Promoting Resilience in Children and Adolescents Impacted by Adverse Childhood Experiences

By

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Abstract

Evidence shows that early exposure to adverse childhood experiences (ACEs) results in lasting poor physical and mental health outcomes from childhood into adulthood. Resilience has been determined to help prevent or mitigate the adverse effects of ACEs. Children and adolescents need to have suitable systems at home, in school, in the community, and within the construct of society that promotes the development of resilience. This research project investigates how to foster resilience as an intervention during formative years in children and adolescents impacted by ACEs. This review of 10 recent studies shows several evidence-based therapeutic interventions and modalities for building resilience through the different levels of protective factors (individual, interpersonal (family), community, and policy), including CBT/TF-CBT, mindfulness interventions, EMDR, parent-child psychotherapy, and school-based psychotherapy. These findings benefit the study of ACEs as they provide clinical practitioners with evidence-based interventions that help minimize the negative impact and foster positive adaptation after exposure to ACEs.

Keywords: adverse childhood experiences (ACEs), resilience, children, adolescents, literature review, therapeutic interventions, therapeutic modalities

Chapter One: Introduction

The World Health Organization (WHO) disclosed in a 2021 publication that depression is one of the leading causes of disability worldwide (WHO, 2021). This publication also indicates that suicide is the fourth leading cause of death among 15 to 29-year-olds. Research indicates that Adverse Childhood experiences (ACEs) inhibit one's physical and mental health, resulting in mental health concerns such as anxiety, depression, PTSD, phobias, behavioural challenges, mood disorders, substance use disorders, and eating disorders. ACEs, though occurring in childhood, contribute to poor health outcomes that continue into adulthood (Yamaoka & Bard, 2019). The outcomes of ACEs are also intergenerational, the impact of ACEs on an individual has a high likelihood of impacting the well-being of future generations.

Numerous studies have shown that several types of adversity can play a significant role in developing and maintaining mental health problems among children and adolescents (Miller-Lewis et al., 2013). The experience of ACEs, such as child abuse, maltreatment, and neglect, has led to various negative impacts, including mental health challenges (Mersky et al., 2013). Globally, ACEs have been associated with multiple leading causes of death such as ischaemic heart disease, stroke and chronic obstructive pulmonary disease, and are a significant public health concern in high-income countries (Felitti et al., 1998; Gilbert et al., 2009, Harris, 2018). Distinct ACEs, such as childhood sexual assault, have now been recognized as risk factors associated with disability and death (Anda et al., 2010). Many studies have focused on investigating the impact of ACEs on adults, identifying a pronounced positive relationship between retrospective reports of ACEs from their childhood and diverse adult mental health challenges like depression, anxiety, substance misuse, personality disorders, and psychosis (Bellis et al., 2019, Kalmakis & Chandler, 2015, Leza et al., 2021, Nelson et al., 2020, Yamaoka

& Bard, 2019). Studies focused on exploring the impact of ACEs on children have also identified the negative effect of ACEs on children and adolescent mental health, which is often associated with externalized behaviours, internalized behaviours, and suicide in children (Nelson et al., 2020). There is evidence showing the relationship between the occurrence of ACEs and externalizing mental health problems (Bellis et al., 2019, Leza et al., 2021), internalizing mental health problems (Ziobrowski et al., 2023), and suicide among young people (Pournaghash-Tehrani et al., 2019).

Considering the extensive negative impact of ACEs from childhood to adulthood, it is essential to prioritize further research on preventing childhood adversities as well as effective evidence-based resilience-promoting interventions to be utilized within counselling. (Gilbert et al., 2009; CDC, 2021). Promotive factors are considered when exploring the prevention of adversity. Promotive factors such as parental support or a supportive relationship with an adult outside the home (teacher or mentor) contribute to positive outcomes. Promotive factors directly and positively influence the outcome of children and adolescents regardless of exposure to adversity (Masten & Barnes, 2018; Werner, 2005). Additionally, considering the various negative ramifications of ACEs, more studies should investigate possible factors that might mitigate or prevent children and adolescents from experiencing adverse outcomes (Balistreri & Alvira-Hammond, 2016; Gilbert et al., 2009).

While ACEs and its impact is a global problem, it remains a cause for concern in Canada. A Public Health Ontario (2020) literature review published in 2020 revealed that between a half to two-thirds of Canadians experience ACEs before the age of 18. These ACEs occurring as of various forms of abuse, witnessing violence, instability due to parental separation, or a close family member with mental health and addiction challenges. These adverse experiences, similar

to results observed in ACEs research, can lead to chronic physical and mental chronic health concerns. The topic that this Capstone intends to explore is promoting resilience in children and adolescents impacted by ACEs.

Research Problem Statement

WHO indicated that childhood trauma is associated with the highest causes of death and mental health concerns globally, likely decreasing the lifespan by approximately 20 years (WHO, 2021). Resilience has been identified as a factor that fosters a healthy life without psychopathological symptoms, even in the presence of childhood trauma (Grogan-Kaylor et al., 2008). While there has been much emphasis on adult resilience factors, it is significant that developing resilience in children and adolescents is given more attention (Cosco et al., 2017). The development process and developmental tasks in childhood and adolescence differ from adulthood. According to Levine & Kline (2019), children and adolescents should not be treated as small adults by clinical practitioners as they do not experience life events and therapy in the same way that adults. As a result, there remains a need for further investigation into comprehensive treatments for children and adolescents impacted by ACEs and interventions that promote their resilience.

As found by Elmore et al. (2020), a lack of resiliency during formative years has a higher probability of leading to psychopathology in children and adolescents and mental health challenges in adulthood. Consequently, it is crucial to identify the protective factors and relevant clinical-based interventions that help promote resilience in children and adolescents. This study aims to explore existing literature to identify the treatment interventions that promote the development of resilience protective factors in children and adolescents.

Research Question

Children and adolescents impacted by ACEs are predisposed to experience mental health challenges as young people and as adults. Resilience has been found to mitigate against the effects of ACEs. Despite this, limited research investigates therapeutic approaches that comprehensively address the development of resilience during formative years. The research question(s) to be answered in this capstone include “how can resilience be fostered as an intervention during formative years?”

Justification for Research

Studies show that ACEs contribute to poor health and mental health consequences for children, which can progress into adulthood (Yamaoka & Bard, 2019). The presence of protective factors can foster resilience in children and adolescents experiencing ACEs, promoting healthy outcomes and healing childhood trauma.

The literature on ACEs has shown its adverse effects on children and adolescents' health and mental health. Beyond the limit of formative years, these health and mental health concerns can continue into adulthood (Bellis et al., 2019; Kalmakis & Chandler, 2015; Leza et al., 2021; Nelson et al., 2020; Yamaoka & Bard, 2019). A study conducted with a sample of youths examined the outcomes of exposure to traumatic, stressful events during childhood and adolescence (Barzilay et al., 2019). This study showed that exposure to traumatic stress in childhood and adolescence is strongly associated with severe psychopathology and neurocognitive deficits (Barzilay et al., 2019). Research indicates that exposure to ACEs is linked to mental health problems, including post-traumatic stress disorder (PTSD), depression, antisocial behaviour, and drug use, with these adverse effects being present in adulthood (Felitti et al., 1998). ACEs have also been associated with underdeveloped executive functioning and altered physiological stress responses (Shonkoff, 2016), health risk behaviours (Felitti et al.,

1998), chronic health conditions (Felitti et al., 1998; Gilbert et al., 2015), decreased life opportunities (e.g., education and income) (Metzler et al., 2017), and decreased life expectancy (Brown et al., 2009). These findings show the severe impact of ACEs on health, which can also be present well into adulthood. These impacts highlight the need for strategies and interventions that address ACEs and, consequently, poor mental health outcomes.

Exposure to ACEs, particularly without protective factors, can lead to unhealthy effects in formative years and throughout life. (Felitti et al., 1998; Gilbert et al., 2015; Shonkoff, 2016; Metzler et al., 2017). Considering the broad negative consequences of ACEs, further investigation must investigate factors that might mitigate or interrupt children and adolescents from experiencing adverse outcomes following ACEs (Balistreri & Alvira-Hammond, 2016; Gilbert et al., 2009).

Cloitre et al. (2019) explored the psychological processes that could determine the relationship between ACEs and adverse health and psychological concerns. The study concentrated on emotional regulation acting as a potential mediator between ACEs and PTSD, depression, as well as poor physical health. The outcome was that an intervention or treatment strategy incorporating the improvement of emotional regulation skills could be transdiagnostic, possibly helping with both physical and psychological health concerns. This finding is significant as the experience of substantial ACEs could mean the co-occurrence of physical and mental health concerns; therefore, having a treatment strategy that addresses both is beneficial and potentially economical. Highlighting the role that emotional regulation plays following ACEs is crucial because developing emotional regulation as a skill can occur within the therapeutic space with a counsellor (Cloitre et al., 2019). Additionally, this indicates that

identifying internal protective factors that promote resilience is vital in mitigating and healing from the effects of ACE.

To further examine the role of protective factors, another study explored the effectiveness of emotion regulation as a mediator in the relationship between having experienced ACEs and symptoms of posttraumatic stress and depression (John et al., 2017). The findings revealed emotional regulation as a critical protective factor to address when developing and implementing interventions that promote resilience in female adolescents exposed to early adversity. The study was conducted by the participants retrospectively reporting their experience of child abuse, current symptoms of PTSD/depression, and emotion regulation abilities. Caregivers also reported on the adolescent emotional difficulties. The study discovered that females who experienced childhood trauma were more likely to have challenges regulating their emotions and increased mental health concerns than females without a trauma history. In addition, the results show that emotional regulation significantly mediated the relationship between childhood abuse and assessed mental health symptoms. While many ACE and resilience studies have focused on adults, this study emphasized the importance of evaluating emotion regulation in adolescents exposed to trauma. The demographic focus of this study suggests the necessity to examine and identify the impact of ACEs in childhood and adolescence and how to develop the necessary protective factors to mitigate the adverse effects of childhood trauma. It is also important to note that the researchers in this study obtained reports from their caregivers on the emotional difficulties of the adolescent participants. Like some other ACE and resilience studies, this study involves the child or adolescent’s caregiver in examining their level of resilience either as one of the protective factors or as a means of assessing the child or adolescent's functioning (Hildebrand et al., 2019). The results of this study highlight the instrumental role parents/caregivers could

play in breaking the cycle of trauma and their role as part of the protective factors that children and adolescents must prevent poor health outcomes later in life (Woods-Jaeger et al., 2018).

To understand the process of resilience (social support and resources of the family environment) and the likelihood of mental health challenges in children and adolescents who have experienced domestic violence, Hildebrand et al. (2019) examined two groups of children and adolescents. The first group were individuals who had experienced domestic violence, suffered neglect, and physical, psychological, or sexual violence and who received specialized services. In contrast, the second group was without reports of domestic violence. This study used semi-structured instruments to assess resiliency in both groups, analyzing individual, family, and social components of resilience. In addition to confirming that the experience of domestic violence by children and adolescents is a risk factor for developing mental disorders, the study concluded that having low resilience demonstrated by having few protective factors was associated with a higher possibility of developing mental health challenges. This notable finding can be instrumental in identifying and developing intervention strategies for supporting children and adolescents in their formative years. Providing an effective area of focus regarding intervention processes for counsellors and healthcare teams working with this demography.

There is notable research on childhood trauma and its relationship with physical and mental health concerns that become apparent in childhood and could continue into adulthood and are associated with decreasing the lifespan for many (Yamaoka & Bard, 2019). ACEs remains an area of concern within Canada as over half of the population are exposed to ACEs at a young age leaving them susceptible to its adverse effects (Public Health Ontario, 2020). With this awareness, it is critical that research investigates ways to minimize these adverse effects of ACEs. The research aims to identify ways to support children and adolescents in developing

resilience, equip them to face life's challenges better and maintain optimal physical and mental health throughout their lives.

The link between Research Topic and Counselling Psychology

Within the clinical setting of counselling, the clinician's role is to support their clients, in this case, children and adolescents, after experiencing some form of trauma. With this in mind, it would be essential to study how counsellors can support their clients in ways that can mitigate ACEs and their adverse health outcomes. Individuals who have experienced childhood trauma are likely to become adults and begin presenting with physical and mental health concerns. As identified earlier, much focus has been on addressing the adverse effects of ACEs in later years when these individuals have become adults. While the desire is to prevent ACEs, mitigating its impact as early as possible is essential.

Further, social and health care services for children and adolescents impacted by ACEs has largely focused on psychopathology and the treatment of biopsychosocial symptoms (Stengård & Appelqvist-Schmidlechner, 2010). It is essential that more emphasis is placed on the assessment of effective psychotherapeutic treatments beyond simply improvements in the biopsychosocial symptoms of children and adolescents impacted by ACEs (Webster, 2022).

This paper will contribute to counselling psychology by exploring the protective factors that can develop resilience in children and adolescents. This project will apply to counsellors, identifying the protective factors and intervention strategies that can be utilized within the counselling context. By using these interventions, counsellors can work with individuals at a young age to manage the adverse health outcomes of ACEs when they are young and build resilience, which is needed to face adversities in life.

Theoretical Framework

Attachment theory and Bronfenbrenner's ecological systems theory provide the foundation for a theoretical and conceptual framework through which this paper will analyze the literature research. These two theories will be instrumental in helping to answer the research question. Attachment theory describes the dynamics of the emotional bond that emerges between a child and their primary caregivers for survival and security (Bowlby, 1969).

Within attachment theory, John Bowlby (1982) describes the dynamics of the emotional bond that emerges between a child and their primary caregivers. When an attachment style is formed in childhood, it determines how those individual functions in their relationship with others throughout life (Bowlby, 1982). The four attachment styles that have been identified are secure, anxious, avoidant, and disorganized attachment, the last three are insecure attachment styles (Ainsworth et al., 1978, Bowlby, 1982).

Secure attachment is the healthiest form of attachment and is identified by a pattern of seeking and receiving support and reassurance from their caregivers. Insecure attachment styles are developed due to inconsistency in love and affection received in childhood from caregivers, possibly through abandonment, rejection, abuse, or inability to predict caregivers' responses. Neufeld and Matè (2013) found that children and adolescents typically only connect with adults they feel attached. In contrast, Gregorowski and Seedat (2013) discovered that the adverse developmental effects of children and adolescent's exposure to trauma strain their relationships, making it difficult for them to attach to safe adults securely. This attachment process leads to the development of we and others and the expression of the four attachment styles. Attachment theory proposes that our early relational experiences with primary caregivers give rise to patterns

in which we connect to others, particularly in times of difficulty, pain, and stress, and how we learn to regulate emotions (Wallin, 2015).

The Bronfenbrenner's ecological systems theory conceptualizes an individual's development as a complex network of relationships affected by various systems (Bronfenbrenner, 1986). The ecological system theory focuses on the quality and context of the child's environment. This includes the systems of relationships that form a child's environment. The systems of a child or adolescent's relationships develop by their numerous complex environments. The ecological perspective encompasses various levels that affect an individual's life, which impact health and well-being. These levels include the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

The microsystem encompasses the relationships and interactions a child has with their immediate environment has a direct influence on a child's development (Bronfenbrenner, 1986). Structures in the microsystem include family, school, neighbourhood, or childcare. The mesosystem provides the connection between the structures of the child's microsystem (Berk, 2000). The mesosystem could be the connection between the child's teacher and his parents, between church and his neighbourhood. The exosystem the larger social system (formal and informal) in which the child does not function directly but still interacts with some structure in her microsystem (Berk, 2000). For example, a parent's stressful job and work schedule affects their availability, resources, and mood at home with their child or community resources, government policies, and mass media shape the child's microsystems.

The macrosystem is the outermost layer in the child's environment. While the macrosystem is not a specific framework or environment that encompasses a child, it focuses on how cultural elements affect a child's development, consisting of cultural values, ideologies,

attitudes, customs, laws, and social conditions that children are immersed in (Berk, 2000). The effects of larger principles defined by the macrosystem have a cascading influence throughout the interactions of all other layers (Berk, 2000). This could include beliefs about gender roles, individualism, and family structures determine norms and values that permeate a child's microsystems. For example, if it is the belief of the culture that parents have the sole responsibility to raise their children, that culture would likely provide fewer resources to help parents. Which then affects the structures in which the parents function. And then the parents' ability or inability to care for their child within the context of the child's microsystem is likewise affected.

The chronosystem relates to shifts and transitions over the child's lifetime. These environmental changes can be predicted, like starting school, or unpredicted, like parental divorce or changing schools when parents relocate for work, which may cause stress. These changes can also be external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. As children get older, they may react differently to environmental changes and may be able to better determine how that change will influence them (Bronfenbrenner, 1986). There could also be an interaction between the different ecological levels. Changes or friction in any one layer will affect other layers. To study a child's development then, studies must examine not only the child and their immediate environment, but also at the interaction of the larger environment. Resilience can be assessed within an ecological framework, with risk and protective factors present within an individual, in their close environments of family, school or community, and at the more distal community and societal levels. As many systems could contribute to the experience of trauma, using an ecological theory is very important in trauma-informed approaches.

Personal Positioning

This literature review aims to explore the development of resilience during formative years due to the student researcher's experience within a clinical setting. Some common concerns that a sizeable number of people who come to counselling experienced were depression, anxiety, low self-esteem, and suicidal ideation. In exploring the nature and origin of these concerns, an often-mentioned contributing factor is the experience of one or more ACEs starting at a young age. While some people exposed to ACEs presented with these mental health concerns, I have also encountered other individuals who have also been exposed to some form of childhood trauma but have been able to grow up having healthy lives free of physical and mental health concerns.

As a counsellor, I want to be able to work with clients who, despite ACEs and other childhood traumas, can lean in the direction of healing and lead a life devoid of adulthood diseases or lifelong battles with mental health issues. It would benefit children and adolescents to be supported in building protective factors to mitigate the adverse outcomes of childhood adversity. Building resilience would not only help them as they develop, but developing resilience would be helpful to them throughout their lives. Considering this, I want to examine the research around supporting children and adolescents in developing resilience protective factors, considering the possibility of affecting long-term changes and positioning people for more positive health outcomes, longevity, and quality of life. To mitigate any personal biases, results from this research project will be determined by examining evidence provided in peer reviewed literature that focus on this subject area.

This project's intended audience is counsellors who work with children and adolescents with a history of adversity and trauma (ACEs), community service organizations that support this

demographic, and individuals who present with mental health challenges and hope to heal for better well-being. It may also benefit and be employed by parents and caregivers of children and adolescents exposed to ACEs.

Definition of Terms

Adverse Childhood Experiences (ACEs): Experiences of childhood traumas, such as child abuse and family dysfunction (Gilbert et al., 2015).

Anxiety: an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure; a future-oriented, long-acting response broadly focused on a diffuse threat,

Attachment Theory: Describes the dynamics of the emotional bond that emerges between a child and their primary caregivers. This bond is developed primarily through psychological connectedness and dependence between an infant and caregiver (Bowlby, 1969).

Co-regulation: The process by which parents and their children regulate one another through goal-oriented behaviour and expressed effect in a safe and structured environment for learning and exploration (Fisher, 2014).

Depression: involves a mood or emotional state that is marked by feelings of low mood or loss of pleasure or interest in activities or a reduced ability to enjoy life for long periods of time.

Emotional Regulation: Effectively managing responses to internal feeling states, emotional experiences, and the behavioural reactions accompanying these emotions.

Mindfulness: Focusing and paying attention to what one senses and feels in the moment without judgment (Kabat-Zinn, 2003).

Post-traumatic stress disorder (PTSD): is a mental health condition that's triggered when a person experiences or witnesses an event in which they believe that there is a threat to life or

physical integrity and safety and experiences fear, terror, or helplessness. Symptoms may include flashbacks, nightmares and severe anxiety, as well as uncontrollable thoughts about the event.

Promotive Factors: Promotive factors contribute to direct and positive influence and positive outcomes in children and adolescents regardless of exposure to adversity (Masten & Barnes, 2018; Werner, 2005). Such factors include parental support or having a supportive relationship with an adult outside the home (teacher, mentor).

Protective Factors: Protective factors modify or minimize the risk of an adverse outcome when exposed to adversity (Rutter, 1987; Zimmerman, 2013).

Resilience: The ability to re-establish one's original state of functioning, positively adapt to stress or adversity, and maintain normal psychological and physical functioning (Guimarães, 2018).

Overview of the Paper

The following chapters provide the details of the literature review process, the results of the literature review, and recommendations for counsellors and future researchers. To explore the development of resilience to overcome ACEs, the rest of this paper will describe the comprehensive literature search process that facilitated the writing of this literature review Capstone project in Chapter Two. Chapter Three will explore child and adolescent development, ACEs, ACEs and developmental psychopathology, resilience, and resilience protective factors. This chapter will also discuss recommendations on what interventions, modalities, and programs may foster resilience and how they impact the resilience-building process based on evidence-based ACEs research. Further, Chapter Four will integrate the evidence outlined in Chapter Three to identify specific modalities, interventions, and programs that clinicians may implement to support clients in building resilience about those exposed to ACEs. Lastly, Chapter Five

concludes this project by summarizing the literature review findings and identifying opportunities for future research.

Chapter Two: Methods of Literature Search

Description of the General Research Plan

The data collection for this paper will review the literature on how protective factors can promote resilience in children and adolescents after exposure to ACEs. This literature review will explore studies focused on examining the correlation between physical and mental health concerns and resilience-focused interventions centred on improving protective factors. This literature review will synthesize findings from recently published articles to identify themes, gaps, and applicable information. The articles were obtained by searching electronic databases. There was an initial review of literature sources. Then, narrowing the findings using specific key search terms relevant to the research question and inclusion and exclusion criteria to find the relevant research articles needed.

Search Strategy

The articles were explored using four core concepts: ACEs, therapeutic interventions, childhood and adolescent development, and resilience. The following key terms to search the City University of Seattle's library, EBSCO, PsycINFO, and ProQuest databases: "intervention or psychotherapy or treatment," "youth or child* or adolescent*," and "adverse childhood experiences (ACEs) or adversity or trauma or maltreatment or posttraumatic stress disorder (PTSD)," and "resilience." The search was limited to the subject fields of psychology, counselling/human services, social welfare and social work, and public health. Furthermore, there was a selection of relevant literature reviews and a review of references for additional sources that fit the inclusion criteria.

Criteria for Selection

According to Creswell & Creswell (2018), the inclusion criteria used for this review were that studies had to be academic journals, primary research, theoretical studies, empirical studies, terms in the title, abstract or as keywords, scholarly, peer-reviewed, published in English, within the last five to seven years, focused on children between ages 3 -18 years exposed to ACEs/trauma, and factors and interventions associated with resilience outcome. The exclusion criteria were studies with participants over the age of 18, studies not limited to children and adolescents who had experienced ACEs/trauma, non-English studies, articles that did not discuss interventions and research that did not involve mental health professionals in the intervention. Based on the inclusion and exclusion criteria, 720 articles were initially considered. After reviewing their abstracts, only articles that addressed the specific subject and population of this study were used in this literature review. These papers were searched between February 2024 and April 2024.

Data-Analysis Procedures

Throughout the process of selecting studies for analysis, the research parameters (key terms) were continuously reframed in response to the available literature (Creswell & Creswell, 2018). The analytic process began during the early stage of article selection, which influenced and was influenced by the literature selected. The findings/results of each article were analyzed to identify themes that emerged in the literature (Creswell & Creswell, 2018).

The search process was challenged, especially regarding the different definitions and conceptualizations of ACEs. The scientific literature refers to ACEs in various terms, and exploring each title was difficult (Creswell & Creswell, 2018).

Limitations of the Current Literature Review

There ought to be a consideration of this literature review while being mindful of some limitations, including the utilization of a select but quality and credible sample of sources identifying factors and interventions determined to correlate with resilience through a systematic search strategy; however, it was not conducted as a full systematic review and only focused on the most recent literature. Also, some of the studies had a small sample size, limiting their results' generalizability (Fagermoen et al., 2024; Fortuna et al., 2018; Giordano et al., 2022; Jørgensen et al., 2019; Lempertz et al., 2022; Olivier et al., 2021). Jørgensen et al. (2019), the only qualitative study used, was also non-generalizable because it took a phenomenological approach, providing an understanding of individual subjective experience and does not offer any cause and effect. This study is also exposed to the researchers' biases and presuppositions. Similarly, Olivier et al. (2021) used case studies, which also prevented the generalizability of their results. Moreover, certain studies did not include waitlist control groups, allowing for the possibility that effects might be attributed to the impact of time or a placebo effect rather than the intervention being investigated (Canale et al., 2022; Fortuna et al., 2018; Giordano et al., 2022; Jørgensen et al., 2019; Lempertz et al., 2022; Olivier et al., 2021). In certain studies, the provision of therapy was conducted by multiple therapists, which could further limit generalizability (Lempertz et al., 2022)

Similar to qualitative studies, the mixed-methods studies used in this paper were limited to self-report measures of intervention outcome, which may not portray accurate intervention effects due to social desirability biases and selective recall (Giordano et al., 2022; Hutchison et al., 2020; Olivier et al., 2021; Sanders et al., 2020).

Furthermore, some studies lacked or had only short-term postintervention follow-up measures, preventing the determination of intervention result maintenance or improvement over

time (Fortuna et al., 2018; Giordano et al., 2022). Likewise, most of the studies used in this literature review are entirely cross-sectional in design, and therefore, no inferences regarding causality can be made. In some studies, participants, and independent assessors (who evaluated the diagnostic status) were not blinded to the treatment phase they were in (Olivier et al., 2021). Some studies do not differentiate between types of ACEs/trauma exposure, such as complex, relational, sexual, neglect, or domestic violence, in their analysis, potentially limiting the validity of this review's findings (Olivier et al., 2021). Another limitation is using a single treatment and comparison site, which limits the comparison of intervention impacts across various sites that would strengthen generalizability (Hutchison et al., 2020). This design limits comparing the treatment at one site to other treatment sites, which would further test the validity of the findings. Hutchison et al. (2020) longitudinal study also increased attrition rates, limiting the generalizability of results and the ability to examine subgroup differences among this original group. Finally, this literature review consists primarily of quantitative literature, which has a structured approach that limits the amount of information and insight into participants' experiences of their symptoms before the study and after intervention.

Despite the review's limitations, the results of each study analyzed are significant, as the tools used for data collection and analysis in most studies showed high levels of validity and reliability. The qualitative research used self-report, semi-structured interviews for data collection and thematic analysis (Jørgensen et al., 2019). The quantitative studies used structured interviews and questionnaires with Likert scales to collect data and used a descriptive statistics study design (Canale et al., 2022; Cutright et al., 2019; Fagermoen et al., 2024; Fortuna et al., 2018; Giordano et al., 2022; Hutchison et al., 2020; Lempertz et al., 2022). The mixed-method

studies used self-report, semi-structured interviews, questionnaires, and descriptive statistics to analyze data (Olivier et al., 2021; Sanders et al., 2020).

Chapter Three: Review of the Literature

In recent times, there has been an increase in the awareness of trauma and its impact, with trauma even considered an epidemic in the world today (Conti, 2021). The pervasiveness of trauma should be indicative of the need for increased awareness regarding the prevention and mitigation of ACEs, which give rise to physical and mental health challenges that could persist into adulthood, potentially altering how a child interprets the world and changing the course of a person's life (Maté, 2018). This paper aims to outline interventions focussed on building resilience through strengthening protective factors and consider how to learn resilience through systems and practical methods that can aid clients in building new skills to manage challenges and thrive. In effect, this paper will help identify ways in which clinicians and families can best approach trauma care with children and adolescents.

This chapter will begin by briefly explaining child and adolescent development. Next, we will consider the framework of ACEs and their impact on mental, physical, and overall well-being. This chapter will go on to explore the uniqueness of exposure to trauma at the childhood and adolescent stages of development. Then, there will be an examination of resilience and some factors contributing to resilience in children and adolescents who have experienced ACEs. Evidence-based resources, interventions and modalities that promote resilience are explored, followed by the literature's gaps and limitations. Lastly, this chapter will discuss ethical considerations.

Child and Adolescent Development

"Development is an extraordinary process full of rapid and gradual transitions designed to establish efficient structural and functional neural connections supporting our behaviours, cognitions, and emotions" (Guyer et al., 2018, p. 687). Two guiding principles of developmental

neuroscience propose that numerous and rapid changes occur during infancy and early childhood that promote development in core domains of functioning. A second period of growth and change occurs in the brain that contributes to new domains of functioning related to the distinctive experiences that first emerge in adolescence (Guyer et al., 2018). According to research in neuroscience, windows of rapid growth and change are more sensitive to different life experiences during childhood and adolescence (Guyer et al., 2018). The sensitivity of neural change during infancy and early childhood amplifies the importance of providing the needed supports to children and adolescents exposed to ACEs to foster healthy development before they go past the window of heightened neural sensitivity. Therefore, highlighting the importance of fostering resilience as a mitigating factor to ACEs in children and adolescents.

Childhood Development

Childhood is a developmental phase from two years old until puberty, around age 10 and 12 (American Psychological Association [APA], 2020b). In childhood, neurological processes that contribute to healthy maturing depend on primary caregivers' environmental factors to encourage learning experiences and emotional regulation (Guyer et al., 2018). Safety and security concerning physical and emotional needs are most impactful between infancy and the onset of puberty (Guyer et al., 2018). Achieving these developmental needs allows children to gain a sense of trust, autonomy, initiative, and industry (Erikson, as cited in Fine, 2019).

Adolescent Development

Adolescence is marked by the time of human development that begins with puberty and concludes at the point of physiological maturity (approximately 19 years of age), depending on the individual (APA, 2020a). During adolescence, there is an increase in neurological growth and high plasticity in the adolescent brain, giving room for significant environmental influences on

cortical circuitry (Konrad et al., 2013). Therefore, adolescence is marked by the emergence of abstract thinking, changes in social functioning, and psychosocial challenges of identity, autonomy, intimacy, and sexuality. During adolescence, defining one's sense of self begins (Fine, 2019). Typically, a defined self-image begins forming during adolescence. This determined self-image dictates how adolescents define themselves, influencing their beliefs, drives, and ambitions. Moreover, the limbic system's hormonal changes and neurological activity increase sensitivity to socioemotional experiences during adolescence (Nelson et al., 2005). Due to this neural affinity, there is a need for relational interactions that encourage self-discovery through affiliation and belonging, such as association with peers (Fine, 2019; Nelson et al., 2005; Masten & Barnes, 2018).

Attachment and Development

According to developmental psychology, the impression of possibly harmful events in early life is based primarily on the emotional responses of the caregiver (Wedekind et al., 2013). The human biology (Bowlby, 1988), the capacity for survival through social relationships (Siegel & Hartzell, 2018), and the pace at which neurobiological development occurs in the early years of life (Costello, 2013) allows for a distinct vulnerability to the influence of attachment experiences in the earliest stages of development. The significance of attachment extends beyond the growth of different skills within a child, attachment also affects the development of areas in the brain involved in emotional processing (Leblanc et al., 2017). When a parent creates the right environment for their child, they support the brain development that underlies these critical interpersonal and social abilities. The experience of adversity and stress during development may affect brain architecture (Shonkoff, & Garner, 2019). Effective affect regulation in both parents and children is associated with relationship satisfaction and

positive developmental outcomes. Contrary to this, poor emotional regulation is associated with various long-term negative consequences (Siegel and Hartzell, 2018).

Adverse Childhood Experiences (ACEs)

Early life adversity interferes with developing a stable perception of self and others. Pain or neglect, which could be physical or emotional experiences during formative years, can result in a skewed sense of self as being fundamentally flawed and a misconception of the reliability of others (Duffy et al., 2018). A general definition for ACEs involves child maltreatment (which could be in the form of child abuse or neglect), as well as household challenges (such as substance abuse in the home, mental illness within the family, parental incarceration, witnessing intimate partner violence, or parental separation or divorce) that occur before adulthood. (Felitti et al., 1998). Population-based studies indicate that about a half to two-thirds of Canadian children experience some form of ACEs before the age of 18 (Public Health Ontario, 2020). In addition to being common, ACEs has a strong association with morbidity and mortality. An increased exposure to ACEs is associated with higher risk of a wide range of mental and physical health outcomes across the lifespan, including anxiety, depression, substance abuse, cardiovascular disease, type 2 diabetes, respiratory diseases, chronic pain, gastrointestinal, metabolic disorders, cancer, and neurological and musculoskeletal problems, as well as premature mortality (Campbell et al., 2016; Duncan et al., 2015; Jones et al., 2009; Kessler et al., 2010; McLaughlin et al., 2009; McLaughlin et al., 2012; McLaughlin et al., 2016; Rich-Edwards et al., 2012; Thomas et al., 2008; Wegman & Stetler, 2009; Widom et al., 2012). The adversities particularized in the original ACE study by Felitti et al. (1998) fall mainly within the category of micro- (individual) and meso-(family) system levels of influence stated in ecological models of human development (e.g., Bronfenbrenner, 1986). Research centred on a comprehensive

approach to operationalizing the ACEs construct has included and highlighted exo-level (extra-familial) adversities, including placement in foster care, residing in a disadvantaged neighbourhood, exposure to violence, bullying, racial discrimination (e.g., Cronholm et al., 2015). Arguments exist that crisis relocation, such as migration due to fleeing large-scale emergencies, natural disasters, armed conflicts, and government repression, should also be acknowledged as an ACE, given its potential to impede development in many populations (Ertanir et al., 2023).

It is important to note that the original ACE study did not provide an official definition of adversity; there was also no theoretical support for choosing the distinct adversities included. The construction of the definition and conceptualization of ACEs has continued to evolve, and limitations exist regarding depending on the ACE score for this purpose (Lacey & Minnis, 2020). To date, the definitions still need to be more consistent. There is ample benefit in a collective assumption of a definition that speaks to both developmental and ecological aspects of adversity, like one proffered by McLaughlin (2016), which defines childhood adversity as experiences that could demand appreciable adaptation by a typical child and that typify a deviation from the anticipated environment (i.e., the environmental conditions that individuals require to develop normally).

According to Webster (2022), the resulting consequences of ACEs develop closer to exposure. The negative impact of ACEs on mental health (i.e. socioemotional and cognitive impairments) shows a connection to significant physical health problems later in life (Mersky et al., 2013; Yamaoka & Bard, 2019). There is substantial evidence indicating that intense, recurring, or prolonged stress response activation from ACEs can lead to atypical neurodevelopment (McCrory et al., 2010; Shonkoff, & Garner, 2019), which makes children

vulnerable to risks for mental health conditions which begin to show up from childhood and often evident by late adolescence (Herringa et al., 2013; Yamaoka & Bard, 2019). Moreover, ACEs can be said to be responsible for an estimated 30% of the global mental health crisis. Eliminating ACEs has been proposed to lead to the possibility of expunging approximately 37% of anxiety disorders observed among young adults aged 20 to 29 worldwide (Kessler et al., 2010). According to Public Health Ontario (2020), preventing ACEs has been suggested as an effective intervention to reduce substance use, chronic disease and improve overall health in the Canadian population. While eliminating ACEs would be ideal for preventing the negative consequences of ACEs, it is beneficial to investigate the mitigation of the adverse effects post-exposure to ACEs. Much research provides evidence for resilience, supporting children with prior exposure to ACEs to achieve positive growth and adjustment.

Felitti et al. (1998) indicated that an increase in ACE scores results in a corresponding increase in the likelihood of encountering a health or social problem ("ACE attributable" problem). In comparison to individuals who indicated no ACEs, individuals who reported multiple ACEs were more likely to experience health risks, including alcohol and substance use/abuse, depression and suicide attempts, numerous sexual partners and sexually transmitted diseases, physical inactivity, and obesity (Felitti et al., 1998). The research on ACE continues to grow, and a consistent concern that ACEs appear to contribute to is that exposure to toxic stress at a young age gives rise to persistent brain dysfunction that, in turn, affects health and quality of life throughout the lifespan (Leblanc et al., 2017; Shonkoff, & Garner, 2019).

Adverse Childhood Experiences and Developmental Psychopathology

The mechanisms by which ACEs lead to child psychopathology such as a disruption of the physiological stress response system (Kautz, 2021), could on occasion, overlap and co-occur

within one another due to the systemic nature of the family environment and its pivotal significance in development. Within the family context, the processes of the parent-child relationship (e.g., attachment security, emotional socialization, coercive cycles, parental monitoring) are immediate and close influences on a child (Bronfenbrenner, 1986). Moreover, it is generally through such processes that factors in the more extensive ecology of a child are understood to confer risk (Bronfenbrenner, 1986; Hawes et al., 2021a). Therefore, it is essential to note that ACEs comprise both extreme forms of adverse parenting (e.g., physical abuse, neglect) as well as a span of known determinants of parenting and moderators of parenting influences (e.g., parent mental health, interparental conflict, a lower socioeconomic status) (Taraban & Shaw, 2018). Through such pathways, ACEs gain the capacity to interact and transact with the neurobiology of the developing child, altering corticolimbic pathways and wide-ranging brain networks that serve as the foundations for cognitive and affective mechanisms for psychopathology (McLaughlin et al., 2020). Brain processes that could be affected include cognitive control, reward processing, and detection of behaviorally relevant stimuli. Also, specific transdiagnostic processes that may be affected include emotion regulation, social information processing, and associative learning (McLaughlin et al., 2020).

Sensitive Periods and Timing in Developmental Psychopathology

A developmental psychopathology perspective conceptualizes mental health concerns as deviations from a healthy developmental trajectory over time (Sroufe, 1997). The digressions from the typical developmental course are sometimes different but vary depending on the stage of development in which the digression occurs. Accordingly, to understand the impact of ACEs on children and adolescent's mental health, the timing of such experiences must be considered. Hawes et al. (2021b) explored the effect of ACEs while integrating timing; this study identified

that the occurrence of ACEs within specific age periods of childhood explains distinct variances in symptoms of psychopathology in children. Additionally, ACEs may co-occur in clusters, and these clusters could vary across developmental periods (Pollmann et al., 2022).

Consequently, it is pertinent to consider the developmental timing of adversity to identify sensitive periods of emotional, social, cognitive, and neurobiological development when the effects of ACEs on subsequent mental health may be most prominent (e.g., Hawes et al., 2021b). While adversity experienced at an early age substantially impacts neurobiological development compared to adulthood, complex interactions exist between developmental timing, type of adversity exposure, sex, and regional specificity in the brain (Gee, 2021). As such, adversity during particular window of increased plasticity later in development may increase the possibility of certain risks (Reh et al., 2020).

The "understanding of developmental change, capacities, and vulnerabilities at various ages, family characteristics, and functioning, and the interplay of young people and the settings in which their development unfolds may be relevant to providing evidence-based practices to children and families" (American Psychological Association Task Force on Evidence-Based Practice for Children and Adolescents, 2008, p. 28; Michaelson et al., 2021). Children and adolescents are entirely different from adults in their development, affecting their experience of life events. Therefore, the treatment provided to children and adolescents should vary from that offered to adults as they also experience therapy differently (Levine & Kline, 2019). Evidence shows that children and adolescents are the most marginalized and underserved in healthcare systems (Smitherman et al., 2021). Previously implemented interventions geared towards education and the provision of guidelines, with minimal to no skills training for parents and little acknowledgment of the vital role parenting plays in developing healthy lifestyle habits.

Likewise, current studies have little to no consideration for the mechanisms that determine the development of health concerns and, thus, potentially fail to account for crucial modifiable intervention targets (Miller et al., 2018). Consequently, it is essential for steps to be taken toward furthering research and developing practices that would contribute to prevention, early intervention, treatment, and continuity of care to hamper the potential long-term costs related to the adverse mental health of childhood and adolescents.

Resilience: Mitigating the Effects of ACEs

The word resilience comes from the Latin verb resiliere, which means to leap or spring back, rebound, recoil, or bounce back (Tóth, 2015). Put simply, it is a re-establishment of the original state of being after physical or psychological distress, trauma, or setback (Guimarães, 2018). According to Roth and Herzberg (2017), characteristics of a resilient person include a person who possesses high self-confidence and grit, which foster success in different areas of life, including academics, career, health, and relationships. Resilience is not merely the nonexistence of pathological responses dependent on individual susceptibility; instead, resilience is conceptualized as an active, adaptive, and dynamic process (Russo et al., 2012). Münch et al. (2021) defined resilience as a set of learned skills that facilitate recovery from adversity and maintain positive adaptation and normative functioning (Kural & Kovacs, 2021).

Adversity and positive adaptation are two components that consistently appear in the literature on resilience, suggesting that these two constructs can predict resilience (Masten., 2021). Adversity refers to a difficult or challenging situation a person experiences, which can include physical, emotional, or social stressors. While positive adaptation refers to the ability to adjust to new environments and experiences in order to function more effectively. Masten (2001) indicated that “resilience is made of ordinary, rather than extraordinary processes” (p. 227). It is,

therefore, implied that humans have the potential to be resilient through learnable processes. Therefore, if people can learn resilience, developing resilience is possible despite past trauma, ACEs, or previous negative learned responses. This approach offers a more positive outlook on human development and adaptation (Masten, 2001).

Other approaches to resilience take the perspective that resilience and well-being are not equivalent to the absence of adversity and illness (Fava & Tomba, 2009). Therefore, this proposes that resilience may be looked at as an innate ability to thrive (Richardson, 2002) instead of from a pathological lens to help overcome adversity. Regardless of the approach, resilience requires active engagement with life's events, experiences, and internal and external (social/cultural) resources that influence well-being (Bonanno & Diminich, 2013). Resilience is undeniably a crucial factor that enables people to adjust, grow, and succeed despite stressful, adverse, or traumatic conditions (Barnhart et al., 2022; Yoon et al., 2021). While this is so, there are still gaps in the knowledge about the factors that influence resilience and the mechanism of how it functions in children and adolescents (Fletcher & Sarkar, 2013). The difference in individuals' responses to stressors is apparent, but the how and why behind the observed variation has yet to be clearly defined. There is need to explore the factors that contribute to an adaptive response to adversity instead of a maladaptive response (Wadsworth, 2015). Within psychology and counselling, it is imperative to understand individual responses and how clinicians can support clients to overcome adversity and thrive.

Resilience as a topic has received the attention of researchers who focus on the study of maltreatment during childhood and adolescence (Sroufe & Siegel, 2011; Yoon et al., 2019). Developmental perspectives conceptualize resilience as a developmental process during which person-environment interactions help build competence, leading to the capacity to address stress,

distress, and trauma (Sroufe & Siegel, 2011). Studies have shown that children with secure attachment are less vulnerable to stress and more capable of capitalizing on growth opportunities. Such children continue to be influenced by their prior exposure to being nurtured; it influences their response even in the face of challenging periods (Sroufe & Siegel, 2011). Resilience and coping with trauma have repeatedly shown that there is a power that healthy relationships possess to protect from and heal following exposure to trauma (Perry, 2009). Perry (2009) ascribed this to the neurobiological connection between the stress response and attachment, social communication, and related systems in regulating distress.

When studied in the context of children and adolescents exposed to maltreatment, resilience has been regarded primarily as either the absence of psychopathology/negative outcomes or proficiency across multiple spheres of functioning (Kalisch et al., 2015). In addition to external contributors, individual traits associated with positive outcomes or resilience are self-regulation skills, personal control, problem-solving skills, self-esteem, motivation, adept social competence, and enhanced adaptive functioning abilities (Yoon et al., 2019). A national study found that resilience decreased the impacts of ACEs on grade repetition and poor school engagement (Bethell et al., 2014). On this account, framing developmental opportunities for these traits through psychotherapeutic interventions with children and adolescents affected by ACEs is essential in psychotherapy.

Resilience Protective Factors

In the face of the negative impacts of ACEs, studies have gradually come up regarding the counteracting effect of resilience and protective factors. An ecological approach to resilience emphasizes that each level of a person's environment carries risks and protective factors (Zimmerman, 2013). The factors contributing to a person's well-being are internal and external,

including within an individual (assets), in their proximal environments of family, school or work, and at the more distal community and societal levels (resources) (Zimmerman, 2013). Within the protective factor model, studies have determined several ecological levels of protective factors, which are the healthy development of social and emotional competencies, the presence of positive relationships, and safe, protective, and equitable environments (Center for the Study of Social Policy, 2017; Schofield et al., 2013).

Research shows that particular protective factors mediate long-term risks of ACEs (McElroy & Hevey, 2014; Moore & Ramirez, 2016; Walker et al., 2011) as well as adverse effects such as depression during childhood and adolescence (Elmore et al., 2020) The presence of sufficient social support like a loving, stable adult (McElroy & Hevey, 2014), an adult who makes a child feel safe (Walker et al., 2011), or living in a safe, supportive physical environment (Moore & Ramirez, 2016) can entirely or moderately minimize the effects of ACEs. Various factors have been recognized to support resilience in children and adolescents; these protective factors are categorized into individual/intrapersonal factors, which include coping styles/skills, optimism, self-esteem, cognition, interpersonal factors such as positive family relationships or social connectedness (Bowes et al., 2010; Marriott et al., 2014), institutional factors such as school engagement, church or support groups (Marriott et al., 2014), community and policy factors. Most of the resilience research thus far has concentrated on adult resilience to trauma and adversity, even when exposure to adverse events takes place in childhood. Limited research is available on factors that support resilience in childhood and adolescence (5–17 years).

Recently, resilience researchers have recognized the necessity of identifying modifiable protective factors that can support children and adolescents thriving despite exposure to ACEs (Hornor, 2017; NSCDC, 2015; Ortiz, 2019). While there is support for most protective factors by

older resilience research (Masten, 2018; Wright et al., 2013), more research that examines the efficacy of these protective factors with individuals exposed to ACEs should be conducted (Traub & Boynton-Jarrett, 2017). Therefore, it is essential for there to be a continuity in the functionality of protective factors; it is likewise vital to identify resilience-focused interventions that address the adverse effects of ACEs (Bethell et al., 2019; NSCDC, 2015; Sege & Harper Browne, 2017).

Resilience theories such asxxxxx focus on individuals' strengths on all ecological levels, internal and external, in place of risks and deficits, and how these strengths can help them overcome the risk and impact of ACEs (Luthar et al., 2000; Masten, 2001; Rutter, 1985). Moore and Ramirez (2016) discovered that several factors mediate the correlation between the extent of exposure to ACEs and negative consequences, including living in a safe neighbourhood, a safe school environment, and parental monitoring of friends and activities. Understanding, recognizing, and cultivating components of protective factors may support the reduction of harmful impacts of ACEs on children and adolescents (Moore & Ramirez, 2016).

Individual/ Intrapersonal Protective Factors

Giving attention to individual protective factors can lead to building resilience through strengthening emotional intelligence skills, stress management, and executive functioning, which have been associated with a higher degree of resilience (NSCDC, 2015; Sciaraffa et al., 2017; Traub & Boynton-Jarrett, 2017). Self-regulation is defined as the ability to regulate one’s natural inclinations toward a preferred outcome or the ability to understand and manage one’s behaviour and reactions to feelings and the external environment (Vohs & Baumeister, 2016). Likewise, resilience is linked to increased emotional intelligence, which is the ability to label and communicate feelings in a safe environment (Sciaraffa et al., 2017). Likewise, higher self-

esteem, hope, inner strength, spirituality, and a sense of control correlate with increased resilience (Hornor, 2017; Rutter, 2012). In addition, engaging in creative activities and hobbies have been identified as protective factors. Self-care practices such as sleep, exercise, a healthy diet, and routine have increased resilience (Sege & Harper Browne, 2017; Traub & Boynton-Jarrett, 2017).

Interpersonal Protective Factors

Safe, secure, and nurturing relationships, such as resilience-building adult relationships, have been identified as one of the most vital protective factors (NSCDC, 2015). This type of relationship is characterized by the sense of safety with the absence of fear and threat of physical or emotional harm, stability, consistency, and predictability within a child or adolescent's environment while experiencing adequate physical and emotional development CDC (2013). While adult relationships outside the home can build resilience, the parent or caregiver relationship with a child has been regarded to be one of the most critical contributors to building resilience, with researchers conceptualizing this relationship in the context of health attachment (Sege & Harper Browne, 2017; Traub & Boynton-Jarrett, 2017). In addition to this, having physically and emotionally healthy parents has been associated with resilience (Sege & Harper Browne, 2017). A safe and supportive parent-child relationship can disrupt the negative impact of ACEs on future outcomes, including child emotion regulation challenges (Alink et al., 2009), aggressive behaviour (Fagan, 2020), poor self-esteem (Appleyard et al., 2010), depressive symptoms (Nowalis et al., 2020), and trauma symptoms (Evans et al., 2013). Therefore, the parent-child relationship is fundamental to promoting children and adolescents have ACEs.

According to Schofield et al. (2013), other relationships, including with teachers and peers, are likely protective factors (Hornor, 2017; Keane & Evans, 2022; Sege & Harper

Browne, 2017). Educational and other support groups or services teaching social and coping skills could also promote resilience factors to combat ACEs (Ortiz, 2019). Parental harmony and having a valued role within the household, such as helping siblings or doing household chores, are other interpersonal protective factors that promote resilience. Lastly, the CDC (2013) proposed that mental health support for children and adults and parent training programs could help build resilience in children or equip parents to put necessary structures in place to promote other protective factors. Considering the developmental stage of children and adolescents, having a safe, secure, and nurturing relationship with at least one parent or caregiver has been deemed beneficial in mitigating the impacts of ACEs (Crouch et al., 2018). Healthy relationships during the early stages of life can develop resilience-promoting skills as well as through modelling positive parenting styles and approaches, which could mitigate the developmental and emotional consequences of ACEs (Jeon & Neppl, 2016; Norona & Baker, 2016)

Self-esteem, self-confidence, social competence, and resilience in children and adolescents are associated with secure attachment (Sroufe et al., 2000). The foundation of our ability to operate in the world originates from our early relational (attachment) experiences (Schore, 1994; Cook et al., 2005). When children experience insecure attachment (i.e. through exposure to trauma, loss, abuse, betrayal, or as a result of chronic dysregulation in the caregiver), they fail to develop the ability to self-regulate resulting in the experience of intense emotions without the capacity to manage these emotions, neither do they have safe and consistent caregiver relationships to rely on for support (Cook et al., 2005; Van der Kolk, 2005, Ye et al., 2023). Children and adolescents exposed to a considerable amount of adversity and, therefore, have challenges with self-regulation and may also lack a sense of agency about their internal experiences and the level of influence they have on their immediate environment (Cook et al.,

2005). Some of the adverse outcomes that could occur as a result of having an insecure attachment in the presence of ACEs include anxiety, excessive clinginess, internally or externally directed aggression and dissociation (Cook et al.,2005; Van der Kolk, 2005, Ye et al., 2023).

Parental sensitivity and supportiveness are parent-centred means that can help children and adolescents develop the ability to regulate and communicate their emotions healthily (Bocknek et al., 2009). While parental sensitivity supports the healthy development of children and adolescents, not all caregivers know how to establish a sound relationship using sensitive attunement. Therefore, developing a secure relationship that is nurturing, compassionate, loving, and attentive may require education and practice for some parents (Davis et al., 2017).

Conversely, individuals who grow up with parents who are not as present or attentive are inclined to conceal their intense emotions, which impedes stress response (Bocknek et al., 2009). When parents give attention to their children to understand their feelings, they can guide them to articulate and handle intense emotions, which is considered emotional regulation (Bocknek et al., 2009). Based on earlier research, the priority of unconditional love, secure attachment, and having safe, secure, warm, nurturing relationships during childhood and adolescence is well established as a primary protective factor (Ainsworth, 1989; Baumrind, 1971; Bowlby, 2008; Steinberg et al., 1992).

Institutional Protective Factors

Research has stipulated that nurturing relationships and resilience are the core of well-being. Therefore, a relationship-centred approach within the family and community is critical to building resilience after exposure to ACEs (Bethell et al., 2017). At the institutional level, engaging in school organizations and other supportive, equitable, protective, and safe institutional environments has been determined to be a probable protective factor (Sege &

Harper Browne, 2017). This category of protective factor includes living in safe communities with neighbourly support and additional help from extended family (Crouch et al., 2021). High-quality education has been associated with increased resilience (Sege & Harper Browne, 2017). In addition, the presence of school connectedness or school support has been supported as a possible protective factor for resilience (Crandall et al., 2020). The relationship between parent and teacher has also proven to be a protective factor as teachers support parents on how best to help their child following exposure to ACEs (Sciaraffa et al., 2017). Likewise, holding a valuable role such as a job (for adolescents), volunteering or helping neighbours, extra-curricular activities, and membership in a religious or faith community may contribute as protective factors that improve resilience (Crouch et al., 2021; Elmore et al., 2020).

Community and Policy Protective Factors

At the community and policy level, fostering resilience can occur by establishing policies that ensure quality housing for children and adolescents, providing high-quality education and medical care, and access to healthy food. Sege & Harper Browne (2017) also identified that resilience protective factors could be fostered when children and adolescents can live in safe communities with spaces to play and engage in physical activities. Community norms that encourage positive parental relationships, social cohesion within the community, and hopeful cultural or faith practices are also potential protective factors to oppose the effects of ACEs (Bethell et al., 2019; CDC, 2013; Crandall et al., 2020; NSCDC, 2015). Lastly, establishing policies that help minimize other family stressors and provide economic support can foster resilience in children, adolescents, and families (CDC, 2013).

Research shows that paying attention to protective factors proffers promising approaches to building resilience in the face of ACEs (Feder et al., 2019). Past research has indicated that

interventions that focus on building resilience through strengthening protective factors could provide opportunities to prevent and reduce mental health problems in children and adolescents (Feder et al., 2019). Further research shows that it is vital to consider the interaction and interrelatedness between protective factors and how they occur within the developmental system (Masten, 2018). Therefore, it is proposed that effective resilience-focused interventions for individuals exposed to adversity would consider the interaction between protective factors across the various ecological levels (Wright et al., 2013). Thus, the following sections will explore psychological approaches/models that identify modifiable protective factors that can be worked upon through interventions to build resilience and overcome ACEs' adverse effects.

Minimizing ACEs and Increasing Protective Factors

While conducting an ACE assessment for children and adolescents is a well-established practice, it is essential that clinicians also assess for the protective factors that are currently in place or potentially accessible (Hays-Grudo et al., 2022). Doing this would optimize existing and prospective protective factors, promoting resilience among children and adolescents exposed to ACEs (Hays-Grudo et al., 2022). Protective factors such as family strengths and supportive community can be identified and incorporated into interventions such as determining how parents and caregivers can be involved in treatment goals to develop new skills (e.g., building other social connections and healthy bedtime routines) (Frosch et al., 2019). A recent study explored the distinct influences of ACEs and positive parenting practices on early childhood social-emotional skills and general development (Yamaoka & Bard, 2019). This study utilized the National Survey of Children's Health, focusing on children from birth to five years old. Evidence shows that specific positive parenting practices (i.e. reading stories, telling stories or singing together, eating a meal together, child playing with a peer, going on a family outing, and

limiting screen time to less than 2 hours per day) may function as a form of mitigation against the negative impacts of ACEs on social and emotional development as well as developmental delays in children from the age of four months to six years old (Yamaoka & Bard, 2019). While positive parenting practices served as influential protective factors against the negative impacts of ACEs, they were also found to have protective effects independent of the degree of exposure to ACEs. Whereby children without positive parenting were typically more likely to experience higher risks compared to children with four or more ACEs. This result further shows the need to identify protective factors in place or possibly available to children and adolescents when determining interventions to address ACEs.

Individual-Level Interventions

With regards to resilience-focused interventions used with children and adolescents who have had ACEs, various treatment modalities have proven to target the development of affect regulation, coping skills, and problem-solving and have proven to be effective in fostering good mental health outcomes. Some of such treatment modalities/interventions include cognitive behavioural interventions (CBT/TF-CBT), mindfulness-based interventions, eye movement desensitization and reprocessing (EMDR), and an integrated approach to treatment (Canale et al., 2022; Fagermoen et al., 2024; Giordano et al., 2022; Jørgensen et al., 2019).

A case study conducted of a 6-year-old boy with a complex symptom profile examined the effects of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)
on children exposed to diverse forms of interpersonal trauma perpetrated by caregivers, including physical, emotional, and sexual abuse, neglect, and domestic violence (Jørgensen et al., 2019). The results of this study indicated TF-CBT to be effective in reducing PTSD symptoms, in addition to internalizing and externalizing behaviour problems. This study noted that a

modified version of TF-CBT intervention for trauma in children was used to treat his PTSD symptoms successfully. Similar findings were also obtained in other studies that identified CBT/TF-CBT as an intervention with improved symptomology after treatment intervention (Fagermoen et al., 2024; Giordano et al., 2022). As a case study, the study by Jørgensen et al. (2019) has a very small sample size which limits the generalizability of its result.

Jørgensen et al. (2019) emphasize the need to give attention to trauma-oriented interventions as well as making use of a multi-modal approach when providing care to children with complex symptom profiles. With these considerations, treatment targets problematic behaviour while accounting for traumatic reactions that may arise during moments of chronic and intense stress. While this study only examines one male individual, which limits the generalizability of its result, providing its subjectivity, it highlights the use of TF-CBT to successfully care for children with a history of ACEs who present with symptomology. This study also identifies the psychopathology linked with complex trauma in young children beyond exposure to a single traumatic experience or sexual abuse. The results of this study add to the body of literature about the treatment of PTSD in young children (range 2–8 years old). As of the few studies that explore the efficacy of TF-CBT in this population, TF-CBT was discovered to be effective in decreasing PTSD and emotional and behavioural concerns and treatment gains were maintained at follow-up (range 3 to 12 months) (Cohen & Mannarin, 2008; Deblinger et al., 2001; Salloum et al., 2016; Scheeringa et al., 2011). However, two of these studies examined samples of children exposed to sexual abuse (Cohen & Mannarino, 2008; Deblinger et al., 2001).

In line with the multimodal approach suggested by Jørgensen et al. (2019), CBT can be combined with other therapeutic modalities to form a treatment program for children and adolescents exposed to ACEs. Studies have explored the integration of CBT and mindfulness-

based intervention to serve as a more comprehensive approach to promoting resilience protective factors in children and adolescents (Fortuna et al., 2018). A study conducted by Fortuna et al. (2018) investigated adolescents experiencing PTSD-substance abuse comorbidity. This study utilized MBCT-Dual, a treatment modality comprising of individual 12-week intervention, combining elements of mindfulness and cognitive therapy. The primary treatment techniques used were psychoeducation about PTSD and substance abuse, cognitive restructuring, managing cravings and urges, and mindfulness exercises for improving awareness of thoughts, feelings, and reactions and for reflecting on new ways of responding. The findings showed reduced use of cannabis and notable improvements in depression and PTSD symptoms at the end of treatment compared to baseline. Although this study offers critical initial evidence for the plausible benefits of mindfulness-based interventions for adolescents with a history of trauma, its result may be non-generalizable due to the small sample size. Moreover, due to the treatment combining cognitive and mindfulness therapeutic approaches, it may prove challenging to identify the unique benefits of mindfulness for individuals.

Mindfulness can also be used as an independent intervention with children and adolescents following ACE exposure. A study examined the relationship between mindfulness and psychological outcomes in children and adolescents with hurricane exposure (Cutright et al., 2019). This study discovered a negative association between mindfulness and PTSD symptoms, internalizing symptoms, and externalizing symptoms. Mindfulness was also observed to act as a moderator of PTSD symptoms, internalizing and externalizing symptoms. This study gives strength to the importance of mindfulness with children and adolescents. It suggests mindfulness-based interventions to be helpful for children and adolescents exposed to ACEs to prevent the development of internalizing symptoms such as depression and anxiety and a decline

in reactivity to emotions and cognitions while promoting mindfulness and self-compassion (Van der Velden et al., 2015). This result is consistent with earlier studies that found interventions such as Mindfulness-Based Stress Reduction (MBSR) to be helpful with adolescents (Tan & Martin, 2012), and Mindfulness-based Cognitive Therapy for Children (MBCT-C) is effective with children between the ages of 9 to 13 (Semple et al., 2009).

This study by Cutright et al. (2019) also identifies a variation in the moderating role of mindfulness to ACEs; it found that mindfulness had no moderating effect on PTSD symptoms in adolescents exposed to child sexual abuse. This result suggests the possibility that the ability of mindfulness to function as a moderator depends on the type of traumatic or adverse event. It is also essential to know that more internalizing symptoms were reported compared to PTSD and externalizing symptoms. This result could have been due to the cross-sectional design of this study, which may have prevented the capturing of the moderating effects of mindfulness for PTSD symptomology and externalizing symptoms' possibly due to the impact not being evident soon after ACEs exposure. Mindfulness may also promote resilience, whereby individuals with increased mindfulness may have less persistent PTSD symptoms over time. This study by Cutright et al. (2019) had a large sample size (N=108) children and adolescents and representative sample of the island of St. Thomas, United States Virgin Islands population. Although this study does not use the exact population that this project intends to study, it is an important one to include because of the comparison to children and adolescents of diverse backgrounds which reflects the Canadian population.

In addition to cognitive and mindfulness-based interventions, Eye movement desensitization and reprocessing (EMDR) has proven beneficial for children between the ages of 4 and 10 who have been exposed to ACEs (Lempertz et al., 2022; Olivier et al., 2021). Studying

five children between the ages of five and ten years who developed PTSD after a single incident trauma, Lempertz et al. (2022) found that exposure to EMDR interventions led to a reduction in PTSD symptoms for all children. This study showed decreased vegetative hyperarousal, fears, and clinging behaviour. In addition, the study noticed stability and recovery of daily routine and reduction in parental stress levels. In like manner, Olivier et al. (2021) found that diagnostic remission of PTSD at a rate of 85.7%, as well as emotional and behavioural concerns, including comorbid anxiety, depression, and anger, could be attained with the use of EMDR with younger children. It is important to note that while benefits were evident at the three-month follow-up after treatment, one participant reported EMDR was not effective and had received a different form of trauma intervention. It is important to note that the Lempertz et al. (2022) case series has the limitations of a small sample size of five participants and no control group. The study design does not allow a prediction of longer-term effects and generalizability of the findings. The strengths of this case series were the high level of acceptance of the treatment by children and parents, and the diversity of stressful events leading to PTSD in children (which reflects variability in the clinical practice). The study by Olivier et al., (2021) had a small sample-size which is inherent of the case series design limits the generalizability of our findings. However, the participants were a heterogeneous group with different types of chronic traumatic experiences which fits into this project as this project aims to address multiple types of traumatic experiences.

The result of these studies (Olivier et al., 2021; Lempertz et al., 2022) aligns with similar studies (Scheeringa et al., 2011) that highlight the effectiveness of TF-CBT and EMDR in addressing PTSD symptoms and comorbid concerns in young children. Scheeringa et al. (2011) obtained an 82.4% remission rate in PTSD symptomology with 12 sessions of TF-CBT.

Likewise, stepped-care TF-CBT resulted in an 83.3% remission rate, while regular TF-CBT (12 sessions) produced a 77.1% remission rate (Salloum et al., 2016). Much like Lempertz et al. (2022) and Olivier et al. (2021), both studies found significant treatment effects on emotional and behavioural problems. In contrast to having 12 90-minute TF-CBT sessions, treatment effects were reached in fewer EMDR sessions (6 sessions of 60 minutes). It can also be noted that EMDR can also be used with children younger than four years with adequate adaptations of the EMDR protocol (Olivier et al., 2021). In comparison to TF-CBT, EMDR requires less cognitive and verbal skills, which makes it appear to be more accommodating for young children with PTSD. While EMDR is well suited for this age group, evidence is lacking on the effectiveness of EMDR as trauma treatment for young children with PTSD and other trauma-related symptoms, thereby bringing forward another gap in the literature.

The evidence suggests that short-term EMDR therapy can be an effective treatment intervention for children suffering from symptoms of PTSD after exposure to ACEs. A drawback of these studies is the lack of a comparison group to control for potential placebo effects or to determine if the result can simply be attributed to EMDR intervention. Nevertheless, all children met PTSD diagnosis criteria before undergoing EMDR and criteria or cut-offs for PTSD were not met following treatment, indicating that on the individual level, children benefit from the treatment. Furthermore, the findings by Lempertz et al. (2022) highlighted the significance of considering both the child's symptoms and how the child's family experiences the adverse event. For example, some of the adverse experiences participants were exposed to and led to trauma-related concerns could have been considered insignificant and ignored. This then brings attention to the role of parents/caregivers in providing early and effective resilience-focused intervention to children and adolescents.

While these treatment modalities have shown some effectiveness with this population, some studies offer varying results regarding their comparative efficacy. A study found that EMDR and TF-CBT produce comparative efficacy as treatments for children with PTSD symptoms (Barron et al., 2019). Contrary to this, another study proposes EMDR to be less effective than TF-CBT as a psychological and psychosocial treatment for children with PTSD symptoms (Mavranezouli et al., 2019). A meta-analysis examining interventions' effectiveness for children, adolescents and young adults showed that EMDR was more effective than TF-CBT, but on a smaller evidence base (Bastien et al., 2020). Furthermore, while there is evidence for the efficacy of CBT, research on the use of CBT with children shows that although there are some benefits to its use with children, it has more effectiveness with adolescents (Reynolds et al., 2012). It is proposed that younger children have not developed the cognitive and interpersonal functioning required to thoroughly engage in CBT-based therapies (Reynolds et al., 2012). Therefore, creating and implementing simpler modalities and programs that examine specific interventions is necessary as they may be more effective with children.

This section identified possible individual-level psychotherapeutic interventions/ treatment modalities that help foster resilience protective factors in children and adolescents who have experienced adversity. CBT, TF-CBT, mindfulness-based interventions, and EMDR were found to effectively moderate PTSD symptoms and reduce internalizing and externalizing concerns through developing emotion regulation skills, coping skills, and problem-solving following the experience of ACEs. They have also proven effective in fostering good mental health outcomes, including a reduction in depression and anxiety symptoms. These intervention modalities can be implemented independently, and an integrative approach may also be taken to provide holistic treatment. An example could be the combination of mindfulness and EMDR or

TF-CBT, which may offer better success with children and adolescents who have been exposed to sexual abuse. As is seen in Cutright et al. (2019), mindfulness-based interventions may not be effective for sexual abuse exposure in children, but EMDR and TF-CBT have support for their success (Fortuna et al., 2018; Jørgensen et al., 2019; Lempertz et al., 2022; Olivier et al., 2021). Therefore, the type of ACE exposure needs to be assessed to help determine which modality will be most effective. A review found that CBT, play/art therapy, EMDR and mind-body (mindfulness-based) techniques were the most frequently used interventions (Rolfsnes & Idsoe, 2011). Likewise, an integrative approach can be suggested by combining two or more treatment modalities/ interventions, such as CBT/TF-CBT and mindfulness (Fortuna et al., 2018) or CBT/TF-CBT, mindfulness and EMDR.

In some of these studies (Lempertz et al., 2022), it was observed that some parents delayed the start of the treatment for various reasons, such as illness or scheduled school holidays. These factors reflect a general challenge in the psychotherapeutic treatment of children. A critical factor that must be considered for children and adolescents, which is distinct from the treatment of adults, is the inclusion of the different systems surrounding the child (parents, family, reference persons of institutions). The success of psychotherapeutic treatment/interventions for children and adolescents largely depends on the caregiver's support.

Family-Level Interventions

In addition to individual-focused interventions, ACEs and resilience processes occur within the context of the family system (Madigan et al., 2019). Therefore, interventions must consider the family system as an instrumental factor in providing support and as a tool for interventions. Children develop their attachment style from their relationship with their parents or caregivers (Bowlby, 1969); therefore, they should be involved in the treatment process

because they are instrumental in the therapeutic results. Moreover, children and adolescents access therapeutic support through their primary caregivers (i.e. scheduling, access and transportation), making it vital to incorporate family-level interventions into treatment. In attending to interventions that promote resilience on the family level, it is possible to include parents and caregivers in interventions offered to children and adolescents exposed to ACEs (Gupta et al., 2021). Also, parents and caregivers can receive interventions and support to build skills and improve their relationship with their children.

Interventions that include both the parent and child to improve the parent-child relationship have resulted in positive outcomes for children exposed to ACEs and improved overall family functioning (Fagermoen et al., 2024). One study explored supporting parents/caregivers and children and adolescents affected by adverse experiences (Fagermoen et al., 2024). The study had 82 child-caregiver dyads. This Norwegian study aimed to examine the possible directional associations between emotional reactions and anxiety/depression in caregivers and children's post-traumatic symptoms and depression using Stepped-Care TF-CBT. The result showed that symptoms improved for both caregivers and children. Therefore, acknowledging the influence that caregivers and children have on each other's responses when undergoing a parent-led child trauma-focused intervention is crucial. Evidence shows that children with caregivers who are minimally impacted by their emotional reactions display a higher level of improvement for depression and PTSD symptoms.

Consequently, caregivers' and children's symptoms appear to affect each other while in treatment. Hence, by supporting caregivers, both the child and caregiver gain. This study states that having a solid and secure attachment to one's primary caregiver is "the single most important factor" for healthy development in children and adolescents. Parents need optimum

well-being to provide their children with the necessary care and environment. Hence, parents and caregivers must have the support required to maintain good mental health. Interventions targeted toward strengthening parents' self-regulation skills and decreasing dysregulated stress responses would be instrumental in preventing and mitigating the effects of ACEs. Minimizing stress response requires countering the activation of the sympathetic nervous system with the activation of the parasympathetic nervous system, resulting in a state of relaxation and calm in the body (Franke, 2014). Likewise, trauma-focused cognitive behaviour therapy (TF-CBT) actively involves parents in their child's treatment as it entails a parent/caregiver component (Cohen & Mannarino, 2008; Fagermoen et al., 2024). Parents/caregivers may function as emotional coaches and guides for their children during and after treatment.

Exploring the implementation of cognitive-based interventions for children and adolescents, McTavish et al. (2021) questioned the efficacy of cognitive behaviour interventions independent of a supportive caregiver as part of the treatment process. This study proposes that the presence of a supportive caregiver may be highly instrumental in the success of resilient-oriented ACEs interventions. Likewise, a study on a resilience-building program, Tutor of Resilience Program (ToR), a group-based program intended to decrease trauma-related outcomes in children exposed to maltreatment and on the mother-child interactions within this population (Giordano et al., 2022). The result signifies a significant improvement in trauma-related symptoms, including anxiety, post-traumatic stress, disassociation, and anger, but none was observed in depression when exposed to the treatment program. When mothers took part in treatment, further improvement in anxiety and dissociation was observed. The study also found mother-child relationship to improve over time as well as their trauma-associated symptoms. This study emphasizes the outcomes of a resilience-building program targeted toward mitigating

the adverse effect of ACEs and the significance of the mother-child interaction in such treatment/interventions.

While it is vital to include parents in the treatment process, it is possible that parents/caregivers of children exposed to ACEs also present with mental health challenges of their own, past traumas, and life stressors (Racine et al., 2022). In such situations, if the parents' needs are unmet, it may be difficult for them to support their children adequately. As such, parents who are going through challenges from past trauma may lack the emotional capacity to effectively provide support to their children. Other than their own challenges, parents could also experience additional stress, maladaptive cognitions, and mental health challenges relating to their child's trauma (Canale et al., 2022). Consequently, parents/caregivers may need to access treatment and support to be protective factors for their children (Canale et al., 2022).

Evidence shows that enhancing parenting skills and supporting parents' mental health are essential protective factors that promote resilience in children with ACEs (Fagermoen et al., 2024; Traub & Boynton-Jarrett, 2017). Parent-child relationship and parenting practices have improved due to parenting programs such as Child-Parent Psychotherapy, Parent-Child Interaction therapy, and the Circle of Security Intervention; these improvements then contribute to improved psychosocial outcomes for children (Landers et al., 2018; Moss et al., 2011).

Community-Level Interventions

While there is an emphasis on individual and interpersonal protective factors, more research should be conducted on the significance of community and system-level protective factors contributing to resilience in children and adolescents exposed to ACEs. This gap in the literature has resulted in consideration of resources such as the availability and accessibility of services, provider responsiveness, and interventions that meet the needs of children and families

(Ungar, 2013). Dray et al. (2017) pointed out that universal, school-based, resilience-focused interventions aimed at the mental health outcomes of children and adolescents seem to promote resilience in children and adolescents. In this literature review, Dray et al. (2017) examines studies that focus on interventions that strengthen individual-level promotive and protective factors, including cognitive abilities, problem-solving abilities, coping skills, and communication. The conclusion of the study showed that these interventions resulted in a decline in internalizing problems, externalizing problems, depressive symptoms, and general psychological distress in children and adolescents. While this study targets individuals not exposed to ACEs, the positive implications of school-based, resilience-focused interventions may have similar results for those with ACEs. Delivery of school-based interventions enlarges the scope and scale of these interventions. In general, interventions intended to promote resilient outcomes in children and adolescents with a history of ACEs by focussing on building promotive and protective factors through promoting individual-level skills such as emotion regulation, problem-solving, and communication skills can potentially be implemented at the community level (i.e. in schools).

A longitudinal randomized controlled trial of a preschool intervention, Research-based, Developmentally Informed (REDI), examined the impact of this preschool intervention on children exposed to ACEs over ten years (preschool to grade nine) (Sanders et al., 2020). This study had 294 children from low-income families (58% White, 17% Latinx, 25% Black; 54% girls; Mage = 4.49 years old at study entry). The REDI program is a resilience-focused, school-based intervention delivered in the classroom by Head Start teachers, which implies that it has the potential to reach many at-risk children at a relatively low cost. REDI aims to promote early social-emotional and language skills to help children develop emotional understanding, self-

regulation, and social problem-solving skills that could support more positive emotional coping and social relationships as they transition into elementary school (Sanders et al., 2020). The results of this study showed that going through REDI intervention in preschool provided a level of protection for children exposed to a high degree of ACEs, contributing to the reduction of high social-emotional distress and weak school bonding experienced in adolescence. Therefore, providing interventions like the REDI intervention when children are still young can help develop language skills, emotional understanding, self-regulation, and social problem-solving skills that could support more positive emotional coping and social relationships that promote resilience and mitigate the impact of ACEs.

Furthermore, taking into consideration that children and adolescents may be at a higher risk of experiencing trauma in comparison to others due to factors such as living in disadvantaged communities. To address treatment specifically for this category of children and adolescents, Hutchison et al. (2020) conducted a longitudinal study comparing two experimental groups (treatment vs. comparison) to investigate the outcomes of the novel Aspire Connect Thrive (ACT) program, a trauma-informed initiative for disadvantaged community with a high exposure rate for K-8th grade students. The ACT intervention aimed to strengthen children's social-emotional skills and resilience while reducing trauma symptoms and improving academic performance. The ACT intervention was conducted by school staff and clinicians within the school setting and included the involvement of peers and activities available in schools. This study shows notable improvement in social-emotional competence among the children and adolescents who underwent the treatment intervention; females also showed more improvement than males. Although the findings of this study did not reach statistical significance, possibly due to a short time in the program and minimal exposure to intervention supports (a longer time in

the program may lead to results reaching statistical significance), this study adds to the importance of considering broader ecological factors, such as disadvantaged communities in determining preferred treatment interventions. Those in underprivileged communities possibly encounter higher trauma exposure rates with the probability of more severe effects compared to children and adolescents in healthier and safer communities with family and educational support. This highlights the need to develop tailored resilience-promoting interventions for children and families living in disadvantaged communities.

While assessing for community factors is more challenging than individual and interpersonal protective factors, community and system protective factors are critical in promoting resilience in children and adolescents with a history of adversities. Services like a safe foster home or individualized school curricula and high-quality childcare (early childhood education) have broad-reaching impacts, resulting in resilience (Ungar, 2013; Ellenbogen et al., 2014). Therefore, while it is essential to pay attention to the individual skills and family-related support that they need to thrive, the efficacy of these skills and support may only be observed within well-structured systems (i.e., child welfare, healthcare, mental health care) and services that contribute to positive outcomes for children, adolescents, and their families.

Moreover, some families face barriers that hinder their ability to access intervention services (e.g., transportation restrictions, availability of childcare for other children, socioeconomic barriers), which may be a vital determinant of whether resilient outcomes occur (Crittenden, 1992). Models of care that encourage collaboration of interdisciplinary services and holistic care available in one location may help foster resilient outcomes by decreasing systemic trauma and increasing service access (Shaffer et al., 2018). Paying more attention to reducing

barriers to treatment accessibility has the possibility of making resilience outcomes more equitable and possible for children and adolescents exposed to ACEs.

Limitations and Gaps in Resilience Intervention Research for Children and Adolescents with ACEs

The research explored in this project identified different resilience-promoting protective factors contributing to the well-being of children and adolescents with ACEs such as a nurturing environment, supportive caregivers, and availability of community resources (Canale et al., 2022; Cutright et al., 2019; Fagermoen et al., 2024; Fortuna et al., 2018; Giordano et al., 2022; Hutchison et al., 2020; Jørgensen et al., 2019; Lempertz et al., 2022; Olivier et al., 2021; Sanders et al., 2020).. Nevertheless, there are still research gaps, including standardizing the terminologies used for protective factors to better analyze their effectiveness across studies, evidence showing whether a protective factor or group of factors is considerably more essential and to be given more attention, comprehension of resilience mechanisms at the community level, and understanding how different subgroups may benefit from specific resilience interventions. Addressing these gaps in future research can inform research and clinical practice.

Across various studies, the terminology used to identify protective factors that appear to be similar varies (e.g., supportive family vs. family cohesion, social support vs. social connectedness). There is also variation in how the protective factors are categorized (e.g. individual, interpersonal/family, community vs. internal, external vs. individual, family, peer, school, neighbourhood, social). Having these differences in terminology brings in the need for subjectivity when comparing research findings to accurately group and compare similar protective factors, introducing additional complications in concluding.

Moreover, there is little to no evidence suggesting one protective factor or group of factors with the most significant impact on child and adolescent physical and mental health problems, making it notably more critical to focus on more than others for more effective treatment and outcome (Beyond., 2018). Future studies need to provide the rationale for the selected conceptual approach or the rationale for the protective factor addressed by the intervention. The validity and quality of literature in this field will be improved if researchers identify the protective factor aimed at in the intervention as well as the rationale and supporting evidence for choosing that protective factor, including stating if changes in protective factors are the proposed mechanism for change in mental health.

Likewise, less research has focused on community-level protective factors than individual and family protective factors. The difference in the depth of research for the various levels of protective factors may be due to the complex nature of community-level factors compared to individual and family-level protective factors. Nonetheless, community and system-level factors contribute significantly to a child and adolescent's life at the policy level and in environments such as schools where interventions and support can be available. Hence, not paying attention to them may hinder resilience outcomes in children with ACEs. It would be helpful to conduct a moderator analysis that would consider which specific interventions may be most beneficial and if there may be unaccounted adverse effects for some subgroups of children and adolescents (Gillham et al., 2001). Also, to further the research done by Cutright et al. (2019), a longitudinal approach may provide better insight as to whether mindfulness moderates PTSD symptomology at all or at later stages of recovery from ACEs. It may be helpful for future studies to examine the impact of interventions on protective factors and mental health outcomes for subgroups within the specified population. Focusing on subgroups could positively

impact individuals experiencing inequity in accessing support, which may lead to desired resilience outcomes. Lastly, examining the common elements of effective interventions such as psychoeducation, coping skills, and exposure may be valuable.

Ethical Considerations

Ethical considerations are important in research and clinical practice to handle the diverse ethical challenges inherent in professional practice. The study of ACE with children and adolescents calls for a critical look into the ethical considerations of researchers and practitioners. Understanding and paying attention to these ethical considerations is essential for the well-being of everyone involved, mainly because the focus of this review pertains to minors.

All research studies are expected to adhere to the ethical principles and standards outlined in the Tri-Council Policy Statement on Ethical Conduct for Research.
Involving Humans (TCPS) (2022), the Canadian Code of Ethics for Psychologists (CPA, 2017), and the Ethical Principles of Psychologists and Code of Conduct (APA, 2017). It is essential to acknowledge that the majority of the studies in this literature review were conducted outside North America; nevertheless, the expectation is for these studies to maintain specific ethical principles in line with TCPS, the Canadian Code of Ethics for Psychologists (CPA, 2017), and the Ethical Principles of Psychologists and Code of Conduct (APA, 2017).

The literature mentioned in this review indicated some of the fundamental ethical principles and guidelines. Firstly, majority of the studies submitted the design and conduct of study to their respective ethics commission and gained approval for research from ethics boards, including Fortuna et al. (2018), Cutright et al. (2019), Olivier et al. (2021), Lempertz et al. (2022), Canale et al. (2022), Fagermoen et al. (2024), Giordano et al. (2022), Hutchison et al. (2020), and Sanders et al. (2020). Further, the research protocol must ensure the privacy and

confidentiality of participants. With some of these studies involving children and their parents, it is essential to maintain confidentiality for both child and parent. One study noted securely storing all data to maintain confidentiality (Fagermoen et al., 2024).

Furthermore, informed consent and assent from minors are critical ethical considerations. Informed consent for research clearly outlines the entire research process, including benefits and participants' rights to inform participants properly. All the studies included in the this indicated the obtaining of informed consent from participants parents (Jørgensen et al., 2019; Fortuna et al., 2018; Cutright et al., 2019; Olivier et al., 2021; Lempertz et al., 2022; Canale et al., 2022; Fagermoen et al., 2024; Giordano et al., 2022; Hutchison et al., 2020; Sanders et al., 2020). While most studies obtained assent from children and adolescents, two studies fail to mention whether assent was provided (Olivier et al., 2021; Hutchison et al., 2020). Lempertz et al. (2022) also allowed participants to review the final manuscript and to provide consent to publish results.

The study of ACEs with children and adolescents is delicate as the participants are vulnerable under their minority status and possibly mental or physical health concerns. Therefore, researchers must take necessary precautions to protect their well-being throughout the study; many studies lacked additional support services, debriefs, or ensuring that participation did not cause harm or re-traumatization. Only Cutright et al. (2019) provided parents with mental health resources after concluding the study, while Jørgensen et al. (2019) implemented a safety component at the beginning of the treatment to prevent the initiating of new traumatic events. Fortuna et al. (2018), Lempertz et al. (2022), Canale et al. (2022), and Giordano et al. (2022) also informed participants of their ability to withdraw from the study at any time. In addition, no study explicitly discussed how to manage safety and risk assessment, although it may be assumed that researchers considered the treatment interventions studied for this.

When assessing evidence-based, protocolized practices in treatment planning, specific ethics must be considered. One ethical consideration is ensuring the competence of clinicians who implement treatment interventions in alignment with the second ethical principle of responsible caring in the Canadian Code of Ethics (CPA, 2017). Some studies addressed clinicians receiving training specific to the treatment program/ intervention being studied (Canale et al., 2022; Hutchison et al., 2020; Jørgensen et al., 2019; Lempertz et al., 2022).

The studies examined in this project were conducted in various countries with diverse cultures. Considering the participants ' unique cultural differences and contexts, these studies appear to be culturally sensitive as they were designed, implemented, and interpreted (results). Further, according to the last principle in the Canadian Code of Ethics for Psychologists (CPA, 2017), which addresses the development of knowledge, beneficial activities, and the development and respect for society, the studies need to provide details on disseminating findings. It is also important to note that the expectation for treatment programs to be evidence-based based on Westernized standards may sideline individuals of other cultures by developing programs and interventions that are not well suited for them.

Lastly, some studies mentioned their funding source (Cutright et al., 2019; Giordano et al., 2022) or lack thereof (Fagermoen et al., 2024; Lempertz et al., 2022; Olivier et al., 2021). Fagermoen et al. (2024) indicated that the source that funded the study played no role in the study design, collection, analysis, or interpretation of data, writing the manuscript, or submitting the paper for publication. Some authors also stated that there were no conflicts of interest (Cutright et al., 2019; Olivier et al., 2021; Lempertz et al., 2022; Canale et al., 2022; Fagermoen et al., 2024; Giordano et al., 2022). A study acknowledged that one of the researchers received compensation for training one of the professionals in EMDR (Olivier et al., 2021). Finally,

certain studies spoke to whether compensation was given to participants for participating in the study. While Giordano et al. (2022) did not provide financial, monetary, or other incentives to participants, a study had their participants compensated financially (Sanders et al., 2020), while another study gave incentives of wristbands, gel pens, candy, stickers to participants after completing the questionnaire. Finally, by adhering to ethical principles and guidelines, researchers can conduct studies responsibly that protect the well-being of all participants.

Clinical Ethical Considerations

Clinical ethics guide professional practice under the Canadian Code of Ethics for Psychologists (CPA, 2017) and the Ethical Principles of Psychologists and Code of Conduct (APA, 2017). Like research ethics, privacy and confidentiality must be maintained, informed consent obtained, protection of vulnerable groups and individuals, and regarding clients' rights. Doing this is in line with the first ethical principle of Respect for the Dignity of Persons and People (CPA, 2017); providing care to children and adolescents with a trauma history is delicate as this is a vulnerable population. Therefore, a proper understanding of the limitations of consent and assent is imperative.

According to the second ethical principle, Responsible Caring (CPA, 2017), clinicians must ensure that they offer treatment programs and interventions within their scope of competence, maximize benefits, minimize and offset harm, and have a keen understanding of the limits of confidentiality. Carrying out trauma-focused interventions such as TF-CBT and EMDR with children, adolescents, and their parents/caregivers requires that clinicians are appropriately trained and competent in the specific trauma-related treatment as well as in working with the unique population and presenting concern. In addition, children and adolescents with ACE exposure could potentially still be at risk of trauma. Therefore, clinicians must know how to

identify red flags for parental abuse or other forms of abuse in the community, as well as be competent in navigating situations when confidentiality must be ethically broken, which may be complex.

Concerning integrity in relationships, the third ethical principle (CPA, 2017) is that clinicians must be open, honest, objective, without bias, and avoid any conflict of interest. In clinical work with children and adolescents exposed to trauma, it is crucial to maintain objectivity and lack of bias. Professionals must be aware of possible biases they may hold regarding children and families that face adversity or have gone through adversity in the past, such as parent blaming. Additional education and consultation should be done to attain adequate competence in ACEs and children/adolescent issues to maintain objectivity and reduce biases, thereby minimizing harm.

Finally, the fourth ethical principle is the responsibility to society (CPA, 2017). This principle entails the clinician's responsibility to maintain their client's and society's well-being. Aspects of this principle include considering the impact of the client's well-being on society and vice versa, promoting equity, and finding opportunities to advocate for the client’s needs. For clinical practice with childhood trauma, this could mean gaining more understanding, contributing to the knowledge in this field, and looking for opportunities to support clients by providing community resources or advocacy.

This chapter discussed children and adolescents' unique experiences of ACEs to answer the research question of how to foster resilience as an intervention during formative years. It examined possible treatment interventions focussed on building resilience through strengthening protective factors. There was a discussion of ACEs and their negative impact on mental, physical, and overall well-being from a developmental perspective. Next is a discussion of

resilience, expounding on some factors contributing to building resilience in children and adolescents who have experienced ACEs. These factors were categorized into individual-level, interpersonal-level, institutional-level, and community/policy-level protective factors. Next, a review of recent literature on resilience-focused interventions and modalities, including CBT/TF-CBT, mindfulness interventions, EMDR, parent-child psychotherapy, and school-based psychotherapy. This chapter explored the gaps and limitations of the literature, and lastly, it noted the ethical considerations relevant to the literature examined and to clinical practice. The next chapter will discuss applying the current research findings in clinical practice.

Chapter Four: Application to Clinical Practice

While researchers continue to investigate preventative approaches to adversity, an increasing number of children and adolescents continue to be exposed to adverse experiences (Hillis et al., 2016). Therefore, interventions that minimize the negative impact and foster positive adaptation after exposure to ACEs are essential. Current ACE studies show that assessment and treatment approaches are strength-based and resilience-focused (Walsh & Canavan, 2014). In taking this approach, assessments are designed to check for promotive and protective factors currently present in an individual's life that can be drawn from to inform the treatment process and strengthen outcomes. Being aware of the resources and supports available to children, adolescents, and their families (promotive and protective factors) not only minimizes the stigma and judgment they and their parents may feel when accessing support but can also determine the direction of care provided. This chapter presents how the research findings apply to clinical practice and clinicians working with children and youth who have experienced ACEs. More specifically, it focuses on identifying resilient-promoting psychotherapeutic modalities and interventions on an individual, community, cultural, and policy level, that are evidence-based and effective in counselling this population.

Prevention and Intervention Programs

Hays-Grudo et al. (2022) explored the development of effective interventions to mitigate the effects of ACEs. Like the socioecological concept of resilience factors discussed above, it is useful to identify the cognitive, affective, and social developmental impact of ACEs, resulting in poor self-regulation, mental and physical health problems, and intergenerational transmission (Hays-Grudo Morris, 2020). It is also important to highlight the significance of positive social relationships and contextual resilience-promoting resources at varying developmental stages to

alleviate the effects of ACEs, putting forward fitting neurobiological and behavioural areas that intervention and prevention should address to promote resilience. In their consideration of what informs adequate resilience interventions, Hays-Grudo et al. (2022) emphasize an approach that specifies and identifies opportunities to address multiple problem factors that may contribute to ACEs (interrelated targets of change) and potential outcomes. This could be done by implementing programs to minimize exposure to adversity at a young age and increasing protective factors. An example of this is programs that offer parenting and social support to at-risk parents/single parents, such as home visiting programs, which are helpful in terms of decreasing parent's perceived stress and social isolation while increasing parental self-regulation and parenting efficacy, reducing the likelihood of the infant's exposure to harsh or neglecting parenting (e.g., Legacy for Children™) (Hays-Grudo et al., 2022).

Likewise, interventions centred on neurobiological adaptations comprise mindfulness-based practices that improve self-regulation, attention, introspection, and emotional processing (Hatchard et al., 2017). Hatchard et al. (2017) also mention that it is crucial that interventions that aim to improve cognitive, social, and emotional development push for access to high-quality early childhood care and education and skill-acquiring avenues during adolescence. Determining effective interventions will be possible with quality research specifying the protective factors targeted with each intervention and the evidence and rationale that back them up. To answer the research question of how to foster resilience as an intervention during formative years, this chapter will discuss different interventions that could help promote resilience in children and adolescents.

Application: Individual Level Interventions

Psychological interventions that promote resilience focus on skills development (Southwick et al., 2016). Fostering of individual-level resilience protective factors can occur through different behavioural, cognitive, and somatic therapy strategies; however, many of the methods discussed in the previous chapter can work together in synergy, further strengthening adaptation, coping, and resilience after facing trauma/ACEs. According to the literature reviewed in the paper, CBT (Fagermoen et al., 2024; Fortuna et al., 2018; Giordano et al., 2022; Jørgensen et al., 2019; Lempertz et al., 2022), TF-CBT (Canale et al., 2022; Jørgensen et al., 2019), mindfulness-based interventions (Cutright et al., 2019; Fortuna et al., 2018), and EMDR (Olivier et al., 2021), though not an exhaustive list, are identified as treatment modalities that foster resilience and help support children and adolescents with a history of adversity/trauma. While these modalities are the framework for implementing different techniques and skills, it is essential to emphasize the specific skills and areas the interventions address. According to the studies reviewed in this project pertaining to fostering resilience in children and adolescents, some of the significant areas that psychotherapeutic interventions address include emotional/self-regulation skills, coping skills, problem-solving skills, social-emotional skills, support for parents, increasing parental self-regulation, increasing parenting efficacy, involving parents in the treatment process, access to high-quality early childhood care, and skill-acquiring avenues during adolescence. For this reason, these are the areas/skills that clinical practitioners should focus on despite the treatment modality being used. Moreover, treatment could integrate multiple modalities, if it is more effective and offers the best care to individuals and their needs. Treatment could also involve parents or primary caregivers to help foster resilience in their children,

Application: Family Level Interventions

This paper addresses some factors that shape and determine resilience. According to recent resilience literature, secure attachment to a primary caregiver significantly increases resiliency and decreases the prevalence of childhood and life-long psychopathology and maladaptive coping strategies. Particular positive parenting practices (i.e. reading stories, telling stories or singing together, eating a meal together, child playing with a peer, going on a family outing, and limiting screen time to less than 2 hours per day) improve the parent-child relationship consequently establishing the foundation that resilience can be built upon (Yamaoka & Bard, 2019). Therefore, clinicians must provide attachment-related interventions within the treatment and include parents/caregivers in the treatment process, involving working on skills such as parents/caregivers' co-regulation and psychoeducation while providing safe, secure, and supportive environments. Integrating attachment-based interventions will help children develop the emotion regulation skills required to manage overwhelming feelings, as trauma is associated with emotions, body sensations, and memories that are too overwhelming for young children to cope with alone. Parents should be taught parenting skills such as emotion identification, regulation, and problem solving to enable them to support their children in various contexts (Brown et al., 2020; Fagermoen et al., 2024; Jørgensen et al., 2019). A significant component of treatment is that caregivers learn how their behaviour and interactions with their child may restrict or reinforce certain behaviours (Canale et al., 2022; Giordano et al., 2022). Likewise, research indicates that parents may have mental health concerns of their own from past trauma and life stressors (Giordano et al., 2022; Kiser et al., 2020; Mitchell et al., 2019). For this reason, it could be impactful for clinicians in their work with children and adolescents to consider the influence of parents/caregivers’ well-being.

In clinical practice, the development of a safe and secure therapeutic relationship is an essential component of the treatment process with children and adolescents with a history of trauma (Jørgensen et al., 2019; Ormhaug et al., 2014). Therefore, support from an honest clinician is necessary to foster a therapeutic alliance that yields treatment success. Likewise, clinicians can adjust and adapt the structure of interventions to meet the needs of children and caregivers who have experienced ACEs (Williams, 2023). The content of therapeutic modalities and interventions must also be adapted according to the child's or adolescent's developmental age and psychosocial capacities (Frankel et al., 2012; Garber et al., 2017; Lempertz et al., 2022). For example, teaching younger children cognitive and meta-cognitive skills may be challenging and should avoid advanced introspection. Clinicians must also have a strong knowledge of children's and adolescent's developmental stages, especially at a cognitive, social, and emotional level.

Additionally, as indicated by Eirich et al. (2020), children who have experienced various forms of adversities and have limited promotive and protective factors appear more likely to terminate treatment before completion; identifying the absence of these factors could help inform areas that specific interventions need to address the areas that require additional support thereby encouraging treatment completion (Eirich et al., 2020). An example of what this may look like within counselling would be fostering connections with safe, loving, and supportive family and community members for a child or adolescent who has relational support deficits. Similarly, when school-related protective factors are lacking, a clinician may focus on building a connection with a child or adolescent's teacher or school. It is also vital to integrate cultural responsiveness in all aspects of treatment, which is critical to identifying and responding to individual needs related to ACEs. Measuring promotive and protective factors throughout treatment duration could help determine which interventions to address ACEs, track treatment

outcomes, and identify avenues to support children beyond their immediate influence/ environment.

Application: Community and Policy Level Interventions

Policies to promote positive resilience factors are important as they impact the community thereby the child. While several high-quality services may be available, it is also essential to consider their accessibility. Establishing both availability and access to services requires promoting messaging about ACEs and effective ways to address their concerns while being mindful of the uniqueness of children and adolescents and the systems involved. Although the different systems, families, providers (mental health, medical, human service, education professionals), and policymakers contribute to mitigating the effects of ACEs, they take on different perspectives. A collaborative approach would involve partnerships across various disciplines and settings (Rog et al., 2021).

Consistent with the College of Alberta Psychologists (CAP) and the American Psychological Association (APA), clinical practitioners are expected to collaborate with other practitioners, disciplines, and various systems involved in responding to ACEs to provide the best care for the people they care for, including primary care, child welfare, juvenile justice, education, and health care systems (APA, 2017; CAP, 2022). Clinical practitioners are uniquely positioned to advocate for change by informing policy and practice that mitigate the effects of adversity and promote resilience according to evidence-based data, established knowledge, and recommendations from recognized experts (Hays-Grudo, 2020). Consequently, clinicians can develop well-grounded prevention approaches on a higher systemic and policy level. Applying ACE research findings to the community and policy level may reduce mental health-related stigmatization, contributing to a significant improvement in care.

An example of a government-initiated effort to decrease the effects of adversity in Iceland was by developing programs that increase access to protective factors in adolescence (Milkman & Jonsson, 2019). In response to the high levels of alcohol and substance abuse in Europe, a program called "Youth in Iceland" was created to increase access to opportunities for various after-school recreational activities, sports, hobbies, positive relationships, parenting support for caregivers, and modifications in policy such as curfews for minors and bans on alcohol advertising. Doing this resulted in a reduction in tobacco, alcohol and marijuana use, while adolescents spent more time engaged in sports and with their families. Initiatives along these lines demonstrate the effectiveness of merging policy and programming to establish increased accessibility to protective factors for children, adolescents, and families. In addition, healthcare systems, organizations, and legislature should integrate a trauma-informed approach to care. Clinical practices must incorporate the principles of trauma-informed care, evidence-based care, and best practices. Through screening for ACEs and intervention, clinicians can help individuals and families increase the necessary resilience and protective factors, treat mental health concerns, provide information on additional resources, and offer psychoeducation.

Theoretical Models

This section will briefly explore specific evidence-based psychotherapeutic modalities and interventions that impede the underlying mechanism of ACEs and can improve the well-being of children and adolescents exposed to ACEs by fostering resilience. With all these interventions and modalities, it is necessary to take on a trauma-informed approach while working with children and adolescents exposed to ACEs. Trauma-informed care creates a safe space where children and adolescents can feel supported and avoid re-traumatization while building protective factors (Ortiz, 2019). The trauma-informed approach consists of six

components: (i) establishing safety; (ii) self-regulation; (iii) self-reflective information processing; (iv) integration of traumatic experience into the life narrative; (v) re-engagement with relationships; and (vi) enhancement of positive affect (Cook et al., 2005). First, there will be an exploration of mindfulness as an intervention that is a beneficial component of a therapeutic intervention which aims to promote resilience in children and adolescents exposed to ACEs.

Evidence-based interventions have been developed to target symptoms associated with ACEs. These interventions typically comprise mindfulness-based approaches and emotion regulation skill development. Mindfulness-based mind-body (MBMB) approaches can willingly activate the parasympathetic nervous system to reduce stress response in the body. Mindfulness interventions focus on increasing awareness of one's experience and mental state in the moment while minimizing distractions from previous and possible stressful experiences. Some mindfulness-based approaches include meditation, meditative prayer, diaphragmatic breathing (deep breathing with longer exhalations), mindful awareness, guided imagery, and biofeedback (Bethell et al., 2016). Evidence shows a positive association between consistent engagement in mindfulness practices and improved resilience and self-regulation of stress, emotions, and behaviour in adolescents. Engaging in these practices requires being present in the moment, being aware of the breathing, body sensations, emotions, and thoughts in a non-judgmental manner, maintaining a relaxed position, avoiding distractions, and being in a quiet environment (Bethell et al., 2016; Franke, 2014).

Research findings propose that taking part in regular, high-quality, structured mindfulness practices may alleviate the adverse effects of stress and trauma linked to ACEs, thereby minimizing present and future outcomes with outcomes such as improved social skills, attention, coping, and conflict avoidance in children giving rise to a decline in anxiety and

depression, better classroom behaviour, and reduction in likelihood for child abuse by parents (Ortiz & Sibinga, 2017). For children in particular, self-regulation skills are best learned through co-regulation with warm, supportive adults (caregivers, teachers, extended family) who provide safety and structure for learning and exploration. Caregivers who can self-regulate are in the position to actively guide children in self-regulation skills such as calming down, taking turns, waiting, and problem-solving. They provide this support to children through modelling, developmentally appropriate instruction, supportive scaffolding, opportunities for practice, and reinforcement in the moment (Miller et al., 2018). A few early interventions that foster children and parent self-regulation include Circle of Security, Triple P, Incredible Years, Parents as Teachers, and specific home visit programs such as Nurse-Family Partnership and SafeCare (Hays-Grudo et al., 2022).

Trauma-focused cognitive–behavioural therapy (TF-CBT) is an example of such modality/intervention, which incorporates relaxation and affect modulation skills and parenting skills to manage physiological, emotional, and behavioural dysregulation (Cohen et al., 2012). Another trauma-focused modality, Integrated treatment of complex trauma (ITCT), comprises distress reduction through the teaching of emotional regulation and mindfulness approaches. TF-CBT and ITCT pay attention to the review of trauma memories wherein emotional regulation is practiced when negative memories trigger unpleasant thoughts and feelings (Cloitre et al., 2012).

In addition, other evidence-based approaches that address the adverse effects of ACEs by addressing stress response and self-regulation skills, such as Trauma Affect Regulation: Guide for Education and Therapy (TARGET) (Ford & Hawke, 2012), attachment, regulation, & competency (ARC) (Blaustein & Kinniburgh, 2019), and Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS) (DeRosa & Pelcovitz, 2006). Following a

significant finding from this paper, all these interventions allow for the involvement of parents/caregivers. Their involvement is an essential component of treatment that fosters the parent-child relationship, improves the caregiver's co-regulation skills, encourages continuous skill development, and promotes a stable home.

Evidence-based somatic approaches that are instrumental in improving self-regulation include sensory integration occupational therapy (SI-OT) (May-Benson & Koomar, 2010) and sensory-motor arousal regulation treatment (SMART) (Warner et al., 2011), which uses therapeutic equipment like fitness balls and weighted blankets, and shared play to regulate physiological and emotional arousal, enable attachment, and trauma processing (Warner et al., 2014). Other somatic approaches used with children and adolescents include movement or rhythm-based activities such as dance, music, drumming, sports, and repetitive exercises (e.g., yoga, trampoline).

Lastly, evidence-based therapeutic interventions for infants and young children use play therapy (i.e., serve and return, imaginative play) to promote behavioural and emotion regulation skills through supported coregulation. Some such modalities include parent-child interaction therapy (PCIT) (Eyberg et al., 2001), attachment and biobehavioral catchup (ABC) (Dozier et al., 2005), and child-parent psychotherapy (CPP) (Lieberman et al., 2015), which incorporates a trauma narrative element. Encouraging parent/caregiver regulation capacity and skill development to strengthen the parent-child relationship and foster coregulation is the foundation for these interventions.

Chapter Five: Recommendations and Conclusion

This literature review project aimed to answer the research question of how to foster resilience as an intervention during formative years. It is well established that exposure to trauma/adversity at a young age predisposes people to mental health concerns as adults. Literature shows that resilience is a critical factor that mitigates the adverse effects of ACEs through different levels of protective factors. Therefore, it is essential to develop and implement therapeutic interventions that promote the development of resilience protective factors in children and adolescents that will address the negative impact of ACEs before adulthood to prevent or minimize the occurrence of mental health concerns. Preventing and mitigating ACEs would result in better health outcomes, quality of life, and best practices across domains such as parenting, healthcare, educational institutions, policymakers, and community.

This capstone project discussed the framework of (ACEs) and their impact on mental, physical, and overall well-being through the perspective of child and adolescent development. Considering how therapeutic interventions can support children and adolescents after exposure to ACEs, resilience as a means of minimizing the adverse effects of ACEs and protective factors that contribute to resilience were discussed. The resilience protective factors can be categorized into ecological levels, including individual/intrapersonal, interpersonal, institutional, community and policy protective factors.

Evidence-based therapeutic interventions and modalities were identified for each resilience protective factor level. Some treatment modalities and interventions discussed in this paper include CBT/TF-CBT, mindfulness interventions, EMDR, parent-child psychotherapy, and school-based psychotherapy. Based on the reviewed research articles, limitations and gaps in the literature were discussed. Also, the study identified ethical considerations relevant to the

literature and clinical practice. Chapter four then considered how the findings from the reviewed literature can be applied to clinical practice. The specific and essential areas to focus on in treatment that cuts across treatment modalities were outlined; these include emotional/self-regulation skills, coping skills, problem-solving skills, social-emotional skills, support for parents, increasing parental self-regulation and parenting efficacy, involving parents in the treatment process, access to high-quality early childhood care, and skill-acquiring avenues during adolescence. Treatment programs and modalities that best cater to the needs of children and adolescents were explored. Research shows that a trauma-informed approach was needed to guide all interventions.

Despite the significant physical and mental health impact, not everyone exposed to ACEs requires mental health treatment as they do not meet the clinical criteria for Post-Traumatic Stress Disorder (PTSD) nor show other physical or mental health symptoms (Elm, 2020). It has also been noted that the degree of exposure to adversity, measured by the 10-item ACEs questionnaire, does not correspond to post-traumatic stress symptoms (Finkelhor, 2018). Clinicians must recognize that irrespective of the presenting problem, most individuals who seek clinical support have possibly experienced trauma and likely several forms of trauma (Graham-Bermann et al., 2011). For this reason, interventions must not be simply focused on a single form of trauma but are designed in such a way that they can address multiple forms of adversity that an individual may have experienced (Olds et al., 1997; Eckenrode et al., 2000). Specific therapeutic approaches have considered and incorporated the possible occurrence of multiple traumas in their conceptualization of the trauma narrative, such as trauma-focused cognitive behavioural therapy and narrative exposure therapy (Cohen et al., 2012; Robjant & Fazel, 2010).

In addition, strengths-based approaches and interventions involving all categories of resilience protective factors and individual, family, and sociocultural factors should be integrated into treatment (Howell & Miller-Graff, 2014). Many people have overcome trauma to lead healthy and prosperous lives. In recognition of this, treatment modalities and interventions must emphasize the role of resilience and pathways to thriving in the face of adversity. Studies propose that an individual's history of strengths has equivalent or greater impacts on current functioning than the extent of their trauma exposure, including cases of high victimization (Howell & Miller-Graff, 2014; Hamby et al., 2020). A resilience-focused approach through strengths-based interventions would involve using interventions that strengthen a sense of purpose and prosocial functioning, which can lessen stress responses (Padesky & Mooney, 2012).

Interventions that address some or all aspects of the protective factor would effectively build resilience to overcome ACEs. Such interventions will teach children and adolescents self-regulation skills and parents/caregivers' co-regulation while providing safe, secure, and supportive environments. These interventions would emphasize fostering resilience-building parent-child relationships that could contribute to building resilience to mitigate ACEs (Keane & Evans, 2022). Some resilience-based therapeutic modalities and interventions include psychoeducation, child-parent psychotherapy, play therapy, behavioural psychotherapy, cognitive psychotherapy, trauma-focused cognitive behavioural therapy, mindfulness, and somatic psychotherapy. Evidence supports the use of psychotherapy modalities that prioritize resilience to improve well-being, minimize symptoms of psychopathologies, and promote one's ability to recover from adversity (Laird et al., 2019). This is particularly evident with children

and adolescents, where these developmental stages are considered the most favourable phases for implementing strategies that promote resilience (Masten & Barnes, 2018).

Further Research Possibilities

Some areas for further research include identifying common therapeutic elements in various treatment modalities/interventions, exploring the order, frequency, and variables of intervention components, examining the efficacy of treatment interventions for multiple groups of children and adolescents, the relationships between ACEs, protective factors, and health outcomes on a population level, exploration of the efficacy of longer-term interventions, the use of behavioural tasks with reliability and ecological validity to assess for intervention efficacy, the use of consistent in terminology, and long-term and repeated follow-ups across various assessment levels. Most of the resilience research thus far has concentrated on adult resilience to trauma and adversity, even when exposure to adverse events takes place in childhood. Limited research is available on factors that support resilience in childhood and adolescence (5–17 years).

Recently, resilience researchers have recognized the necessity of identifying modifiable protective factors that can support children and adolescents thriving despite exposure to ACEs (Hornor, 2017; NSCDC, 2015; Ortiz, 2019). While there is support for most protective factors by older resilience research (Masten, 2018; Wright et al., 2013), more research that examines the efficacy of these protective factors with individuals exposed to ACEs should be conducted (Traub & Boynton-Jarrett, 2017). Therefore, it is essential for there to be a continuity in the functionality of protective factors; it is likewise vital to identify resilience-focused interventions that address the adverse effects of ACEs (Bethell et al., 2019; NSCDC, 2015; Sege & Harper Browne, 2017).

There are a notable number of studies that were valuable in identifying treatment modalities that support children and adolescents to heal from trauma and identify components of these modalities that cut across interventions (Canale et al., 2022; Cutright et al., 2019; Fagermoen et al., 2024; Fortuna et al., 2018; Giordano et al., 2022; Hutchison et al., 2020; Jørgensen et al., 2019; Lempertz et al., 2022; Olivier et al., 2021; Sanders et al., 2020). It would be helpful for future research to examine the common therapeutic elements in various treatment modalities/interventions, identifying their efficacy with multiple types of trauma/adversity, including complex trauma. This will allow clinicians to know what interventions best suit individual clients based on their unique needs and development levels. Furthermore, future research should explore the order, frequency, and variables of intervention components that have produced treatment success. This would allow clinicians to offer interventions thoroughly that result in the best outcome in minimizing the effects of ACEs instead of simply utilizing highly structured interventions that may not yield the preferred treatment result. This will enable clinicians to correspond interventions to the distinct needs and preferences of the client while accounting for the clinician's preferences and professional competencies. In addition, further research can examine the efficacy of treatment interventions for various groups of children and adolescents.

Future research should investigate the relationships between ACEs, protective factors, and health outcomes on a population level to address prevention and intervention endeavours at a wider scale within the nation (Crouch et al., 2018; Metzler et al. 2017). This would also beneficial as protective factor research on the population level could be the foundation for policies, public health programs, and innovations by emphasizing the drive to outline the part played by social and environmental systems in approaches that advance healthy outcomes**.**

Likewise, future research must utilize a rigorous methodology to make substantial progress in the study area. This could be done using quantitative evidence to determine the efficacy of longer-term interventions. This allows clients and clinicians to develop therapeutic rapport and trust and address the continuous and varied needs of children and adolescents affected by ACEs.

Additionally, using behavioural tasks with reliability and ecological validity will allow us to assess intervention effects on behaviour free from clinician observation and participant self-report. Though challenging, better consistency in terminology for similar concepts could make research comparison and synthesis easier. Future research could also examine whether children with specific characteristics or types of ACEs can benefit more from a kind of intervention than others.

Finally, long-term and repeated follow-ups across various assessment levels should be explored with treatment approaches to provide clear evidence for preventing ACEs-related concerns later in life. This would optimize currently available modalities and interventions and develop new interventions to mitigate the long-term consequences of ACEs.

Concluding Thoughts

Clinical practitioners are privileged to connect with each client in their state of vulnerability. The literature on ACEs and their impact on children, adolescents, and families is evidence to support and show the value of the work that researchers and professionals in this field strive to do to achieve a tremendous positive impact on children’s and adolescents' developmental processes. Without protective factors in place, children and adolescents exposed to ACEs are likely to experience the negative effect of ACEs on their physical and mental health, which is often associated with externalized behaviours, internalized behaviours, and suicide in children. While these presenting concerns may appear in childhood and adolescence, they could

continue into adulthood. Due to the magnitude of the impact and prevalence of ACES, an ecological approach to treatment that incorporates all levels of society and system (individual, family, institutional, community, and policy levels) is critical. While more research is needed, this review indicates some evidence-based treatment modalities and interventions that may promote resilience protective factors to mitigate the adverse effects of ACEs and effectively support children and adolescents who have been exposed to trauma at a young age.

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