Exploring the Connection: Adverse Childhood Experiences and Substance Use Disorders in Young Adults

by

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Abstract

There is a significant connection between adverse childhood experiences (ACEs) and the development of substance use disorder (SUDs) in young adulthood. Exploring this association is relevant because it aids in the understanding of correlating factors, informs the development of effective interventions, and supports the creation of constructive prevention strategies. The principal objective of this capstone is to offer a comprehensive understanding of the connection between ACEs and SUDs, while empowering young adults to confront challenges, develop resilience, foster hope, and lessen the lasting impacts of ACEs. Furthermore, this capstone presents current research findings and examines the diverse risk and protective factors that may be present in this population. This paper concludes with an infographic primer intended for registered clinical counsellors (RCCs) who may have an interest in working with addiction populations but lack foundational knowledge and uncertainties about how to proceed. The primer includes definitions, recent statistics, valuable local resources, and recommendations for therapeutic interventions.

Keywords: substance use disorders, adverse childhood experiences, resilience, adversity, cognitive behavioural therapy

Acknowledgments

I would like to dedicate my capstone to my grandparents, Marian and Sam, whose presence has been a constant throughout my life. Their support during my master's degree has been invaluable, and this achievement is as much theirs as it is mine. I would not be who I am or where I am today without them, and I am incredibly fortunate.

I'd also like to express my gratitude to my parents, Andy and Meryl, for instilling the values that continue to guide me today. Their dedication and passion in their respective careers have always been a significant source of inspiration, shaping my own approach to work and life. Beyond that, their support has been foundational to everything I've achieved, and I am deeply grateful.

Table of Contents

Chapter One: Introduction

Topic Overview

The topic of this paper centres on the connection between exposure to adverse childhood experiences (ACEs), and consequent substance use disorders (SUDs) in young adults. The topics and themes to be examined include the correlation between ACEs and SUDs, and the interplay of influential dynamics. This review aims to explore how Registered Clinical Counsellors (RCCs) can effectively approach, navigate, and support their work with populations affected by the experiences of ACEs and SUDs.

Purpose Statement

The purpose of this paper is to gain an understanding of the link between ACEs and prospective SUDs in young adults. I aim to explore the association between substance use and addiction, unresolved ACEs, and covariable risk factors that contribute to increased vulnerability. Developing a comprehensive understanding of the complex interplay of factors contributing to problematic substance use is paramount in addressing the public health crisis of SUDs. The goal is to provide an understanding that informs applicable intervention and prevention strategies, while helping young adults to address challenges, foster resilience, instill hope, and mitigate the lasting effects of ACEs.

Significance, Context, and Contribution to the Field

This research is meaningful for countless reasons. One of the more prominent reasons for its significance is that it helps address and better understand the existing public health issue of substance addiction, both on a global scale and a local scale. Understanding the connection between ACEs and the risk of developing SUDs in young adulthood has the potential to lead to more effective mitigation and remediation strategies.

Statistically, Crick et al. (2023) detailed that between 50% and 60% of American children have experienced at least one ACE, and approximately 38% have encountered multiple ACEs. As noted by Woods-Jaeger et al. (2018), exposure to ACEs can pose a threat to children by potentially disrupting their brain development, consequently increasing the likelihood of encountering health issues in later life, including an elevated risk of mortality. The impact on brain development will be discussed later in the paper. The experience of multiple forms of childhood trauma can lead to issues related to substance abuse and mental illness, often occurring together – this can be understood as co-occurring disorders (COD) (Crick et al., 2023). According to Crick et al. (2023), recurrent exposure to ACEs frequently heightens the occurrence of problematic alcohol and substance use and diminishes overall health during the early stages of adulthood. While there have been investigations exploring the connection between early childhood trauma and substance misuse, the existing research in this area could be more extensively explored. Developing a deeper insight into the relationship between these two variables, especially in early adulthood, could help individuals comprehend the reasons behind their behaviours and life course. By addressing this association, the aim is to promote individual resiliency, provide access to available resources, and explore effective therapeutic treatments for all. This can ultimately contribute to a more favorable therapeutic outcome and better support for those at risk of developing SUDs in their early adult years.

Regarding my contribution to the field, I intend to take the valuable knowledge I have accumulated over the years from my work in addictions medicine and apply it. It has taken me years to gather and process the intricate innerworkings of addictions medicine, and those who operate and exist within it. That said, I aim to create a basic blueprint in the form of an

infographic primer for RCC's. My hope is to be able to help inform RCCs with a lack of knowledge in the field of addictions to familiarize and educate themselves clearly and concisely. I intend to include essential definitions, available resources, effective therapeutic interventions, and useful material for RCC's to easily pull from when working with individuals who may struggle with substance use and addiction. My objective is for this primer to be informative, easily digestible, and engaging – designed for RCC's both in the early stages of their career, and those in the later stages as well. The statistics within the primer will mainly apply to the local addiction's population that exist within Vancouver, BC to keep information localized for all intended purposes.

Conceptual Framework of the Study

In this paper, the key concepts I will discuss are as follows. I will first examine the relationship between the impact of ACEs on the emergence of SUDs in young adulthood. Research indicates a strong intersectionality between ACEs and SUDs, as studies denote that early traumatic experiences in childhood, such as abuse, neglect, adversity, or household instability, may elevate the likelihood of developing coping strategies like problematic substance use in adulthood. Next, I will be discussing the correlation between SUDs and CODs. Ample research suggests that a strong relationship exists between ACEs and CODs. ACEs can concurrently contribute to the emergence of both mental health challenges and SUDs, often manifesting together in individuals who have experienced early childhood trauma. Additionally, I will explore the cycle of generational trauma dysfunction of ACEs, its connection to SUDs in young adults, and the longstanding impacts it can have on individuals, families, and society as a whole. Next, I will explore the covariable risk factors that exist among those with exposure ACEs, and subsequent development of SUDs in young adulthood.

I will investigate the age of onset concerning ACEs, their connection to the initiation of substance use occurring at a younger age, and the harmful effects that can result. As well, I will discuss the connection between ACEs and resilience, examining the role that resiliency plays in shaping how individuals navigate, adapt, and overcome trauma and adversity. Subsequently, I will touch on promising preventative treatment approaches to support those who have undergone ACEs, with a strong emphasis on resilience development. Finally, I will discuss what has been unexamined through current research on ACEs, SUDs, and related subject matter, while suggesting areas for further enquiry.

Definition of Key Terms

Adverse Childhood Experiences (ACEs)

Adverse Childhood Experiences (ACEs), refer to occurrences of mistreatment that encompass "abuse, neglect, and household turmoil endured from birth to 17 years of age" (McDonald, 2020, p. 383). Some examples of risk factors of ACEs include but are not limited to: “physical abuse, emotional abuse, sexual abuse, emotional neglect, physical neglect, violent treatment towards mother figure, household substance abuse, household mental illness, parental separation or divorce, and having an incarcerated household member”, as well as “economic hardship and parent/caregiver divorce or separation” (Crick et al., 2023, p. 2-3).

Adverse Childhood Experiences-Questionnaire (ACE-Q)

The Adverse Childhood Experiences-Questionnaire (ACE-Q) is a scaled questionnaire that assesses the correlation between childhood abuse and adverse early life environments with health and wellbeing in later life (Zarse et al., 2019). The 10-item questionnaire assesses the subject’s exposure to psychological, physical, and sexual abuse before the age of 19, along with

household issues such as domestic violence, substance abuse, and incarceration (Zarse et al., 2019).

Adversity

Jackson, Firtko, & Edenborough (2007) define adversity as “any form of hardship or suffering connected to challenges, misfortune, or trauma” (as cited in Fletcher & Sarkar, 2013, p. 14).

Co-occurring Disorders (CODs)

Co-occurring Disorders (CODs**)** refer to situations where individuals concurrently experience the presence of multiple disorders, such as substance abuse and psychiatric conditions (i.e., mood disorders, suicidal ideation, anxiety, etc.) (Crick et al., 2023).

Opioid Agonist Therapies (OAT)

Opioid Agonist Therapy (OAT) is a widely recognized treatment for managing Opioid Use Disorder (OUD) (BCCSU, 2023). According to the BCCSU (2023), evidence suggests that OAT is effective in significantly reducing the risk of overdose deaths among individuals with OUD who engage in fentanyl use.

Opioid Use Disorder (OUD)

Opioid Use Disorder (OUD) is characterized by the habitual use of opioids, resulting in clinically significant functional impairment (Dydyk et al., 2024). Dydyk et al. (2024) describe the symptomology of OUD which involves intense cravings and dependence on opioids, ultimately leading to increased tolerance, and eventual withdrawal.

Resilience

Resilience can be best understood as “the role of mental processes and behavior in promoting personal assets and protecting an individual from the potential negative effect of

stressors" (Fletcher & Sarkar, 2013, p. 16). Additionally, Fletcher and Sarkar (2013) note that most researchers suggest that resiliency becomes evident when both adversity and positive adaptations co-occur. Critical to this assessment is the distinction between resilience and coping – resilience shapes how an event is viewed and perceived, whereas coping refers to the strategies used after evaluating the stressful event (Fletcher & Sarkar, 2013).

Self-Medication Hypothesis (SMH)

The Self-Medication Hypothesis (SMH) hypothesizes that individuals who problematically misuse substances often seek self-medication as a means to alleviate various psychiatric conditions and emotional imbalances stemming from prior traumas, particularly those experienced during their formative early years (Meadows et al., 2023).

Socioeconomic Status (SES)

Socioeconomic status (SES) refers to an individual's or group's social class position, often influenced by determinants such as occupation, gender, income, education, ethnicity, and race (Amaro et al., 2021). These social factors result in different populations facing varying levels of risk and protective factors that impact their health and wellbeing (Amaro et al., 2021).

Substance Use Disorders (SUDs)

Substance Use Disorders (SUDs), as outlined by Meadows et al. (2023), is the recurrent utilization of a substance or substances, resulting in problematic behaviours, even in the face of substance-related issues or consequences.

Personal Positioning

As an individual with both personal experiences and a professional background in addiction medicine, my perspective on the link between ACEs and SUDs in young adults has been shaped by a multifaceted journey. My connection with SUDs begins through familial

experiences. Specifically, my estranged brother has faced the challenges of substance use and addiction. It is important to note that our divide is rooted in a longstanding complex and problematic sibling dynamic, separate from his struggles with addiction. Separately, I am someone who has their own experience with ACEs, which further fosters my passion for this work. My own experiences have given me a unique perspective and deepened my understanding of the challenges individuals can face in accessing support. That said, I do not personally struggle with substance misuse, and this distinction helps separate my experience from my brother's challenges, providing clarity in my approach. Nevertheless, my professional experiences, and personal connection have instilled a deep sense of compassion for those who struggle with substance use and addictions. This paper is not an attempt to explain my sibling, his behaviours, or his situation. As well, it is imperative to note that ACEs are not connected to his challenges. This creates a clear distinction and degree of separation for me.

Additionally, as aforementioned, I have 4.5 years of work experience in addiction medicine, which has driven my interest in this topic. This work has provided me with a profound understanding of SUDs as complex diseases that can exert significant control over individuals' choices, behaviours, and lives. My inherent interest in the topic of problematic substance use is rooted in the profound suffering I have witnessed both personally within my family, and professionally among individuals who have sought addiction medicine services. The unfolding tragedy of the opioid overdose epidemic – which was particularly magnified during the global pandemic – further motivates my enthusiasm for this work.

While I acknowledge the potential for personal bias due to my intimate ties, my professional work has allowed me to cultivate a more nuanced and empathetic perspective on substance use and addiction. It is essential for me to approach this topic with both an open mind

and an awareness of my personal experiences, as they can offer valuable insights, while also necessitating caution in interpreting research findings. While I strive for objectivity in my study of this topic, I intend to remain acutely aware of my subjective experiences. These experiences serve as both a source of motivation and a potential source of bias in the exploration of the connection between ACEs and SUDs in young adults.

Capstone Outline

I will be approaching this synthesis of literature from a multifaceted framework, considering both neurobiological foundations and psychosocial influences to provide a comprehensive understanding of the connection between exposure to ACEs and the onset of SUDs in young adulthood.

Chapter Two: Literature Review

Chapter Summary

Within my researched areas of literature, a fundamental concept emerged: the apparent connection between ACEs and the emergence of SUDs during early adulthood. The research literature under examination revolves around two pivotal variables: first, the exposure to ACEs, acting as the independent variable, and second, the subsequent emergence of SUDs, identified as the dependent variable. Consequently, this chapter posits that the manifestation of SUDs in young adults is linked to exposure to ACEs. This theory aligns with broader findings in the field, which highlight the lasting impact of early trauma on long-term behavioural health outcomes. By investigating this connection, this review aims to shed light on potential clinical counselling intervention strategies that could more effectively reduce the risk of SUDs among those with a history of ACEs. Understanding these intervention points could enhance therapeutic approaches and preventative strategies, ultimately supporting more effective treatment and support for individuals affected by early adverse experiences.

ACEs and SUDs

ACEs have become increasingly recognized as a critical factor influencing various developmental outcomes, including SUDs in young adulthood. Kwako et al. (2019) note that exposure to ACEs is one of greatest determinants for developing SUDs, likely influenced by both genetics, as well as environment. In fact, the findings by Hughes et al. (2019) suggest that individuals with four or more ACEs have a significantly higher likelihood – four times greater – of developing issues with alcohol or drug use (as cited in Broekhof et al., 2023). Further, Kwako et al. (2019) indicated the long-standing outcomes of childhood trauma as a

contributing factor to persistent negative affect and mental health challenges, which leads some individuals to seek substance use as a means to relieve their distress.

Separately, as detailed by Sebalo et al. (2023), ACEs can have a significant effect on several areas of the brain that are in charge of determining how stress is cognitively managed. Firstly, the prefrontal cortex and amygdala play an important role in emotional regulation. In fact, exposure to select ACEs during a vulnerable stage like childhood is linked to difficulties with emotional regulation and reduced inhibitory control, which may contribute to the development of SUDs as a coping mechanism (Meadows et al., 2023). Understanding these effects is key, as it demonstrates how early life adversity can fundamentally shape long-term behavioural patterns. Recognizing the potential effects of trauma and adversity on a developing brain is highly valuable as it illustrates the fundamental roles, they play in controlling behavioural management, self-regulation, and impulse control (Sebalo et al., 2023). Our inherent abilities to control and regulate ourselves, our behaviours, and our impulses are directly connected to the brains rewards systems. Consequentially, exposure to prolonged distress can keep the bodies stress response in overdrive, further interfering with the brain's reward systems, and increasing the risk of developing SUDs (Amaro et al., 2021). Additionally, Amaro et al. (2021) reported that research on the role of the Hypothalamic-Pituitary-Adrenal functioning in managing cortisol levels – which determines how the body handles stress – are connected to ACEs and can enhance the risk of developing SUDs. Therefore, existing research suggests that impact of ACE exposure on the brains executive functioning abilities is considerable, and results in greater substance use and dependence starting in adolescence and into adulthood (Sebalo et al., 2023). Findings by Merrick et al. (2020), echoed similar results and revealed that ACEs can trigger neurobiological effects,

including an overactive stress response due to changes in hormone and neurotransmitter systems. These alterations may lead to psychological and physical health issues, such as depression, anxiety, post-traumatic stress, and somatic disorders, which individuals might address through substance use as a coping strategy (Merrick et al., 2020).

A qualitative study by Silverstein et al. (2023) examined the connection between ACEs and the narratives concerning substance use, particularly emphasizing OUD and the recovery journey. Study data was gathered via interviews that encompassed a wide range of biographical questions, exploring an individual's historical involvement with opioid use and the health consequences arising from drug use, such as overdoses or drug-related infections (Silverstein et al., 2023). Furthermore, their investigation examined ACEs-related data, revealing three primary themes: accounts of challenging childhoods, the utilization of opioids to deal with past trauma, and the critique of SUD treatment for overlooking the impact of adverse experiences (Silverstein et al., 2023). The researchers posit that individuals with OUD who incorporate childhood trauma into their accounts of substance use and recovery differs and relies heavily on contextual factors and individual viewpoints (Silverstein et al., 2023). The study's findings indicate that the assessment of specific ACE scores or the mere count of ACEs should not be regarded as an adequate measure of the influence of these events or how they are integrated into one's narrative (Silverstein et al., 2023). Silverstein et al. (2023) argue that the way ACEs are experienced by adults with OUD is largely shaped by the trajectories of their lives, which are influenced by sociocultural, historical, and interpersonal factors.

Meadows et al. (2023) discuss the Self-Medication Hypothesis (SMH) concept, which is often attributable to substance misuse as a coping mechanism for past traumas. The SMH outlines how substance users attempt to self-medicate to manage mental health issues and

emotional dysregulation triggered by past traumas, especially from a young age (Meadows et al. (2023). Meadows et al. (2023) further detail that ACEs in particular are associated with a greater risk of developing SUDs across the lifetime. Likewise, Meadows et al. (2023) note how ACEs are connected to earlier substance use initiation, raising concerns due to the increased risk of developing problematic use patterns. Namely, Meadows et al. (2023) note how early illicit drug use is associated with a higher likelihood of later dependence and an accelerated progression to SUDs. In fact, individuals with a score of five or more ACEs are 7-10 times more likely to use illicit drugs or have SUDs, in comparison to those with no ACE exposure (Meadows et al., 2023). These findings underscore the critical importance of addressing the interplay between ACEs and the trajectory of substance use, underscoring the complex dynamics that contribute to the development of SUDs throughout an individual's life.

Relative to findings from previous studies, a comprehensive research analysis conducted by Leza et al. (2021), revealed some significant differences during their in-depth investigation into the relationship between ACEs and SUDs. Their study concluded that a more thorough exploration is warranted to fully elucidate the underlying mechanisms linking ACEs to SUDs (Leza et al., 2021). These findings mirror the sentiments expressed by Silverstein et al. (2023), who also stressed the need for a deeper understanding of the factors surrounding early traumatic experiences. For future research, Silverstein et al. (2023) may consider integrating the four ACE categories identified in a quantitative study conducted by Kim et al. (2021). Kim et al.'s (2021) research categorized ACEs into four distinct classes: High Adversity, Low Adversity, Child Abuse, and Parental Substance Use. By incorporating these more rigorous ACE measurements, as Kim et al. (2021) demonstrated, future qualitative interviews with participants could potentially gain greater depth, understanding, and insight.

Comparatively, a longitudinal study administered by Moss et al. (2020), investigated how ACEs, including those related to homelessness and foster care, can impact the development of SUDs in young adults. As detailed by Moss et al. (2020), the purpose of the research was to assess the impact of biopsychosocial components on the development of SUDs. The study was able to conclude that there was a considerable link between the experience of ACEs with the development of acute Alcohol Use Disorder (AUD), Tobacco Use Disorder (TUD), and Cannabis Use Disorder (CUD) in young adults (Moss et al., 2020). In alignment, a study conducted by Kwako et al. (2019) concluded that some forms of ACEs are more strongly associated with a greater risk of developing problematic substance use issues than others. The study concluded that certain ACEs, specifically emotional and sexual abuse, as well as emotional neglect have a strong association with traits that may make someone more susceptible to substance misuse later in life (Kwako et al., 2019). Kwako et al. (2019) further explained that these traits include potential impairments with executive functioning, a heightened reward drive, and increased negative emotionality – all of which may increase the likelihood of developing SUDs.

The above findings by the researchers are of great value. Nevertheless, there are some significant limitations within the studies that are of qualitative nature. Qualitative research articles commonly grapple with a limitation tied to the absence of a universally accepted language and set of criteria for evaluating such research, as noted by Coleman et al. (2021). Coleman et al. (2021) elaborate that this challenge becomes particularly apparent when attempting to establish a standard of excellence in the context of interviews. Another critical aspect is the concept of replicability. As underscored by Coleman et al. (2021) and referenced by Bisman (2010), a fundamental aspect of assessing research quality revolves around the

potential for replicating the study's findings. It remains uncertain whether the research conducted by Silverstein et al. (2023), for example, could be effectively replicated. Further research has shown that the risk of SUDs associated with ACEs varies depending on the type of substance. This topic will be explored and discussed more in the subsequent sections.

ACEs and Alcohol

Research conducted by Zarse et al. (2019), demonstrated that exposure to ACEs significantly increased the likelihood of alcohol misuse, especially when involving the following parameters. Firstly, the more ACEs an individual has experienced, the higher the risk of addiction. Additionally, Zarse et al.'s (2019), research indicated that the higher the ACE score, the higher the likelihood of excessive intoxication. In fact, an ACE score over four is linked to a 3.72-fold increase in heavy drinking and an earlier onset of alcohol use (Zarse et al., 2019). The final research indicator revealed that the strongest risk factor involved individuals with high ACE scores and a history of parental alcohol misuse (Zarse et al., 2019). A separate study conducted by (Broekhof et al., 2023), indicated that female adults were 5.9 times more susceptible to developing an alcohol use disorder. The researchers further suggests that emotional neglect, sexual abuse, and physical abuse are significant ACE predictors that contribute to this connection (Broekhof et al., 2023).

ACEs and Nicotine

Regarding ACEs and nicotine use, several research findings have determined a relationship between the ACE score and nicotine consumption (Zarse et al., 2019). Similarly, to ACEs and alcohol use, Zarse et al. (2019), summarized research indicating that exposure to ACEs is connected to higher rates of smoking, including earlier onset and increased usage. This effect is stronger with individuals that grew up subsequent to the introduction of

smoking warnings, which suggests that ACEs increase nicotine addiction risk despite anti-smoking efforts (Zarse et al., 2019). Further, Zarse et al. (2019) hypothesized that each ACE increased smoking risk by 20-30%, and people with high ACE scores struggle more with quitting and face more smoking-related health problems in life (Zarse et al., 2019).

ACEs and Illicit Substances

In connection with alcohol and ACEs, as well as nicotine and ACEs, there is a considerable link between illicit substance use and ACEs. Zarse et al. (2019), report findings by Ramiro et al. (2010), who indicated that the risk of developing an illicit drug addiction increases extensively as the quantity of ACE categories increases. Separately, a study by Broekhof et al. (2013) found that male adults were 5.0 times more likely to develop an illicit drug use disorder, which includes stimulants like cocaine, opioids, and polydrug use. The strongest individual ACE predictors for this association were physical abuse, parental divorce, and exposure to violence (Broekhof et al., 2013).

ACEs and OUDs. Opioids are a type of illicit substance with a history of chronic dependence. In fact, research findings suggest that OUD impacts more than 16 million individuals globally (Dydyk et al., 2024). Likewise, Meadows et al. (2023) note that SUDs affect individuals physical and mental health, contributing to an estimated annual economic burden of $500 billion in the United States, specifically due to OUDs. These distressing statistics underscore the importance of understanding OUDs, which is discussed in a subsequent study by Merrick et al. (2020). In the multi-state study by Merrick et al. (2020), the findings showed that higher ACE scores were linked to increased rates of prescription opioid misuse, including taking opioids in larger quantities than prescribed, using them without a prescription, or using them for their psychoactive effects. Merrick et al. (2023)

further summarize and highlight literature that indicates ACEs are connected to an earlier onset of opioid use, a higher incidence of injection drug use, and an increased risk of lifetime overdose, marking three critical points in the progression of opioid use.

ACEs and CODs

Existing research suggests a significant link between ACEs, mental health, and co-occurring disorders (CODs). A comprehensive research analysis of ACEs, conducted by Panagou and MacBeth (2022), revealed that, since the 1990s, research has consistently shown that exposure to ACEs heightens the risk of developing mental health issues such as depression, anxiety, and PTSD, as well as behavioural problems, substance misuse, and suicidal thoughts in children and youths. These findings underscore the well documented link between the impact of ACEs on mental health challenges. Building on these findings, Sebalo et al. (2023), further emphasize the strong association between exposure to ACEs and mental health issues including depression, anxiety, and suicidal ideation. Consequently, substance use can become problematic when used to self-medicate as an indirect result of these early experiences (Sebalo et al., 2023).

Research was conducted on a mixed-gender sample of correctional system inmates to determine whether or not there was a connection between ACEs and CODs, with a particular focus on substance use and mental health (Crick et al., 2023). The inmate study by Crick et al. (2023) employed a survey-based sampling approach. To explore the relationship between ACEs and CODs among inmates, explicitly focusing on differences between male and female inmates, they administered an Inmate History and Needs interview to a group of 166 incarcerated individuals (comprising 59 females and 107 males) selected from three rural jails located in a southern state (Crick et al., 2023). The survey conducted by Crick et al. (2023)

was a standardized questionnaire involving yes or no answers to questions related to ACEs, CODs, and substance use. The findings of the investigation indicated inmate reports of elevated occurrences of ACEs, mental health challenges, and substance use (Crick et al., 2023). Furthermore, Crick et al. (2023) reported their observation of a substantial connection between ACE exposure and the presence of CODs. Additionally, there was a notable prevalence of mental health problems and substance use reported by all inmates, with a markedly larger proportion of females who had experienced at least one mental health issue compared to their male counterparts (Crick et al., 2023). Crick et al. (2023) note that this observation supports the notion that males and females may encounter and manage traumatic experiences differently.

Cycle of Dysfunction

Within this section of the paper, I will explore the concept of intergenerational cycles of ACEs, delving into how these experiences perpetuate across generations, ultimately leaving a lasting and profound impact on individuals, families, and wider society. The adverse outcomes stemming from ACEs can potentially be averted through environments that foster resilience and encompass stable and protective caregiving relationships. Research indicates that establishing secure, supportive, and nurturing environments can effectively lower the likelihood of adverse health consequences associated with ACEs (Woods-Jaeger et al., 2018). However, this can be particularly challenging if the parents have also had previous exposure to ACEs. In fact, as outlined by Woods-Jaeger et al. (2018), parents who have exposure to more than one ACE may face an elevated risk of encountering mental health challenges, substance use issues, disrupted social connections, and restricted educational achievements. The cumulative impact of these difficulties, exacerbated by the strains of economic hardship,

can hinder families from creating a safe and supportive environment for their children (Woods-Jaeger et al., 2018).

Consequently, this may perpetuate a cycle of ACEs and suffering across generations (Woods-Jaeger et al., 2018). Therefore, by prioritizing responsive caregiving during the early stages of a child's life, we can potentially boost resilience and provide essential support for the development of children exposed to ACEs. This association was explored in a study conducted by Woods-Jaeger et al. (2018). The goal of the study was to gain insight into several aspects, including (1) the experiences of parents regarding ACEs, (2) how they perceive ACEs affecting their parenting, (3) identifying protective factors that can mitigate the potential negative outcomes of ACEs, and (4) recognizing available supports and services capable of reducing the extent and severity of ACEs, while promoting resilience among children with early adversity (Woods-Jaeger et al., 2018). The study by Woods-Jaeger et al. (2018) explored key themes, significance, and implications of the cycle of dysfunction. In this research, a qualitative approach was employed, involving 11 in-depth interviews with inner-city parents who had experienced ACEs and their children who had similar experiences (Woods-Jaeger et al., 2018). These interviews conducted by Woods-Jaeger et al. (2018) underwent thorough analysis to identify emergent themes related to intergenerational cycle of ACEs. Their findings emphasized the importance of factors like parental nurturance in disrupting this cycle (Woods-Jaeger et al., 2018).

From an ethical standpoint, the above study by Woods-Jaeger et al. (2018), collected ecologically valid data by engaging in one-on-one, in-depth interviews with parents from low socioeconomic backgrounds, who predominantly belonged to racial and ethnic minority groups. Moreover, to attain a well-rounded perspective, Woods-Jaeger et al. (2018) analyzed

themes and findings, including active engagement of the community stakeholders. This approach, which embraces community-based participatory research, not only enhances the ethical standards of the research but also fortifies the integrity and credibility of the study results.

Covariable Risk Factors

It is important to emphasize that there is no direct causation between ACEs and SUDs. There is however a significant correlation between the two which greatly increases in the presence of specific risk factors. One of the greatest risk factors includes the role of multiple ACEs. As detailed by Sebalo et al. (2023), multiple research studies indicated that substance abuse increased significantly with each additional ACE. There are a host of other variables that can shape the impact of ACEs on substance use in young adulthood. Some of these variables include but are not limited to the type of ACE experienced, challenges with self-regulation (particularly impulsivity), level SES, and the coping mechanisms employed to manage the adversity (Sebalo et al., 2023).

SES is a social determinant that can predispose individuals to increased vulnerability to SUDs in young adults. Amaro et al. (2021) note that it is imperative to understand the impact of the determinants of social class – i.e., education, gender, race, etc. – to grasp their influence on substance use vulnerability. Amaro et al. (2022) further detail that these factors can shape intermediary factors like living conditions, and behavioural, biological, and psychosocial factors – that affect health outcomes and equity for individuals and communities. This, in turn, can lead to significant health inequities, including increased vulnerability to substance use (Amaro et al., 2021). Amaro et al. (2021) apply social stress theory in their research, which posits that individuals with low SES, including those living below the poverty line, confront more

stressors and are more susceptible to developing maladaptive stress responses. This increased vulnerability can result in ongoing stress, and inadequate psychosocial coping resources (Amaro et al., 2021). As a result, social stress theory suggests this vulnerability can enhance the risk of developing mental illnesses, which include SUDs (Amaro et al., 2021).

For contextual purposes, Sebalo et al. (2023), examined individual ACEs which revealed they had varying effects on substance use and that not all ACEs had the same impact. They found physical abuse was generally linked to increased substance use in young adults, whereas emotional abuse demonstrated a more consistent link to substance use within the youth population (Sebalo et al., 2023). Sebalo et al. (2023) propose that the stronger association between emotional abuse and substance use in young people specifically may be due to the societal tendency for individuals experiencing psychological distress to turn to substances like alcohol for reprieve. As aforementioned, difficulties with emotional and self-regulation, such as impulsivity, can further exacerbate this connection, which is developmentally relevant for youth. Those who struggle with impulsivity may be more likely to seek substances as a method to soothe emotional distress, further perpetuating the cycle of problematic substance use (Sebalo et al., 2023). Comparatively, the correlation between sexual abuse and substance use indicated that childhood sexual abuse was generally linked to greater substance use in young adults (Sebalo et al., 2023). That said, the literature review by Sebalo et al. (2023) noted that the results varied across studies and tended to lack overall consistency. Similarly, indirect abuse such as neglect or exposure to domestic violence, echoed that of sexual abuse and correspondingly had inconsistent and varied results.

In a separate study conducted by Broekhof et al. (2023), researchers explored the link between ACEs and SUDs. The research by Broekhof et al. (2023) employed logistic

regression analysis as part of a large longitudinal study examining a non-clinical population from 2006 to 2020. Their findings indicated that adults with any history of ACEs are 4.3 times more likely to develop a SUD (Broekhof et al., 2023). Broekhof et al. (2023) reported that for women specifically, the risk was even higher and were 5.9 times more likely to develop an alcohol use disorder. The strongest individual ACE predictors for this association were emotional neglect, sexual abuse, and physical abuse (Broekhof et al., 2023). In comparison, Broekhof et al. (2023) highlight that for men, the likelihood of developing an illicit drug use disorder was 5.0 times greater. In this case, the most significant ACE predictors included physical abuse, parental divorce, and witnessing violence (Broekhof et al., 2023). This critical findings by Broekhof et al. (2023) demonstrated the profound impact of ACEs on the onset of SUDs in young adulthood, emphasizing the importance of recognizing both the meaning of individual ACEs and the cumulative effects of these experiences in the development of SUDs.

Age of Initiation

As detailed by Meadows et al. (2023), ACEs are associated with initiating substance use at an earlier stage in life. Their findings indicate that psychosocial experiences occurring within the first two decades of life can predispose certain individuals to developing chronic health conditions. These enduring health issues may include cancer, ischemic heart disease, and SUDs (Meadows et al., 2023). Notably, Meadows et al. (2023) note that early adversity is a psychosocial experience that can be recognized as a risk factor for the above conditions. Meadows et al. (2023), posit that individuals with a history of 5 or more ACEs exhibit a 7-10-fold higher likelihood of reporting illicit drug use, SUDs, and intravenous drug use compared to those without any exposure to ACEs. These findings are backed by research reported on by

Zarse et al. (2019), which indicate an increased ACE-Q score is connected to an earlier age of onset of illicit substance use.

Additionally, Meadows et al. (2023) noted the significant finding that ACEs are associated with an earlier onset of substance use, which is of particular concern as early initiation of substance use is correlated with an elevated risk of developing problematic patterns of substance use. The research by Meadows et al. (2023) incorporated a distinctive element by recruiting participants actively engaged in substance use during the screening process. This aspect of the study holds the potential to yield more precise outcomes as participants may be more inclined to provide honest responses regarding their substance use, given the absence of potential legal consequences (Meadows et al., 2023). As of 2023, while these findings carry substantial weight, a principal constraint of this study lies in its limited potential for generalization, primarily due to the absence of study replication thus far. The study's generalizability may be constrained because it exclusively features participants from a solitary institution within a particular geographic area (Meadows et al., 2023). All the above findings underscore the enduring impact of early childhood trauma on individuals, while highlighting the need for early intervention and support to mitigate the risk of developing SUDs.

Similarly, Swedo et al. (2020) conducted a study that explored similar properties to those examined by Meadows et al. (2023). Both studies investigated the relationship between ACEs and substance misuse among adolescents. The findings of Swedo et al. (2020) revealed the association between the number of ACEs and recent opioid misuse among youths, closely mirroring the results reported by Meadows et al. in their 2023 study. A systematic quantitative literature review by Sebalo et al. (2023), aimed to investigate similar correlations that exist

focusing on how ACEs experienced prior to age 18 influence problematic substance use prior to age 25. A notable approach taken by these contributors in their research, was to focus on the mediating and moderating factors in the relationship between ACES and SUDs in young adults, aiming to gain a better understanding of the association (Sebalo et al., 2023). The research by Sebalo et al. (2023) was extensive, involving review of 80 research studies. Their findings were consistent and indicated a significant association between ACEs exposure prior to 18 years, and the subsequent use of alcohol, cannabis, and other controlled substances between the years of 18 and 25 (Sebalo et al., 2023).

ACEs and Resiliency

While there is a strong link between ACEs and adverse outcomes, research suggests that resiliency plays a pivotal role in mitigating these outcomes. Resilience can be understood as a dynamic process that necessitates adversity as a fundamental condition for its development (Malhi et al., 2019). Malhi et al. (2019) clarify that, within this context, resilience is conceptualized as the capacity to positively adapt and effectively manage challenges. Building on this framework, Chandler et al. (2015) further elaborate that resilience involves the interaction between an individual and their environment while facing adversity. This process often starts with an internal sense of control and agency, which enhances effective stress management. Together, these perspectives demonstrate how resilience depends on both external factors, as well as internal mechanisms that reinforce positive adaption (Chandler et al., 2015). Additional variables that can impact resiliency include genetics, individual traits, social supports, protective factors, and environmental factors (Chandler et al., 2015). Chandler et al. (2015) highlight that individuals who effectively leveraged their resilience in response to ACEs could mitigate the widely reported negative

impacts of ACEs identified within academic research by using the variables as tools for growth and development. In fact, Malhi et al. (2019) reported that even when "adverse experiences are severe and protracted" that "recent evidence suggests that up to two-thirds (65.7%) of individuals undergoing adversity remain relatively unscathed—exhibiting what is generally referred to as 'resilience'" (p. 1).

Therapeutic Interventions

The impact of ACEs can be grievous. As detailed by Chandler et al. (2015), the experience of ACEs can have a substantial effect an individual's physical, psychological, and social wellbeing. Research suggests that the more ACEs an individual experiences, the more likely they are to adopt maladaptive coping strategies, such as substance use (Chandler et al. (2015). Chandler et al. (2015) suggest that although maladaptive behaviors may provide temporary relief, they can ultimately result in outcomes like poor health, chronic illness, ongoing cycles of abuse, and increased strain on the healthcare system. From a framework perspective, Chandler et al. (2015), suggest the following:

> Resilience intervention should include the following five components: (a) emotional regulation training to recognize and manage reactivity and impulsivity; (b) cognitive behavioral approaches to reframe thought processes and increase positive emotion; (c) physical health information on exercise, nutrition, sleep, and relaxation to increase protective behavior; (d) social support to build connections to family, peers, and mentors to increase protective factors; and (e) a neurobiological component, such as mindfulness-based stress reduction (MBSR), to increase the ability to manage stress (p. 407).

Additionally, research findings suggest that resilience training can reduce depression, enhance resilience capacity, and improve coping strategies in those with a history of ACEs (Chandler et al., 2015). Considering these findings, the therapeutic modalities employed by RCCs can be pivotal in helping individuals with a history of ACEs to effectively navigate these experiences, build resilience, and address potential adverse outcomes.

Resilience-Based Interventions

Resilience develops from multiple factors. Understanding this underscores the need for effective therapeutic approaches, especially when supporting vulnerable populations navigating complex issues. For RCCs working with individuals who have experienced past abuse, and more specifically ACEs, a multi-faceted approach is essential. According to Panagou and MacBeth (2022), assessing emotion regulation deficits and fostering the development of emotion regulation skills are fundamental components of the treatment process. Additionally, research on resilience in adolescents and adults suggests that positive adaptation following adversity emerges from a dynamic interplay of various factors, including cognitive processes, coping strategies, individual traits, timing of the traumatic event, social context, and relational support from caregivers (Panagou & MacBeth, 2022). Given these insights, there are various psychotherapeutic approaches that form the foundation for resilience interventions, including "cognitive-behavioral therapy, acceptance and commitment therapy, mindfulness-based therapy, attention and interpretation therapy, problem-solving therapy, and stress inoculation" (Helmreich et al., 2017, p. 2). In the following sections, I will examine the foundations of some of these therapeutic modalities, and their practical applications for supporting ACE survivors who are working to build resilience.

Cognitive Behavioural Therapy (CBT)

Childhood and adolescent traumas, namely ACEs, have a significant association with enduring psychosocial challenges (Briere & Scott, 2006). Briere and Scott (2006) posit that this connection is largely due to the developmental period in which the traumas occur – during a critical human development stage. Additionally, these experiences often involve relational maltreatment, and can extend over prolonged periods with multiples instances of victimization (Briere & Scott, 2006). From a CBT perspective, these experiences:

> result not only in the disturbed mood, cognitive distortions, posttraumatic stress, and related symptoms sometimes found in survivors of adult traumas, but also in outcomes more specific to childhood victimization and disrupted parent-child attachment, including problems with affect regulation, identity disturbance, and difficulties in forming positive and lasting relationships with others (Briere & Scott, 2006, p. 30).

To effectively address these complex traumatic experiences, various cognitive strategies can be employed by therapists to support individuals who have experienced ACEs. In the following sections, I will explore a handful of empirically supported cognitive interventions rooted in CBT. These techniques can be effectively applied in therapeutic practice to address the intricacies and support resilience development overall.

Cognitive Distortions. The conceptual framework of cognitive therapy was originally proposed by psychiatrist Dr. Aaron Beck (Beck, 1970). This framework is discussed by Yurica and DiTomasso (2005), who detail it is based on the idea that early life experiences shape individuals core beliefs, and how habitual thinking patterns reinforce these beliefs by generalizing, disregarding, and distorting information. This in turn can result in cognitive

distortions which are “identifiable errors in thinking” (Beck, 1970, as cited in Yurica, & DiTomasso, 2005). Yurica and DiTomasso (2005), further clarify that distorted processing takes place when faulty reasoning affects an individual’s thought process, leading to adverse outcomes. Helmreich et al. (2017) expands on this finding by thoroughly examining how mental health issues, such as depression, anxiety, and substance abuse, can frequently stem from faulty thought patterns.

Cognitive distortions resulting from adversity often lead individuals to perceive themselves as inadequate and powerless, view others with ambivalence and distrust, and envision their future as hopeless (Briere & Scott, 2006). Some examples of distorted thought patterns, as outlined by Briere and Scott (2006), include but are not limited to: “I am broken and will never get better/be loved/get what I want”; “I am helpless to avoid additional traumas”; “People/men/women/authority figures are predatory and can’t be trusted”; “The environment is dangerous and I will be hurt again”; and “The future is hopeless” (p. 157-158). From a CBT standpoint, Briere and Scott (2006) emphasize the importance of validating the clients' trauma-related thought processes as natural responses to overwhelming experiences that may have involved distress, anxiety, confusion, coercion, and the drive for survival. They emphasize that rather than viewing these cognitions as fundamentally flawed, they should instead be viewed as situational beliefs that could benefit from modification in a safe and supportive environment (Briere & Scott, 2006).

Resilience Through Cognitive Change. Maladaptive behavioural responses such as problematic substance use, often arise during times of stress and adversity – this can further perpetuate cognitive distortions (Helmreich et al., 2017). Helmreich et al. (2017) further observe that stress reactions are often not driven by the stressor itself, but rather by the

individual's perception of it. Therefore, Helmreich et al. (2017) suggest that challenging distorted thought patterns and shifting to more adaptive thinking can improve emotional and behavioural responses to stress. Given the impact of faulty thought patterns on stress responses, effective interventions are crucial for fostering resilience, and supporting cognitive flexibility.

Stress Inoculation Therapy (SIT). Stress Inoculation Therapy (SIT) is an additional resilience-based intervention rooted in CBT (Helmreich et al., 2017). Helmreich et al. (2017) suggests that SIT is grounded in the idea that subjecting individuals to milder types of stress can help them to practice various coping skills from their collection. As a result, this can strengthen their resilience by boosting their self-efficacy and confidence overall (Helmreich et al., 2017). By targeting maladaptive coping mechanisms, applying resilience interventions, and fostering adaptive cognitive thought processes, therapists can help clients break the cycle, thereby supporting their journey towards greater resilience and well-being overall (Helmreich et al. (2017).

Mindfulness Based Interventions (MBIs). The research on the connection between MBIs and therapeutic success when working with youth and adults exposed to ACEs is considerable. A literature review conducted by Moyes et al. (2022), reported that MBIs are designed to help individuals acknowledge and accept challenging cognitions and feelings, reflect on their responses, and implement adaptive coping strategies. Their research further indicated that MBIs can help individuals who have experienced ACEs learn to safely explore and accept their thoughts and feelings related to their past adversities (Moyes et al., 2022). Additionally, Moyes et al. (2022) suggest that MBIs can help clients focus on the present, enhance their awareness of the positives in their lives, and shift their attention away from

persistent negative thoughts. Lastly, Helmreich et al. (2017) note that these practices can enhance cognitive flexibility by encouraging acceptance of difficult emotions and challenging life situations.

Cognitive Reassessment. Another key cognitive strategy to practice is cognitive reassessment, which is more commonly known as insight. As detailed by Briere and Scott (2006), cognitive reassessment is a fundamental objective of cognitive interventions and involves modifying how clients perceive themselves, their past experiences, and their relationships. For instance, when clients have insight into the fact that they had little control over uncontrollable traumatic events, it challenges and reduces feelings of self-blame (Briere & Scott, 2006). Briere and Scott (2006) propose another useful therapeutic exercise which involves helping clients understand the dichotomy between their past experiences and their present situations. This awareness can lessen the likelihood and intensity of current triggers causing posttraumatic reactions (Briere & Scott, 2006). An example of how to practice this approach as a clinician is by prioritizing the creation of a safe and supportive rapport with the client, as this foundational element is essential. Briere and Scott (2006) emphasize the importance of helping clients understand that their past traumas do not dictate their current reality, and that building healthy relationships can lead to positive outcomes, rather than fostering fear and distrust. In essence, therapeutic techniques that reinforce clients in developing an integrated sense of self – both in the past and present – can significantly support them in their psychological healing and individual growth (Briere & Scott, 2006).

Summary and Synthesis

Exposure to ACEs can have profound effects on individuals, families, and wider society. The effects of ACEs can cause profound suffering that can echo across generations.

This literature review highlights the influence of ACEs on the relatively early age of onset of SUDs, and the resulting challenges. While research does not demonstrate a direct causal link between ACEs and the development of problematic substance use, it does reveal a strong correlation between the number of ACEs, the type of ACEs, and the occurrence of SUDs. The central themes discussed include the connection between ACEs and SUDs in young adulthood, the importance of resiliency development, the influence of covariable risk factors, the impact of the cycle of dysfunction, the relationship between ACEs and CODs, and the recommendations for effective cognitive interventions. The findings highlight that ACEs substantially increase the risk of initiation of substance misuse at a young age, emphasizing the need for continued research in this domain. Critically, the research demonstrates that individuals with ACEs and SUDs are not beyond help. Understanding these complex interconnections is crucial to create, understand, and apply effective therapeutic interventions, and foster resilience in those impacted. These interventions can empower individuals to better understand their trauma while equipping them with the resilience needed to heal, utilizing therapeutic approaches like CBT, Stress Inoculation Therapy, and Mindfulness Based Interventions.

Chapter Three: Discussion

The previous chapter reviewed current literature on how ACEs can influence the development of SUDs in young adults, highlighting factors that contribute to both vulnerabilities and protective influences related to substance use risks. This chapter will present foundational recommendations for counselling practice, discuss limitations in existing research, and identify areas for future study. Additionally, a supplementary infographic primer will be provided for RCCs interested in working with addiction populations. The infographic will offer essential insights and guidance for understanding the unique complexities involved.

Recommendations for Counselling Practice

Monitor Assumptions

For RCCs working with young adults with a history of ACEs who are navigating SUDs, monitoring assumptions is vital. Regarding working with a population of individuals who have experienced ACEs, it's important to recognize the impact that the ACE questionnaire may have on their overall experience. As detailed by Mendel et al. (2022), the ACE questionnaire often fails to capture the gravity of individuals lived adverse experiences, which can be damaging in itself. To be specific, the ACE questionnaire limits responses to listed experiences, overlooking the duration, severity, subjective impact, and contextual nuances surrounding a person's ACEs (Mendel et al., 2022). Therefore, as RCCs its imperative to approach this work with humility, compassion, and understanding, setting aside any preconceived assumptions about ACEs, while remaining open to the unique experiences of each individual.

The structure of the traditional ACE questionnaires concentrates on adversity, often overshadowing the impact it may have on individuals receiving their ACE scores. That said, moving towards a more hopeful approach to future editions of ACE questionnaires could be

advantageous. By incorporating resilience alongside adversity, these additions create more of a strength-based framework. Some practitioners have created resilience-focused additions to the ACE questionnaire, offering a more empowering perspective by underscoring protective factors alongside adversity.

When working with a vulnerable population of individuals facing substance use challenges, it's imperative for counsellors to recognize any existing assumptions they may have about individuals with addictions. Recognizing the intersectional nature of stigma is crucial, as individuals with lived experience of substance use may face multiple layers of stigma and discrimination, including colonialism, racism, sexism, ageism, and classism (Canadian Centre on Substance Use and Addiction, 2021). Creating a culturally safe and inclusive environment is essential to support the diverse cultural identities of individuals facing substance-related challenges. This is important because as noted by Canadian Centre on Substance Use and Addiction (2021), fear of discrimination due to stigma surrounding substance use can act as a significant barrier to engagement in treatment.

Address Ethical Considerations

Ethically, RCCs should uphold the following principles within the scope of their practice: equity, diversity, and inclusion (Canadian Centre on Substance Use and Addiction, 2021). Upholding these principles is of particular importance when engaging with substance users from various backgrounds, such as Indigenous peoples, sex workers, people of color, 2SLGBTQQIA+, and other marginalized communities (Canadian Centre on Substance Use and Addiction, 2021). Because much of the work is done in collaboration, it's essential to ensure that participants' perspectives, concerns, and experiences guide the RCC's efforts (Canadian Centre on Substance Use and Addiction, 2021). Additionally, unearned privilege and power differentials

should be directly addressed to acknowledge any existing disparities between counsellor and client (Canadian Centre on Substance Use and Addiction, 2021).

Because Vancouver is home to a large Indigenous population, its crucial for RCCs working in substance use treatment and mental health to be informed and consider the unique cultural perspectives and experiences of these communities. This is of particular importance for counsellors from non-Indigenous backgrounds working with Indigenous populations struggling with substance abuse. When working with this population it is vital to understand that Indigenous wellness is an essential part of culturally focused treatments, as it emphasizes a harmonious relationship among the mind, body, emotion, and spirit (Rowan et al., 2014). That said, counsellors and healthcare professionals at large are advised to advocate for the availability of culture-based approaches for their Indigenous clients, if said clients express interest in these services (Rowan et al., 2014). Rowan et al. (2014) suggest that this can be achieved by collaborating with culture-based practitioners and partnering with Indigenous communities. The significance of this effort is underscored by research findings indicating that incorporation of culture-based interventions in treating SUDs among Indigenous individuals can greatly improve client functioning and addiction outcomes overall (Rowan et al., 2014).

Resource Assistance

In addition to societal stigmas, it's crucial for RCCs to acknowledge that individuals with lived and living experience of substance use often encounter barriers to meaningful engagement in partnerships (Canadian Centre on Substance Use and Addiction, 2021). Therefore, providing accessible and appropriate resources for a variety of substance related needs is an effective approach when working with this demographic. For a comprehensive list of accessible and local low barrier resources, please refer to the Appendix, found below.

Limitations and Recommendations for Future Research

While existing research on SUDs has provided valuable insights, further studies are essential to advance the field of knowledge that currently exists. In the following section, I will evaluate the limitations of current research on SUDs, highlighting areas that could benefit from further attention and development.

Throughout this paper, the connection between ACEs and SUDs has been thoroughly examined. LeTendre et al. (2023) report how many existing research studies are often conducted retrospectively, which can limit their ability to account for cofounding factors that could explain the effects connected to ACEs – i.e., a history of substance misuse. They further posit that much of the existing research fails to address the role of resilience in the context of ACEs and SUDs, despite its potential to offer valuable insight into the mechanisms that promote positive outcomes following adversity (LeTendre et al., 2023). There also appears to be variability in the impact of ACEs on the development of SUDs. According to Sebalo et al. (2023), the inconsistencies found in current research on individual ACEs underscore the need to assess and compare various types of ACEs for a clearer understanding of their impacts. For instance, limited research examines aspects of family dysfunction such as problematic substance use that exists within a family, and its relationship with substance use in early adulthood (Sebalo et al., 2023). Sebalo et al. (2023) note that much of the existing literature has comparatively focused on the impact of other types of maltreatment, such as sexual abuse. It's essential to include all types of ACEs in future research models to fully understand their impact on substance use (Sebalo et al., 2023). This imbalance highlights the importance of evaluating various ACE types to gain a more comprehensive understanding of their distinct and combined effects.

Conversely, there is the issue of generalizability. As detailed by Broekhof et al. (2023), population studies often differ in how they conceptualize ACEs, with some using cumulative scores and others focusing on a limited range of specific ACEs when linking them to SUDs. These variations make it difficult to generalize findings, limiting the ability to understand the effects of distinct ACE categories, such as abuse, neglect, or household dysfunction, or the impact of different ACE combinations (Broekhof et al., 2023). Panagou and MacBeth (2022) build on this narrative by emphasizing the conceptual challenge that exists in literature on ACEs: the inconsistency in their definitions and measurements of ACEs. Specifically, they note how the term 'adversity' is often used interchangeably with words like trauma, maltreatment, or stress (Panagou & MacBeth, 2022). Panagou and MacBeth (2022), further argue that the ambiguity in properly defining adversity, and more specifically ACEs, creates a critical gap in the literature and highlights the need for more consistent operationalization of the term. Achieving greater clarity in the definitions and measurements of ACEs could enhance generalizability and ultimately strengthen research findings across the field.

Another significant area for future research is the ways in which SUDs are methodically studied. As noted by Kwako et al. (2019), additional research into the underlying factors contributing to problematic substance use, along with better methods for assessing and measuring them could greatly enhance the understanding of the disorder. This could help medical professionals and therapists alike to better recognize the varying severities, similarities, differences, and progression of SUDs, with the objective of developing more effective and successful treatments (Kwako et al., 2019). In accordance with this, McCabe et al. (2022) emphasize the lack of clarity surrounding the long-term consequences of

SUD symptoms as individuals move from adolescence into adulthood. Understanding the severity of SUDs symptoms in adolescents as it relates to future behaviours, such as prescription misuse, and the emergence of SUD symptoms later in life (McCabe et al., 2022).

While the existing research on SUDs has offered significant insights and informative findings, continued research remains essential to deepen understandings, advance treatment interventions, and ultimately achieve improved outcomes within this field.

Contribution to the Field

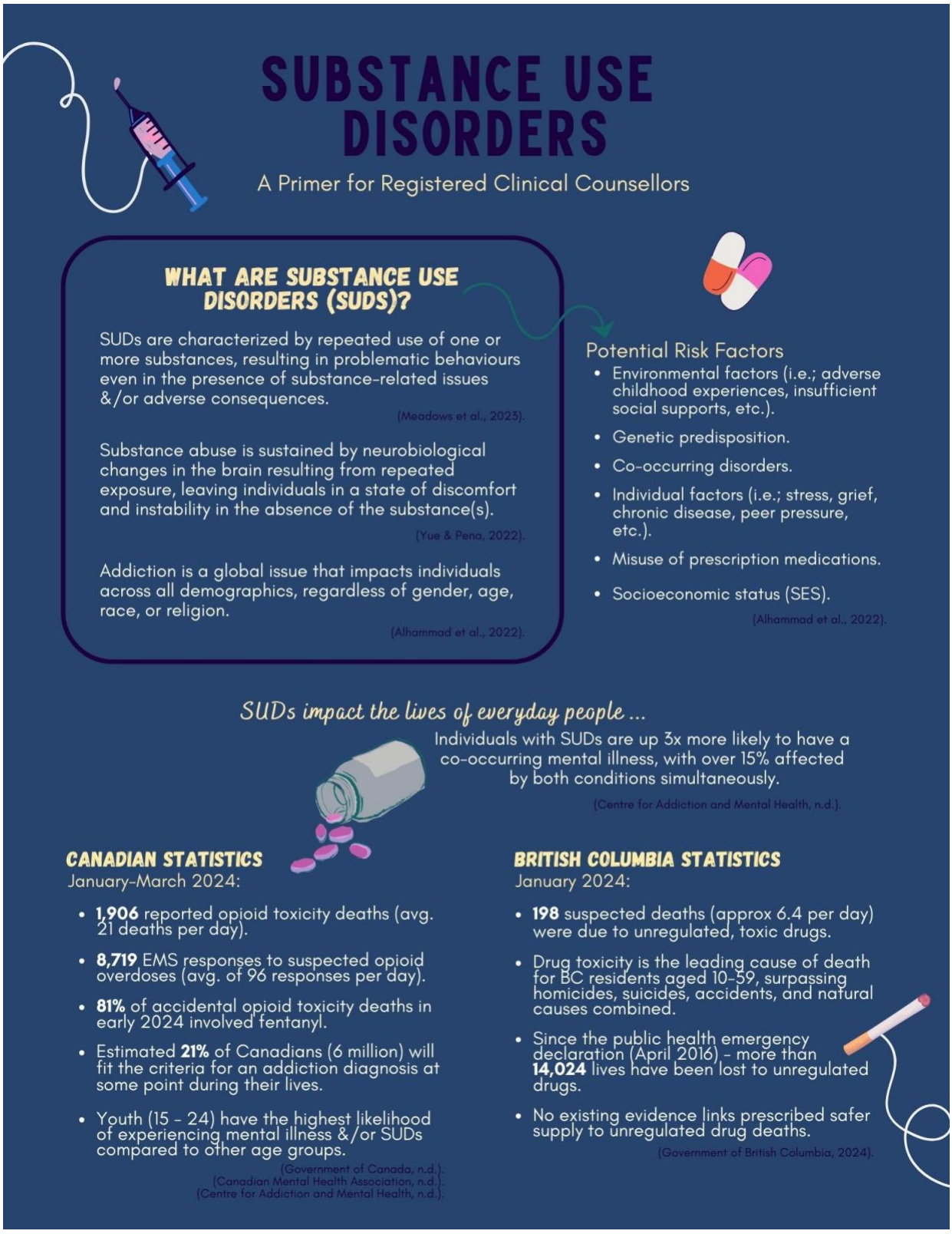
I have developed an infographic primer designed for RCCs who are considering working with addiction populations but may have limited foundational knowledge and uncertainty about how to move forward. This primer offers clear definitions, recent statistics, important local resources, and helpful recommendations for therapeutic interventions. My aim is for RCCs to employ this resource as needed in their practice. The infographic primer can be found in the Appendix below.

Conclusion

The objective of this capstone was to explore how ACEs shape the onset of SUDs in young adulthood, highlighting the complexities in providing effective support for clients affected by both. Approaching this work with compassion, neutrality, and cultural sensitivity is essential for RCCs who wish to make a meaningful impact. Collaboration with other professionals and commitment to ongoing learning are crucial for achieving positive outcomes and fostering resilience in clients. Despite the inherent challenges and complexities of this work, the insights gained through this capstone underscore the fundamental role that RCCs hold in fostering healing and resilience among populations that are affected. As a final consideration, while RCCs

play a fundamental role in fostering healing and resilience, the true impact lies in their humility and their ability to acknowledge the strengths of the populations they are privileged to serve.

Appendix


SUBSTANCE USE DISORDERS
A Primer for Registered Clinical Counsellors
WHAT ARE SUBSTANCE USE DISORDERS (SUDS)?
SUDs are characterized by repeated use of one or more substances, resulting in problematic behaviours even in the presence of substance-related issues &/or adverse consequences.
(Meadows et al., 2023).
Substance abuse is sustained by neurobiological changes in the brain resulting from repeated exposure, leaving individuals in a state of discomfort and instability in the absence of the substance(s).
(Yue & Pena, 2022).
Addiction is a global issue that impacts individuals across all demographics, regardless of gender, age, race, or religion.
(Alhammad et al., 2022).
Potential Risk Factors
Environmental factors (i.e.; adverse childhood experiences, insufficient social supports, etc.).
Genetic predisposition.
Co-occurring disorders.
Individual factors (i.e.; stress, grief, chronic disease, peer pressure, etc.).
Misuse of prescription medications.
Socioeconomic status (SES).
(Alhammad et al., 2022).
SUDs impact the lives of everyday people ...
Individuals with SUDs are up 3x more likely to have a co-occurring mental illness, with over 15% affected by both conditions simultaneously.
(Centre for Addiction and Mental Health, n.d.).
CANADIAN STATISTICS
January-March 2024:
1,906 reported opioid toxicity deaths (avg. 21 deaths per day).
8,719 EMS responses to suspected opioid overdoses (avg. of 96 responses per day).
81% of accidental opioid toxicity deaths in early 2024 involved fentanyl.
Estimated 21% of Canadians (6 million) will fit the criteria for an addiction diagnosis at some point during their lives.
Youth (15 - 24) have the highest likelihood of experiencing mental illness &/or SUDs compared to other age groups.
(Government of Canada, n.d.).
(Canadian Mental Health Association, n.d.).
(Centre for Addiction and Mental Health, n.d.).
BRITISH COLUMBIA STATISTICS
January 2024:
198 suspected deaths (approx 6.4 per day) were due to unregulated, toxic drugs.
Drug toxicity is the leading cause of death for BC residents aged 10-59, surpassing homicides, suicides, accidents, and natural causes combined.
Since the public health emergency declaration (April 2016) - more than 14,024 lives have been lost to unregulated drugs.
No existing evidence links prescribed safer supply to unregulated drug deaths.
(Government of British Columbia, 2024).

LOW BARRIER HARM REDUCTION RESOURCES

VANCOUVER, BC:

Rapid Access Addiction Clinics (RAAC)

Facilities that provide harm reduction services, resources, and opioid agonist therapies (OAT). RAACs also support patient transitions to longer-term community programs.

(Help Starts Here, n.d.).

Insite: Supervised Injection Site

Provides supervised consumption of illicit substances, harm reduction supplies, drug testing, OD response care, clinical services (i.e.; wound care), community referral services, and more.

(PHS Community Services Society, n.d.).

Overdose Prevention Sites (OPS)

Overdose prevention sites offer various services, including overdose prevention training and distribution of take-home naloxone kits. All locations supply fentanyl testing strips.

(Government of British Columbia, n.d.).

Road to Recovery (R2R)

Initiative that currently provides 14 detox and 20 transitional beds. The R2R initiative will gradually roll out over 4 years, with plans to expand withdrawal management and short-stay treatment services.

(Providence Health Care, n.d.).

Foundry BC

A provincial initiative providing no-cost primary care, mental health support, and addiction services to youth from 12-24, accessible through wellness centers and online platforms.

(Government of British Columbia, 2024).

Culture Saves Lives (CSL)

CSL blends Indigenous cultural practices with harm reduction strategies to help individuals manage addiction. Through healing circles, sweat lodges, peer support, and access to healthcare, the program addresses the physical and cultural needs of participants.

(PHS Community Services Society, n.d.)

RECOMMENDED THERAPEUTIC INTERVENTIONS

Resilience Based Interventions

Effective resilience interventions involve 5 key components:

1) Training in emotional regulation to manage impulsivity.

2) Cognitive-behavioural strategies to support adaptive thought processes.

3) Education on physical health for protective behaviours.

4) Building social support networks.

5) Mindfulness-based practices to enhance stress management.

(Chandler et al., 2015).

One example of a resilience-based therapeutic intervention is a CBT approach known as Stress Inoculation Therapy (SIT). The SIT method enhances resilience by exposing individuals to mild stressors, enabling them to practice and strengthen their adaptive coping skills.

The objective is to strengthen individuals' abilities to effectively handle future challenges, develop more adaptive coping mechanisms, build resilience, and navigate recovery to maintain long-term sobriety.

(Helmreich et al., 2017).

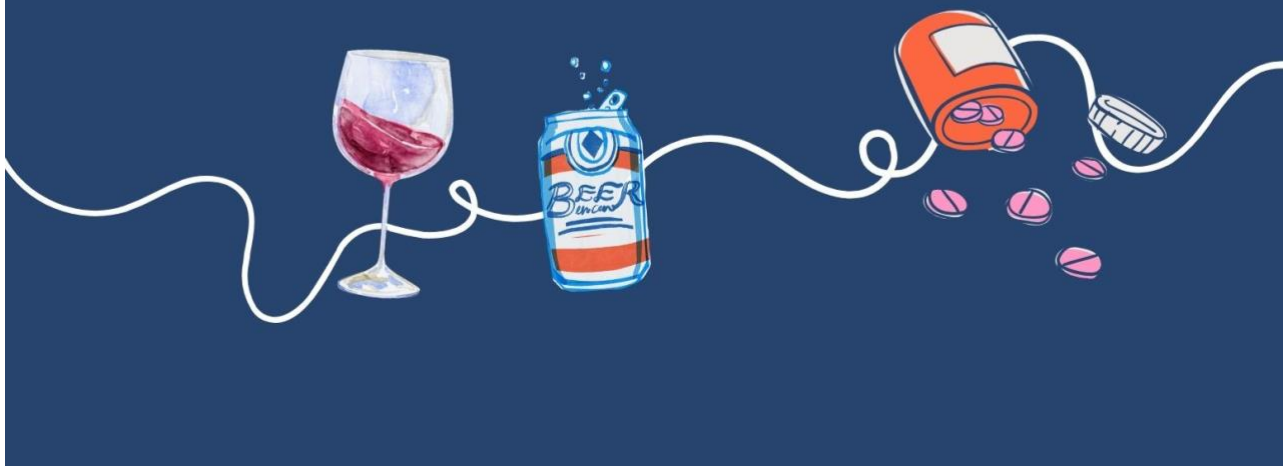
Cognitive Behavioural Therapy (CBT)

CBT is a proven method for treating SUDs. It focuses on breaking the learned habits of substance use by increasing awareness of behaviours and teaching practical coping skills to reduce use and handle relapses. This helps people interrupt thought-emotion-behaviour cycle patterns and build healthier responses.

(Volkow & Blanco, 2023).

Traditional CBT, including relapse prevention, has been the main evidence-based treatment for SUDs for 30 years. Research suggests that future improvements in CBT will come from focusing on its core mechanisms - targeting the behaviours and thought patterns of addiction while teaching strategies to help individuals maintain control over their actions and thoughts.

(Carroll & Kiluk, 2017).



OPIOID USE DISORDER (OUD)

Symptomology:

OUD symptoms involve dependence on opioids, an increased tolerance, and eventual withdrawal effects.

(Dydyk et al., 2024).

Dependence is characterized by intense cravings, ongoing habitual use, and withdrawal symptoms from substance reduction or cessation.

(World Health Organization, 2023).

Statistics:

OUD impacts more than 16 million individuals globally, and 2.1 million individuals throughout the U.S.

(Dydyk et al., 2024).

As of 2021, 296 million people worldwide used drugs at least once. This includes approximately 60 million opioid users, with around 39.5 million individuals experiencing SUDs.

(World Health Organization, 2023).

Opioid Agonist Therapies (OAT):

OAT is a clinically proven treatment for OUD. The type of OAT prescribed varies based on individual factors such as:

- *Health conditions*
- *Substance use history*
- *Lifestyle choices*

In British Columbia, options include sublocade, methadone, buprenorphine, and suboxone. OAT alleviates symptoms of withdrawal and cravings. Research indicates that OAT effectively maintains treatment engagement, reduces illicit opioid use, and lowers mortality rates.

(British Columbia Centre on Substance Use, 2023).

Naloxone

A life-saving opioid antidote. Intended for use on unresponsive individuals to reverse opioid toxicity - i.e., respiratory depression. Takes effect within minutes. Can be administered intravenously, intranasally, intramuscularly, or subcutaneously.

(Jordan et al., 2024)

Available over the counter at no cost - found in over 2,300 locations across BC, such as pharmacies, harm reduction sites, hospitals, ERs, and correctional facilities.

(Help Starts Here, n.d.).

KNOW THE SIGNS!

Recognizing an Opioid Overdose

	Constricted pinpoint pupils.
	Bluish or greyish tint to lips or nails.
	Dizziness &/or disorientation.
	Slowed, shallow, or absent breathing.
	Sounds of choking or gurgling.
	Unresponsiveness &/or difficulty staying awake.

(Health Canada, n.d.).

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