, 2003; Scott, 2007), and it is reasonable to expect that developing self-acceptance will be associated with lower levels of depression among Chinese children. We also included brief measures of self-criticism and dependency in light of research with children and adolescents from North America and China which indicates that these depressive vulnerability factors are associated with higher levels of distress and a tendency to engage in maladaptive behaviours that generate interpersonal stress (Auerbach, Eberhart & Abela, 2010; Cohen et al., 2013; Starrs et al., in press).

Our main hypotheses were as follows. First, it was hypothesized that mattering, self-esteem, and unconditional self-acceptance would be associated negatively and significantly with depression. In addition, it was expected that depression would be linked with higher levels of self-criticism and dependency. Second, it was anticipated that mattering and either self-esteem or unconditional self-acceptance would be unique predictors of depression when considered simultaneously in a regression analysis. This prediction reflects the fact that this research was conceptualized and conducted with the expectation that the results would support our contention that the theme of mattering versus not mattering is a specific resilience factor for children who feel like they matter but it is a risk factor for children who feel like they don't matter.

Method

Participants

Our sample consisted of 218 participants (109 boys, 108 girls, 1 undeclared). Participants were in Grade 5 and were recruited from a school in Anshan. Anshan is located in the northeast of China in Liaoning province. Anshan has over 1.5 million residents. Our participants had a mean age of 12.19 years (SD = 0.57). We focused on students in Grade 5 rather than older students to respect the wishes of school officials and our interest in assessing mattering in younger participants. Our participants were from a convenience sample that was available largely due to the affiliations established previously by the authors.

All participants were volunteers and no one indicated that they did not wish to participate and no interested participant was excluded. Informed consent from each student and their parents was obtained in writing. Ethics approval was provided by York University.

The second author was engaged in the recruitment of participants. The second author stayed with the students while they were completing the measures in order to assist with any reading or interpretation difficulties. All data were collected from multiple classrooms at the same school. Data collection took place in April 2012. Once participants completed the survey, each participant was given a written debriefing form in Mandarin and a small monetary gift (approximately $5 Canadian) for taking part in this study.

Procedure

The various measures used in the current study are described below. Participants were tested in groups in their individual classrooms. Note that all measures were translated into simplified Mandarin from the original English version by the second author, who is qualified as a professional translator, and then, in accordance with established procedures, we confirmed the accuracy of the translations by having the measures back translated by another bilingual Mandarin-English speaker. The following measures were administered after a demographics questionnaire asking for date of birth, sex, and grade level:

Measures

The General Mattering Scale (GMS; Rosenberg & McCullough , 1981). The GMS is a five-item measure of how much one perceives they matter to others. The five questions are: (1) How important are you to others? ; (2) How much do other people pay attention to you?; (3) How much would you be missed if you went away?; (4) How interested are others in what you have to say?; and (5) How much do other people depend upon you? This measure has shown good internal consistency with an alpha coefficient of .85 (Taylor & Turner, 2001). Factor analysis has confirmed this measure is unidimensional (Taylor & Turner, 2001). The response options varied from strongly disagree to strongly agree using a four-point rating scale.

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a 10-item scale that is well-known and widely used. It is a measure of global self-esteem and has five items

worded in the negative direction. Response options range from "1" (strongly disagree) to "4" (strongly agree). Cross-cultural research with adults indicates that the scale typically yields a pattern suggesting that positive self-evaluation is universal across cultures, though in collectivist cultures such as China, there is some evidence of a neutral response bias (Schmitt & Allik, 2005).

Children's Depressive Experiences Questionnaire (CDEQ; Abela & Taxel, 2001). The CDEQ is a 10-item scale with five items that assess self-criticism (e.g., I am only happy when I am succeeding at everything. If I am not good at everything I do, I get mad at myself) and five items that assess dependency (e.g., I am not happy unless most people I know like me. I worry a lot about hurting or upsetting people who are close to me). The measure is patterned after the Depressive Experiences Questionnaire (Blatt, D'Afflitti & Quinlan, 1979) designed for adults. The CDEQ requires children to rate each item according to three options (i.e., not true for me, sort of true for me, and really true for me). The CDEQ was developed based on extensive analyses of 10 self-criticism items and 10 dependency items by Abela and Taylor (2002). The subscales have modest reliability likely due to the relatively low number of items being assessed.

Unconditional Self-Acceptance Questionnaire (USAQ). We utilized an abbreviated six-item measure of Chamberlain and Haaga's (2001) USAQ by selecting items based on their content validity and readability level. Evidence attests to the psychometric properties of the USAQ when administered to adolescents (Hill, Hall, Appleton & Kozub, 2008). We used an abbreviated version of this measure in the current study despite the lack of a measure specific to children because of the conceptual relevance of individual differences in unconditional self-acceptance.

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D scale is a 20-item measure of the level of depressive symptoms within the past week. The CES-D has shown adequate test-retest reliability and construct validity in both clinical and nonclinical samples (Radloff, 1977).

Results

Initially, descriptive statistics were computed to examine the psychometric properties of the mattering measure. The Cronbach alpha was .69. The item-total correlations ranged from .35 to .51 and there were no items that appeared to undermine internal consistency, so the alpha of .69 is a reflection of modest scale length. The overall mean was 13.97 (SD = 2.91). Comparisons showed that girls had higher levels of mattering than boys with respective means of 14.36 (SD = 2.31) and 13.62 (SD = 3.34) and this difference was marginally significant, $t = 1.89$, $p < .07$.

The correlations among the variables for the total sample are shown in Table 1. Mattering was correlated significantly with self-esteem ($r = .37$, $p < .01$) but it was not associated significantly with unconditional self-acceptance, self-criticism, or dependency. As expected, mattering was associated significantly with reduced levels of depression ($r = -.30$, $p < .01$). Depression was also associated negatively with self-esteem ($r = -.37$, $p < .01$) and

Table 1: Correlations Among the Measures

	Mattering	Self-Esteem	Self-Acceptance	Self-Criticism	Depend	Depression
Mattering	1.00					
Self-Esteem	.37**	1.00				
Self-Acceptance	.00	.13	1.00			
Self-Criticism	.06	.09	-.10	1.00		
Depend	-.11	.14*	-.14*	.31**	1.00	
Depression	-.30**	-.37**	-.25**	.19**	.31**	1.00

Note. n = 218. * p < .05, **p < .01, two-tailed. The abbreviations are as follows: Self-Acceptance (Unconditional Self-Acceptance) and Depend (Dependency).

unconditional self-acceptance (r = .25, p< .01). Also, as expected, depression was correlated significantly with self-criticism (r = .19, p< .01) and dependency (r = .31, p< .01).

Overall, comparable correlations were obtained for boys versus girls in terms of the magnitude of the correlations between depression and mattering, self-esteem, and unconditional self-acceptance. However, the association between self-criticism and depression was significant in boys (r = .31) but not girls (r = .08, ns). In contrast, the association between dependency and depression was much more robust in girls (r = .46, p< .01) than boys (r = .21, p<. 05).

A regression analysis was then conducted to evaluate the unique predictors of depression. Given the differences between boys and girls in the correlations, sex was included as one of the predictors along with mattering, self-esteem, unconditional self-acceptance, self-criticism, and dependency. Overall, the predictors accounted for 27.7% of the variance in depression scores, F = 13.45, p<.001. As can be seen in Table 2, there were four significant predictors (at the p<.01 level): mattering, self-esteem, unconditional self-acceptance, and dependency. The results were in the expected direction with higher levels of depression associated with higher levels of dependency and lower levels of mattering, self-esteem, and unconditional self-acceptance.

Discussion

The current study focused on mattering as a protective factor among Chinese children. As expected, this research confirmed that mattering was associated significantly with lower levels of depressive symptoms. This is in keeping with our earlier research highlighting the protective role of mattering among Chinese adolescents (Flett et al., 2014). The pattern of correlations also indicated that mattering was associated with self-esteem but it had little overlap with the measures of unconditional self-acceptance, self-criticism, and dependency.

The correlational results using data from the total sample further established that all of the other individual difference factors were significantly correlated with depression, with the

Table 2: Multiple Regression Analysis for Variables Predicting Depression

Variable	R^2	*B*	*t*
Predictor Block	.277***		
Sex		-.055	-0.92
Mattering		-.193	3.02**
Self-Esteem		-.232	3.59**
Unconditional Self-Acceptance		-.176	2.94**
Self-Criticism		.097	1.56
Dependency		.207	3.28**

Note. *p < .05, **p < .01, ***p < .001.

strongest associations with depression involving self-esteem and dependency. Links between depression and dependency in Chinese adolescents have been reported previously (Cohen et al., 2013; Starrs et al., in press). However, to our knowledge, the association between unconditional self-acceptance and depression has not been evaluated previously in research with Chinese children. This finding illustrates the generalizability of previous findings obtained from samples of university students from North America (e.g. Scott, 2007), but more importantly, our results suggest that a relative paucity of unconditional self-acceptance may play a greater role that the presence of self-criticism as a contributor to distress among Chinese children.

Given that multiple factors were associated with depression, it was important to evaluate which factors were unique predictors of levels of depression when these factors were considered simultaneously in a regression analysis. We found that unique variance in depression was predicted by mattering, self-esteem, unconditional self-acceptance, and dependency. The findings with mattering replicate and extend other research showing that mattering is predictive of depression beyond the variance attributable to self-esteem among older participants from North America (e.g., Ueno, 2011). These results are in keeping with our contention that mattering is a unique protective factor that should be especially relevant after experiencing adverse interpersonal events. The child who knows in general that he or she matters to key significant others should be more able to withstand various forms of mistreatment and other types of stressors and challenges when compared to the child who has not been instilled with a sense of mattering to others.

A recent-meta analysis that took a lifespan perspective when assessing self-esteem among people from Taiwan illustrated the benefits of self-esteem; the authors of this work emphasized the need to promote self-esteem as a way of preventing depression in children (Chen, Chiu & Huang, 2013). Our findings support this conclusion given that self-esteem was a unique predictor of depression. However, our findings also qualify this conclusion by pointing to the need to promote a sense of mattering as a supplement to this focus on promoting self-esteem. Mattering can be promoted in many contexts (e.g., mattering at

home, at school, and in the community) so that the child develops a more generalized sense of her or his importance and significance to other people.

While our main focus is on the role of mattering as a factor that protects children from depression, our results have broad implications involving the nature and relevance of self-evaluation. For instance, there has been some debate about the universality of self-esteem, with research suggesting that self-esteem is still relevant in collectivistic cultures (Brown, Cai, Oakes & Deng, 2009). Our results suggest that individual differences in perceived mattering are just as relevant as self-esteem differences among children from China.

Research is needed in China and elsewhere to identify the factors, processes, and experiences that contribute to individual differences in mattering. In the current instance, children were raised according to a one-child policy that ensures some degree of prominence within the family unit and this should, at least on the surface, result in some sense of mattering to some degree. However, the development of a sense of mattering is based on the quality of experiences with other people who take a special interest in the child. It is likely that a sense of mattering emerges from exposure to the types of parental warmth that are known to facilitate positive adjustment among children in China (Chen, Liu & Li, 2000).

While our primary focus is on mattering, it is important to note that several factors were associated with depression and unconditional self-acceptance was a unique predictor. This finding signifies the importance of Chinese children being able to develop an unconditionally positive orientation toward themselves to buffer feelings of self-criticism and to be resilient despite the achievement pressures they likely experience. Here it is worth noting that unconditional self-acceptance was uniquely predictive when pitted against self-esteem, so it seems evident that positive adjustment is more likely if elements of self-esteem (i.e., sense of self-liking and sense of feeling capable and competent) are accompanied by a pervasive sense of self-acceptance. This unconditional self-acceptance is especially important after making mistakes or experiencing achievement setbacks that would normally elicit self-punitive responses.

Limitations of the Current Study and Directions for Future Research

While the current study yielded several unique findings, certain limitations should be noted. First, this research was cross-sectional in nature, so no causal assumptions are warranted. Longitudinal research is needed to further establish the extent to which mattering uniquely contributes to a resilient orientation and positive adjustment outcomes. Similarly, the generalizability of these results need to be determined empirically rather than assumed. This is especially necessary given that we utilized a convenience sample rather than a sample comprised of randomly selected participants.

Second, we utilized a general measure of mattering and multiple measures of mattering should be used in future research; indeed, it could be argued that the predictive utility of mattering was actually underestimated in the current study. Mattering can be measured in terms of mattering in specific contexts (e.g., mattering at school) and it can be measured in terms of mattering to family members as well as peers and friends. Mattering can also be assessed in terms of feeling significant in the community. The need to use multiple measures

of mattering is suggested by the fact that there was substantial variance in depression scores that was not predicted by the variables included in the current research.

In summary, the current study examined predictors of depression in a sample of Chinese children and we confirmed that mattering as well as self-esteem and unconditional self-acceptance are associated with lower depression. As well, we established that mattering, self-esteem, and unconditional self-acceptance are unique predictors of depression when considered along with trait personality factors associated typically with depressive vulnerability. The results are noteworthy for various reasons, including the fact that mattering was related to self-esteem but predicted unique variance in depression when considered along with self-esteem and unconditional self-acceptance. Overall, these results suggest that children in China would benefit from additional experiences that promote a sense of mattering, perhaps by being given the opportunity to perform key roles that foster a sense that other people are depending on them.

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Interpersonal Personality Vulnerabilities, Stress, and Depression in Adolescents: Interpersonal Hassles as a Mediator of Sociotropy and Socially Prescribed Perfectionism

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Abstract:

Objectives: Research linking interpersonal personality factors with depression illustrates the need for adolescents to develop interpersonal resilience. In the current study, we examined the extent to which two interpersonally-based vulnerability factors (i.e., sociotropy and socially prescribed perfectionism) and daily interpersonal hassles are associated with depression in adolescents.

Methods: A sample of 143 high school adolescents from Toronto, Ontario, Canada completed self-report questionnaires that included measures of sociotropy (i.e., the Personal Styles Inventory), perfectionism (i.e., the Child-Adolescent Perfectionism Scale), daily life hassles, and depressive symptoms.

Results: Sociotropy and socially prescribed perfectionism were associated significantly with depression and daily hassles, including hassles reflecting interpersonal themes such as social mistreatment and social disconnection. A factor consisting of interpersonal hassles subscales mediated the link between these personality traits and depression.

Conclusion and Implications: Our results highlight the roles of sociotropy and socially prescribed perfectionism and suggest that these traits are associated with depression, in part, due to their link with daily interpersonal stressors. Our results suggest that while many adolescents are resilient, others who need to be accepted and who feel that they

must live up to external pressures to be perfect would benefit from stress counseling and preventive interventions that would boost their emotional and interpersonal resilience.

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Conflict of Interest:

The authors declare no conflicts of interest.

Keywords:

resilience; mattering; self-esteem; self-criticism; dependency; depression

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Introduction

A recent conceptual analysis of resilience by Flett, Flett, and Wekerle (2015) emphasized the need for young people to develop a sense of interpersonal resilience. They argued that resilience can be assessed in specific life domains and it is very important to develop a capacity to be able to withstand interpersonal adversities and develop resources and capabilities with an interpersonal focus in order to be able to bounce back from and adapt to interpersonal challenges, threats, and setbacks.

Flett et al. (2015) defined interpersonal resilience as "… the tendency to withstand negative feedback and less than ideal treatment by other people and persist in terms of maintaining positive relationships and pursuing personally important goals, including interpersonal goals… Someone who is high in interpersonal resilience is able to adapt without withdrawing socially when they are confronted on a regular basis with social adversity" (p. 13). They noted further that this interpersonal resilience is deeply rooted in beliefs about the self and views of the self in relation to other people.

They identified nine facets of interpersonal resilience. Someone is more likely to be interpersonally resilient if they have positive resources such as an optimistic orientation characterized by social hope and being someone who is socially self-compassionate (i.e., being kind to oneself and accepting oneself after being mistreated or after making mistakes in public). Other characteristics including having a strong sense of social self-esteem due to a sense of mattering to significant others and being able to adaptively disengagement and distance oneself from negative social interactions and feedback.

Why it is important to develop interpersonal resilience? There is now extensive evidence that attests to the potential destructiveness of interpersonal stress. Several investigations have documented a link between negative social interactions and psychological distress (e.g., Herres, Ewing, & Kobak, 2016; Pagel, Erdly, & Becker, 1987). For instance, Bolger, DeLongis, Kessler, & Schilling (1989) had participants complete diary accounts and provide mood ratings over a six-week period. Analyses established that interpersonal conflicts were the most upsetting stressors and these stressors accounted from more than 80% of the variance in daily mood ratings.

In the current paper, we did not assess interpersonal resilience per se, but instead sought to illustrate the need to develop interpersonal resilience among adolescents by examining how interpersonally-based personality vulnerability factors and daily interpersonal hassles relate to depression. Our focus on interpersonal hassles stems, in part, from general evidence showing that daily hassles have a strong impact on the self-concepts of adolescents (Tolan, Miller, & Thomas, 1988). Our emphasis on interpersonally-based personality vulnerabilities follows from an extensive and growing literature that focuses on the role of interpersonal factors in depression. For instance, Joiner and Timmons (2009) and Hammen and Rudolph (2003) have demonstrated that interpersonal factors are implicated in depression. When it comes to adolescents, it has been suggested that it is susceptibility to interpersonal stress that accounts for the sex differences in depression with adolescent girls having higher levels and rates of depression than adolescent boys (Hankin & Abramson, 1999) and adolescent girls having greater reactivity to interpersonal episodic stress (Shih, Eberhart, Hammen, & Brennan, 2006). Recent data suggest that depression among girls is a growing problem; there are indications that the prevalence of depression may be increasing among children and adolescents in general (Mojtabai, Olfson, & Han, 2016) and this increase is especially evident among adolescent girls (Gariepy & Elgar, 2016).

We examined interpersonal factors in the current study by focusing on the associations among interpersonal personality vulnerabilities, interpersonal hassles, and depression in a sample of Canadian adolescents. Our focus was on two personality factors – sociotropy and socially prescribed perfectionism. Each of these factors is now described in more detail below.

Sociotropy is a concept that was introduced by Beck and his associates (Beck, 1983; Beck, Epstein, Harrison, & Emery, 1983). The sociotropy concept was then developed further by Robins et al. (1994). Sociotropy is similar to dependency in that in involves a high sensitivity to other people and a need to seek out other people and try to maintain close contact with significant others and get their social approval. It is typically assumed that at the root of extreme sociotropy is a negative self-view and identity that sees oneself as weak and ineffective and in need of the support and reassurance of more confident and capable others. The adolescent who has elevated sociotropy is presumed to be vulnerable rather than resilient because she or he lacks the sense of personal agency and confidence in problem-solving ability that is found among resilient people with more positive self-views and associated motivational orientations.

As is typically the case in the broader personality literature, most research on sociotropy has been conducted with adults rather than children or adolescents. However,

some longitudinal research on sociotropy among children was reported by Little and Garber (2000). They developed the Sociotropy-Achievement Scale for Children to assess sociotropy and self-criticism. Sociotropy was assessed by two factors known as neediness and connectedness. They assessed sociotropy, social stressors, and depression over two timepoints and found that neediness at Time 1 was positively correlated with Time 2 social stressors and neediness predicted increased depression over time, but it did not interact with social stressors to predict Time 2 depression. Other analyses revealed that connectedness interacted with social stressors to predict depression at Time 2 for boys but not for girls.

More recently, Calvete (2011) examined sociotropy, social events, and depression in 853 adolescents at two timepoints separated by six months. Analyses indicated that negative inferences about social events and generated stress mediated the association between sociotropy and subsequent depression. Moreover, sociotropy and negative inferences about social events contributed to the higher levels of depression found among adolescent girls.

Finally, research from the Northwestern-UCLA Youth Emotion Project included sociotropy and autonomy among the predictor variables. This investigation revealed that sociotropy was associated with depression in a sample of 575 high school students. Moreover, it was also associated with various other forms of maladjustment, including anxiety (Zinbarg et al., 2010).

As for perfectionism, Hewitt and Flett (1991) introduced the concept of socially prescribed perfectionism as part of a broad multidimensional conceptualization of the personal and interpersonal aspects of perfectionism. This work has resulted in a relational approach to the treatment of perfectionism (Hewitt, Flett, & Mikail, 2017). Socially prescribed perfectionism is a highly deleterious orientation that reflects the sense that other people or society in general demands perfection from the self. Socially prescribed perfectionism is reflected by test items such as "The better I do, the better I am expected to do," and "My teachers expect me to be perfect." This perfectionism orientation can involve a sense of helplessness or hopelessness among those people who strongly endorse the view that success will only result in other people setting expectations even higher. A lack of resilience among adolescents with high levels of socially prescribed perfectionism would be expected due to a tendency for adolescents with high socially prescribed perfectionism to lack a sense of personal efficacy and a propensity to be easily overcome due to a sense of being externally controlled, either by other people or by life circumstances. However, adolescents with elevated socially prescribed perfectionism who are able to establish a sense of resilience and grit should be relatively protected and less prone to distress, especially if they have developed a capacity to bounce back from interpersonal stressors.

Initial research on the socially prescribed perfectionism dimension was conducted with adults, but research has also established that meaningful individual differences in levels of socially prescribed perfectionism can be assessed among children and adolescents (Flett et al., 2016). There is growing evidence which suggests that socially prescribed perfectionism is highly deleterious and is associated with several forms of psychological distress in adolescents (e.g., Asseraf & Vaillancourt, 2015; Flett, Coulter, Hewitt, & Nepon, 2011). For instance, results indicate that socially prescribed perfectionism is associated with racial discrimination

experiences and depression in African American adolescents (Lambert, Robinson, & Ialongo, 2014) and another study showed that socially prescribed perfectionism in adolescents from Scotland predicted depression and it interacted with a measure of acute life stress to predict self-harm (O'Connor, Rasmussen, & Hawton, 2010).

Regarding the role of hassles in perfectionism and depression, there has been extensive research on perfectionism, stress, and depression in adults. This work followed from suggestions that perfectionism acts as a diathesis factor that becomes linked with depression and other forms of distress following the experience of negative events (Hewitt & Flett, 1991, 1993). Research in this field has tested the role of stress in general (e.g., Dunkley, Mandel, & Ma, 2014) as well as a specific vulnerability model. This model suggests that when vulnerabilities are matched with relevant stressors (i.e., a perfectionist driven to meet personal achievement goals experiences an ego-involving failure connoting lack of achievement), this combination will produce depression. Thus, when the focus is on interpersonal stress, this model suggests that it is the combination of interpersonal perfectionism and interpersonal stressors (as opposed to achievement stressors) that is most likely to result in depressive symptoms.

A subsequent conceptual refinement of the diathesis-stress model led to the development of the perfectionism social disconnection model (Hewitt, Flett, & Sherry, & Caelian, 2006; Hewitt et al., 2017). The essence of this model is that people with elevated levels of interpersonal perfectionism dimensions will act in avoidant and socially isolating ways that foster a sense of perceived or actual disconnection and alienation from other people; in addition, they will have life situations that fail to satisfy their need for meaningful connections with others and this stress will result in depression for those people who feel that they must live up to socially imposed pressures to be perfect but their lives and social worlds are less than perfect.

Unfortunately, there have been relatively few empirical studies focused on perfectionism and the stress experienced by children and adolescents. Two studies have been conducted thus far on socially prescribed perfectionism and daily hassles in children or adolescents, though both studies were limited due to the use of a less than optimal measure of daily hassles. Initially, Hewitt et al. (2002) administered the Child-Adolescent Perfectionism Scale (Flett et al., 2016), the Children's Hassles Scale (Kanner, Feldman, Weinberger, & Ford, 1987), and measures of anger, anxiety, and depression to a heterogeneous sample of 114 children and adolescents. The Children's Hassles Scale is a 25-item inventory that was scored in this study so as to yield separate 10-item indices of the frequency of achievement hassles (e.g., school work too hard) and interpersonal hassles (e.g., kids at school teased you). Hewitt et al. (2002) found that both self-oriented perfectionism (i.e., exceptionally high personal standards) and socially prescribed perfectionism were associated with the distress measures, including the measure of depression. Socially prescribed perfectionism had a small but positive association with social hassles ($r = -.24$, $p < .01$) but it was not associated significantly with achievement hassles. Analyses of possible interaction effects found no evidence of a significant interaction of socially prescribed perfectionism and hassles in predicting depression.

More recently, Hewitt, Caelian, Chen, and Flett (2014) examined perfectionism, life stress, daily hassles, depression, hopelessness, and suicide ideation in a sample of 55 adolescent psychiatric patients diagnosed with depression. Once again the hassles scale was the Children's Hassle Scale. It was scored in Hewitt et al. (2014) study as a total score and not in terms of separate achievement and interpersonal themes. This research established that socially prescribed perfectionism predicted concurrent levels of suicide potential. Moreover, socially prescribed perfectionism interacted with daily hassles to predict concurrent suicide potential.

On a related note, another study by Roxborough et al. (2012) did not assess hassles per se, but they did include a brief self-report measure of exposure to bullying. Roxborough et al. (2012) found in 152 psychiatric outpatient children and adolescents that interpersonal perfectionism components were associated jointly with bullying and a sense of social hopelessness and bullying acted as a mediator of the link between interpersonal components of perfectionism and suicide risk.

The brief hassles measure used in previous research on perfectionism, hassles, and depression did not measure the full range of relevant daily hassles experienced by high school students. Accordingly, in the current study, we assessed daily hassles with a measure known as the Inventory of High School Students' Recent Life Experiences. Kohn and Milrose (1993) developed this inventory. It has been widely used to assess the frequency of daily hassles in adolescents (Chang, 2002; Lai, 2009; Marks, Sobanski, & Hine, 2010). This measure was patterned after a similar measure developed for use with university students. This inventory has eight subfactors but we focused on the five hassles factors that have an interpersonal focus. The eight factors are social alienation, academic challenge, excessive demands, romantic concerns, decisions about personal future, loneliness and unpopularity, social alienation, social mistrust, and assorted annoyances and concerns (including several social annoyances and concerns) (Kohn & Milrose, 1993).

Goals of the Current Study

Clearly, there is a substantial need for further investigation in samples of adolescents of the role of interpersonal stress in personality and depression. Accordingly, in the current study, we addressed three interrelated questions. First, do sociotropy and socially prescribed perfectionism have the expected associations with depression in adolescents? Second, to what extent are sociotropy and socially prescribed perfectionism associated with interpersonal hassles in adolescents? Finally, is there evidence that the experience of daily interpersonal hassles acts as a mediator of the proposed links between the interpersonal personality vulnerabilities and depression?

We evaluated these issues in a convenience sample of adolescent boys and girls from Ontario who completed measures of sociotropy, socially prescribed perfectionism, depression, and daily hassles.

In summary, the current study tested several issues in a sample of adolescents. It was hypothesized that both sociotropy and socially prescribed perfectionism would be associated significantly with depression and various interpersonal daily hassles. Moreover, it was further hypothesized that a composite measure comprised of various interpersonal hassles factors

would mediate the association between sociotropy and socially prescribed perfectionism and depression.

Method

Participants

A sample of 143 adolescents (58 boys, 85 girls) took part in this research. Our participants were recruited from a high school in the Toronto area which was approached by the second author. Their mean age was 17.10 years (SD = 2.07). Overall, participants recruited from various grades but most participants were in grades 11 or 12.

Procedure

Permission was obtained from the school board, high school principal, and teachers. A few days before the study took place students were asked by their teachers to participate voluntarily in study that examined "personality and adjustment". If they agreed to be in the study, and provided an informed consent signed by a parent or guardian, as well as by themselves, they were asked to complete a package of questionnaires. Participation rates were not recorded but were exceptionally high. The measures were completed during regular classroom time. Our measures are described below.

Measures

Personal Style Inventory (PSI). The PSI is a 48-item self-report measure. Respondents make five-point ratings of the degree to which each statement applies to them (Robins et al., 1994). The measure is divided into two subscales – sociotropy and autonomy. The current research focused on the 24-item sociotropy subscale because of its interpersonal focus. The sociotropy scale assesses a person's level of concern about what others think of them, their dependency on others for material support or emotional support, and their excessive need to please others. Items on this scale include "I worry a lot hurting or offending other people", and "I am very sensitive to criticism by others." The sociotropy subscale had an alpha of .86 in the present study.

Child-Adolescent Perfectionism Scale (CAPS). The CAPS is a 22-item self-report measure of perfectionism for use with children and adolescents (Flett et al., 2016). It parallels closely its adult equivalent, the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991). The CAPS has two subscales assessing self-oriented perfectionism and socially prescribed perfectionism. Extensive evidence attests to the psychometric characteristics of the CAPS and it subscales (Flett et al., 2016). Respondents make five-point ratings on items that are designed to assess self-oriented perfectionism (e.g., "I try to be perfect in everything I do"; "I get mad at myself when I make a mistake") and socially prescribed perfectionism (e.g., "My family expects me to be perfect"; "My teachers expect me to be perfect"). In the present study, we obtained internal consistency coefficients of .87 for each subscale.

Inventory of High School Students' Recent Life Experiences (HISSRLE). The HISSRLE is a 41-item self-report measure developed for tapping the daily hassles of high

school students (Kohn & Milrose, 1993). This was designed to parallel the Inventory of College Students' Recent Life Experiences (ICSRLE; Kohn, Lafreniere, & Gurevich, 1990). The content of some items was changed to suit the context (e.g., professors changed to teacher) and some items were simplified or adapted by the scale creators to enhance clarity. Respondents make five-point ratings on items that tap various factors. The eight factors in order of their magnitude are social alienation (e.g., disagreements with friends, disliking fellow students), excessive demands (i.e., too many things to do at once, not enough time to meet your responsibilities), romantic concerns (i.e., dissatisfaction about romantic relationship), decisions about personal future (i.e., important decisions about your education), loneliness and unpopularity (i.e., loneliness, being ignored), assorted annoyances and concerns (i.e., separation from people you care about, money problems), social mistreatment (i.e., being taken for granted, having your trust betrayed by a friend), and academic challenge (i.e., lower grades than you hoped for, struggling to meet other people's standards of performance at school). The overall scale and the subscales have adequate internal consistency (Kohn & Milrose, 1993).

Center for Epidemiological Studies Depression Scale (CES-D). This 20-item scale was developed to measure current levels of depressive symptomatology (Radloff, 1977). Respondents indicate on a four-point scale, how frequently during the past week they experienced particular symptoms such as "My sleep was restless", "I talked less then usual" and "I felt fearful". The scale has been shown to be reliable measure for identifying true positives of major depression in students in high school students (Radloff, 1991; Roberts, Lewinsohn, & Seeley, 1991). In the present study, we obtained an internal consistency coefficient of .86.

Results

Test of Sex Differences

A MANCOVA was performed with participants' gender as the independent variable and all study variables as the dependent variables. In addition, participants' age was covaried. A significant sex effect was obtained Wilks' $\Lambda(8, 133) = .83$, $p < .001$. Table 1 presents the means, standard deviations, and Univariate F's. As can be seen in Table 1, girls reported significantly higher levels of sociotropy, depression, and various hassles (i.e., Romantic Concerns, Assorted Annoyances and Concerns, and Social Mistreatment). Consequently, in the following analyses, participants' sex was controlled.

It is worth noting that the means obtained on the CES-D exceeded the CES-D cutoff score of 16 or greater for at least mild depression (Radloff, 1977). Thus, our sample as a whole was characterized by mild depression.

Correlations Among the Measures

The correlations among the variables are presented in Table 2. It can be seen in terms of the hassles subscales that sociotropy was not associated with social alienation and it did have a small but significant association with romantic concerns. In contrast, socially

Table 1: Means, Standard Deviations, and Univariate F's for the Variables: Sex differences

	Boys n =58		*Girls* n= 85		
Variables	*M*	*SD*	*M*	*SD*	*F (1,141)*
1. Socially Prescribed Perfectionism	30.57	7.73	29.96	7.76	.16
2. Sociotropy	90.53	17.93	95.65	16.65	4.36*
3. Social Alienation	15.00	3.88	15.08	3.90	.00
4. Romantic Concerns	4.64	1.92	5.36	2.17	4.82*
5. Loneliness and Unpopularity	9.78	4.00	10.21	3.42	.637
6. Assorted Annoyances and Concerns	10.09	3.05	11.05	2.92	4.55*
7. Social Mistreatment	11.83	3.41	13.47	3.79	9.06**
8. Depression	17.47	9.67	22.38	11.22	9.61**

Note: n = 143 (two-tailed test). *p <.05; **p <.01.

prescribed perfectionism was correlated significantly with social alienation but was not associated with romantic concerns. The main associations of note in terms of the links between sociotropy and the hassles subscales were the correlations that sociotropy had with loneliness/unpopularity (r = .41, p<.01) and with social mistreatment (r = .47, p<.01). Socially prescribed perfectionism had a smaller but significant association with loneliness/ unpopularity (r = .22, p<.05) but a stronger link with social mistreatment (r = .34, p<.01).

Regarding the correlates of depression, it can be seen in Table 2 that sociotropy, socially prescribed perfectionism, and all of the hassles measures were associated significantly with depression. The strongest links were between depression and the factors tapping social mistreatment and unpopularity/loneliness.

The Mediating Role of Interpersonal Hassles

Does a construct representing interpersonal hassles mediate the effect of socially prescribed and sociotropy personality variables on adolescents' depression? We explored this issue using a structural equation modeling approach that permitted us to simultaneously evaluate both the direct and mediating effects of the adolescents' Interpersonal Hassles, while assessing measurement errors in the dependent and independent variables. All SEM analyses were performed with the AMOS software based on the variance- covariance matrix. We tested the adequacy of measurement models and the fit of the structural models, using maximum likelihood estimations. As is conventional in SEM analyses, we have reported the $\chi 2$ as a fit index to evaluate how the "proposed" model - the model being evaluated- fits the data compared to the "saturated" model - the baseline model that represents perfect model fit. A non-significant $\chi 2$ has traditionally been used as a criterion for not rejecting an SEM. This non-significant $\chi 2$ indicates that the discrepancy between the matrix of the parameters estimated based on the model being evaluated is not different from the one based on the empirical data. Thus, one can conclude that the proposed model fits the empirical

Table 2: Correlations, Means, and Standard Deviations for the Variables

Variables	Gender	1	2	3	4	5	6	7	M	SD
1. Socially Prescribed perfectionism	-.04	-------	-------	-------	-------	-------	-------	-------	30.21	7.72
2. Sociotropy	.15	.24**	-------	-------	-------	-------	-------	-------	93.57	17.30
3. Social Alienation	.01	.31***	.15	-------	-------	-------	-------	-------	15.05	3.88
4. Romantic Concerns	.17*	.10	.18*	.24**	-------	-------	-------	-------	5.07	2.10
5. Loneliness and Unpopularity	.06	.22**	.41***	.35***	.17*	-------	-------	-------	10.04	7.72
6. Assorted Annoyances and Concerns	.16	.27***	. 31***	.49***	.41***	.39***	-------	-------	10.66	2.10
7. Social Mistreatment	.22**	.34***	.47***	.40***	.22**	.54***	.47***	-------	12.80	3.72
8. Depression	.22**	.34***	.35***	.26**	.22**	.46***	.37***	.47***	20.38	10.86

Note: n = 143 (two-tailed test). *p<.05; **p<.01; ***p<.0001.

data well. However, this criterion can be overly strict and sensitive, and can be influenced by the number of variables and participants (Landry, Smith, Swank, & Miller-Loncar, 2000). Therefore, we have also used and reported moderately stringent acceptance criteria as additional fit indices: the Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), and the Normed Fit Index (NFI), with values closer to 1 indicating better fitting models.

We first conducted a Confirmatory Factor Analysis (CFA) of the interpersonal hassles factors to reflect our belief that the interpersonal hassles subscales reflect a more general interpersonal stress factor. Parenthetically, it should be noted that a similar analysis could not be done with the other measures since they did not involve multiple subscales. We then tested the measurement model of the following constructs: sociotropy, socially prescribed perfectionism, depression, and interpersonal hassles. We then analyzed the combined direct effects of socially prescribed perfectionism and sociotropy on adolescents' depression. Finally, we specified the direct and indirect effects' model.

Confirmatory Factor Analysis (CFA) for Interpersonal Hassles

As noted above, in an initial preliminary step, we performed a Confirmatory Factor Analysis (CFA) using Structural Equation Modeling (SEM). In this model, we specified a latent construct determined by five of the eight IHSSRLE factors as indicators (Social Alienation, Romantic Concerns, Loneliness and Unpopularity, Assorted Annoyances and Concerns, and Social Mistreatment). The specified CFA model resulted in the following acceptable indices of fit: $\chi 2[5, N = 143] = 6.10$; $\chi 2/df = 1.22$; $p = .30$; GFI = .98; NFI = .95; CFI = .99. Table 3A presents the CFA model factor loadings for the Interpersonal Hassles construct. All of the factor's indicator's paths and loadings were substantial and statistically significant in the expected directions in keeping with our expectations. The model was found

Table 3: CFA Model's Factor Loadings and Measurement Model's Intercorrelations

A. Factor loadings

Variables	Social Hassles	R^2
1. Social Alienation	.61	.38***
2. Romantic Concerns	.41	.17***
3. Loneliness and Unpopularity	.61	.37***
4. Assorted Annoyances and concerns	.73	.53***
5. Social Mistreatment	.69	.48***

B. Intercorrelations

Variables	Social Hassles
1. Socially Prescribed Perfectionism	.42***
2. Sociotropy	.54***
3. Depression	.61***

Note:

n = 143 (two-tailed test).
***p<.0001.

to explain 38%, 17%, 37%, 53%, and 48% of social alienation, romantic concerns, loneliness and unpopularity, assorted annoyances and concerns, and social mistreatment, respectively.

Analysis of the Measurement Model

We delineated all of the associations between the latent and observed variables in the analysis of the measurement models. The latent construct Interpersonal Hassles was assessed by five indicators; Social Alienation, Romantic Concerns, Loneliness and Unpopularity, Assorted Annoyances and Concerns, and Social Mistreatment. Socially prescribed perfectionism, sociotropy, and depression were the observed variables.

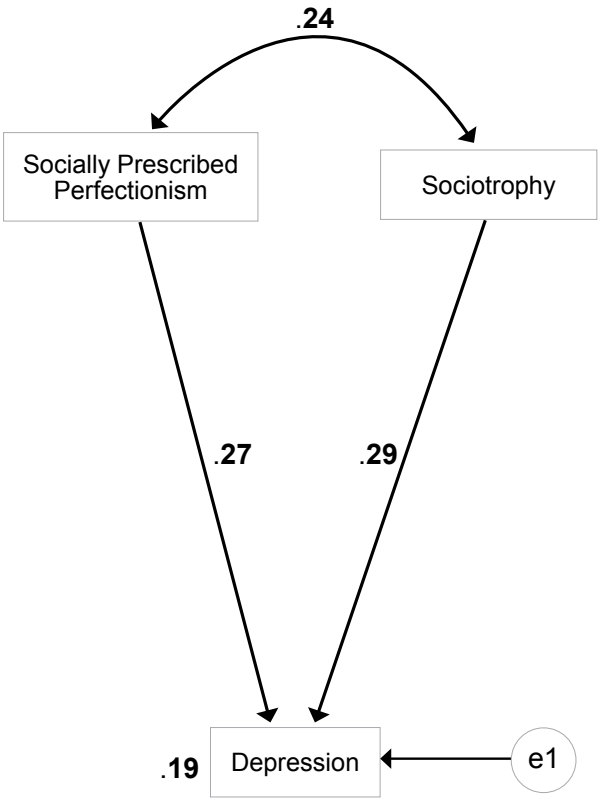
The specified full measurement model resulted in the following acceptable indices of fit: (χ^2[17, N = 143] = 36.2; χ2/df = 2.13; p = 0.004; GFI = .94; NFI = .90; CFI = .93. All the factor indicators' paths and loading for the measurement model were substantial and statistically significant in the expected directions. The correlations are presented in Table 3B. Convergent validity was supported for the measures, as factor loadings ranged from .41 to .73; all were highly significant at p< .0001.

Structural models specification

Analysis of the direct effects

We followed Baron and Kenny's (1986) criteria for mediation. We first estimated in the first step the combined direct effects (i.e., Multiple Regression) of socially prescribed perfectionism and sociotropy on depression. The specified direct effects model resulted in

Figure 1. The Mediating Effect Model



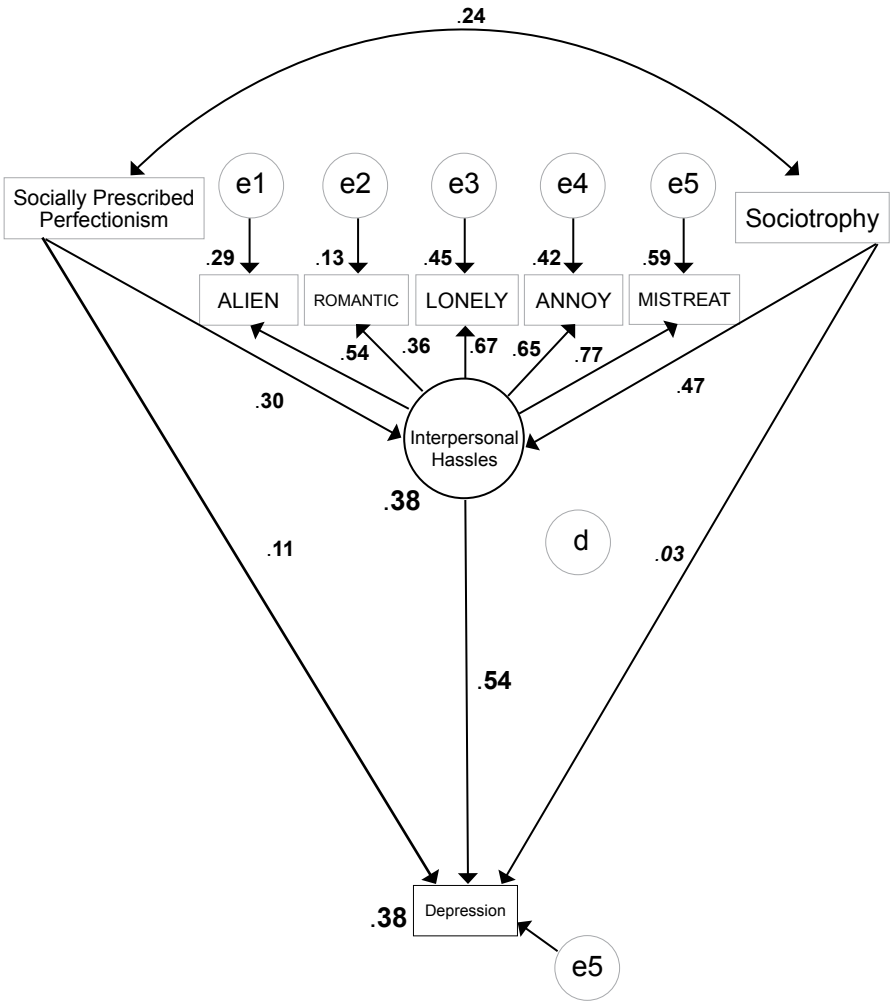
Note: Rectangles indicate measured variables. Large circles represent latent constructs, small circles reflect residual or disturbance variances. Two-headed arrows represent correlations, and unidirectional arrows depict hypothesized directional, or "causal", links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant as determined by critical ratios.

zero df and thus did not allow for the estimations of indices of fit. As can be seen in Figure 1, this direct effect models accounted for 19% of the variance of adolescents' depression, showing that adolescents scoring high on socially prescribed perfectionism and sociotropy were reporting high levels of depression (path coefficient = .27, t = 3.51, p<. 0001 for socially prescribed perfectionism and path coefficient = .29, t = 3.68, p< .0001 for sociotropy).

Analysis of the Mediating Model:

It was assumed that Interpersonal Hassles mediates the effects of adolescents' socially prescribed perfectionism and sociotropy scores on their depression levels. We specified separate mediation models with two observed predictors: socially prescribed perfectionism and sociotropy, and one endogenous mediating latent variable -- Interpersonal Hassles. Depression scores served as the observed criterion variable. The specified direct indirect mediation model resulted in the following acceptable indices of fit: ($\chi 2[17, N = 143] = 36.2$; $\chi 2/df = 2.13$; $p = 0.004$; GFI = .94; NFI = .90; CFI = .93. The models specified (see Figure 2)

Figure 2.



Note: ALIEN = Social Alienation, ROMANTIC = Romantic Concerns, LONELY = Loneliness and Unpopularity, ANNOY = Assorted Annoyances and Concerns, MISTREAT = Social Mistreatment

accounted for 38% of the variance in Interpersonal Hassles and in depression. Personality variables were associated significantly with high levels of Interpersonal Hassles (path coefficient = .30, t = 3.58, p< .0001 for socially prescribed perfectionism and path coefficient = .47, t = 5.11, p< .0001 for sociotropy). Interpersonal Hassles were associated significantly with adolescents' reporting high levels of depression, path coefficient = .54, t = 4.68, p< .0001 (see Figure 2).

Mediation has occurred when the indirect effect of a predictor through a mediator significantly reduces the predictor's direct effect (Baron & Kenny, 1986). As can be seen in Figure 1, the direct paths from socially prescribed perfectionism and sociotropy to adolescents' depression were significant: path coefficient = .27, t = 3.51, p<. 0001 for socially

prescribed perfectionism, and path coefficient = .29, t = 3.68, p< .0001 for sociotropy. In Figure 2, however, these paths approached zero, path coefficient = .11, t = 1.32, ns, and path coefficient = .04, t = 0.36, ns for socially prescribed perfectionism and sociotropy, respectively. The reductions in the coefficients of the direct paths from socially prescribed perfectionism and sociotropy to adolescents' depression after the Interpersonal Hassles mediator was controlled, were significant according to Sobel's test: Z = 2.87, p< .004 for socially prescribed perfectionism, and Z = 3.51, p< .0001, for sociotropy, respectively. Thus, interpersonal hassles construct acted as an almost full (though not necessarily exclusive) mediator of the association between high socially prescribed perfectionism and high sociotropy and adolescents' depression levels.

Discussion

The current study examined how interpersonal vulnerability factors (i.e., sociotropy and socially prescribed perfectionism) related to daily interpersonal stressors (i.e., hassles) and depression in a sample of high school students. The need to examine predictors of depression was signified by the level of depressive symptoms found in our sample as a whole. The means for both male and female participants exceeded the CES-D cutoff off point for the presence of depressive symptoms, so having some depressive symptoms was normative in this sample.

As expected, correlational analyses found that both sociotropy and socially prescribed perfectionism were associated with depression. The magnitude of the obtained associations with depression was comparable for sociotropy and socially prescribed perfectionism. Overall, these associations are in keeping with previous findings obtained in adolescent samples (e.g., Calvete, 2011; Flett et al., 2016; Sutton et al., 2011).

The results of analyses with the interpersonal hassles factors suggest that adolescents characterized by interpersonal personality vulnerabilities are prone to experience daily interpersonal hassles that likely amount to a constant source of strain. Both socially prescribed perfectionism and sociotropy were associated with more frequent hassles involving social mistreatment. Similarly, both personality factors were associated with the hassles factor representing unpopularity and loneliness but the association was stronger between sociotropy and unpopularity and loneliness. However, socially prescribed perfectionism and sociotropy had little association with romantic concerns hassles; the role of romantic hassles likely needs to be examined in a more refined way in future research by taking into account key variables such as relationship status. Finally, we also found there was a significant positive association between socially prescribed perfectionism and social alienation but this same association was not evident for sociotropy.

Overall, several conclusions can be drawn from the obtained pattern of correlations. For instance, it is evident that there are both similarities and differences between socially prescribed perfectionism and sociotropy and thus it is not surprising that these two factors are not highly correlated with each other even though they represent a more general overarching construct. Second, the associations found with the interpersonal hassles factors are in keeping with predictions from the perfectionism social disconnection model (Hewitt et al., 2017); as noted earlier, this model posits that the interpersonal perfectionism dimensions

are associated with a sense of alienation and isolation from other people. Our results suggest that a social disconnection model is also applicable to some degree to adolescents with elevated levels of sociotropy; for these individuals, the sense of being disconnected from others is at variance with their needs and desires to connect with other people in meaningful ways and this should be a source of disappointment and dejection for them that could result in socially avoidant actions and withdrawal.

Third, the links that exist between these personality factors and these interpersonal hassles must be interpreted within the context of the robust associations that were found between depression and the hassles factors tapping social mistreatment and unpopularity and loneliness. Our results suggest that daily stressors involving perceptions of being mistreated and being socially disengaged and perhaps even unpopular are factors that have a strong psychological impact on adolescents. Given the cross-sectional nature of our research, we cannot infer that these interpersonal hassles caused depression but is should still be the case that the frequent experience of these hassles likely contributes to the persistence and maintenance of symptoms of depression among adolescents.

One overarching implication that follows from this research is that adolescents who are characterized by high levels of socially prescribed perfectionism have very stressful existences. These young people must contend with the constant pressure that comes from incredible demands and expectations being placed on them, as well as the pressures associated with their own lofty goals. In addition, our results suggest that they are faced on a regular basis with a host of interpersonal hassles that can take quite an emotional and physical toll on them. Given the high level of stress that is involved, calls for the prevention of perfectionism in young people and proactive ways of dealing with stress seem warranted. Flett and Hewitt (2014) discussed why there is a need to prevent perfectionism and they outlined several themes that need to be addressed in order to achieve this goal. One suggestion focused on stress inoculation and stress management. The current results suggest that attempts to inoculate vulnerable students from stress and increase their levels of interpersonal resilience should emphasize developing coping and self-regulation when faced with specific stressors involving various forms of social mistreatment and situations involving a sense of being excluded and a lack of belongingness. Flett et al. (2014) also emphasized the need for perfectionistic children and adolescents to develop a sense of self-acceptance and self-compassion. Given our emphasis on building interpersonal resilience, it seems evident that perfectionistic adolescents should also benefit substantially from preventive interventions that promote being self-accepting and kind to oneself following adverse social experiences and outcomes (e.g., receiving negative social feedback for not living up to prescribed standards).

The current results suggest that it is essential to develop resilience in response to the daily experience of interpersonal hassles. The clearest illustration of the central role of interpersonal hassles in the current research was provided by the structural equation analyses that yielded that results indicating that interpersonal hassles act as a mediator of the link between interpersonal personality vulnerabilities and depression in adolescents. These findings provide support for stress-based conceptual models that link personality dimensions with depression (e.g., Hewitt & Flett, 2002).

Although it was not our primary focus, there were several indications of sex differences in our results. This is not surprising given the evidence cited earlier suggesting that adolescent girls are more likely than adolescent boys to experience depression. Our analyses revealed that girls were higher in depressive symptoms, and they also reported higher levels of trait sociotropy and higher levels of certain daily life hassles (i.e., romantic concerns and social mistreatment). There were no sex differences in levels of socially prescribed perfectionism in the current research, but this does not preclude the possibility that there are sex differences in the degree to which the pressures imposed on the self to be perfect relate to key aspects of self-definition and personal identity.

The current study yielded unique and novel insights into the interplay of personality vulnerabilities, interpersonal daily hassles, and depression in adolescents, but the limitations of the current research must be acknowledged. As noted earlier, this research was cross-sectional and longitudinal research is needed to gain additional insights into the temporal sequence between hassles and depression. A longitudinal study of adolescents that examines these personality traits, stress, and depression using an experience sampling approach with daily assessments would be quite revealing. Second, the current research was based entirely on self-report data and future research would be strengthened by the inclusion of informant reports. Third, it cannot be assumed that the current findings are specific to depression, and subsequent research should include additional measures of distress and emotional maladjustment (e.g., anxiety, anger) given that it is likely that these results apply more generally to a range of negative affective states. Finally, the current results are based on participants from a convenience sample and the generalizability of our findings needs to be examined in other samples of adolescents.

In summary, the current research confirmed that adolescents are more likely to report the experience of depressive symptoms if they are characterized by sociotropy and socially prescribed perfectionism and they have a daily life characterized by the frequent interpersonal hassles. These hassles seem particularly important as a focus for interventions given that these interpersonal hassles mediated the link between personality and depression and some of the most robust correlates of depression were interpersonal hassles reflecting social mistreatment and social disconnection. This research highlights the need to build resilience in the interpersonal domain so that adolescents will be able to withstand major life events in the social domain but also the pernicious daily interpersonal hassles that can undermine well-being on a constant basis.

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Child Maltreatment, Altered Self-Capacities and Resilience: Testing a Moderated Mediation Model of Depression Symptoms and Alcohol Problems in Emerging Adulthood

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Abstract:

Objectives: Although it is well established that resilience moderates the effects of child maltreatment on mental health, less is known about the effects of resilience on pathways from child maltreatment to depression symptoms and alcohol problems. Previous researchers have found that difficulties with relationships, identity and affect control (i.e., altered self-capacities; Briere & Runtz, 2002), are important antecedents of child maltreatment and are linked to challenges in adulthood. The current study tested a moderated mediation model of the relationship between childhood maltreatment, altered self-capacities, resilience and both depression symptoms and alcohol problems during emerging adulthood.

Methods: Participants were 277 emerging adults (ages 18-24, M = 21.06; SD = 1.93; 69.3% female) recruited from the community who completed an online survey. Using PROCESS (Hayes, 2012), we examined a moderated mediation model of the relationship between child maltreatment, resilience, altered self-capacities, and both depression symptoms and alcohol problems.

Results: Problems with identity and affect control mediated the relationship between child maltreatment and depression symptoms, whereas only problems with affect control

mediated the relationship between child maltreatment and alcohol problems. In addition, resilience moderated the relationship between child maltreatment and alcohol problems and positively attenuated the relationship between child maltreatment and depression symptoms through identity problems.

Conclusion and Implications: These findings provide a more nuanced understanding of the mechanisms that link child maltreatment to outcomes in emerging adulthood and highlight resilience and difficulties with identity and affect control as important prevention and intervention targets.

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Conflict of Interest:

The authors declare no conflicts of interest.

Keywords:

Resilience, self-functioning, trauma, identity, affect regulation, emerging adulthood

Introduction

The maltreatment of children (i.e., the abuse or neglect of a child under the age of 18 by a parent, caregiver, or another person in a custodial role) is an area of significant societal and public health concern. The consequences of childhood maltreatment are extensive and involve pervasive social, psychological, and physical health difficulties (Mangion & Buttigieg, 2014; WHO, 2014), including risk for subsequent development of depression (Ali et al., 1999; Antypa & Van Der Does, 2010; Dunn, Gilman, Willett, Slopen, & Molnar, 2012; Shea et al., 2005; Weich et al., 2009) and increased involvement in high-risk behaviors such as harmful alcohol use (Afifi, et al., 2012; Gilbert et al., 2009; Goldtein et al., 2013; Sartor et al., 2008; Tonmyr et al., 2010). Although the impacts of child maltreatment are seen throughout the lifespan, difficulties in some domains may be heightened during emerging adulthood, a time of transition and instability (Arnett, 2000).

Depression and Alcohol Problems in Emerging Adulthood

Emerging adulthood typically refers to the developmental period that occurs between the ages of 18 to 25 (Arnett, 2000). The theory of emerging adulthood is rooted in stage theories of development (Erickson, 1968), but has received increasing attention over the past decade due to recent demographic shifts, resulting in the delay of typical adult milestones such as job security, financial independence, marriage, and parenthood (Arnett, 2000; 2004; 2007). Arnett (2004) characterized emerging adulthood as a time of identity exploration, instability, self-focus, exploration of possibilities, feeling 'in-between', and has drawn specific theoretical links between difficulties in fulfilling each of the fundamental tasks faced by emerging adults, and engaging in potentially dysfunctional coping behaviors, such as harmful alcohol use (Arnett, 2005). The transitional stressors of emerging adulthood also correspond with vulnerability to developing depression (Tanner et al., 2007; Schulenberg & Zarrett, 2006).

Research has shown that depression in emerging adulthood corresponds to the challenges of this developmental stage, including its associated physical and psychological life transitions. These include leaving home, starting a career, along with prolonged identity exploration and feeling "in between" adolescence and adulthood – the convergence of which may contribute to identity crises and psychological distress (Weiss et al., 2012; Lee & Gramotnev, 2007). These transitions impact autonomy, family support, and social networks (Lane, 2014) and can negatively influence mental health outcomes. Although not all emerging adults experience difficulties during these transitions, there is great inter-individual variability (Schulenberg et al., 2004), with some emerging adults responding with considerable distress (Perrone & Vickers, 2003; Polach, 2004) including loneliness and depression (Hallowell et al., 1989; Kenny & Sirin, 2006; Tanner et al., 2007). The median age of onset for depression occurs during the 20's (Weiner, 1992), with approximately 25% of late adolescents and young adults having experienced a major depressive episode, which greatly increases risk of subsequent depression recurrence (Hart et al., 2001).

Alcohol problems are also more prevalent in emerging adulthood than during any other time of life (Simons-Morton et al., 2016). Indeed,18-24 year olds have the highest rates of past year drinking, binge drinking (including the highest amounts of monthly and weekly binge drinking) and hazardous drinking relative to other age groups and this places them at further risk for alcohol-related problems, including adverse physical, mental, and social consequences (Boak et al., 2015; Dawson et al., 2015; Reich et al., 2015; Whitehill et al., 2015; Willoughby et al., 2014). Based on his theory, Arnett (2005) suggested that increased substance use in emerging adulthood is also functionally related to the challenges of this developmental stage. For some emerging adults, the instability of this time of life that gives rise to increased negative affect may also motivate substance use.

Mechanisms Underlying the Relationship Between Child Maltreatment, Depression Symptoms and Alcohol Problems

Despite research documenting the higher prevalence of both depression and alcohol problems during emerging adulthood and a significant literature linking child maltreatment to both of these outcomes, there is a gap in the literature regarding the psychological

mechanisms that mediate these relationships and reflect developmentally timed psychosocial issues. One theory that has been proposed to account for some of the negative outcomes experienced by individuals with histories of child maltreatment is the theory of altered self-capacities (Briere, 1997; McCann & Pearlman, 1990). According to this theory, child maltreatment impacts the ability to relate to oneself and to others and is linked to three distinct but interrelated difficulties in functioning: 1) difficulties in establishing and maintaining meaningful social and interpersonal relationships (relational disturbance); 2) difficulties accessing and maintaining a stable sense of identity or self (identity disturbance); and 3) difficulties managing and/or tolerating aversive emotional states (affect dysregulation). Previous researchers have found that altered self-capacities are associated with an increased risk for engaging in dysfunctional patterns of behavior, including substance use (Briere & Gil, 1998; Grilo, et al., 1997), depression (Valdez, Bailey, Santuzzi, & Lilly, 2014), aggression (Allen, 2011), and suicide potential (Allen, 2013). To date, however, we are not aware of any other study that has examined a comprehensive model of the relationship between childhood maltreatment and alcohol problems in EA that has considered these three areas of functioning.

There is, however, some evidence for increased difficulties in these areas during emerging adulthood based on research using the Inventory of Altered Self Capacities (IASC; Briere, 2000), a measure designed to assess disturbances in relatedness, identity and affect control. In their standardization study for the IASC, Briere and colleagues (Briere, 2000; Briere & Runtz, 2002) found that IASC scores were higher for a university student sample compared to a community-recruited standardization sample, suggesting greater difficulties in the three self-other functions among emerging adults. Based on these findings, along with research identifying altered self-capacities as an area of particular difficulty among those with histories of maltreatment (e.g., Allen, 2013; Bigras, et al., 2015; Briere & Rickards, 2007), we anticipated that difficulties in interpersonal relationships, identity and affect control would be more pronounced in the context of childhood maltreatment and that altered self-capacities would mediate the relationship between child maltreatment and both depression symptoms and alcohol problems.

Resilience Attenuates Risk in Emerging Adulthood

Despite the increased risk of developing depression and alcohol problems, not all individuals with exposure to childhood maltreatment go on to experience mental health problems later in life (McGloin & Widom, 2001; Collishaw et al., 2007). Resilience is defined as the ability to adapt well in the face of trauma or adversity (Alim et al., 2008; Collishaw et al., 2007) and resilience factors such as perceived parental care, adolescent peer relationships, and the quality of adult love relationships, have been found to mitigate the mental health risks associated with childhood maltreatment (Collishaw et al., 2007). Resilience traits have also been found to mitigate a range of mental health outcomes among those exposed to childhood maltreatment, including depression (Green et al., 2010b; Pietrzak et al., 2010b; Wingo et al., 2010) and alcohol use and problems (Wingo et al., 2014; Green et al., 2010b). Nonetheless, studies on resilience as a moderator (i.e., buffer) of the relationship between childhood maltreatment and depression symptoms and alcohol problems in emerging adulthood are limited. Only one study examined this topic in adults with exposure to

childhood abuse and trauma (Wingo et al., 2014) and the researchers found that resilience reduced lifetime alcohol use problems as a main effect, and interacted with severity of childhood abuse to decrease harmful alcohol use. There is also limited research on the influence of resilience on depression in emerging adulthood following exposure to childhood maltreatment. Existing research shows that resilience has a direct effect on depression symptom severity among adolescents (Moran & Eckenrode, 1992) and adults exposed to childhood abuse (Wingo et al., 2010), with higher resilience predicting lower depression. In addition, resilience moderates and counteracts the effects of risk associated with a history of sexual abuse among emerging adults transitioning out of child welfare, with individuals scoring high on resilience demonstrating significantly fewer depression symptoms than those with lower resilience (Goldstein et al., 2013).

Although previous researchers have tested whether resilience attenuates risk for depression and alcohol problems among individuals exposed to childhood maltreatment, few have specified the mechanisms of risk that are attenuated by resilience. Research on resilience provides a critical perspective on the conditions under which the impact of child maltreatment on maladaptive outcomes may be reduced. Research on resilience as a moderator of the mediational pathways from child maltreatment to these outcomes provides an additional opportunity to determine the ways in which mechanisms that underlie the relationship between child maltreatment and maladaptive outcomes may be attenuated, providing critical information on the "when of the how" (Hayes, 2015, p.1). Indeed, researchers have already determined that resilience attenuates the indirect relationships between stress, anxiety/depression, and alcohol problems, with greater resilience weakening these pathways (Wang & Chen, 2015). We tested a similar moderated mediation model in which we anticipated that resilience would moderate the mediation effect of altered self-capacities. Specifically, we hypothesized that resilience would buffer the pathway from childhood maltreatment to altered self-capacities and depression symptoms and alcohol problems. The hypothesized moderated mediation model is illustrated in Figure 1.

Method

Participants and Procedures

Overall, 290 emerging adults consented to participate in the study and started the online survey; however, only 277 participants completed a sufficient number of the current measures (> 80%) to be included in the data analysis. The 277 participants ranged in age from 18 to 24 years old (M = 21.06; SD = 1.93; 26.4% male and 69.3% female; 4.3% did not complete the binary gender option) recruited from the community in a large urban Canadian city. In terms of ethnicity, 46.2% identified as Caucasian, 26.4% as Asian, 16.2% as South Asian, 9.6% as African or Caribbean, 4.7% as Middle Eastern or West Asian, and 1.1% identified as Aboriginal or First Nations. The majority of the sample were currently in school (73.3%) and were unemployed (51.1%) and living with a parent or parents (53.4%). A good proportion of the sample (36.9%) reported that they had lived independently at one time, but had moved back home to live with their parents.

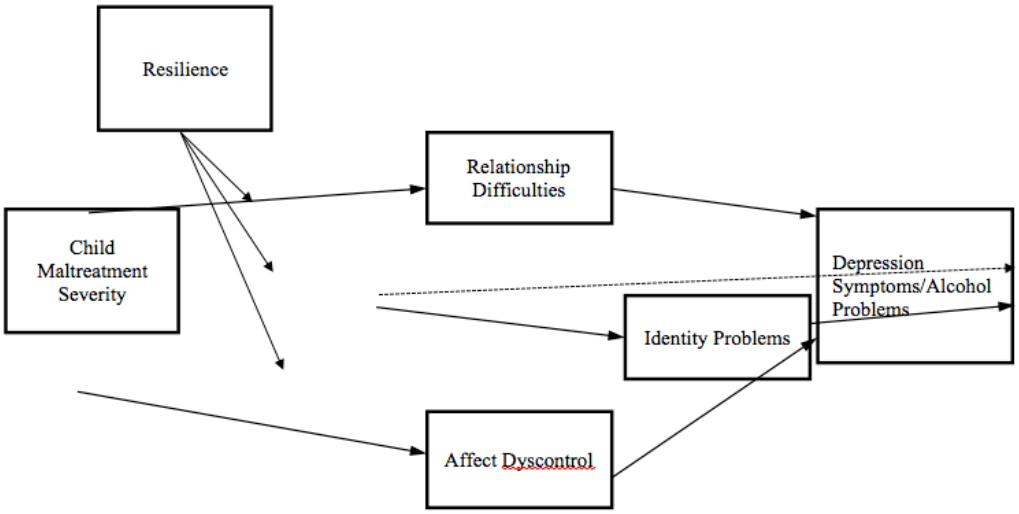

Figure 1. Hypothesized moderated mediation model with resilience moderating altered self-capacities (i.e., difficulties in relationships, identity disturbances and affect dysregulation) as mediators of the relationship between child maltreatment and depression symptoms and alcohol problems.

Participants were recruited from the community through advertisements posted around an urban university campus, online ads posted on community websites (Craigslist and Kijiji) and notices distributed by a psychology students' association and through Twitter postings targeting accounts with relevance for emerging adults (e.g., university Twitter accounts, youth advocacy groups). Participants who were interested in the study called or emailed a research assistant and were then sent a unique link to the online survey, which was administered via Fluidsurveys. At the end of the survey, participants had the option to enter their email address into a draw for a $50 giftcard to an online site. To retain anonymity of the survey responses, email addresses were stored in a separate database from the survey responses.

All procedures were approved by the institutional Research Ethics Board.

Measures

Childhood maltreatment. Childhood maltreatment was assessed with the Childhood Trauma Questionnaire – Short Form (CTQ-SF; Bernstein et al., 2003). The CTQ-SF is a 25-item questionnaire, measuring five types of maltreatment, including three types of abuse (physical, sexual, emotional) and two types of neglect (physical and emotional). Participants rate childhood experiences (e.g., "People in my family hit me so hard that it left me with bruises or marks") using a five-point Likert scale based on the frequency of the event (1=Never True, 2=Rarely True, 3=Sometimes True, 4=Often True, 5=Very Often True). A subscale score based on the sum of items is generated for each type of maltreatment. For the

current sample, internal consistencies for all but one of the maltreatment scales were good, with α's = .92, .90, and .97, for physical, emotional, and sexual abuse, respectively, and .66 and .92 for physical and emotional neglect, respectively. For the regression analyses, we used a single score representing the sum of all CTQ items. For analyses comparing maltreatment vs. no-maltreatment groups, we used cut-off scores established by Bernstein et al. (2003), to convert each of the maltreatment subscales into dichotomous scores, reflecting no or minimal abuse (0) and moderate or severe abuse (1) and created a single maltreatment score to indicate whether or not (yes/no) a participant had experienced moderate to severe abuse or neglect.

Altered Self-Capacities. Difficulties in relationships, identity, and affect control were assessed using the 63-item Inventory of Altered Self Capacities (IASC; Briere, 2000). Participants rate the extent to which they have experienced each item in the past 6 months, with responses ranging from 1 (never) to 5 (very often). The IASC consists of seven lower-order subscales, representing the three higher-order subscales. Difficulties with relatedness is assessed with three subscales (27 items): Interpersonal-Conflicts (e.g., having a lot of ups and downs in your relationship with people), Idealization-Disillusionment (e.g., looking up to people and then being very disappointed by them), and Abandonment Concerns (e.g., feeling afraid that someone you cared about might leave you). Identity problems is assessed with two subscales (18 items): Identity Impairment (e.g., Wishing you understood yourself better), and Susceptibility to Influence (e.g., Believing what somebody told you, even though it didn't make sense). Affect dyscontrol is assessed with two subscales (18 items): Affect Dysregulation (e.g., Your moods changing quickly) and Tension Reduction Activities (e.g., Throwing or hitting things during an argument as a way of getting out your anger). Because the scales have a different number of items, we combined subscales by averaging the items that loaded onto the three primary IASC dimensions. Internal consistencies for the seven subscales was good, with Cronbach's alphas ranging from .80 (Tension Reduction Activities) to .91 (Abandonment Concerns). Internal consistencies for the three higher order scales were also good: Difficulties with Relatedness (α = .95), Problems with Identity (α = .92), Affect Dyscontrol (α = .91).

Alcohol Use and Problems. Alcohol use and problems were assessed with the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The AUDIT is a 10-item measure, which covers multiple domains of alcohol use (e.g., how often do you have a drink containing alcohol) and problems (e.g., how often during that last year have you been unable to remember what happened the night before because of your drinking). Items are rated on a scale from 0 (never) to 4 (daily or almost daily). Scores for the current sample were based on the sum of all items and scores of eight or more reflect problem alcohol use. Internal consistency for the current sample was good (α = 0.88).

Depression Symptoms. Depression symptoms were assessed using the Centre for Epidemiological Studies – Depresssion scale (CES-D; Radloff, 1977). The CES-D is a 20-item measure of depressive symptoms, including poor sleep, low energy, low mood and hopelessness. Participants rate the extent to which they have experienced these symptoms over the past week on a scale from 0 (rarely or none of the time) to 3 (most or almost all the time). Higher scores indicate greater symptoms of depression and cut-off scores of 16 or higher are considered within the clinical range. The CES-D has demonstrated good internal

consistency and validity in predicting risk for depression in adolescents and emerging adults (Radloff, 1991). Internal consistency for the current study was excellent (α = 0.93).

Resilience Index. The resilience measure was based on a combination of items incorporating both internal and external resilience factors. This approach considers that resilience is multidimensional and includes both internal assets and resources and external factors that promote well-being, including social support and involvement in prosocial activities (Zimmerman et al., 2013). Internal resilience was measured using the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), which measures stress-coping ability using 25-items reflecting patience, self-efficacy, recognition of limits of control, tolerance of negative affect and viewing challenges as growth opportunities. Items are rated on a five point scale (0 = not true at all to 4 = true nearly all the time), with the total score reflecting the sum of all items. Participants were also asked about external resilience factors, including: 1) involvement with their community; 2) religious involvement; 3) parental monitoring; and 4) presence of an adult mentor. Parental monitoring was assessed using the six-item Parental Monitoring Scale (Silverberg & Small, 1991), which assesses the frequency with which emerging adults believe that their parents know their plans and whereabouts (e.g., When you go out, how often do you tell your parents who you are going out with?). Items are rated on a five-point scale from 1 (never) to 5 (always). In addition, participants were asked to indicate if they had another adult role model in their life, besides a parent (yes/no) and their past year frequency of involvement in community programs (not at all to more than once a week) and religious activities (not at all to more than once a week). A score of 0 or 1 was assigned to each resilience factor as follows: 1) Above the median on CD-RISC; 2) Above the median on parental monitoring; 3) involvement with religious activities at least monthly; 4) involvement with community activities at least monthly; and 5) presence of an adult mentor. A combined index score was created reflecting the number of resilience factors that participants endorsed, with scores ranging from 0 to 5.

Statistical Analysis

We first examined whether child maltreatment was associated with higher scores on the three IASC scales, resilience, and depression symptoms and alcohol problems. A multivariate analysis of variance (MANOVAs) was conducted in which the IASC scales, depression symptoms and alcohol problems, and resilience were the dependent variables and child maltreatment (yes vs. no) was the independent variable.

We then examined whether difficulties with relatedness, identity, and affect control mediated the relationship between history of childhood maltreatment and both depression symptoms and alcohol problems. We used PROCESS (Hayes, 2012; 2013) to examine the indirect effects of child maltreatment on alcohol problems via altered self-capacities. Bias-corrected bootstrap 95% confidence intervals were estimated for the three indirect effects based on 10,000 bootstrap samples. Confidence intervals that do not contain zero indicate a significant indirect effect. The model included the three IASC constructs as parallel mediators, with all three constructs included in the same model. Next, two moderation models were tested in which resilience was examined as a moderator of the

relationship between child maltreatment and both depression symptoms and alcohol problems; a significant interaction between child maltreatment and resilience is evidence of a significant moderation effect. Finally, two moderated mediation models were examined to test whether resilience moderated the mediation effect of altered self-capacities on the relationship between child maltreatment and alcohol problems/depression symptoms. This involves a moderated mediation or a conditional process model (Edwards & Lambert, 2007; Hayes, 2013), which allows direct or indirect effects of the independent variable (child maltreatment) on the dependent variable (alcohol problems and depression symptoms) through altered self-capacities (difficulties in the domains of interpersonal functioning, identity development, and affect regulation) to be dependent on the moderator (resilience). This is a first stage moderation model (Edwards & Lambert, 2007) with resilience moderating the path from child maltreatment to altered self-capacities. The hypothesized model is illustrated in Figure 1. To examine this moderated mediation model, we used the PROCESS macro (Hayes, 2012), which integrates moderation and mediation functions in SPSS Regression Models. PROCESS allows one to estimate the effects of multiple mediators on the dependent variable as well as the influence of a common moderator. To determine whether there is a significant moderated mediation effect, PROCESS provides an index of moderated mediation, which estimates the slope of the line representing the association between the moderator and the indirect effect (Hayes, 2015). In addition, the conditional indirect effect and 95% confidence intervals are calculated, which reflects conditional indirect effects at various levels of the moderator: low (-1 SD from the mean), moderate (at the mean) and high (+1 SD from the mean). Confidence intervals that do not include zero are considered significant. All variables were standardized prior to analysis so that parameter estimates from the PROCESS macro are interpreted as unstandardized parameter estimates.

Results

Analysis of Differences Between Child Maltreatment Groups

In total, 37.5% of the sample reported experiencing at least moderate child maltreatment. In terms of maltreatment types, 11.2% endorsed physical abuse, 12.6% endorsed sexual abuse, 21.7% endorsed experienced emotional abuse, 16.2% physical neglect and 18.1% emotional neglect. There was an overall effect of child maltreatment on all variables included in the multivariate model (difficulties in relationships, identity problems, affect dyscontrol, depression symptoms, resilience): Pillai's Trace $F(5, 271) = 13.96$, $p < .001$, $\eta 2 = 0.21$. As illustrated in Table 1, with the exception of the resilience measure, mean scores on all variables were higher for the maltreatment group than for the non-maltreatment group. Scores for the maltreatment group were lower on the resilience measure. For all analyses involving the alcohol problems score, only those who reported alcohol use in the past year were included (N = 223; 80.5% of the sample). The alcohol problems score was not included in the MANOVA due to the lower number of respondents for this measure, but a t-test revealed significantly higher alcohol problems for the maltreatment (N = 89) vs. the non-maltreatment (N = 134) group: $t (221) = -3.10$, $p < .01$.

Table 1. Means (SD) for the child maltreatment and non-child maltreatment groups.

IASC Scale	No Child Maltreatment (*N*=173)	Child Maltreatment (*N*=104)
Difficulties with relationships	16.24 (6.09)	21.92 (8.36)***
Identity problems	16.04 (6.32)	21.54 (8.05)***
Affect dyscontrol	14.57 (5.60)	20.72 (8.13)***
Depression symptoms	12.32 (9.00)	21.78 (12.81)***
Alcohol problems[a]	6.54 (5.27)	9.16 (7.37)**
Resilience index	2.24 (1.10)	1.75 (1.19)**

[a]Note. The sample size for alcohol problems was lower due to only those with past year alcohol use completing the alcohol problems measure: No Child Maltreatment (*N* = 134) and Child Maltreatment (*N* = 89). Means differ from each other at **$p < .01$; ***$p < .001$.

Bivariate Analyses

Descriptive statistics and inter-correlations for child maltreatment, altered self-capacities, alcohol problems, depressive symptoms and the resilience index are presented in Table 2. The negative association between gender and alcohol problems reflects greater alcohol problems among men (M = 9.87, SD = 7.25) compared to women (M = 6.86, SD = 5.79), t(208) = 3.11 p = .01. Severity of child maltreatment was positively and significantly associated with all three altered self-capacities: difficulties with relatedness, identity, and affect dyscontrol and with both depression symptoms and alcohol problems, whereas child maltreatment had a negative association with the two resilience scores. All three altered self-capacities were positively associated with alcohol problems and depression symptoms and negatively associated with the resilience measures. Finally, the resilience scores were negatively associated with depression symptoms, but there was not a significant relationship between resilience and alcohol problems.

Mediation Analysis

The first model tested the relationship between child maltreatment and depression symptoms via the three IASC constructs. Due to significant correlations between gender and both child maltreatment and alcohol problems, we included gender as a covariate in all models. There was a significant direct effect of child maltreatment on depression symptoms (B = 0.155, SE = 0.042, 95% CI [0.073, 0.238], p < .001). In addition, as listed in Table 3, severity of child maltreatment was associated with all three altered self-capacities (mediators), but only identity problems and affect dyscontrol were associated with depression symptoms. In addition, the total indirect effect of altered self-capacities on the relationship between child maltreatment and depression symptoms was significant (B = 0.236, SE = 0.041, 95% CI [0.162, 0.321]) and there were significant indirect effects of child maltreatment on depression symptoms through both identity problems and affect dyscontrol.

For the alcohol problems mediation model, the direct effect of child maltreatment on alcohol consequences was not significant (B = -0.035, SE = 0.031, 95% CI [-0.095, 0.025]) and only affect

Table 2. Bivariate correlations for key variables in the model ($N = 277$)[a]

	1	2	3	4	5	6	7	8
1. Gender								
2. Age	-.10							
3. CM Severity	-.15*	.05						
4. Relatedness	.07	-.08	.49***					
5. Identity	.07	-.04	.44***	.82***				
6. Affect control	.05	-.05	.51***	.88***	.80***			
7. Depression symptoms	.09	-.01	.47***	.61***	.61***	.65***		
8. Alcohol problems	-.20**	.01	.20**	.35***	.32***	.39***	.20**	
9. Resilience index	-.03	-.15*	-.29***	-.22**	-.22***	-.24**	-.29***	-.16*

[a]For correlations involving alcohol problems $N = 223$.
Note: CM = Child maltreatment.
*$p<.05$; **$p<.01$.; ***$p<.001$.

Table 3. Mediation models for depression symptoms and alcohol problems.

Mediator	CM Effect on Mediator	Mediator Effect on Outcome	Mediated Effect	Mediated Effect 95% Confidence Interval
	Depression Symptoms			
Relationship difficulties	0.263 (0.027)***	0.069 (0.156)	**0.018 (0.046)**	**-0.064 – 0.118**
Identity problems	0.238 (0.028)***	0.331 (0.123)**	**0.079 (0.031)**	**0.021 – 0.142**
Affect dyscontrol	0.266 (0.026)***	0.522 (0.156)**	**0.139 (0.049)**	**0.051 – 0.245**
	Alcohol Problems			
Relationship difficulties	0.276 (0.029)***	0.066 (0.118)	**0.018 (0.031)**	**-0.039 – 0.082**
Identity problems	0.250 (0.029)***	0.036 (0.095)	**0.009 (0.026)**	**-0.044 – 0.060**
Affect dyscontrol	0.277 (0.028)***	0.284 (0.115)*	**0.078 (0.037)**	**0.010 – 0.153**

Note. CM = Child Maltreatment; All models included gender as a control variable. Bolded mediated effects and confidence intervals are significant.

*$p<.05$; **$p<.01$; ***$p<.001$.

dyscontrol was uniquely associated with alcohol consequences. The total indirect effect of altered self-capacities on the relationship between child maltreatment and alcohol consequences was significant (B = 0.106, SE = 0.026, 95% CI [0.060, 0.160]) and there was a specific significant indirect effect of child maltreatment on alcohol consequences through affect dyscontrol (see Table 3).

Table 4. Results of the moderation analysis for depression symptoms and alcohol problems.

Variable	*B*	*SE*	95% CI
	Depression Symptoms		
Child maltreatment	0.335***	**0.046**	**.245 – .424**
Resilience	-1.465**	**0.538**	**-2.524 – -0.406**
Child maltreatment x resilience	-.047	**0.033**	**-.113 – 0.018**
	Alcohol Problems		
Child maltreatment	0.076***	**0.029**	**0.019 – 0.134**
Resilience	-0.745[b]	**0.370**	**-1.474 – -0.016**
Child maltreatment x resilience	0.058**	**0.021**	**0.016 – 0.099**

*$p < .05$; **$p < .01$; ***$p < .001$.

Moderation analysis

The second set of analyses tested whether resilience moderated the association between childhood maltreatment and both depression symptoms and alcohol problems. Results of the moderation analysis are presented in Table 4. For depression symptoms, the main effects of child maltreatment and resilience were significant, but there was no significant child maltreatment x resilience interaction. For alcohol problems, the main effect of child maltreatment was significant, there was a significant effect for resilience, and the child maltreatment x resilience interaction was significant. However, as illustrated in Figure 2,

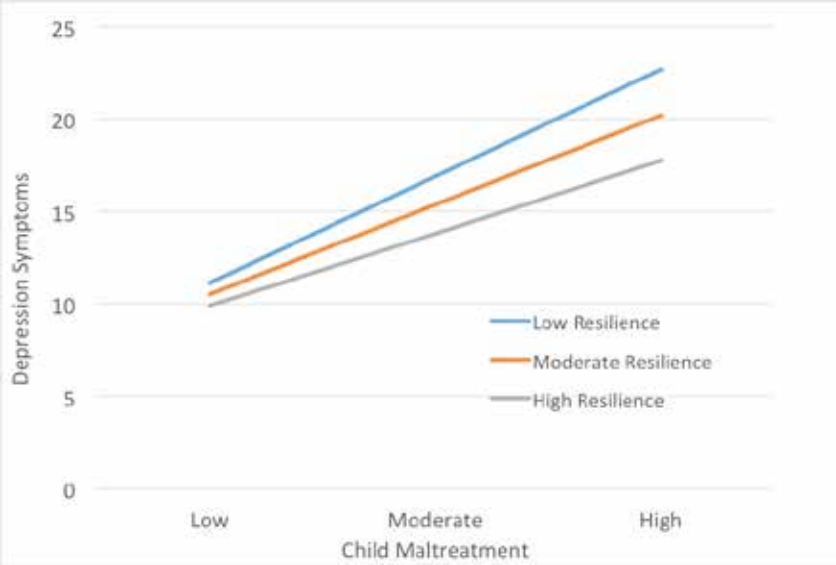

Figure 2. Hypothesized moderated mediation model with resilience moderating altered self-capacities (i.e., difficulties in relationships, identity disturbances and affect dysregulation) as mediators of the relationship between child maltreatment and depression symptoms and alcohol problems.

pattern of findings was somewhat different than expected. Although increasing resilience attenuated the effects of child maltreatment on alcohol problems, the buffering effect of resilience was less impactful at higher levels of child maltreatment.

Moderated Mediation Analysis

The final set of analyses tested a moderated mediation model in which resilience moderated the relationship between child maltreatment and the two outcomes (depression symptoms and alcohol problems) via altered self-capacities.

When depression symptoms were the outcome, we only included the two indirect effects that were significant in the mediation model: identity problems and affect dyscontrol. Regarding the moderated mediation effects, the index of moderated mediation, which reflects the slope of the line representing the association between the moderator and the indirect effect was significant for identity problems (B = 0.018, SE = 0.009, 95% CI [0.005, 0.040]), but not for affect dyscontrol (B = 0.017, SE = 0.014, 95% CI [-0.007, 0.047]). A further examination of the relationship indicated that there was a conditional indirect effect of child maltreatment on depression symptoms through identity difficulties at all levels of resilience, but the indirect effect increased in magnitude with increasing residence, with effects at low (-1 SD; B = 0.066, SE = 0.025, 95% CI [0.024, 0.122]), moderate (Mean; B = 0.086, SE = 0.028, 95% CI [0.033, 0.145], and high (+1 SD; B = 0.107, SE = 0.035, 95% CI [0.043, 0.180]) levels of resilience. The positive slope of the index of moderated mediation and the increasing magnitude of the indirect effects of difficulties with identity on the child maltreatment – depression symptoms relationship suggests that the association between child maltreatment, identity difficulties and depression symptoms increased as resilience increased. That is, greater child maltreatment was associated with increased identity problems and more

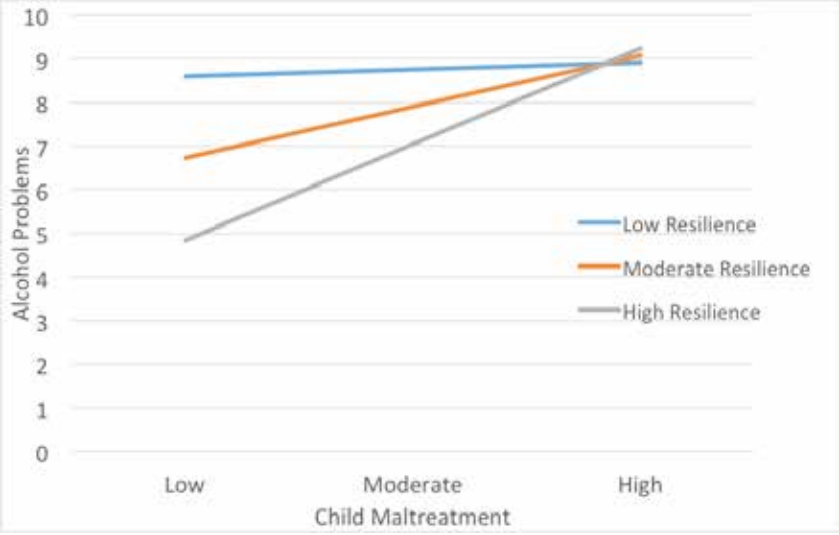

Figure 3.
Interaction of child maltreatment and resilience in predicting alcohol problems.

depression symptoms among those with low, moderate and high levels of resilience, but the size of the indirect effect was greater as resilience increased.

For alcohol problems, we tested moderated mediation for affect dyscontrol, which was the only significant indirect effect in the mediation model. The index of moderated mediation was not significant (B = 0.015, SE = 0.010, 95% CI [-.001, .037]), indicating that the indirect effect of affect dyscontrol on the child maltreatment-alcohol problems relationship was not conditional on resilience.

Discussion

The purpose of the current study was to explore the relationship between childhood maltreatment and depression symptoms and alcohol problems in emerging adulthood using Briere's framework of altered self-capacities (Briere, 2000; Briere & Runtz, 2007) and including resilience as a moderator of the relationship between child maltreatment and both depression symptoms and alcohol problems via altered self-capacities. We found support for our first hypothesis in that emerging adults who had experienced at least one type of moderate child maltreatment had significantly more difficulties with relationships, identity and affect control compared to those without maltreatment histories and experienced greater depression symptoms and alcohol problems. In addition, those with histories of child maltreatment had lower scores on a resilience index compared to those without maltreatment. These findings are consistent with Briere and Runtz (2002) and indicate that difficulties managing some of the critical tasks of emerging adulthood, including increased demands on relationship intimacy, explorations of self and identity and increased instability, may be particularly difficult for those with histories of child maltreatment and highlights the need to provide developmentally appropriate supportive services to emerging adults who have experienced child maltreatment.

Despite the increased difficulties that emerging adults with histories of child maltreatment face in the areas of relationships, identity and affect control, only identity problems and affect dyscontrol were significant mediators of the relationship between child maltreatment and depression symptoms and only affect dyscontrol was a significant mediator of the relationship between maltreatment alcohol problems. The evidence here suggests that emotion dysregulation is a critical factor for understanding the relationship between child maltreatment and both depression symptoms and alcohol problems in emerging adulthood. These findings are consistent with previous research highlighting emotion regulation difficulties as a critical factor in understanding alcohol problems (Dvorak et al., 2014) and depression (Kovacs, Joormann, & Gotlib, 2008) and current research regarding neurocognitive systems involving cognitive control and affective information processing, which are altered by child maltreatment and implicated in depression (Joormann & Quinn, 2014) and substance use disorders (for a review see Puetz & McCory, 2015). The current findings suggest that affect dyscontrol is a particularly important target for interventions aimed at preventing or reducing depression symptoms and alcohol problems among emerging adults with histories of child maltreatment. Findings regarding the mediating effects of identity difficulties on the child maltreatment – depression relationship are

consistent with previous research highlighting difficulties with self-organization as a precursor to the development of psychopathology (Briere, 1997; Cicchetti & Toth, 2005).

The current findings also suggest that the impact of child maltreatment should be considered in the context of other factors that may be protective, despite the risk context. Resilience emerged as a significant moderator of the relationship between child maltreatment and alcohol problems, but not depression. The lack of moderating effect for depression is consistent with previous research in which resilience did not moderate the impact of child abuse on depression (Wingo et al., 2010). In addition, in the present sample, the nature of the interaction for alcohol problems was somewhat unexpected. Although emerging adults with higher resilience scores had fewer alcohol problems at low and moderate levels of maltreatment, the buffering effects of resilience disappeared when maltreatment was high. These findings suggest that the effects of resilience are less compelling at higher or more severe levels of maltreatment. This is somewhat consistent with previous research in which resilience has been defined as an outcome and reflects positive adjustment or well-being in a range of areas (e.g., mental health, substance use, education, employment, etc.). In these studies, greater resilience (i.e., more positive outcomes) has been associated with less severe or fewer types of maltreatment (Hyman & Williams, 2001). Although resilience is protective for alcohol problems in the context of less severe maltreatment experiences, these effects may disappear when considering more severe or multiple types of maltreatment, as we did in our study.

It is not only the case that resilience influences outcomes, but that it can influence some of the primary mechanisms that underlie these outcomes. Indeed, previous researchers have found that resilience buffered the pathway from stress to anxiety/depression to alcohol dependence (Wang & Chen, 2015). However, in the current study, we found that only the indirect effect of identity on the child maltreatment – depression relationship was conditional on resilience. In addition, the nature of this moderation effect was not as expected: increasing resilience positively attenuated the child maltreatment – identity – depression relationship, indicating greater indirect effects of identity struggles on the child maltreatment – depression relationship among those with higher resilience. These findings contradict our initial hypothesis that the indirect effects of identity difficulties on the child maltreatment-depression symptoms relationship would be lower among those with greater resilience. However, the findings are somewhat consistent with recent research highlighting the complexity of the relationship between identity exploration and mental health in emerging adulthood, which is largely considered a time of identity confusion and instability (Kroger, Martinussen & Marcia, 2010) during which both adaptive and maladaptive identity processes are associated with internalizing symptoms (Ritchie et al., 2013). The finding that resilience positively attenuated the relationship between child maltreatment and identity difficulties and the pathway to depression symptoms may be due to the fact that the identity instability that marks this developmental stage is particularly distressing or confusing for those who have otherwise experienced greater adjustment via increased internal and external resilience factors. Thus, preparing these emerging adults for the identity instability that is typical during this time might help reduce potential negative emotional responses to these experiences and increase their use of internal and external resources for coping with identity challenges.

It should also be noted that we did not find moderated mediation effects for pathways from child maltreatment to emotion regulation and depression symptoms and alcohol problems. Although resilience has an overall moderating effect on the relationship between child maltreatment and both outcomes, the current findings suggest that this protective effect is not due to attenuation of affect control as a mediating mechanism. Other factors should be considered for understanding the ways in which resilience influences the mechanisms underlying the relationship between child maltreatment and mental health outcomes. Understanding how resilience operates on mechanisms associated with child maltreatment provides important information about specific intervention targets and who would most benefit from interventions. For example, mindfulness has been identified as an effective intervention for enhancing emotion regulation strategies (Farb, Anderson, Irving, & Segal, 2014) and has been conceptualized as a personality trait that might promote resilience among those with histories of trauma (Thompson, Arnkoff, & Glass, 2011). Individuals who are higher on resilience may be more able to engage with mindfulness interventions, resulting in the development of adaptive strategies to regulate emotions and, consequently, reductions in symptoms of depression and alcohol problems.

There are some limitations of the current study should be noted. First and foremost, the current study is cross-sectional. This is a significant limitation and longitudinal data is needed to validate directional hypotheses regarding moderated mediation. Although the temporal relationships between the variables in the current study make conceptual sense (i.e., child maltreatment reflects experiences prior to age 18, altered self-capacities are assessed on the basis of experiences in the past 6 months, depression and alcohol problems are typically conceptualized as outcomes associated with both child maltreatment and altered self-capacities) longitudinal data is needed to test these associations empirically, with child maltreatment assessed at the earliest timepoint and then mediators assessed at an earlier timepoint than outcomes. Second, although the sample was ethnically diverse in that almost 50% of participants identified as being from a minority group, the current study did not consider how diverse ethnic backgrounds contribute to experiences of maltreatment and impact outcomes during this critical developmental period. Third, the current study was limited to emerging adults recruited from the community. Previous research has documented that the process of emerging adulthood may look very different for individuals who are involved with systems of care, including child welfare, mental health, and justice systems (Munson et al., 2013). Finally, the small sample size may have limited our ability to detect significant effects. Although larger sample sizes are needed to replicate the current findings, it is also important to note that one of the advantages of bias-corrected bootstrapping is that these tests are much more powerful than traditional tests of mediation (Mackinnon, Fritz, Williams, & Lockwood, 2007).

Despite these limitations, this study provides evidence of the need for a more nuanced understanding of the ways in which mechanisms linking child maltreatment to outcomes in emerging adulthood are conditional on other aspects of the individual's experience, including aspects that are critical throughout development. Our findings suggest that more targeted prevention programming is needed based on the mechanisms that connect child maltreatment to outcomes in emerging adulthood. For example, alcohol-related interventions

should target emotion regulation when there is a history of child maltreatment. In addition, efforts to enhance resilience among those with maltreatment histories should consider both personal attributes and external factors, which likely influence each other (Luthar & Cicchetti, 2000) and can mitigate outcomes associated with child maltreatment. From a prevention perspective, health promotion strategies for youth with childhood maltreatment histories should involve an explicit focus on skills to facilitate healthy strategies for affect control. In addition, education around the consequences of using alcohol to cope, relative to other, healthier coping strategies, should be emphasized.

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The Intersection of Child Custody Disputes and Child Protection Investigations: Secondary Data Analysis of the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008)

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Abstract:

Objectives: Identifying child custody dispute characteristics that are associated with child maltreatment investigations are important for improving child protection services. Our objectives were to explore the characteristics of child custody disputes within the context of child protection investigations and to determine the ways in which child maltreatment investigations involving child custody disputes differ from those investigations that do not involve such disputes.

Methods: Data were from the Canadian Incidence Study of Reported Child Abuse and Neglect (collection 2008) from 112 child welfare sites across Canada.

Results: Of the estimated 235,842 child maltreatment investigations in Canada in 2008, estimated 29,218 investigations involved child custody dispute cases (12.4%). Approximately 22.7% of child custody dispute investigations involved allegations of neglect, 16.7% involved an allegation of physical abuse 20.3% involved exposure to domestic violence, 9.7% involved emotional maltreatment, and 5.3% involved an allegation of sexual abuse.

Implications: Child protection workers must not assume that maltreatment allegations are false or unfounded simply because a custody dispute is also present. More attention is needed to explore ways to engage with families involved in child custody disputes so that they can better cope with the complexities of family breakdown.

Conflict of Interest:

The authors declare no conflicts of interest.

Keywords:

custody disputes, child maltreatment, child protection

Introduction

Family breakdown rarely occurs without the presence of interparental conflict (Drapeau, Gagne, Saint-Jacques, Lepine, & Ivers, 2009), as many parents will experience an acute-reaction period of conflict immediately following separation and divorce (Hetherington & Kelly, 2002; Saini, 2012). Parents unable to resolve their conflicts often turn to the family courts, child protection agencies and other legal and mental health professionals to help them resolve disputes over custody and access of their children (Bala & Birnbaum, 2010). Although the majority of families will resolve conflict over time, an estimated 5 to 12% of families will remain in very high-conflict situations despite the passage of time and the level of assistance of legal and mental health professionals (Bala & Birnbaum, 2010; Bala, Birnbaum, & Martinson, 2010; Saini & Birnbaum, 2007). Although there is no specific definition of a "high conflict" custody case, research has concluded that high conflict families most often are involved in prolonged disputes regarding child custody and access (Hetherington & Kelly, 2002; Johnston, 1994; Stewart, 2001), repeated allegations of intimate partner violence, child maltreatment and poor parenting against the other parent, severe anger and distrust (Johnston, 1994; Kelly, 2006; Saini, 2007) and higher rates of mental heath problems for both children and their parents (Amato & Keith, 1991; Burke, McIntosh, & Gridley, 2007).

Impact of Child Custody Disputes

Parental conflict has been found to be a significant predictor of children's maladjustment post separation (Amato & Keith, 1991; Saini, 2012). Children exposed to interparental conflict can struggle with their continued loyalty bonds towards each parent while trying to navigate their parents' feelings of anger, animosity and contempt for the other parent (Burke et al., 2007). Parents place their children at risk of suffering emotional harm by exposing them to: degrading comments made by one or both parents about the other parent; questioning children about the personal life of the other parent; using children as messengers; exposing children to inappropriate content of adult disputes, and interfering with a child's right to access the other parent (Saini & Birnbaum, 2007). Transitions between their parents' homes can further expose children to the conflict, as these exchanges provide another opportunity for their parents to dispute issues regarding access, routines, homework,

and the wrongs of the past that contributed to the demise of the adult relationship (Saini, Black, Fallon, & Marshall, 2013). Attenpts to consider the best interest of the children can be hampered by the interparental conflict that can divert the parents' attention away from the needs of their children (Saini, 2007).

Despite the documented cases of children exposed to inter-parental conflict and its aftermatch (Burke, McIntosh, & Gridley, 2007; Kelly, 2006), children are able to cope through the challenges of being caught in their parents' conflict and find ways to be resilient and adjust to their parents' separation over time (Hetherington & Kelly, 2002). When professionals involved can focus on helping children develop coping mechanisms to deal with the feelings of being caught between their parents, children are better able to create healthier interactions necessary to address more contested issues (Greenberg, Gould, Gould-Saltman, & Stahl, 2003).

Child Custody Disputes within the Context of Child Protection Services

The link between high-conflict separation and divorce and prolonged child custody disputes (Bala et al., 2010) present unique challenges to child protection workers as they struggle to differentiate child maltreatment allegations from concerns related to the child custody dispute. Parents in conflict may make referrals to child protection services regarding the care of the child in the other parent's home. Child protection services may receive a referral from community professionals, such as doctors and teachers, because of a disclosure made by a parent and/or child. Referrals can also be made by local police services following incidents of conflict between the parties over child access. Referrals may also come from custody evaluators, mediators, parenting coordinators, and lawyers in the course of their duties when handling separation or divorce issues because of concerns observed during their work with the ex-partners.

Allegations within the context of child custody disputes can post challenges to child protection services given that there remains a lack of training and understanding of how to best work with this population (Saini, Black, Lwin, Marshall, Fallon, & Goodman, 2012). Child protection workers may minimize parental allegations with the perception that such allegations within the context of child custody disputes are malicious claims made by disputing parents based on exaggerations fueled by the anger of the parents (Brown, 2003). Child protection workers can also dismiss the connection between conflict and maltreatment as a temporary phenomenon influenced by the acute stress related to the parental separation (Brown, Frederico, Hewitt, & Sheehan, 2001; Johnston, Lee, Olesen, & Walters, 2005). While there is growing attention of the unique factors related to child custody disputes (Brown, 2003; Jaffe, Johnston, Crooks, & Bala, 2008; Saini et al., 2012), there remains little evidence how these factors that contribute to the unique nature of these investigations within child protection services.

In Canada in 2003, 12% of child maltreatment investigations involved a child custody dispute (Saini et al., 2013). Investigations that involved child custody disputes were three times more likely to be opened and more likely to be considered malicious by child protection workers, compared to investigations without a noted custody dispute.

Investigations involving child custody disputes were not more likely to be substantiated; however, the ones that were unfounded were more likely to be malicious if they involved a child custody dispute. These findings highlight child protection workers' challenge of discerning the credibility and trustworthiness of allegations made within the context of a child custody dispute. Such investigations are often reported by the disputing parents (i.e. custodial or non-custodial parents), which may question the motives of the caller and influence the worker's judgment in discerning the eligibility of the case for child protection services. In child maltreatment investigations without a child custody dispute, referrals are typically reported by professionals (i.e. doctors, police, and school staff), and so the credibility and motives for the referral may not come into question (Saini et al., 2013).

Twenty percent of investigations involving child custody disputes had the primary maltreatment type noted as children's exposure to intimate partner violence (Saini et al., 2013), supporting previous research that has linked separation with intimate partner violence (Amato & Keith, 1991; Humphreys, 2007; Wilson & Daly, 1992), as separation and divorce itself does not guarantee that the abuse will end simply because the parents no longer live in the same home. The remaining number of investigations involving a child custody dispute were for physical abuse, emotional maltreatment, or neglect. Children involved in investigations with noted custody disputes were reported to have higher proportion of emotional harm and more functioning issues compared to children of investigations without child custody disputes. Parental alcohol abuse was also significantly higher in investigations with child custody disputes (Saini et al., 2013). Given the connection between child custody disputes and higher rates of parental conflict (Hetherington & Kelly, 2002), the findings in this study support the growing body of evidence that considers parental conflict as a significant predictor of children's maladjustment after separation and divorce (Saini, 2012).

Legislation in Canada

In Canada, each province and territory has its own child welfare legislation. None explicitely state child custody dispute as part of the definition of a child in need of protection (see Table 1); however, two allude to it. In Canada's largest province (Ontario), child protection workers use the Ontario Child Welfare Eligibility Spectrum (2006) to assess the referral for eligibility for service and code such cases that involve child custody disputes as 3-3-I (which requires a child protection investigation). Section 3 of the spectrum states that a child has been emotionally harmed or is at risk of emotional harm as a result of specific behaviours of caregiver neglect or due to the caregiver failing to adequately address the child's emotional condition. Under this section is scale 3, which defines partner violence as violence occurring between parents or between a parent/caregiver and his/her partner (i.e., physical or emotional violence). It is under this scale (i) that significant conflict over custody is rated as moderately severe for children's risk of mental/emotional harm or developmental conditions.

Study Objectives

The secondary analysis of the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008; Trocmé et al., 2010) sets out to explore the characteristics of child

Table 1. Provincial and Territorial Child Welfare Legislation (adapted from Black, 2009)

Province/ Territory	Name of Legislation	Definition of a child in need of protection
British Columbia	Child, Family and Community Services Act (2014)	Does not explicitly mention children's exposure to IPV or custody issues.
Alberta	*Child, Youth and Family's Enhancement Act* (2014)	(3) For the purposes of this Act, (a) a child is emotionally injured (i) if there is impairment of the child's mental or emotional functioning or development, and (ii) if there are reasonable and probable grounds to believe that the emotional injury is the result of (c) exposure to domestic violence or severe domestic disharmony.
Saskatchewan	*Child and Family Services Act* (2014)	(11) A child is in need of protection where (a) as a result of action or omission by the child's parent, (vi) the child has been exposed to domestic violence or severe domestic disharmony that is likely to result in physical or emotional harm to the child.
Manitoba	*The Child and Family Services Act* (2015)	Does not explicitly mention children's exposure to IPVor custody issues but section 17(2) states that a child is in need of protection where the child (e) is likely to suffer harm or injury due to the behaviour, condition, domestic environment or associations of the child or of a person having care, custody, control or charge of the child.
Ontario	*The Child and Family Services Act* (2011)	Does not explicitly mention children's exposure to IPV or custody issues.
Quebec	*Youth Protection Act* (2014)	(38) For the purposes of this Act, the security or development of a child is considered to be in danger if the child is subjected to psychological ill-treatment. In this Act, (c) "psychological ill-treatment" refers to a situation in which a child is seriously or repeatedly subjected to behaviour on the part of the child's parents or another person that could cause harm to the child, and the child's parents fail to take the necessary steps to put an end to the situation. Such behaviour includes in particular indifference, denigration, emotional rejection, isolation, threats, exploitation, particularly if the child is forced to do work disproportionate to the child's capacity, and exposure to conjugal or domestic violence.
Newfoundland and Labrador	*Children and Youth Care and Protection Act* (2014)	Does not explicitly mention children's exposure to IPV or custody issues but section 10 states that a child is in need of protective intervention where the child (l) is living in a situation where there is violence or is living in a situation where there is a risk of violence.
Nova Scotia	*Children and Family Services Act* (2008)	22(2) A child is in need of protective services where (i) the child has suffered physical or emotional harm caused by being exposed to repeated domestic violence by or towards a parent or guardian of the child, and the child's parent or guardian fails or refuses to obtain services or treatment to remedy or alleviate the violence.
New Brunswick	*Family Services Act* (2013)	31(1) The security or development of a child may be in danger when (f) the child is living in a situation where there is domestic violence.
Prince Edward Island	*Child Protection Act* (2013)	(9) A child is in need of protection where (m) the child has suffered physical or emotional harm caused by being exposed to domestic violence by or towards a parent; (n) the child is at substantial risk of suffering physical or emotional harm caused by being exposed to domestic violence by or towards a parent.
Nunavut	*Child and Family Services Act* (2010)	Does not explicitly mention children's exposure to IPV or custody issues.
Northwest Territories	*Child and Family Services Act* (2013)	(3) A child needs protection where (p) the child is repeatedly exposed to family violence and the child's parent is unwilling or unable to stop such exposure.
Yukon	*Children's Law Act* (2014)	Does not explicitly mention children's exposure to IPV or custody issues.

Table 2: Investigations involving child custody disputes in Canada in 2008

	Frequency	Percent
No	201 448	85.4
Yes	29 218	12.4
Unknown	5 089	2.2
Total	235 755	100.0
Missing	-	.0
Total	235 841	100.0

custody disputes within the context of child protection investigations and to determine the ways in which child maltreatment investigations involving child custody disputes differ from those investigations that do not involve such disputes. CIS-2008 is the third nation-wide study to examine the incidence of reported child maltreatment and the characteristics of the children and families investigated by child welfare across Canada. The CIS is the only study in Canada to collect information about the national state of child maltreatment investigations.

Methodology

The CIS-2008 sampling strategy consisted of a three-stage stratified cluster sampling design (Trocmé et al., 2010). First, out of 412 child welfare sites across Canada, a representative sample of 112 were selected. Within each site, information was collected about reports investigated over a three-month period, from October 1, 2008 to December 31, 2008. In the end, a sample of 15,980 child maltreatment investigations that met the study inclusion criteria were selected for analysis.

Information from these selected child maltreatment investigations was collected based on the following variables: type of investigated abuse and/or neglect, substantiation level, maltreatment duration, physical and emotional harm, functioning concerns related to the children and their caregiver(s), source of income, child custody dispute, housing, and decisions made by the child protection workers concering the investigation. The CIS-2008 study only includes reports that have been investigated by child welfare agencies; it does not include reports that were screened out, those only investigated by police, and those that were never reported. The data represent child welfare workers' assessments, which are not independently verified.

The Dataset

Estimates of child maltreatment investigations were calculated by: a) weighing the sample annually in order to estimate the number of investigations in 2008, and b) weighing the sample regionally in order to estimate the incidence of child maltreatment in Canada based on Census 2006 child population statistics (see Chapter 2 of the CIS-2008 Final Report; Trocmé et al., 2010).

Table 3: Study variables and their operational definitions

Child custody dispute	There is an ongoing child custody/access dispute at the time of the child maltreatment investigation (court application has been made or pending).
Source of referral	Workers were asked to indicate all sources of referral, persons who contacted the child welfare site. There were 19 options: custodial parent, non-custodial parent, child, relative, neighbor/friend, social assistance worker, crisis service/ shelter, hospital, public health nurse, physician, school, community/recreation center, mental health professional/ agency, other child welfare service, daycare center, police, community agency, anonymous, unknown, other.
Risk of future maltreatment	A specific incident of maltreatment has not yet occurred, but circumstances indicate that there is a significant risk that maltreatment could occur. 3 response categories: risk of future maltreatment, no risk of future maltreatment, and unknown risk of future maltreatment.
Case characteristics	Case characteristic variables included whether the family had a previous opening with child welfare and whether they planned to keep the case open to allow for ongoing child welfare services.
Child functioning issues	Workers were asked to rate issues relating to the child's level of functioning. Twenty-two items were of child functioning included physical, emotional, cognitive, and behavioral.
Child welfare court, and mediation	the status of child welfare court (no application considered, application considered, application made); and whether a referral was made to mediation/alternative response.
Primary investigation type	
Physical abuse	The child was physically harmed or could have suffered physical harm as a result of the behaviour of the persons looking after the child.
Sexual abuse	The child has been sexually molested or sexually exploited. This includes oral, vaginal or anal sexual activity; attempted sexual activity; sexual touching or fondling; exposure; voyeurism; involvement in prostitution or pornography; and verbal sexual harassment.
Neglect	The child has suffered harm or the child's safety or development has been endangered as a result of a failure to provide for or protect the child.
Emotional maltreatment	The child has suffered, or is at substantial risk of suffering, emotional harm at the hands of the person looking after the child.
Exposure to intimate partner violence	The child is a direct or indirect witness to physical or emotional violence between intimate partners or between a caregiver and another person who is not the spouse/partner of the caregiver.
Risk Investigation	If the child was investigated because of risk of maltreatment only. Include only situations in which no allegation of maltreatment was made, and no specific incident of maltreatment was suspected at any point during the investigation (e.g., include referrals for parent-teen conflict; child behavior problems; parent behavior such as substantice abuse, where there is risk of future maltreatment but no concurrent allegations of maltreatment).
Substantiation level for primary maltreatment	
Substantiated	Evidence indicates that abuse or neglect has occurred.
Suspected	There is not enough evidence to substantiate maltreatment, but it is also not certain that maltreatment can be ruled out.
Unfounded	Evidence indicates that abuse or neglect has not occurred. It does not mean that a referral was inappropriate or malicious; it simply indicates that the worker determined that the child had not been maltreated.
Malicious referral	If unfounded, was the case intentionally reported while knowing the allegation is unfounded.
Primary caregiving characteristics	
Cooperative	The caregiver is being overall cooperative with the child welfare investigation.
Alcohol abuse	Caregiver abuses alcohol.
Drug/solvent abuse	Abuse of prescription drugs, illegal drugs or solvents.
Mental health issues	Any mental health diagnosis or problem.
Female victim of domestic violence	During the past six months, the caregiver was a victim of domestic violence, including physical, sexual or verbal assault.
Child welfare placement	
No placement required	No placement of the child is required following the investigation.
Placement considered	At this point of the investigation, an out-of-home placement of the child is still being considered.
Informal kinship care	An informal placement of the child has been arranged within the family support network (kinship care, extended family, traditional care); the child welfare authority does not have temporary custody.
Kinship foster care	A formal placement of the child has been arranged within the family support network (kinship care, extended family, customary care); the child welfare authority has temporary or full custody and is paying for the placement.
Other family foster care	Non-kinship care of the child; includes any family-based care, including foster homes, specialized treatment foster homes and assessment homes.
Group home	Out-of-home placement of the child required in a structured group living setting.
Residential/secure treatment	Placement of the child is required in a therapeutic residential treatment centre to address the needs of the child.

The result was an estimated 235,842 child maltreatment investigations (an incidence of 38.33 per 1,000 children) in Canada in 2008 (see Chapter 3 of the CIS-2008; Trocmé et al., 2010). There was an estimated 29,218 investigations that involved child custody dispute cases (12.4%) and 201,448 (85.4%) that did not. For 5,089 maltreatment investigtions (2.2%), child protection workers were unsure of whether or not a child custody dispute was involved.

The following variables (Table 3) and their operational definitions are taken from Appendix G of the CIS-2008 Guidebook (Trocmé et al., 2010).

Data Analysis

When weighted, the CIS-2008 dataset used child maltreatment investigations as the unit of analysis. The child was not used as the unit of analysis because children reported and investigated more than once a year may be reflected in the annulization weight. The CIS-2008 dataset is nested, containing variables that are measured at five levels (child, family, worker, agency, and province). The analyses include the child and family clusters, as they do not pose a threat to the independence of observations assumption (Williams, 2002). However, due to nesting, the analyses does not include worker, agency, and province clusters as they risk violating the assumption of independence of observations.

Due to the categorical nature of most CIS-2008 variables, chi-square bivariate analyses were used to examine the association between case characteristics. In addition, a logistic regression was performed predicting out of home placements and keeping investigations open for ongoing child welfare service. Using the Bonferroni approach, a more strict p-value was employed and $p<.001$ was considered significant.

Results

Table 4 shows investigations involving a child custody dispute compared to investigations without a child custody dispute and investigations where workers were unsure of whether there was a child custody dispute or not. These investigations are presented by type of investigated maltreatment ($X2 = 74.59$). A risk investigation was the most common investigation involving a child custody dispute (25.8%; an estimated 7,532 investigations). Approximately 23% of child custody dispute investigations involved allegations of neglect (an estimated 6,621 investigations), 20.3% involved exposure to domestic violence, 16.7% of investigations involved an allegation of physical abuse (an estimated 4,875 investigations), 9.7% involved emotional maltreatment, and 5.3% involved an allegation of sexual abuse. The most common form of maltreatment for investigations without a child custody dispute was neglect (26.9%; an estimated 54,256 investigations).

Table 5 depicts the substantiation decision by the child protection worker for the alleged maltreatment. Approximately 25% of investigations involving a child custody dispute involved a malicious referral (an estimated 2,160 investigations) compared to 12% of investigations without a child custody dispute ($X2 = 212.13$). Fourty-four percent of investigations involving a child custody dispute were unfounded (compared to 73% of investigations without a child custody dispute).

Table 6 provides the estimated child maltreatment investigations by characteristics of

Table 4: Estimated child maltreatment investigations involving a child custody dispute by primary maltreatment type in Canada, 2008

		Child Custody Dispute			Total	X^2
		No	Yes	Unknown		
Physical abuse	Estimate	39 383	4 875	784	45 042	74.59***
	%	19.5%	16.7%	15.4%	19.1%	
Sexual abuse	Estimate	8 270	1 536	367	10 173	
	%	4.1%	5.3%	7.2%	4.3%	
Neglect	Estimate	54 256	6 621	1 484	62 361	
	%	26.9%	22.7%	29.1%	26.5%	
Emotional maltreatment	Estimate	12 608	2 735	284	15 627	
	%	6.3%	9.7%	5.6%	6.6%	
Exposure to domestic violence	Estimate	34 560	5 919	689	41 168	
	%	17.2%	20.3%	13.5%	17.5%	
Risk Investigation	Estimate	52 372	7 532	1 483	61 387	
	%	26.0%	25.8%	29.1%	26.0%	
Total	Estimate	201 449	29 218	5 091	235 758	
	%	100%	100%	100%	100%	

*** p<0.001

Table 5: Estimated unfounded child maltreatment investigations involving a child custody dispute by malicious referral in Canada, 2008

		Child Custody Dispute			Total	X^2
		No	Yes	Unknown		
Unsubstantiated no malicious referral	Estimate	41 794	3 748	889	46 431	212.13***
	%	73.0%	43.9%	58.4%	69.0%	
Unsubstantiated malicious referral	Estimate	7 036	2 160	158	9 354	
	%	12.3%	25.3%	10.4%	13.9%	
Unsubstantiated unknown intent	Estimate	8 456	2 621	475	11 554	
	%	14.8%	30.7%	31.2%	17.2%	
Total	Estimate	57 288	8 529	1 522	67 339	
	%	100%	100%	100%	100.0%	

*** p<0.001

the primary caregiver. Approximately the same percentage of investigations with custody disputes involved cooperative caregivers (compared to investigations without custody disputes). The chi square statistic is significant, likely due to the investigations with unknown child custody disputes (X2 = 227.79).

Table 6: Estimated child maltreatment investigations involving a child custody dispute by primary caregiver characteristics in Canada, 2008

		Child Custody Dispute			Total	X2
		No	Yes	Unknown		
Cooperative	Estimate %	185 511 92.5%	26 882 92.4%	4 122 81.0	216 515 92.2%	227.79***
Not cooperative	Estimate %	13 295 6.6%	1 974 6.8%	502 9.9	15 771 6.7%	
Not contacted	Estimate %	1 847 0.9%	233 0.8%	466 9.2	2 546 1.1%	
Total	Estimate %	200 653 100.0%	29 089 100.0%	5 090 100.0%	234 832 100.0%	
Alcohol abuse	Estimate %	31 466 15.6%	4 282 14.6%	1 224 24.1%	36 972 15.6%	19.95***
Drug/solvent abuse	Estimate %	25 696 12.8%	4 907 16.8%	793 15.6%	31 396 13.3%	25.67***
Mental health issues	Estimate %	40 416 20.1%	7 805 26.7%	611 12.0%	48 832 20.8%	63.14***
Victim of domestic violence	Estimate %	57 666 28.6%	11 902 40.7%	1 341 26.4%	70 909 30.1%	122.68***

*** p<0.001

Table 7: Estimated child maltreatment investigations involving a child custody dispute by child welfare placement in Canada, 2008

		Child Custody Dispute			Total	X^2
		No	Yes	Unknown		
No placement required	Estimate %	183 577 91.3%	27 575 94.4%	4 646 91.3%	215 798 91.7%	31.62***
Informal kinship care	Estimate %	7 715 3.8%	893 3.1%	1.9%	8 707 3.7%	
Foster care (kinship or formal)	Estimate %	8 512 4.2%	630 2.2%	312 6.1%	9 454 4.0%	
Group home/ residential/ secure treatment	Estimate %	1 300 0.6%	0.3%	0.6%	1 432 0.6%	
Total	Estimate %	201 104 100.0%	29 198 100.0%	5 089 100.0%	235 391 100.0%	

*** p<0.001

Table 8: Logistic regression predicting child welfare placement for substantiated cases in Canada in 2008

	S.E.	Sig.	Exp(B)
age	.012	.001	.959
any child functioning issue	.122	.002	1.461
sexual abuse	.307	.672	.878
neglect	.131	.002	1.495
emotional matlreatment	.163	.168	.799
exposure to IPV	.193	.000	.290
emotional harm	.116	.000	2.375
previous reports	.112	.000	1.485
unknown previous reports	.344	.011	2.405
unsafe housing	.134	.000	1.828
unknown safety	.195	.018	1.582
child custody dispute	.190	.004	.577
female victim of IPV	.105	.002	1.378
part-time	.157	.607	1.084
benefits/unemployed	.116	.001	1.477
social assistance	.184	.000	1.992
other	.377	.107	1.839
referral source is the custodial or non-custodial parent	.137	.001	1.610

Forty percent of investigations with child custody disputes, involved victims of domestic violence (compared to 29% of investigations without child custody disputes, X2 = 122.68). Mental health issues accounted for 26.7% of investigations involving child custody disputes, compared to 20.1% without a child custody dispute (X2=63.14). Alcohol abuse was noted for 15% of investigations involving a child custody dispute compared to 16% without a child custody dispute; the significant chi-sqaure is likely due to the investigations with unknown child custody disputes (X2 = 19.95).

According to Table 7, Approximately 3% of investigations involving a child custody dispute involved informal kinship care, 2.2% involved kinship or other family foster care, and 0.3% involved group home or residential or secure treatment. Approximately 4% of investigations without child custody disputes involved informal kinship care, 4.2% involved kinship or other family foster care, and 0.6% involved group home or residential or secure treatment (X2 = 31.62).

When controlling for child, family, and household characteristics in the logistic regressions (see Table 8 and 9), investigations involving custody disputes were significantly less likely to result in out of home placements (odds ratio = .577, p=.004) or to stay open for ongoing child welfare services (odds ratio = .757, p = .004).

Discussion

Findings suggest that 12.4 percent (or 29,218 investigations) of children involved in child protection services are also involved in child custody disputes, slightly higher than reported in the 2003 data (12 percent and estimated 25,101 child maltreatment investigations as reported in Saini et al., 2012). In two percent of child maltreatment investigations, workers were not sure whether or not there was a legal child custody dispute, which is 2 percent lower than reported in Saini, et al., (2012) suggesting that workers are becoming better able to detect child custody disputes during the investigative stages.

Risk investigation was the most common investigation involving a child custody dispute (25.8%), which was not captured in Saini, et al., 2012. Approximately 22.7 percent of child

Table 9: Logistic regression predicting case opening for ongoing services for substantiated cases in Canada in 2008

	S.E.	Sig.	Exp(B)
age	.007	.000	.951
any child functioning	.070	.000	1.806
sexual abuse	.201	.137	.742
neglect	.086	.000	2.062
emotional matlreatment	.099	.000	1.618
exposure to IPV	.094	.275	.902
emotional harm	.082	.000	2.249
previous reports	.063	.000	1.662
unknown previous reports	.271	.000	2.991
unsafe housing	.109	.000	1.579
unknown safety	.137	.184	.834
child custody dispute	.098	.004	.757
female victim of IPV	.069	.000	1.737
part-time	.094	.027	1.230
benefits/unemployed	.074	.000	1.582
social assistance	.130	.533	.922
other	.294	.372	1.300
referral source is the custodial or non-custodial parent	.098	.189	1.137

custody dispute investigations involved allegations of neglect, which is almost unchanged from Saini, et al., (2012) where they found 23 percent of allegations were due to neglect. A marked decrease in allegations of physical abuse was found (16.7% in the present study compared to 32% in Saini et al., 2012). Allegations of exposure to domestic violence was almost unchanged (20.3% in this current study compared to 20% in Saini et al., 2012). Only 9.7 percent of allegations involved emotional maltreatment compared to 20 in Saini et al., 2012). Laslty, the perentage of allegatins of sexual abuse remained almost unchanged (5.3% in this current study compared to 5% in Saini et al., 2012).

Approximately twenty-five percent of unfounded investigations involving a child custody dispute were malicious, which is a decrease from the 37% of unfounded investigations noted as malicious using CIS-2003 data (Saini et al, 2012).

Results from this current study suggest that investigations involving custody disputes are significantly different from investigations without custody disputes. For example, investigations involving custody disputes were more likely to have been investigated for emotional maltreatment (9% vs 6%), involve a malicious referral (25% vs. 12%), involve a caregiver with drug/solvent abuse (17% vs 13%) or mental health issues (27% vs 20%).

The overlap between custody disputes and intimate partner violence is worth noting. Investigations with custody disputes had a significant overlap with children's exposure to intimate partner violence. For example, investigations involving custody disputes are more likely (compared to investigations without noted child custody disputes) to have been investigated for children's exposure to intimate partner violence (20% vs 17%) or involve a caregiver who is a victim of domestic violence (41% vs 29%). In Ontario, Canada as of 2006, there is a distinction in the province's screening tool distinguishing children's exposure to intimate partner violence from child custody disputes; referrals solely concerning custody disputes also require an investigation by child protection services if the child is at risk of emotional harm. Our findings from a national representative study (CIS-2008), demonstrate

a complex overlap between IPV and custody disputes. With a focus on child safety, child protection workers should be vigilant for the presence of domestic violence in separated families, especially those caught in child custody disputes (Saini, et al., 2012). Simply because the parents may no longer live in the same home does not gurantee that the violence will end, as each transition between the homes can place children and parents at further risk of harm (Saini, et al., 2012).

Child Custody and Resilience

Previous research has found that children tend to show resiliency despite being caught in their parents' dispute (Hetherington & Kelly, 2002). Several factors have been linked to childhood resiliency, including the parents ability to form positive and democratic parenting relationships among family members, particularly between the parent and child (Covell & Howe, 2008; Kelly, 2007). High-quality parenting and positive relationships between parents and children may be challenging to maintain post separation and divorce (Saini, 2012). Parents involved in both child custody disputes and child protection services should be provided with education and training services so that they can best heal from the emotional commotion related to the family breakdown while ensuring that they are best able to be sensitive to the needs of their children.

Recent attention has focused on empowering children to have a stronger voice and input in decisions that affect them (Covell & Howe, 2006; Kelly, 2007; Birnbaum & Saini, 2012). Risks to childhood development within the context of child custody disputes can be exacerbated by the lack of voice the child regarding the restricting of the family post separation and divorce. The relunctance to include children's input into these decisions has been influenced by the suggestion that children's participation in child custody decisions can be more traumatic than resilient building; particularly if the child is asked to choose between parents (Covell & Howe, 2006; Kelly, 2007). Covell and Howe (2006) have argued that children should be involved in how the family will be re-organized after the parental divorce and that this participation should be age appropriate and work towards: (1) increasing understanding for the child as to why these large transitions had to happen, and (2) lessen any fears or uncertainties regarding the future of the family and the relationships they currently hold. Child protective services' involvement in child custody dispute cases provides children with a unique opportunity to share their concerns and fears about their parental separation and to provide a platform for children's voices to be heard; this may be difficult for the child protection worker, so could involve referrals outside of child protection.

Limitations

The Canadian Incidence Study of Reported Child Abuse and Neglect has certain limitations that should be noted. The study examined only reported child maltreatment in Canada and excluded situations in which children were not reported (e.g., by the victim out of fear that child protection will remove her children), reports that were screened out prior to investigation, reports that were investigated by the police only and never referred to child protection services, and new reports of on already opened cases. The results of the present

study are limited to the investigation period (approximately 30 days); therefore, the data do not include placements of children beyond the investigation. The judgments provided by the investigating worker could not be independently confirmed. Finally, the data is collected from the perspective of the workers who are potentially biased or may be operating with limited information. Thus the perspective of clients has not been secured and this perspective is vital to a full understanding of the impact of child welfare processes on families experiencing in high conflict situations.

Implications

When controlling for child, family, and household characteristics, investigations involving custody disputes were significantly less likely to result in out of home placements or to stay open for ongoing child welfare services. At the same time, child custody disputes were more likely to be reopened more than three times. These findings suggest that child protection services may be prematurely closing these cases without adequately addressing the needs of the children and families involved. With the paramount focus of child protection services on children's overall safety and wellbeing, special consideration should be made in these child custody cases to carefully assess for the presence of interparental conflict and presence of risk of maltreatment or harm, address protection needs and to also focus on how best assist families so that each member of the family can gain the requirement coping skills to be more resilience and adaptable despite the presence of conflict.

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