Forgiving Childhood Adversities:

Exploring Mental Health Benefits and Pathways of Influence

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Contents

Abstract

The term "childhood adversity" encompasses negative experiences such as abuse, neglect, and household dysfunction. These experiences are associated with difficulties in adulthood, including psychological distress. Evidence suggests that the negative impacts of childhood adversity may be attenuated if individuals had some positive experience during childhood, have resilience characteristics, or learn to increase their reliance on adaptive coping strategies and reduce their reliance on maladaptive coping strategies. Forgiveness is a coping response that may reduce the negative impacts of adversity. Researchers vary in their conceptualizations of forgiveness. While forgiveness is generally associated with more favourable outcomes, very few studies have examined the benefits of forgiveness for adults with childhood adversity. The present research examined the associations between (a) childhood adversity, (b) forgiveness of others, self, and situations related to individuals' childhood adversity, and (c) psychological distress. In this study, the trait- vs. state-forgiveness distinction was adopted—while the former refers to the tendency to forgive across time and situations, the latter refers to forgiveness related to a specific transgression. Forgiveness was organized by "target" to examine forgiveness of others, self, and situations. Mediation and moderation models were estimated and compared to assess the extent to which forgiveness of childhood adversities explains or influences the relationship between childhood adversity and psychological distress. The present study found that the estimated mediation model better explained the relationships between childhood adversity, forgiveness, and psychological distress than the estimated moderation model. This suggests that childhood adversity may undermine ones' ability to forgive their childhood adversities, which in turn may contribute to increased day-to-day psychological distress in adulthood. Given that the moderation model was non-significant, it may be more important to further understand the causal pathway in

which childhood adversity undermines individuals' forgiveness towards targets associated with their childhood, rather than solely focusing on promoting forgiveness within this population.

Forgiving Childhood Adversities: Exploring Mental Health Benefits and Pathways of Influence

What is Childhood Adversity?

The term "childhood adversity" encompasses a range of negative childhood experiences, and researchers employ various operational definitions and focus on different components of childhood adversity. The inconsistencies across this large body of literature are significant enough that they hinder the generalizability of research findings (Taylor, 2020). These inconsistencies also caused the World Health Organization (WHO) to recommend that sectors concerned with childhood maltreatment develop a common conceptualization and operational definition, and use common methodological approaches (Butchart et al., 2006). Below I review common definitions and highlight notable inconsistencies between conceptualizations that emerge in the literature on childhood adversity.

When investigating childhood adversity, some researchers focus solely on maltreatment caused by other people—typically a caregiver or other adult. The WHO defines childhood maltreatment as abuse, neglect, and exploitation for commercial or other purposes that occur before the age of 18, but note that exposure to intimate partner violence is also sometimes considered childhood maltreatment (WHO, 2021). The WHO also notes that perpetrators are not limited to parents or guardians, but can be a variety of individuals, including other family members or caregivers, friends, acquaintances, strangers, other authority figures (e.g., teachers, police officers), employers, health care providers, and other children (Butchart et al., 2006). The WHO's definition encompasses four distinct types of maltreatment. First, physical abuse refers to intentionally using physical force that causes—or is likely to cause—harm to a child's health, development, survival, or dignity. Examples include behaviours such as hitting, kicking, shaking,

burning, and poisoning. Second, sexual abuse refers to involving a child in sexual activity that the child does not comprehend, cannot provide informed consent to, is not developmentally prepared for, or violate laws or societal taboos. Third, emotional and psychological abuse encompasses behaviours in which a caregiver fails to provide an environment that is developmentally appropriate and supportive, and is likely to damage a child's physical or mental health or development. This includes behaviours such as (a) patterns of belittling, blaming, threatening, and frightening, (b) physically restricting a child's movement, and (c) other methods of rejection or hostility that are non-physical. Fourth, neglect is defined as caregivers' failure to provide for a child's development and well-being related to health, education, emotional development, nutrition, or shelter conditions. Furthermore, these four types of maltreatment can occur as either isolated instances or patterns over time (Butchart et al., 2006).

While some researchers focus solely on childhood maltreatment, others encompass additional experiences in their conceptualizations of childhood adversity. For instance, the Early Trauma Inventory assesses four domains of childhood adversity that occurred before the age of 18 (Bremner et al., 2007). These overlap with the WHO's definition of maltreatment by encompassing physical, emotional, and sexual abuse, however, the authors exclude neglect and assess "general trauma" to encompass experiences such as natural disasters, parental divorce, severe illness or injury, and witnessing traumatic events such as domestic violence (Bremner et al., 2007). Similarly, the widely used term "adverse childhood experiences" (ACEs) also encompasses experiences beyond abuse and neglect that occurred before the age of 18 by including the category "household dysfunction" (Felitti et al., 1998), but excludes historical trauma (e.g., Residential Schools), external trauma (e.g., extreme poverty; Carsley & Oei, 2020), and many of the experiences included in the previously mentioned Early Trauma Inventory's

general trauma category (e.g., death of a sibling; Bremner et al., 2007). It is important to note that Felitti et al.'s (1998) original ACEs excluded neglect, however, subsequent researchers expanded the list of ACEs to include neglect and additional experiences, and researchers now differ in the number and type of ACEs included in their definition of ACEs (Wallace, 2020). For the purposes of the present study, ACEs encompass: (a) physical, emotional, and sexual abuse; (b) physical and emotional neglect; and (c) household dysfunction, such as the presence of substance abuse, mental illness, domestic violence, and incarcerated household members (Frewen et al., 2019).

Some researchers choose to narrow the scope of childhood adversity by focusing solely on specific types of adversity or populations. For instance, Snyder and Heinze (2005) exclusively examined physical and sexual abuse, while excluding psychological abuse and neglect. In another investigation, Roubinov and Luecken (2013) exclusively examined family conflict and excluded other forms of household dysfunction (e.g., parental substance use). In addition to narrowing the scope of adversity, some investigators also restrict the populations being examined—for instance, Freedman and Enright (1996) and Ghahari and Rad (2018) both exclusively examined women who were sexually abused by a male relative during childhood, excluding victims of other genders and non-kin perpetrators. Narrowed focused investigations such as these illustrate the importance of specifying sample characteristics when reviewing research literature as findings from narrowed samples are not generalizable to the broader population of those who experienced childhood adversity.

Beyond these differences in scope, researchers also employ contradicting specifications in their operational definitions of childhood adversity. Snyder and Heinze (2005), for instance, specified in their investigation that the perpetrator of the childhood maltreatment reported by

research participants must have been at least 17 years of age or a minimum of five years older than the victim. Similarly, in ACE measurements it is specified that the perpetrator of sexual abuse must have been a minimum of 5 years older than the respondent (Felitti et al., 1998). Contrary to this, the WHO does not impose age restrictions on perpetrators of mistreatment within their definition; it is further stated that perpetrators of the mistreatment can be other children (Butchart et al., 2006). Furthermore, researchers employ different age restrictions on the survivor in their operational definitions of childhood adversity. While some define childhood adversity as occurring before the age of 18 (Butchart et al., 2006; Felitti et al., 1998), some narrow the age range by restricting measurement to only adversity that occurred by the age of 15 (Roubinov & Luecken, 2013; Snyder & Heinze, 2005; Song et al., 2020). Even younger, Ghahari and Rad (2018) exclusively examined individuals that were abused before age seven. These inconsistencies in age specifications complicate the interpretation of research findings, and highlight the methodological nuances that should be considered when drawing conclusions from investigations' results.

Childhood Adversity Epidemiology

While childhood adversity is defined, measured, and investigated in a variety of ways, research literature consistently suggests that it is a common phenomenon. The WHO (2017) reported global prevalence rates of childhood maltreatment for 2016 and found that approximately 23% of children reported physical abuse, 36% reported emotional abuse, 16% reported physical neglect, and 18% of girls and 8% of boys reported sexual abuse. This data was derived from the Violence Against Children and Youth Surveys, collected across 22 countries, and contained self-reported information from adolescents and young adults aged 13-24 years of age. Similarly, one in four adults reported physical abuse during childhood. Global prevalence

estimates of the more inclusive ACEs were reported in Hughes et al.'s (2017) systematic review and meta-analysis. Thirty-seven studies were included, surmounting to a total of 253,719 participants from numerous regions across the globe. In this cumulated sample, 57% of participants reported experiencing at least one ACE, and 13% reported experiencing four or more. Similarly, Merrick et al. (2018) examined a diverse sample of adult Americans representative of 23 states (n = 214,157) and found that 61.55% experienced at least one ACE, and 24.64% experienced three or more ACEs. The most common adversities were emotional abuse (34.42%), parental separation or divorce (27.63%), and the presence of substance abuse in the household (27.56%).

Canadian statistics also reveal high rates of childhood adversity in the general Canadian population. In Statistics Canada's national 2014 General Social Survey, data were collected from individuals who were 15 years of age or above, and 33% (or 9,723,426 individuals) reported at least one type of childhood maltreatment prior to being 15 years old. Childhood maltreatment included physical and sexual abuse by an adult perpetrator (18+ years old), and witnessing violence between a parent/guardian and another adult; the prevalence rates were 26%, 8%, and 10%, respectively. Furthermore, 15% of the sample reported that they had been physically and/or sexually abused at least 22 times before age 15 (Burczycka & Conroy, 2017).

Canadian prevalence estimates of ACEs are also available. Joshi et al. (2021) examined a sample of 44,817 Canadians, ages 45-85, from the ten provinces and found that 61.6% of the sample reported at least one ACE before the age of 16, and 35.6% reported two or more ACEs. The prevalence of physical abuse in this sample is very close to that reported by Statistics Canada and mentioned in the previous paragraph—25.7% compared to 26%, respectively. Similar to Statistics Canada's data, physical abuse was more prevalent than sexual abuse,

however, the prevalence of sexual abuse in Joshi et al.'s (2021) sample was almost 10 percent higher—17.3% compared to 8%. Joshi et al. (2021) also reported the national prevalence estimates for all other ACEs measured: (a) emotional abuse (21.8%); (b) neglect of basic needs (3.1%); (c) exposure to intimate partner violence (22.4%), which was further divided into (i) verbal abuse being witnessed six or more times (20.9%), and (ii) physical violence being witnessed three or more times (7.8%); (d) death of a parent (16.3%); (e) parental separation or divorce (10.7%); and having a household member with mental health problems (20.3%). As illustrated by the findings presented above, childhood adversity is a widespread issue. Furthermore, different types of childhood adversity appear to commonly co-occur (Felitti et al., 1998; K. Kim et al., 2017). These findings highlight the importance of further investigations to improve our understanding of childhood adversity.

Impacts of Childhood Adversity

The prevalence rates reported above are concerning because a large body of research literature suggests that childhood adversity impacts survivors unfavourably, having both immediate and long-term effects. Physical injuries and death are one potential immediate risk; according to the WHO (2017), globally, approximately 41,000 individuals under the age of 15 are homicide victims every year. Adversity exposure in childhood is also linked to numerous physical and psychological problems. In the context of a large two-year longitudinal study, Flaherty et al. (2006) examined the impacts of (a) physical, sexual, and psychological abuse, and (b) household dysfunction, which encompassed having incarcerated household member(s) and having a caregiver who experienced problematic drinking, depression, or violence. The results suggest that exposed children were more likely to have poor overall health than unexposed children, and that exposure to such adversity during early life impacts children’s health by the

age of six. Developmental implications are also likely to occur as exposure to childhood adversity may unfavourably affect brain development (Anda et al., 2006; Baker et al., 2013). Consequences of this developmental disruption may include: compromises in the development of processes required for emotion regulation, language abilities, internalized morality, social information processing, and school adaptation (Pratchett & Yehuda, 2011); and physiological disruptions that can persist through adulthood and increase susceptibility to physical and mental health impairments throughout the lifespan (Shonkoff et al., 2012).

Physical and Mental Health During Adulthood

Health consequences of being exposed to childhood adversity occur throughout adulthood, and these associations are likely unique, in that they are present while other risk factors are controlled for. A cross-sectional study from Statistics Canada's national 2014 General Social Survey found that individuals 15 years of age or older who experienced physical and/or sexual abuse were more likely to report poor physical health than non-victims, while non-victims were more likely to report having very good or excellent physical health (Burczycka & Conroy, 2017). Similarly, Hughes et al. (2017) examined an amalgamated sample (n = 253,719) composed of participants from various countries in a systematic review and meta-analysis. The results revealed moderate associations between ACEs and complications later in life, including cancer, heart disease, respiratory disease, and poor self-reported health.

Evidence also indicates that childhood adversity impacts mental health and well-being during adulthood. Burczycka and Conroy (2017) found that individuals who experienced childhood physical and/or sexual abuse were more than twice as likely to self-report "mental or psychological limitations" than adults with no history of abuse. Congruent with this, Hughes et al. (2017) reported that ACEs were strongly associated with depression—including depressed

affect, depression disorders, and depression symptoms—in their meta-analysis. Furthermore, research suggests that this association is unique in that it is not attributable to the presence of other risk factors. Childhood adversity may even be a greater contributor to adult depression than some other known risk factors, such as socio-demographic characteristics (Mondi et al., 2017). Similarly, Hughes et al. (2017) also reported a strong association between ACEs and anxiety, including 13 studies in their analyses that examined frequent anxiety and anxiety disorders. General adult psychological distress is another psychological impact of adversity—Manyema et al. (2018) found all ACEs, except for parental unemployment and divorce or separation, were directly associated with psychological distress experienced between the ages of 22 and 23. Those who experienced one to five ACEs, and those who experienced six or more ACEs, were three times and almost eight times more likely to experience psychological distress, respectively.

Adults who experienced childhood adversity may also be more likely to exhibit trauma symptoms in adulthood than individuals who did not experience childhood adversity. Frewen et al. (2019) found that the number of ACEs reported predicted adult symptoms of both post-traumatic stress disorder (PTSD) and complex PTSD (cPTSD). Furthermore, ACEs and lifetime traumatic stressors uniquely predicted these health outcomes while recent life stressors did not. Similarly, van Dijke et al. (2015) found that traumatic experiences during childhood were directly associated with cPTSD symptoms during adulthood. While research suggests that this association is mediated by factors such as social support, there remains a direct relationship between childhood maltreatment and adult PTSD symptoms (Vranceanu et al., 2007). In addition to directly influencing symptom development, childhood adversity may also increase individuals' susceptibility to developing PTSD after experiencing traumatic events during adulthood (Kendall-Tackett, 2002). This increased vulnerability may be attributable to

interactions between the neurological consequences of childhood maltreatment and the effects of revictimization, for which there is an elevated prevalence in this sample (Pratchett & Yehuda, 2011).

Childhood adversity may also affect adult well-being, including life satisfaction, social belonging, and mental well-being. Research suggests that adults over the age of 34 who experienced sexual abuse during childhood are more likely to have lower life satisfaction than individuals who were not sexually abused, regardless of what age the abuse occurred (Morton et al., 2019). Similarly, findings from Statistics Canada's National 2014 General Social Survey data suggest that physical and sexual abuse lead to a weaker sense of belonging (i.e., another facet of well-being) in adulthood (Burczycka & Conroy, 2017). More broadly, ACEs may also impact adulthood well-being, including life satisfaction (Bellis et al., 2014; Mersky et al., 2013) and mental well-being (e.g., feeling useful, being able to handle problems well, and feeling close to others; Hughes et al., 2016). These associations have been found in various samples, including young adults (aged 22 to 24) born into urban underprivileged families (Mersky et al., 2013) and diverse samples from the general population (Bellis et al., 2014; Hughes et al., 2016).

Additional Outcomes

Childhood adversity may also be associated with other unfavourable life outcomes. Using data collected in Statistic Canada's 2014 General Social Survey, Perreault (2015) found that those exposed to childhood physical and sexual abuse were more than twice as likely to be victims of violent crimes as adults. Furthermore, individuals who were *not* physically and/or sexually abused as children but witnessed parental violence were still almost twice as likely to experience violent victimization. After controlling for all other examined risk factors of violent victimization (e.g., age, mental health difficulties, and substance use), results remained

significant. Similarly, after controlling for demographic characteristics and additional risk factors, Burczycka and Conroy (2017) found that a history of childhood abuse was predictive of the most severe forms of spousal violence. Data from the same survey also revealed that child abuse victims were more than twice as likely to experience a period of homelessness than individuals who were not victimized (Burczycka & Conroy, 2017). Adversity may also affect adulthood socioeconomic status—Metzler et al. (2017) examined a large sample that was representative of 10 American states and the District of Columbia; the findings from their cross-sectional study suggest that adults who experienced ACEs have a higher risk of high school non-completion, unemployment, and poverty in adulthood than non-victimized individuals. Past investigations have yielded similar findings (see Bellis et al., 2014).

Adversity during the developmental years may also lead to poor health behaviours later in life, such as frequent and problematic substance use. Hughes et al. (2017) consolidated the results from 34 articles, encompassing 46 samples from various countries, and found moderate to strong associations between ACEs and tobacco use, heavy alcohol use, problematic alcohol use, and problematic drug use. When compared to individuals who reported no ACEs, those who experienced four or more ACEs were more than twice as likely to report current tobacco use or heavy alcohol consumption, and almost six times more likely to report problematic drinking. Similarly, Burczycka and Conroy (2017) examined data from Statistic Canada's 2014 General Social Survey and found that childhood physical and/or sexual abuse increased the likelihood of individuals' illegal drug use and binge drinking.

Dose-Response Relationship

The impacts of childhood adversity may be cumulative, such that greater amounts of adversity increase the likelihood of an individual experiencing poor outcomes later in life. For

instance, in a cross-sectional study, Mersky et al. (2013) found that exposure to multiple ACEs increased individuals' chances of experiencing four or more poor outcomes. In a large cross-sectional examination of health behaviours, and physical and mental health conditions, Ye and Reyes-Salvail (2014) reported that the likelihood of experiencing a number of poor outcomes increased systematically as the number of ACEs increased. In another cross-sectional investigation, Manyema et al. (2018) found a significant dose-response relationship in which individuals who reported at least six ACEs were eleven times more likely to report high amounts of stress during adulthood than individuals who reported either zero ACEs or one to five ACEs. Data from Statistic Canada's 2014 General Social Survey also revealed a dose-response relationship in which each additional occurrence of childhood physical and/or sexual abuse increased an individual's likelihood of experiencing severe spousal violence later in life by 2% (Burczycka & Conroy, 2017). Others have reported similar dose-response relationships for depressive symptoms (Mondi et al., 2017) and substance use (Shin et al., 2018) among emerging adults. Taken together, the literature reviewed in this section regarding the various impacts of childhood adversity supports the conclusion that childhood adversity has long-term psychological implications. Because of these implications, it is important to identify ways in which these consequences can be diminished or avoided.

Reducing the Health Consequences of Childhood Adversity

Despite the substantial evidence indicating that childhood adversity has health consequences later in life, there may be factors that reduce these adverse outcomes. For instance, research suggests that having positive childhood experiences—such as school involvement and social support—can diminish the association between childhood adversity and trauma-related distress experienced during childhood (Racine et al., 2020), and neutralize the effects of ACEs

on numerous indices of adult physical and mental health (Crandall et al., 2019). There may also be factors that promote resiliency when present during adulthood. Banyard et al. (2017) found that adults' strengths related to three resilience domains—self-regulatory, meaning-making, and interpersonal—were associated with good health outcomes after accounting for individuals' exposure to childhood adversity.

Furthermore, the stress of childhood adversity may impede the development of adaptive coping skills (Min et al., 2017; Sheffler et al., 2019); thus, the health consequences of childhood adversity may be partially due to the use of maladaptive coping responses. In support of this, Sheffler et al. (2019) used a 20-year longitudinal study design and found the associations between ACEs and adult health were mediated by coping responses, such that those who experienced ACEs engaged in maladaptive coping behaviours which in turn predicted poor health outcomes. Similarly, evidence suggests that family conflict before the age of 16 and childhood maltreatment are predictive of elevated depression symptoms during emerging adulthood, and that this relationship is mediated by the use of maladaptive coping responses (Roubinov & Luecken, 2013; Song et al., 2020).

Taken together, this information suggests that the negative impacts of childhood adversity may be diminishable if individuals had some positive experience during childhood, have resilience characteristics, or learn to increase their reliance on adaptive coping strategies and reduce their reliance on maladaptive coping strategies. The present research focuses on forgiveness which has been identified as a coping response that may influence the outcomes associated with adversity. However, further investigations are required to elucidate the extent to which forgiveness benefits those exposed to adversity and the pathways in which changes occur. Before reviewing the current literature on forgiveness and childhood adversity, I have described

key background information regarding forgiveness conceptualizations and associated outcomes in the following section.

Forgiveness

What is Forgiveness?

Research psychologists began empirical investigations of forgiveness in the 1980s and 1990s (Worthington & Wade, 2020) and have since developed varying conceptualizations and measurements of the construct. Indeed, there are more than 20 models (Strelan & Covic, 2006) and at least 22 measurements of the construct (Berry et al., 2001; Davis et al., 2015a; Fincham & Beach, 2002; Griffin et al., 2018; Paleari et al., 2009; Woodyatt & Wenzel, 2013; Worthington et al., 2015). Thus, in the following section I will review prominent forgiveness conceptualizations and relevant distinctions and terminology.

Unforgiveness

To understand the general concept of forgiveness, it is useful to understand the commonly used term "unforgiveness". It is a set of emotional, motivational, cognitive, and behavioural reactions to an individual's *appraisal* of a transgression (Worthington, 2020). Thus, the extent to which one experiences unforgiveness is dependent on their subjective perception of a transgression, not its objective severity or qualities. An individual is "unforgiving" when they harbour negative emotions (e.g., anger, disgust), motivations (e.g., desire to seek revenge), and/or cognitions (e.g., negative attitudes and thoughts) related to a transgression. While the exact definition of forgiveness varies between conceptualizations, forgiveness can be thought of as the diminishment of negative emotions, thoughts, and behaviours towards the transgressor (i.e., the reduction of unforgiveness). Thus, forgiveness is broadly considered a transformation of some kind, not simply the absence of reacting to a transgression. For example, an individual who

was yelled at by a friend is experiencing unforgiveness if they feel resentment towards their friend in response to being yelled at; they experience forgiveness once this resentment is reduced to a neutral state. However, if this individual did not feel resentful (or other negative feelings/attitudes/actions) in response to the transgression, their positive regard for their friend would *not* be viewed as forgiveness because they did not experience any emotional, cognitive, or behavioural transformations. It is also important to note that unforgiveness and forgiveness are considered distinct concepts because forgiveness is only one way in which unforgiveness can be reduced. Other means of reducing unforgiveness include seeing justice occur, revenge, and cognitive reframing (e.g., excusing or justifying the transgression; Worthington, 2020).

Targets of Forgiveness

Forgiveness researchers regularly approach the topic by distinguishing between "targets" of forgiveness (i.e., the subjective transgressor that one is trying to forgive). Three targets of forgiveness have been identified—forgiveness of others, forgiveness of the self, and forgiveness of situations (Hodge et al., 2020)—and various conceptualizations of each have been developed.

Forgiveness of Others. Of the three targets, interpersonal forgiveness has received the most attention and thus has the largest body of literature (Hodge et al., 2020). Investigators have focused on both individual and inter-group forgiveness (e.g., opposing countries; Cerci & Colucci, 2018), although most definitions appear to be based on the individual level, suggesting that it has received more attention. Furthermore, given its relevance to the present research, I will be focused on forgiveness at the individual level rather than inter-group level. While most researchers generally agree that interpersonal forgiveness involves prosocial changes in emotions, thoughts, motivations, or behaviours (e.g., reductions in negative emotions felt

towards transgressor), the field lacks consensus on a more specific conceptualization (Worthington, 2020).

Worthington (2020) notes that there are three prominent definitions of interpersonal forgiveness. First, McCullough et al. (2000) provide a broad definition in which forgiveness is an "intraindividual prosocial change toward a perceived transgressor that is situated within a specific interpersonal context" (p. 9). This definition does not specify what changes during the process of forgiveness, but does specify that it occurs intraindividually, implying that the interaction between individuals is not necessary. Furthermore, the change is towards a "perceived transgressor" which implies that forgiveness can occur in reaction to behaviour that is subjectively, but not objectively, hurtful.

The second prominent definition highlighted by Worthington (2020) comes from Enright and the Human Development Study Group who consider interpersonal forgiveness "a willingness to abandon one's right to resentment, negative judgement, and indifferent behavior toward one who unjustly injured us, while fostering the undeserved qualities of compassion, generosity, and even love towards him or her" (Enright et al., 1998, pp. 46–47). While this definition requires both (a) the *reduction* of negative affect and attitudes and (b) the *increase* of positive affect and attitudes, other researchers argue that the latter is not necessary for forgiveness to occur. Indeed, in the third common definition highlighted by Worthington (2020), positive affect and/or attitudes are not essential; instead, a distinction is drawn between decisional forgiveness and emotional forgiveness. The former refers to the extent to which an individual makes an explicit *intention* to treat the offender as a person of value and to abstain from revenge and expressing anger, while the latter refers to the extent to which an individual has experienced an emotional transformation. When emotional forgiveness occurs, negative

unforgiving emotions towards the transgressor are improved. However, in contrast to Enright's conceptualization, the improved state can be (a) a decrease in negative emotions, even if negative affect still lingers, (b) emotional neutrality, or (c) a decrease in negative emotions and an increase in positive emotions (Worthington & Sandage, 2016). Although the two are not mutually exclusive, one may report decisional forgiveness while still harbouring negative emotions towards the transgression (Worthington & Scherer, 2004). Thus, a strength of adopting this conceptualization is that it allows researchers to disentangle individuals' *intention* to forgive from the transformative process of emotional forgiveness.

Although forgiveness of others occurs in an interpersonal context, most researchers consider it an intrapersonal process (Worthington, 2020). This is noteworthy because if forgiveness occurs intrapersonally, then forgiveness can occur without a transgressor's involvement. Although I will adopt this premise in the present research, it is worth noting that cultural affiliation may contribute to whether researchers conceptualize forgiveness as an interpersonal or intrapersonal process. For instance, individuals affiliated with cultures that are more collectivistic may be more likely to view forgiveness as a means to restore group harmony, and be more likely to consider it an *inter*personal process, while those affiliated with more individualistic cultures may be more likely to view forgiveness as a means of benefiting the transgressed, and are thus more likely to consider it an *intra*personal process (Worthington, 2020).

Forgiveness of the Self. The body of literature on self-forgiveness has grown much slower than that of interpersonal forgiveness, however, self-forgiveness has received increased attention in recent years (Hodge et al., 2020). Self-forgiveness is distinct from interpersonal forgiveness—while both may involve changes in negative affect, cognitions, and behaviours, the

former considers the thoughts, feelings, and intentions that are directed at the self, while the latter considers those directed at other individuals. Thus, the constructs of interest during self-forgiveness investigations typically differ from those examined in interpersonal forgiveness investigations. Where interpersonal forgiveness is examined in relation to constructs such as resentment, hostility, and anger, *self*-forgiveness is concerned with constructs such as regret, remorse, guilt, and contrition (Worthington et al., 2015).

Woodyatt et al. (2017) suggest that the definition proposed by the Enright and the Human Development Study Group was seminal, serving as the basis for future definitions and disputes. This group posited that self-forgiveness is "a willingness to abandon self-resentment in the face of one's own acknowledged objective wrong, while fostering compassion, generosity, and love toward oneself" (Enright, 1996, p. 116). Although there is no consensus on what self-forgiveness is, there is "a broad similarity" between definitions (Woodyatt & Wenzel, 2020) and there are three common components that are reminiscent of Enright's 1996 definition (Woodyatt et al., 2017).

First, self-forgiveness requires a person to experience self-condemnation in response to transgressing against their values. It is important to note that self-condemnation occurs in response to the individual's perceived *subjective* transgression, and can occur whether or not the individual has objectively acted immorally (Woodyatt & Wenzel, 2020). Indeed, research suggests that individuals who have been victimized by others or circumstances may experience self-condemnation (Babcock & DePrince, 2012; Boyraz & Waits, 2018). Second, self-forgiveness involves reducing self-condemnation and the related affective, cognitive, and behavioural consequences (Woodyatt & Wenzel, 2020). Some researchers postulate that this reduction alone is not enough and have adopted self-forgiveness definitions that necessitate

increases in *positive* thoughts, emotions, and/or motivations. For instance, Enright and the Human Development Study Group assert that self-forgiveness also involves fostering positive attitudes and emotions towards themselves (Enright, 1996; also see Hall & Fincham, 2008).

In contrast, some consider reducing self-condemnation to a *neutral* state sufficient when defining self-forgiveness and exclude mention of increases in positive thoughts, emotions, and/or motivations (e.g., Thompson et al., 2005). A third common component of self-forgiveness definitions is that the individual must accept responsibility for the perceived or objective transgression (Woodyatt & Wenzel, 2020), however, it is not clear how this component affects the definition and measurement for self-condemning victims who did not objectively transgress (e.g., abuse survivors). In addition to these three common components, most researchers agree that self-forgiveness is not simply the absence of self-condemnation, or the denial of responsibility, but rather first feeling self-condemnation before experiencing decreases in the associated negative emotions and cognitions (Woodyatt et al., 2017). Overall, these definitions highlight that self-forgiveness is a transformative process, rather than the absence of a reaction.

Forgiveness of Situations. The research literature focused on forgiveness of situations is very limited (Hodge et al., 2020). Thompson et al. (2005) assert that forgiveness of situations occurs after an individual experiences situations that (a) violate their positive assumptions, and (b) subsequently elicit negative responses in the individual, including negative thoughts, emotions, or behaviours towards the situation(s). Furthermore, some suggest that the situation should be one that is beyond anyone's control (Thompson et al., 2005). Situational forgiveness is considered the transformation of these negative responses to either neutral or positive responses. Strelan (2007) further specifies that forgiveness occurs after an individual first perceives the source of the situation as *intentionally* causing harm, but that this source may be an actual

situation (e.g., debilitating illness) or an abstract source (e.g., the unjust world; "the world is against me").

Trait- vs. State-Forgiveness

In addition to organizing and defining forgiveness in relation to its target (i.e., others, self, situations), researchers draw other notable distinctions and conceptualizations. The distinction between trait- and state-forgiveness is likely the most common found in forgiveness literature. Trait-forgiveness is conceptualized as a personality trait and refers to an individual's tendency to forgive across time and situations (Hodge et al., 2020), while state-forgiveness refers to forgiving a specific transgression or transgressor (Worthington et al., 2015). While trait-forgiveness is concerned with behavioural *consistency* across situational factors (Kim & Enright, 2016), state-forgiveness is concerned with *specific* situational factors (Hodge et al., 2020). Trait-forgiveness has been more widely researched (Woodyatt & Wenzel, 2020), however, the two concepts are complementary and are understood in relation to one another (Kim & Enright, 2016). Furthermore, this distinction can be applied to forgiveness of others, self, and situations.

Forgiveness Conceptualized as a Coping Response

Forgiveness has also been conceptualized as a coping response. The stress-and-coping model of forgiveness is based on Lazarus and Folkman's (1984) stress-and-coping model, in which coping is considered to be the behaviours employed by individuals to manage the internal and external demands of situations that they find stressful (Strelan, 2020). Proponents of the stress-and-coping model of forgiveness premise that (a) transgressions—either experienced or perpetrated—are stressors that may elicit an individual's stress response, and (b) forgiveness is one approach to coping with this stress (Strelan, 2020). Unforgiveness can be considered a stress-reaction to an appraised transgression (Griffin et al., 2015b). Thus, when a transgression is

appraised, and it leads to unforgiveness, individuals attempt to cope with the unpleasant state of unforgiveness by employing coping responses. Forgiveness is one of many coping responses the individual may use (Worthington, 2020).

In adopting this conceptualization, it is premised that prolonged negative feelings are harmful to individuals (Freedman & Knupp, 2003) and that forgiving is a healthier alternative. Research supports both of these assertions and suggests that using a more forgiving coping style may diminish the impacts of stress (Toussaint et al., 2016). This model is further supported by researchers finding that trait- and state-forgiveness are positively associated with coping responses typically considered to be adaptive, and negatively associated with coping responses that are typically considered to be maladaptive (Strelan, 2020). Overall, the stress-and-coping model of forgiveness is well established (Worthington, 2020) and its adoption may be advantageous for researchers and clinicians. Implementing this model aids in our understanding of the functional purpose of forgiveness—for instance, forgiveness can be employed to save an important relationship or reduce negative emotions for an individuals' own benefit—and provides a framework for interpreting the large body of literature exhibiting the various positive health, social, and personal outcomes associated with forgiveness (Strelan, 2020).

What Forgiveness is Not

While researchers have yet to reach a consensus on what forgiveness *is*, there is agreement over what forgiveness is *not*. Most researchers agree that forgiveness is distinct from forgetting a transgression occurred, condoning or justifying a transgression (Worthington, 2020), forbearance from reactions or legal action (McCullough et al., 2003), and simply making statements such as "I forgive you". Furthermore, most researchers assert that interpersonal forgiveness should not be conflated with reconciliation because the former is an intrapersonal

process that can occur independently, while the latter requires interpersonal interaction (Worthington, 2020). Additionally, self-forgiveness is distinct from self-exoneration as the constructs' associated outcomes may differ—for instance, self-exoneration may predict lower levels of empathy and higher levels of narcissism, while self-forgiveness may predict less antisocial interpersonal behaviour (Woodyatt & Wenzel, 2020). Differentiating forgiveness from other related, but distinct, concepts is necessary because conflating these concepts can distort measurements of forgiveness and hinder the interpretation of research findings. For instance, although McNulty and colleagues found that forgiveness may sometimes lead to negative consequences in romantic relationships (e.g., offender reoffending), Worthington (2020) asserts that these negative consequences are explained by the conflation of (a) forgiveness and reconciliation, and (b) forgiveness and exoneration.

Forgiveness and Health

A large body of literature suggests that forgiveness leads to favourable physical and psychological health, while unforgiveness leads to poor physical and psychological health. Although there are varying forgiveness conceptualizations, these investigations have largely employed the trait-state conceptualization distinction. Thus the following section is largely organized as such.

Trait-Forgiveness Outcomes

While both trait- and state-forgiveness predict health outcomes, trait-forgiveness has been the focus of considerably more investigations (Griffin et al., 2015b). The resulting evidence suggests that individuals with higher propensities to forgive across time and situations have better physical and psychological outcomes than those who tend to hold a grudge.

Physical Health. Both interpersonal and self-forgiveness are associated with better self-reported physical health in community samples (Davis et al., 2015b; Lawler et al., 2005) and student samples (Davis et al., 2015b; Wilson et al., 2008). Self-reported physical health has included indices such as less use of common medications, fewer physical ailments, lower levels of fatigue and somatic complaints, better sleep quality (Lawler et al., 2005), physical functioning, pain, and subjective appraisal of health (Wilson et al., 2008). In support of these findings, Seawell et al. (2014) conducted a three-year longitudinal study and found that the tendency to be unforgiving—i.e., the self-reported frequency of feeling resentful towards others and holding grudges—was associated with declines in older adults' self-reported general physical health over a three-year period. Researchers have also found trait-forgiveness predicts health outcomes in clinical populations (Davis et al., 2015b; Svalina & Webb, 2012). For instance, in an adult sample of outpatients from a physical therapy clinic, Svalina and Webb (2012) found that the tendency to self-forgive was associated with better overall health status, physical health status, current pain, and chronic pain. The relationship between forgiveness and physical health may be partially attributable to the cardiovascular impacts of forgiveness, as research suggests that trait-forgiveness may be related to reductions in blood pressure and cardiovascular recovery after stress (Friedberg et al., 2007).

Psychological Adjustment. Research suggests that trait-forgiveness is also related to better psychological adjustment. The tendency to forgive others, self, and situations is associated with less psychological distress, even when the impacts of lifetime stress severity are controlled for, and may also protect against the negative impacts of lifetime stress severity (Toussaint et al., 2016). Additionally, the tendency to be forgiving of others (Hill & Allemand, 2011; Krause & Ellison, 2003; Lawler-Row, 2010; Toussaint & Friedman, 2009), self (Davis et al., 2015b;

Lawler-Row, 2010; Toussaint & Friedman, 2009), and situations (Toussaint & Friedman, 2009) is also associated with higher levels of subjective well-being, including higher levels of life satisfaction (Krause & Ellison, 2003; Toussaint & Friedman, 2009) and successful aging (Lawler-Row, 2010), and lower levels of depression, anxiety, and anger (Thompson et al., 2005). These investigations of well-being occurred with samples such as psychotherapy outpatients (Toussaint & Friedman, 2009), general population adults (Hill & Allemand, 2011), and older adults (Krause & Ellison, 2003; Lawler-Row, 2010) using cross-sectional study designs. Furthermore, research suggests that this relationship is unique, and remains significant when covariates such as the Big Five personality traits are controlled for (Hill & Allemand, 2011).

Trait-forgiveness is also associated with lower levels of depression, such that individuals who tend to be more forgiving are less likely to experience somatic and affective depression symptoms (Krause & Ellison, 2003; Toussaint et al., 2012) and major depressive episodes (Toussaint et al., 2008b). Researchers have found such patterns in examinations of both interpersonal forgiveness (Lawler-Row, 2010; Messay et al., 2012; Toussaint et al., 2008b, 2012) and self-forgiveness (Krause & Ellison, 2003; Lawler-Row, 2010; Toussaint et al., 2008b), in samples of undergraduate students (Brown, 2003; Messay et al., 2012), adults (Toussaint et al., 2008b), and older adults (Krause & Ellison, 2003; Lawler-Row, 2010). Trait-forgiveness is also associated with lower levels of anxiety. The tendency to forgive others is associated with lower levels of recent anxiety symptoms and stress among undergraduate students (Messay et al., 2012), and death anxiety among older adults (Krause & Ellison, 2003), while the tendency to self-forgive is associated with lower levels of state and trait anxiety among veterans diagnosed with post-traumatic stress disorder (Witvliet et al., 2004) and undergraduate students (Macaskill, 2012).

State-Forgiveness and Outcomes

Physical Health. Although less research has focused on state-forgiveness and health (Griffin et al., 2015b), evidence suggests that state-forgiveness also has health benefits. Forgiving a transgressor for a particular transgression is associated with better self-reported physical health, including less use of common medications, fewer physical symptoms (Lawler et al., 2005; Lawler-Row, 2010), better sleep quality (Lawler et al., 2005; Lawler-Row, 2010; Stoia-Caraballo et al., 2008), and lower levels of fatigue and somatic complaints (Lawler et al., 2005). These findings are evidenced in samples of undergraduate students (Stoia-Caraballo et al., 2008), middle-aged men and women (Lawler-Row, 2010), and adults ranging from early to late adulthood (Lawler et al., 2005). Furthermore, while Lawler et al. (2005) found both trait- and state-forgiveness were associated with five self-reported health indices in their cross-sectional study (i.e., physical symptoms, medications used, sleep quality, fatigue, and somatic complaints); state-forgiveness—which was measured by asking respondents about a time in which they felt betrayed or hurt in response to a transgression perpetrated by a close friend or relationship partner—accounted for more variance than trait-forgiveness in every instance. Physical indicators of health have also been examined through the use of lab-simulated transgressions. For instance, using an experimental design, Hernandez et al. (2009) found that forgiving a role-played interpersonal conflict was associated with lower levels of systolic blood pressure reactivity. Similarly, Witvliet et al. (2008) found that imagining forgiveness of an imagined interpersonal transgression—a burglary scenario—was associated with less heart rate reactivity than when forgiveness was not imagined.

Psychological Adjustment. Research also suggests that state-forgiveness of others is associated with better psychological well-being (Bono et al., 2008; Maltby et al., 2005) and

subjective well-being (Maltby et al., 2005; Toussaint & Friedman, 2009), including life satisfaction (Bono et al., 2008; Toussaint & Friedman, 2009). Samples examined in these investigations include outpatients receiving psychotherapy (Toussaint & Friedman, 2009) and undergraduate students (Bono et al., 2008; Maltby et al., 2005). Self-forgiveness of specific offenses appears to produce similar benefits—Davis et al. (2015b) found that higher levels of self-forgiveness were also related to higher levels of psychological well-being across multiple samples in their meta-analysis, but that this relationship was weaker than that of trait-forgiveness (r = .35 and .46, respectively). Self-forgiveness is also associated with psychological improvements. For instance, da Silva et al. (2017) found that imagining self-forgiveness of an unresolved interpersonal transgression was related to (a) decreases in guilt, negative emotion, and heart rate, and (b) increases in perceived control and parasympathetic activation when compared to ruminating about the wrong-doing. Similarly, Witvliet et al. (2008) found that imagining forgiveness of an imagined interpersonal transgression—a burglary scenario—was associated with higher levels of positive affect than when forgiveness was not imaged.

State-forgiveness is also associated with less psychological symptoms. Researchers found that forgiving a transgressor is associated with lower levels of depression symptoms in samples such as middle-aged adults (Lawler-Row, 2010) and undergraduate students (Messay et al., 2012; Stoia-Caraballo et al., 2008). Forgiving someone for an interpersonal transgression is also predictive of lower levels of recent anxiety (Messay et al., 2012; Stoia-Caraballo et al., 2008) and stress (Messay et al., 2012) among undergraduate students. Furthermore, Carson et al. (2005) examined a sample of patients with chronic pain using a cross-sectional design and found that individuals who reported higher levels of forgiveness towards a transgressor experienced lower levels of psychological symptoms related to nine symptom domains, less anger, and less pain.

Therapeutic Applications

Investigations of forgiveness interventions further support the health benefits of forgiveness. Interventions aimed at reducing unforgiveness have been used with various populations, including students (Bell et al., 2017), older adults (Ingersoll-Dayton et al., 2008), romantic partners (Fincham et al., 2005; Woldarsky et al., 2014), adolescents (Freedman & Knupp, 2003), patients with coronary artery disease (Waltman et al., 2009), substance users (Lin et al., 2004), and older adults with terminal illnesses (Hansen et al., 2009). These investigations offer further support for the beneficial impacts of forgiveness. Most of these studies focused on interpersonal forgiveness related to specific offenses (i.e., state-forgiveness) and used longitudinal study designs.

Both interpersonal and self-forgiveness have been studied in the context of emotion-focused therapy. This is fitting given that forgiveness can be thought of as an emotional transformation of a negative emotional state (Woldarsky et al., 2014), and in emotion-focused therapy, altering underlying problematic emotions to create cognitive and behavioural changes is a major therapeutic goal (Greenberg, 2006; Greenberg, 2017). Cornish and Wade (2015) examined the efficacy of an intervention grounded in emotion-focused therapy that aimed to promote self-forgiveness with adults who had transgressed interpersonally in a variety of ways (e.g., violations of trust, verbal and/or physical abuse, and instances of disrespect/humiliation). Those in the intervention group had significantly better outcomes than the waitlisted control group. Participants scored significantly lower on measurements of self-condemnation and general psychological distress and significantly higher levels of state self-forgiveness and self-compassion when assessed during the post-intervention and 2-month follow-up sessions.

Furthermore, changes in participants' state self-forgiveness during the intervention was predictive of less psychological distress at the 2-month follow up.

Interpersonal forgiveness has also been examined in the context of emotion-focused therapy—Greenberg et al. (2008) compared the effectiveness of two interventions designed to help individuals overcome an unresolved emotional injury perpetrated by a significant person in their life. Group A consisted of a specialized emotion-focused therapy that used empty-chair dialogue, while Group B was a psychoeducational group. Although both interventions effectively increased forgiveness of an offender, those in Group A saw significantly more improvement on measures of forgiveness, distressing feelings and unmet needs related to the offender, and "target complaints" which were three specific problems identified by participants that they wanted to address with the treatment. Furthermore, while the emotion-focused therapy group saw significant improvements in general symptom distress, the psychoeducation group experienced no changes.

The benefits of therapeutic forgiveness strategies have also been examined for specific populations. For instance, research suggests that forgiveness techniques may be a beneficial addition to palliative care. Terminally-ill older adults who completed a four-week forgiveness therapy experienced significant improvements in state-forgiveness, hope, quality of life, and anger reduction, and improved significantly more than the control group (Hansen et al., 2009). Forgiveness interventions have also been efficacious with groups (Harris et al., 2006; Ingersoll-Dayton et al., 2008). For instance, adults who participated in a six-session psychoeducational forgiveness training group experienced significant decreases in perceived stress and trait anger and increases in state-forgiveness towards a transgressor. Furthermore, the intervention group saw significantly better outcomes than the control group (Harris et al., 2006).

There is also evidence suggesting that forgiveness interventions may be useful for individuals with substance use problems (e.g., Lin et al., 2004; Scherer et al., 2011), perhaps because anger and other negative emotions may serve as triggers for substance users (Larimer et al., 1999). Lin et al. (2004) recruited inpatients with substance dependence to partake in 12-sessions of forgiveness therapy that focused on an interpersonal transgression for which the patient still harboured anger and resentment towards the transgressor. In addition to the intervention successfully reducing unforgiveness, those who engaged in forgiveness therapy experienced improvements in their levels of anger, depression, anxiety, self-esteem, and vulnerability to drug use. Furthermore, patients experienced significantly better results than those who engaged in a routine drug and alcohol intervention of the same length. It is worth noting that participants were referred based on their therapists' opinion that they would be "good candidates" for the therapy, suggesting that forgiveness therapy might be beneficial if unresolved interpersonal transgressions are negatively affecting an individual, but not a panacea for all. Self-forgiveness may also be beneficial for substance users as research has linked guilt and shame to alcohol and drug use (Dearing et al., 2005; Ianni et al., 2010). In support of this, Scherer et al. (2011) found that patients diagnosed with alcohol abuse and dependency made significantly more improvements than those in a control group after participating in a four-hour self-forgiveness intervention. Participants experienced improvements on measures of state self-forgiveness, drinking refusal self-efficacy, guilt, and shame; these gains were maintained at a three-week follow-up. In summary, while not a panacea, incorporating forgiveness goals into therapy may be an effective means of transforming emotions and improving mental health.

Pathways of Change

While the findings outlined above are promising, much of the literature regarding forgiveness and health benefits have been correlational, and there remains uncertainty about the direction of these relationships. For instance, it may be that individuals with better psychological health and resiliency have an easier time forgiving rather than forgiveness having a positive impact on psychological health and resilience (Griffin et al., 2015b). While more research is required to elucidate the direction of these relationships, evidence suggests they are prospective. For instance, Seawell et al. (2014) found that the tendency to feel resentful towards others and hold grudges (i.e., unforgiveness) predicted worse self-reported physical health at a three-year follow-up, but that physical health was not predictive of later unforgiveness.

The way in which trait-forgiveness affects health has also been examined, and it is suggested that this association is mediated by psychological states (Griffin et al., 2015b). Indeed, evidence supports the mediating effects of psychological states such as rumination (Stoia-Caraballo et al., 2008; Ysseldyk et al., 2007), hopelessness (Toussaint et al., 2008a), affective state (Green et al., 2012; Stoia-Caraballo et al., 2008; Toussaint & Friedman, 2009), beliefs (Toussaint & Friedman, 2009), state anger (Carson et al., 2005), and perceived stress (Green et al., 2012). Forgiveness may also buffer the impacts of factors that contribute to mental health problems, such as lifetime stress severity (Toussaint et al., 2016). Although additional investigations are required to further corroborate the directionality of these relationships, this research suggests that forgiveness may lead to improvements in psychological adjustment and mental health.

Tying Childhood Adversity and Forgiveness Together

In the previous section I reviewed various health outcomes associated with forgiveness. In the following section I narrow the focus to how forgiveness may benefit those who experienced traumatic events and, more specifically, childhood adversity.

Forgiveness and Trauma

Those who have a tendency to forgive across time and situations (i.e., trait-forgiveness) experience better outcomes after traumatic events than those who are less forgiving. Cerci and Colucci (2018) conducted a systematic review to investigate the association between forgiveness and posttraumatic stress disorder (PTSD) symptoms following man-made traumatic events (e.g., political conflicts, military combat among veterans, childhood abuse, and terrorism attacks). Of the thirteen studies included, trait-forgiveness was examined in eight; in seven of these eight studies, the authors found significant negative relationships between trait-forgiveness and PTSD symptoms. This included trait-forgiveness of others (n = 7), self (n = 4), and situation (n = 3).

Of the thirteen studies examined by Cerci and Colucci (2018), state-forgiveness was examined in five. In all five studies, significant relationships emerged between interpersonal forgiveness and PTSD symptoms, suggesting that individuals who are unforgiving of the transgressors involved in traumatic events have higher levels of PTSD symptoms. Reed and Enright (2006) provide additional evidence that interpersonal forgiveness is beneficial for trauma survivors. The researchers compared the results of forgiveness therapy with an alternative skill-building therapy for women with a history of spousal emotional abuse, and found that those in the forgiveness therapy group experienced significantly greater reductions in PTSD symptoms than those in the alternative skill building therapy; these improvements were maintained at a follow-up (M = 8.35 months, SD = 1.53). These findings suggest that state-forgiveness of a

transgressor may contribute to adjustment and a reduction of trauma symptoms following interpersonally inflicted trauma.

No investigations of the relationship between state self-forgiveness and PTSD were identified. Nonetheless, there is evidence to suggest that self-forgiveness may be beneficial to those experiencing PTSD symptoms. Some support comes from self-blame research because, even though self-blame/self-exoneration and self-forgiveness are distinct constructs (Woodyatt & Wenzel, 2020), the two are closely related. Although trauma survivors are typically not the objective perpetrator, event-specific self-blame is a common response to interpersonal trauma. For example, someone who experienced physical abuse may blame themselves by reasoning that verbally defending themselves during the preceding argument escalated the interaction and caused the abuser to react with violence. Event-specific self-blame also mediates the association between interpersonal trauma and physical health, such that interpersonal trauma leads to increased self-blame, which in turn leads to increased symptomatology (Boyraz & Waits, 2018), and is associated with poorer recovery for women who experienced sexual assault (Ullman, 1997). Additional support comes from literature evidencing the benefits of self-forgiveness. Considering the *tendency* to self-forgive is beneficial for those who experienced traumatic events (Cerci & Colucci, 2018), and *state* self-forgiveness is associated with better psychological adjustment in other populations, state self-forgiveness may be beneficial to those experiencing PTSD symptoms. Like state self-forgiveness, the benefits trauma survivors might derive from state-forgiveness of *situations* has also not been investigated. However, the *tendency* to forgive situations is related to better PTSD outcomes (Cerci & Colucci, 2018) suggesting that reducing negative responses towards the traumatic abstract situation may yield similar benefits.

Forgiveness and Childhood Adversity

Tendency to Forgive and Childhood Adversity

Few researchers have examined forgiveness' influence on childhood adversity outcomes. Banyard et al. (2017) conceptualized forgiveness as an interpersonal strength, assessing participants' "ability to move on following an argument" within their cross-sectional study. They found that being able to forgive others had an independent association with health-related quality of life when adversity exposure was accounted for, and increased health-related quality of life odds by 15%. In another cross-sectional study, Wallace (2020) also characterized interpersonal forgiveness as a character strength and found that forgiveness was associated with all eleven physical and psychological health outcomes. However, contrary to expectations, interpersonal forgiveness did not moderate the relationship between ACEs and poor health outcomes, suggesting that forgiveness may influence health but not by changing the impacts of ACEs.

Similarly, in a cross-sectional study, Ramsey (2019) found that interpersonal trait-forgiveness did not moderate the association between childhood adversity and psychological outcomes in older adolescents (i.e., age 18 and 19), including depression symptoms, cognitive distortions, and perceived social support. That said, the tendency to *self*-forgive did have significant moderating effects on numerous associations between different types of childhood adversity and depression, but not all associations. Self-forgiveness moderated (a) total trauma and depression, (b) physical abuse and depression, and (c) emotional abuse and depression, such that individuals who experienced higher levels of childhood adversity and higher levels of self-forgiveness tendencies reported lower levels of depression. However, self-forgiveness did not moderate the relationships between (a) sexual abuse and depression, and (b) general trauma and depression. The researchers also examined how self-forgiving tendencies may impact social

support. They found that self-forgiveness moderated the relationships between (a) total trauma and perceived social support, and (b) physical abuse and perceived social support, such that individuals with high levels of childhood adversity and high levels of self-forgiveness reported higher levels of perceived social support. However, no moderating effects were found when the relationships between other trauma subscales and peer support were examined. Congruent with this, Morton et al. (2019) conducted a cross-sectional study and found that neither interpersonal nor self-forgiveness moderated the relationship between sexual abuse and life satisfaction. These findings suggest that the tendency to self-forgive may reduce the impact of some types of adversity but not others, while the proclivity towards interpersonal forgiveness, although predictive of better health outcomes, may not reduce the effects of childhood adversity. However, both the tendency to forgive the self and others appear to benefit adults with childhood adversity; thus, the pathways in which forgiveness leads to these benefits require further investigation.

Trait-forgiveness has also been examined as a mediator in a cross-sectional study. Snyder and Heinze (2005) examined a sample of individuals who survived childhood sexual and/or physical abuse and found that both the tendency to forgive the self and situations mediated the relationship between PTSD symptoms and hostile automatic thoughts. Although the tendency to forgive others also mediated the relationship between PTSD symptoms and hostile automatic thoughts, it was a much weaker mediator than self and situational forgiveness. These findings suggest that the tendency to forgive may be an adaptive means for abuse victims to cope with symptoms. These findings also support the implications of Morton et al.'s (2019) study (described above) by further suggesting that self-forgiveness plays a more protective role for adults who experienced childhood adversity than does interpersonal forgiveness. Snyder and

Heinze's (2005) research also implies that the value of forgiving situations for adults with childhood adversity, which very few researchers have examined, deserves more attention.

Forgiving Childhood Adversity

A small number of researchers have begun examining individuals' forgiveness of childhood adversities rather than a global tendency to forgive. In a qualitative study, Carbonell et al. (2005) inductively explored the coping strategies employed by emerging adults who had experienced childhood adversity via open-ended interview questions. The coping strategies described by participants were coded and three general groups emerged, one being "letting go". The authors explain that this encompassed forgiveness, which some of the respondents did discuss explicitly in relation to moving on from past abuse. Some respondents also discussed leaving their childhood adversity in the past, and recognizing that it does not have to affect their daily life, as a means of coping. Although not labelled as forgiveness, the idea of reducing negative cognitions, emotions, and/or motivations (i.e., forgiveness) was alluded to. While these researchers did not explore the connection of "letting go" of childhood adversity with health outcomes in emerging adulthood, the results imply that this population may find forgiveness to be a subjectively beneficial coping response. As such, its adaptability is worth examining in greater detail.

Indeed, there is evidence suggesting that forgiveness may reduce the impacts of childhood adversity, however, these investigations are limited to interpersonal forgiveness. Taylor (2020) asked participants to identify the individual who was the most significantly involved in their childhood adversity and measured participants' interpersonal state-forgiveness of the named transgressor in her cross-sectional study. They found that forgiveness of the transgressor predicted lower levels of emotional distress (i.e., depression, anxiety, and stress)

when personality, type of abuse, and gender were controlled for. Researchers have also examined the efficacy of incorporating forgiveness strategies into interventions for individuals who experienced childhood adversity. Freedman and Enright (1996) tested a forgiveness intervention for women who experienced incestuous sexual abuse during childhood or adolescence. Participants reported their emotions, cognitions, and behaviours towards the abuser (i.e., state-forgiveness). The results suggested that the intervention succeeded in (a) reducing unforgiveness, depression symptoms, and anxiety, and (b) increasing self-esteem and hope.

In another intervention study, Freedman and Knupp (2003) investigated the utility of an eight-week educational intervention with adolescents who had experienced parental divorce. The goal was to increase adolescents' forgiveness towards the parent(s) that hurt them. Although the adolescents reported post-intervention improvements and significantly better levels of hope and trait anxiety than the control group, the results should be interpreted with caution. The amount of change seen by the experimental group did not significantly differ from that of the control group in terms of forgiveness post-intervention. The results could be explained by the control group participants exhibiting higher levels of forgiveness pre-intervention. As such, the extent to which the outcomes can be attributable to changes in forgiveness is unclear. Taken together, the research outlined above suggests that forgiving others involved in ones' childhood adversity may produce health benefits.

No investigations that examined self-forgiveness related to childhood adversity (i.e., state-forgiveness) were identified, however, there is evidence suggesting that this population may benefit from self-forgiveness. As previously mentioned, self-forgiveness and self-blame are related constructs, and evidence from investigations focused on childhood adversity and self-blame suggests that self-forgiveness may be beneficial. First, self-blame is a common response

to childhood sexual abuse (Hoagwood, 1990; Ullman, 2007), and adults who experienced childhood adversity are prone to self-blame (Wojcik et al., 2019). These findings suggest that self-forgiveness may be an appropriate goal for this population. Furthermore, blaming one's self for childhood sexual abuse is associated with poorer adjustment (Hoagwood, 1990). Self-blame also mediates the relationship between interpersonal trauma and physical health (Boyraz & Waits, 2018); since most childhood adversity involves an interpersonal component, and state self-forgiveness is linked to better psychological adjustment in other populations (see section two of this paper), it follows that self-forgiveness in response to childhood adversity may improve health. Like state self-forgiveness, no investigations have examined state-forgiveness of situations related to childhood adversity. While state-forgiveness of situations has yet to be examined in *any* population, the literature suggests that the *tendency* to forgive situations is related to better psychological adjustment for individuals who experienced childhood adversity (see the previous section of this paper). This warrants further investigations of how forgiveness of situations may benefit those who experienced childhood adversity. In conclusion, while the literature illustrates the potential benefits of forgiveness for individuals who experienced childhood adversity, it is important to substantiate the anticipated benefits and elucidate the mechanisms by which forgiveness may lead to such benefits.

Highlighted Literature Gaps

Forgiveness in the context of childhood adversity and adult outcomes has been examined in few studies. Of these investigations, most are limited in that they examine one's global proclivity towards forgiving rather than the forgiveness related to individuals' experience of childhood adversity, thus some researchers recommend incorporating state-forgiveness measures into future investigations (Morton et al., 2019). To date, researchers have only examined

interpersonal state-forgiveness, not self-forgiveness or situation forgiveness related to childhood adversity, even though there is reason to suspect related health benefits. Thus, further research is required to (a) substantiate past findings and (b) examine the potential benefits of forgiving the self and situations for adults who experienced childhood adversity.

Additionally, the pathways in which forgiveness may lead to health benefits for those with childhood adversity are unclear. While trait-forgiveness has been examined in moderation and mediation models (Morton et al., 2019; Ramsey, 2019; Snyder & Heinze, 2005), such investigations have not occurred for forgiveness related to childhood adversities (i.e., state-forgiveness). Thus, further investigations are required to improve our understanding of how forgiveness related to childhood adversity may lead to health benefits, and when these strategies may or may not be beneficial.

The Present Study

Objective

The present study sought to address the above literature gaps to improve our understanding of the pathways in which forgiveness of childhood adversities influences psychological distress during adulthood. In this pursuit, three related research questions were tested:

1. Does forgiveness of childhood adversities explain (or mediate) the relationship between childhood adversity and psychological distress?
2. Does forgiveness of childhood adversities influence (or moderate) the association between childhood adversity and adult psychological distress?
3. Do mediation models or moderation models better explain the way in which forgiveness of childhood adversities influences psychological distress?

Hypotheses

In relation to the research questions above, I hypothesized that:

1. The relationship between childhood adversity and psychological distress would be mediated by forgiveness of childhood adversities (i.e., forgiving others, the self, and situations).

2. The levels of state-forgiveness (others, the self, and situations) would significantly diminish the relationship between childhood adversity and psychological distress, such that as values of forgiveness (others, the self, and situations) increase, the relationship between childhood adversity and psychological distress would decrease.

3. The way in which forgiveness (others, the self, and situations) influences the relationship between childhood adversity and psychological distress would be better explained by mediation models than moderation models such that the mediation models examined to address hypothesis one would have superior goodness of fit when compared to the moderation models examined to address hypothesis two.

My expectation that mediation models would have superior goodness of fit when compared to moderation models is based on past literature. Although there is evidence to support both mediation and moderation models, the reasoning to support moderation models is less robust. To the best of my knowledge, researchers have yet to examine how *state*-forgiveness influences the relationship between childhood adversity and mental health, however, investigations of how *trait*-forgiveness influences this relationship produced mixed results. Researchers found that the tendency to forgive *others* did not affect associations between childhood adversity and health outcomes (i.e., trait-forgiveness of others had no moderating effects). In contrast, the tendency to *self*-forgive affected some health outcomes but not others (see this proposal's Tendency to Forgive and Childhood Adversity section for a more detailed

literature review). Although these findings suggest that trait self-forgiveness may protect against some health difficulties associated with childhood adversity, covariates may instead account for these mixed findings. For instance, self-forgiveness is positively correlated with self-esteem (Eaton et al., 2006), for which two subfacets (i.e., self-liking and self-competence) display different moderating effects on the relationships between victimization and mental health symptoms (Soler et al., 2013). Thus, like interpersonal trait-forgiveness, trait *self*-forgiveness may not protect against the negative health outcomes associated with childhood adversity.

Be that as it may, I examined *state*-forgiveness rather than the *trait*-forgiveness in the present research, which is more akin to examining a specific coping response to a specific stressor. Given that the relationship between trauma exposure and trauma symptoms is moderated by how individuals cope with the specific trauma exposure (Elzy et al., 2013), and forgiveness is largely considered an adaptive coping response (Strelan, 2020), state-forgiveness may influence the association between childhood adversity and psychological distress. Further support comes from Carbonell et al.'s (2005) qualitative findings—discussed in this thesis' Forgiveness of Childhood Adversity section—imply that individuals may subjectively consider forgiveness to be an adaptive coping response for overcoming past childhood adversity. Thus, individuals who score high on childhood adversity but are highly forgiving of the targets involved (i.e., others, self, situations) may experience less psychological distress than individuals who score high on childhood adversity but have *not* forgiven.

The evidence supporting the proposed mediation models is more robust. Research suggests that the stress of childhood adversity impedes the development of adaptive coping skills (Min et al., 2017; Sheffler et al., 2019), thus the health consequences of childhood adversity may be partially explained by the use of maladaptive coping responses. Given that forgiveness is

considered an adaptive coping response (Strelan, 2020), adults with childhood adversity may be less likely to respond with forgiveness, favouring more maladaptive coping responses, thus increasing the likelihood of subsequent poor psychological adjustment. In support of this, Crandall et al. (2019) found that individuals who experienced high levels of childhood adversity had a tendency to be less forgiving of the self and situations. Evidence further supports a mediation model as researchers found that the association between ACEs and adult health was mediated by coping responses, such that those who experienced ACEs engaged in maladaptive coping behaviours which in turn predicted poor health outcomes (Sheffler et al., 2019). Additionally, the perceived severity of an interpersonal offense is predictive of how forgiving an individual is (Fehr et al., 2010). Therefore, it is logical to suspect that as the severity of childhood adversity increases, the extent to which the individual has forgiven will decrease.

Methods

Participants and Procedures

Data collection took place between September 2024 and December 2024. Community adult participants were recruited through CloudResearch, an online research platform that offers various data collection services (see Appendix A for recruitment material). CloudResearch's "MTurk Toolkit" was used for the present study; this service applies advanced data quality control restrictions to recruit high quality respondents through Amazon Mechanical Turk (MTurk). Data collection consisted of two self-report surveys administered on different days (identified as Session One and Session Two). The average number of days between Session One and Session Two was 19.9 days (SD = 19.51). All surveys were administered via SurveyMonkey (i.e., an online survey development platform). CloudResearch offers various "qualifiers" (i.e., demographic variables used to include or exclude participants who meet predefined criteria);

researchers may request the addition of new qualifiers through CloudResearch. For the present study, a new qualifier was requested to screen for Adverse Childhood Experiences (ACEs), and this addition was approved and implemented within CloudResearch. CloudResearch employed the preselected qualifiers to restrict access to Session One so that only qualified participants may view, and register for, the study. Individuals were eligible to participate in Session One if they were 18 years of age or older, able to speak/read/write English fluently, and if they screened positive for at least one ACE via CloudResearch's qualifier. Qualified Participants who signed up for Session One through the online platform subsequently followed a link to Session One where informed consent was obtained (see Appendices M and N) and the following measures were administered: demographics, Adverse Childhood Experiences Questionnaire, Past Response Towards a Transgressor, Past Response to Self, and Past Response to Situations. Session One took, on average, 12.68 minutes to complete (*SD* = 6.29 minutes), and participants were compensated $0.50.

Session One responses were then screened to identify those participants eligible to be invited to Session Two. Since forgiveness refers to *changes* in negative emotions, thoughts, or motivations (Worthington, 2020), the goal was to have a final sample composed of participants whose childhood adversity resulted in unforgiving emotions, thoughts, or motivations. Therefore, participants were eligible for Session Two if they experienced childhood adversity (i.e., they endorsed one or more experience[s] on the Adverse Childhood Experiences Questionnaire); and experienced some unforgiveness in response to their childhood adversity. Unforgiveness was assessed via participants' responses to the following measures: Past Response Towards a Transgressor (Past Absence of Negative subscale only); Past Response to Self (Past Feelings and Actions subscale and Past Self Beliefs subscale); and Past Response to Situations. Eligible

individuals had a raw score that was ≤ to the employed cut-off scores (≤ 25, ≤ 24, ≤ 27, and ≤ 21, respectively) on at least one of these measures. These cut-off scores were chosen because they produce averaged scores of 2.5 on a 5-point scale and 3 on a 7-point scale, and therefore indicate that the respondent experienced, at minimum, a somewhat negative reaction to their childhood adversity (i.e., they endorse being somewhat unforgiving toward the offender, self, or situations in the past). Employing these cut-off scores restricted the sample to include only individuals from the target population (i.e., those who previously experienced at least a mild amount of unforgiveness in response to their childhood adversity). Excluding individuals who responded with neutrality or positivity ensured that participants did not endorse forgiveness items in Session Two simply because they never experienced unforgiveness in response to their childhood adversity.

Of the 717 participants who completed the Session One survey, 192 were excluded for not meeting the inclusion criteria (described in the previous paragraph), and 525 were invited to complete Session Two. Ineligible individuals received a debriefing letter via email (see Appendix O); eligible individuals received a follow-up email containing sign-up instructions for Session Two and were granted access to Session Two on CloudResearch. Similar to Session One, participants signed up for Session Two and followed a link to Session Two, where informed consent was re-obtained (see Appendices M and N). The following measures were administered in Session Two: Childhood Trauma Questionnaire—Short Form, Adverse Childhood Experiences Questionnaire, Rye Forgiveness Scale, State Self-Forgiveness Scale, State-Forgiveness of Situations, Self-Reporting Questionnaire, Distress Questionnaire-5, and DASS-21. Participants were subsequently presented with a debriefing letter (see Appendix P) and compensated $1.50. Session Two took, on average, 14.36 minutes to complete (*SD* = 13.59

minutes). The final sample consists of 294 individuals who were located in the United States of America (USA) at time of data collection (293 residents of USA and 1 resident of Canada). Age ranged from 21 to 81 years of age (M = 42.81, *SD* = 12.08, *n* = 294). Additional demographics are summarized in Table 1.

Table 1

Demographic Characteristics of Participants

Characteristic	*n*	%
Gender Identify		
Woman	208	70.75
Man	74	25.17
Non-binary	9	3.06
Two-spirited	2	0.68
Prefer not to answer	1	0.34
Biological Sex		
Female	218	74.15
Male	74	25.17
Intersex	1	0.34
Prefer not to answer	1	0.34
Ethnicity		
White	224	76.19
Mixed	29	9.86
Black	17	5.78
Latinx	11	3.74

Characteristic	*n*	%
East Asian	5	1.70
Southeast Asian	5	1.70
South Asian	2	0.68
North American Indigenous	1	0.34
Education levels		
No high school	1	0.34
Some high school	3	1.02
High school	32	10.88
College certificate or diploma	43	14.63
Some post-secondary courses	62	21.09
University degree	90	30.61
Some graduate school	17	5.78
Master's degree	41	13.95
Doctorate degree	5	1.70
Employment		
Full-time	150	51.02
Part-time	59	20.07
Unemployed looking for work	30	10.20
Unemployed not looking for work	22	7.48
Full-time student	5	1.70
Part-time student	3	1.02
Retired	11	3.74

Characteristic	*n*	%
Unable to work	13	4.42
Prefer not to answer	1	0.34
History of mental health treatment		
Have received in past	222	75.51
Never received	72	24.49
Current mental health treatment		
Currently receiving	78	26.53
Not currently receiving	216	73.47
History of psychiatric medication		
Have used in past	192	65.31
Never used	100	34.01
Prefer not to answer	2	0.68
Current psychiatric medication		
Currently using	98	33.33
Not currently using	194	65.99
Prefer not to answer	2	0.68

Note. N = 294.

Measures

Demographics

Demographic information was gathered using 14 self-report items (see Appendix B). Items inquired about age, sex, gender, ethnicity, country of residence, employment status,

education status, household income, and presence of past and current treatment for mental health difficulties.

Childhood Trauma Questionnaire—Short Form (CTQ-SF)

The CTQ-SF (Bernstein et al., 2003; Bernstein & Fink, 1998; Appendix C) is a 28-item retrospective self-report measure that screens respondents' history of abuse and neglect during childhood. Items are answered on a 5-point Likert scale to assess frequency, with responses ranging from "never true" to "very often true". This measure includes six scales, five of which measure the extent to which a respondent experienced (1) Emotional Abuse, (2) Physical Abuse, (3) Sexual Abuse, (4) Emotional Neglect, and (5) Physical Neglect, and the sixth measuring Minimization/Denial to detect underreporting of maltreatment (i.e., false negatives). Sample items from each scale, respectively, include: (1) "I felt that someone in my family hated me"; (2) "people in my family hit me so hard that it left me with bruises or marks"; (3) "someone tried to make me do sexual things or watch sexual things"; (4) "people in my family felt close to each other"; (5) "I didn't have enough to eat"; and (6) "there was nothing I wanted to change about my family" (Bernstein & Fink, 1998).

The test-retest estimate was high in a sample of adults with substance abuse (r = .86) (Bernstein & Fink, 1998). The CTQ-SF's validity is supported by its associations with other indices of childhood maltreatment (Bernstein & Fink, 1998), such as the Childhood Trauma Interview (Fink et al., 1995) and therapists' best-estimated maltreatment ratings (Bernstein et al., 2003). The validity is further supported by the CTQ-SF's associations with measures of common trauma consequences, including symptoms of depression, PTSD, dissociation, and alexithymia (Bernstein & Fink, 1998). Internal consistency reliability coefficients have been computed for various clinical and community samples. Bernstein and Fink (1998) report that Cronbach's alpha

coefficients ranged from satisfactory to excellent, with the median coefficients for each scale being reported as: Emotional Abuse (.89), Physical Abuse (.82), Sexual Abuse (.92), Emotional Neglect (.89), and Physical Neglect (.66; Bernstein & Fink, 1998). Cronbach's alpha estimates are as such in the present sample: Emotional Abuse (a =.87), Physical Abuse (a = .84), Sexual Abuse (a =.96), Emotional Neglect (a =.92), Physical Neglect (a =.80), and Denial (a = 87). The coefficient for the total of the adversity scales (i.e., excluding the denial subscale) was .93.

Adverse Childhood Experiences Questionnaire (ACEq)

The ACEq (Felitti et al., 1998; Frewen et al., 2019; Appendix D) was used as a second index of childhood adversity to account for the limitations of both measures. The ACEq assesses additional types of childhood adversity that are excluded from the CTQ-SF (i.e., experiences related to household dysfunction). However, the ACEq is limited in its capacity to assess the frequency of adversity, while the CTQ is sensitive to frequency and is, therefore, a superior index of adversity severity. The CTQ-SF also assesses for underreporting of maltreatment. Thus administering both measures allows for a more comprehensive assessment of childhood adversity.

The ACEq is an 11-item self-report measure used to retrospectively assess respondents' experience of childhood abuse, neglect, and household dysfunction. This questionnaire is similar to Felitti et al.'s (1998) original ACE measure, but has been updated to include neglect and additional categories of household dysfunction (Frewen et al., 2019). Ten categories of adverse childhood experiences are assessed: emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, parental separation or divorce, parent treated violently, presence of substance use in the household, presence of mental illness in the household, and incarceration of a household member. Items are answered on a 3-point scale, in which respondents indicate

whether the event occurred “never”, “at least once”, or “many times”. Sample items include: “Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? OR Act in a way that made you afraid that you might be physically hurt?” and “Were your parents ever separated or divorced?”. One additional follow-up item was added for the purposes of the present study to identify the most significant perpetrator(s) of maltreatment; this approach is consistent with Taylor's (2020) approach to examining forgiveness related to childhood adversity.

The ACEq’s validity is supported by displaying expected associations with related constructs, including systematic relationships with adult attachment styles which serve as an indicator of parenting difficulties during childhood (Murphy et al., 2014). The validity is further supported by the ACEq’s associations with measures of common childhood adversity consequences, including symptoms of post-traumatic stress disorder and complex post-traumatic stress disorder (Frewen et al., 2019). The ACEq measure displayed a high internal consistency in a combined clinical and community sample (a = .88; Murphy et al., 2014). In the present study, the ACEq was administered in Session One as a screening instrument only. The ACEq was also administered in Session Two, concurrently with the CTQ, thus only the ACEq scores collected in Session Two were used with the CTQ to form key variable of “childhood adversity”. In the present sample, the Cronbach’s alpha coefficient for Session Two's ACEq is .77.

Rye Forgiveness Scale (RFS)

The RFS (Rye et al., 2001; Appendix E) is a 15-item self-report measure used to assess the affective, cognitive, and behavioural responses exhibited towards a specific offender. In the present study, this was used to measure participants’ current level of forgiving attitudes, thoughts, and feelings about the individual they previously identified as being most significant to

their childhood adversity in the ACEq; this approach is consistent with Taylor's (2020) approach to measuring interpersonal state-forgiveness related to childhood adversity. Items are answered on a 5-point Likert scale, with responses ranging from “strongly disagree” to “strongly agree”. The two subscales—Absence of Negative and Presence of Positive—can be combined to generate a total RFS score, in which higher scores indicate greater state-forgiveness. Sample items include “I can't stop thinking about how I was wronged by this person” from the Absence of Negative subscale, and “I hope the person who wronged me is treated fairly by others in the future” from the Presence of Positive subscale.

Validity is evidenced by the significant associations between the RFS scores and another self-report interpersonal forgiveness measure—the Enright Forgiveness Inventory (Enright & Rique, 2004)—and observer measures of forgiveness (Worthington et al., 2015). The RFS’ validity is further supported by its associations with related constructs being as expected; for example, the RFS is negatively correlated with state and trait anger and positively correlated with measures of well-being (Rye et al., 2001). Validity is also demonstrated through forgiveness intervention studies in which RFS scores (a) increased post-intervention, and (b) were predictive of mental health improvements as expected (Worthington et al., 2015). In Rye et al.'s (2001) sample of undergraduate students, the Cronbach’s alpha coefficients for the Absence of Negative and Presence of Positive subscales were .86 and .85, respectively, and .87 for the overall scale. The test-retest reliability estimates in the same sample were acceptable for the total scale (r = .80) and each subscale independently (r = .76 for both) over an average of 15.2 days. In the present sample, Cronbach’s alpha coefficients for the Absence of Negative and Presence of Positive subscales were .89 and .90, respectively, and .91 for the overall scale.

Past Response Towards a Transgressor (PT)

This 15-item self-report measure was created for the purposes of the present study (see Appendix F) to assess participants' past unforgiving affective, cognitive, and behavioural responses towards the individual they identify as being most responsible for their childhood adversity. Respondents are instructed to think about the height of their negative attitudes and feelings towards the transgressor identified and report the thoughts, feelings, and behaviours they experienced during that time period. Items are responded to on a 5-point Likert scale, with responses ranging from "strongly disagree" to "strongly agree". The two subscales—Past Absence of Negative and Past Presence of Positive—can be combined to generate a total score, in which lower scores indicate more negative past reactions to the identified transgressor. Sample items include "I couldn't stop thinking about how I was wronged by this person" from the Absence of Negative subscale, and "I hoped the person who wronged me was treated fairly by others" from the Past Presence of Positive subscale. Given that this novel measure was developed for the purposes of the present research, the psychometric properties have yet to be examined. However, the measure was created by adapting the Rye Forgiveness Scale (Rye et al., 2001), which has evidence supporting its reliability and validity; such evidence is summarized in the previous paragraph. In the present sample, Cronbach's alpha for the Absence of Negative and Presence of Positive subscales were .79 and .81, respectively, and .83 for the overall scale.

State Self-Forgiveness Scale (SSFS)

The SSFS (Wohl et al., 2008; Appendix G) is a 17-item self-report measure that assesses the forgiving feelings, actions, and beliefs that a respondent experiences towards themselves for a specific transgression (i.e., state self-forgiveness). In the present study, this was used to measure participants' current forgiving feelings, actions, and beliefs towards themselves in

response to their childhood adversity. Items are responded to on a 7-point scale ranging from "not at all" to "completely". The scale consists of two subscales: Self-Forgiving Feelings and Actions, and Self-Forgiving Beliefs; respectively, sample items for each subscale include "as I consider what I did that was wrong, I feel accepting of myself", and "as I consider what I did that was wrong, I believe I am a bad person (reverse scored)". The SSFS' convergent and discriminant validity is supported by the associations between the SSFS and related and unrelated constructs being as expected. Analyses revealed that the SSFS has negative relationships with measures of depression and self-blame, and is distinct from measures of interpersonal trait-forgiveness, state self-esteem, and life satisfaction. Furthermore, validity has also been demonstrated through forgiveness intervention studies in which (a) SSFS scores increased post-intervention (Cornish & Wade, 2015; Griffin et al., 2015a), and (b) increases of SSFS scores predicted lower psychological stress after intervention (Cornish & Wade, 2015).

In the present study, minor adaptions to the SSFS were made to make the measure more appropriate for the target population. Each item on the Self-Forgiving Feelings and Actions subscale is originally prefaced with "As I consider what I did that was wrong, I…"), and each item on the Self-Forgiving Beliefs subscale is originally prefaced with "As I consider what I did that was wrong, I believe I am…". Respectively, the prefaces were changed to "As I consider what happened, I…" and "As I consider what happened, I believe I am…". This measure was also prefaced with a statement to clarify that participants should respond to items based on their involvement during their childhood adversity. While research shows that victims may place subjective blame on themselves (Babcock & DePrince, 2012; Boyraz & Waits, 2018), from an objective standpoint, they are not the transgressors. To make the measure more appropriate for a victimized population, these alterations were meant to avoid reinforcing or implying that

participants are at fault for their childhood adversity, to avoid excess risk of negative emotional reactions during participation, and to ensure instruction clarity. The internal consistency estimates for each subscale range from *a* = .74-.91 and *a* = .78-.92, respectively (Bell et al., 2017; Griffin et al., 2015a; Wohl et al., 2008). Cronbach's alpha coefficients are also satisfactory for the total scale—.91 in an undergraduate student sample (Bell et al., 2017) and .94 in a general adult sample (Cornish & Wade, 2015). Congruent with past literature, the present sample displays high internal consistency estimates for the total scale (.97), the Self-Forgiving Feelings and Actions subscale (.95), and the Self-Forgiving Beliefs subscale (.95).

Past Response to Self (PSlf)

This 17-item self-report measure was created for the purposes of the present research (see Appendix H) to assess participants' past unforgiving feelings, actions, and beliefs that a respondent experiences towards themselves for their childhood adversity. Respondents are instructed to think about the height of their negative attitudes and feelings towards themselves in response to their childhood adversity and answer items in accordance with that time period. The scale consists of two subscales: Past Self Feelings and Actions, and Past Self Beliefs. Respectively, the instructions for each subscale are "In the past, when I considered what happened I…" and "In the past, when I considered what happened, I believed I was…". Items are responded to on a 7-point scale ranging from "not at all" to "completely". Sample items include "In the past, when I considered what happened, I….showed myself compassion" and " In the past, when I considered what happened, I believed I was…a bad person". Given that this novel measure was developed for the purposes of the present research, reliability and validity estimates are unavailable. However, the measure was created by adapting the State Self-Forgiveness Scale (Wohl et al., 2008), which has evidence supporting its reliability and validity;

such evidence is summarized in the previous paragraph. The present sample displays excellent internal consistency estimates for the Self-Forgiving Feelings and Actions subscale (a = .95), the Self-Forgiving Beliefs subscale (a = .94), and the total scale (.96).

State-Forgiveness of Situations (StFSit)

There are currently no established measures of *state*-forgiveness of situations, and only one *trait*-forgiveness measure incorporates forgiveness of situations—the Heartland Forgiveness Scale (HFS; Thompson et al., 2005). Therefore, for the purposes of the present study, the HFS' Forgiveness of Situations subscale was adapted into a state measurement to assess the extent to which individuals have forgiven their childhood adversity as an abstract situation (i.e., reductions in negative thoughts and emotions aimed towards the situation itself, and not the self or other individuals). The adapted measure (see Appendix I) contains seven self-report items that are responded to on a 7-point Likert scale that ranges from "strongly disagree" to "strongly agree". Samples of the adapted items include "When I think back to what happened, I am understanding of the bad circumstances I faced" and "I have let go of negative thoughts about the bad circumstances".

Since this measurement was adapted for the present study, the psychometric properties have yet to be examined. The original HFS, however, has evidence to suggest that the measure has acceptable validity and reliability. Although the HFS is the only existing self-report forgiveness measure that assesses respondents' dispositional forgiveness of situations, the HFS Situation subscale is positively correlated to other self-report measures of dispositional forgiveness, including Mauger et al.'s (1992) Forgiveness of Self and Forgiveness of Others scales, and the Multidimensional Forgiveness Inventory (Tangney et al., 1999). Validity is further supported by associations with related constructs being as expected—for example, the

HFS Situation subscale is positively correlated with life satisfaction and negatively correlated with depression and trait anger (Worthington et al., 2015). Internal consistency estimates for the HFS's Situation subscale are sufficient, ranging from .77 to .82 in student and community samples (Thompson et al., 2005). The subscale also evidences sufficient three-week temporal stability (r = .77) but slightly lower nine-month temporal stability (r = .68) in student and community samples, respectively (Thompson et al., 2005). In the present sample, Cronbach's alpha is .85, indicating good internal consistency.

Past Response to Situations (PSt)

This seven-item self-report measure was created for the purpose of the present research (see Appendix J) to assess participants' past unforgiving thoughts and emotions aimed towards their childhood adversity as an abstract situation (i.e., the situation itself, and not the self or others). Items are responded to on a 7-point Likert scale that ranges from "strongly disagree" to "strongly agree"; responses are totalled to produce one total score. Sample items include "I was understanding of the bad circumstances I faced" and "I thought negatively about the circumstances." Respondents are instructed to think about the height of their negative attitudes and feelings towards the abstract situations related to their childhood adversity and report the thoughts and feelings they experienced during that time period. Given that this novel measure was developed for the purposes of the present research, reliability and validity estimates are unavailable. However, this measure was created by adapting the Heartland Forgiveness Scale's Forgiveness of Situations subscale (Thompson et al., 2005), which has evidence supporting its reliability and validity; such evidence is summarized in the previous description of the State-Forgiveness of Situations measure. In the present sample, Cronbach's alpha is .70, indicating an acceptable, albeit relatively low, internal consistency.

Self-Reporting Questionnaire (SRQ-20)

The SRQ-20 (Beusenberg et al., 1994; Appendix K) is a 20-item measure of psychological distress experienced by respondents over the preceding four weeks and was developed to screen respondents for mental health problems. The SRQ-20 can be administered as either a self-report questionnaire or interview. In the present research, it was used as an index of psychological distress and was self-administered as a questionnaire. Items are answered on a dichotomous scale with the response options "yes" and "no; responses are summed to produce one total score for which higher values indicate higher levels of psychological distress. Sample items include "do you find it difficult to enjoy your daily activities?" and "do you feel nervous, tense, or worried?".

Validity of the SRQ-20 is supported by its associations with other indices of psychological distress, including the Patient Health Questionnaire-4 (Kroenke et al., 2009), the Distress Questionnaire-5 (Batterham et al., 2016), Kessler-10 (Kessler et al., 2002), and the Kessler-6 (Batterham et al., 2018; Furukawa et al., 2003). The SRQ-20 displays predictive validity by its positive associations with common mental disorders, such as social anxiety disorder, panic disorder, major depressive disorder, and generalized anxiety disorder. The measure also evidenced superior sensitivity and specificity as a screening instrument when compared to other measures of psychological distress (Batterham et al., 2018). In support of its reliability, the SRQ-20 demonstrated high internal consistency in a large Australian adult sample (a = .91). In the present sample, Cronbach's alpha is excellent (a = .92).

Distress Questionnaire-5 (DQ5)

The DQ5 (Batterham et al., 2016; Appendix L) is a 5-item self-report measure of psychological distress experienced by respondents over the preceding four weeks and was

developed to be a brief screener of mental health problems in the general population and health settings. In the present study, it was used as a measure of psychological distress. Items are answered on a 5-point scale with responses ranging from "never" to "always"; responses are summed to produce one total score with higher scores indicating greater distress. Sample items include "my worries overwhelmed me" and "I found social settings upsetting".

Evidence supports the measure's reliability and validity. The DQ5 displayed high internal consistency in two large Australian adult samples (a = .86 and .91; Batterham et al., 2016, 2018). Validity is supported by its associations with other indices of psychological distress, including the Patient Health Questionnaire-4 (Kroenke et al., 2009), Kessler-10 (Kessler et al., 2002), and the Kessler-6 (Batterham et al., 2018; Furukawa et al., 2003). The DQ5 also displays predictive validity by its ability to identify common mental disorders—the measure was positively correlated with DSM-5 criteria for seven disorders, including social anxiety disorder, panic disorder, major depressive disorder, generalized anxiety disorder, obsessive-compulsive disorder, post-traumatic stress disorder, and attention-deficit hyperactivity disorder (Batterham et al., 2016). Research also suggests that the DQ5 is a more robust screener of psychological distress than eight other self-report measures of psychological distress (Batterham et al., 2018). Cronbach's alpha is .91 in the present sample, suggesting excellent internal consistency.

Depression Anxiety Stress Scales – Short Form (DASS-21)

The DASS-21 (Lovibond & Lovibond, 1995; Appendix Q) is a shortened version of the original 42-item DASS (Lovibond & Lovibond, 1995). The DASS-21 is a 21-item self-report measure of psychological distress experienced by respondents over the preceding two weeks and was developed to measure negative emotional states with three subscales—Depression, Anxiety, and Stress. In the present study it was used as a measure of psychological distress. Items are

answered on a 4-point scale with responses ranging from “did not apply to me at all” to “applied to me very much, or most of the time”. Responses are summed to produce a total score for each subscale, with higher scores indicating greater negative affect. Sample items include “I felt that I had nothing to look forward to”, “I found that I was very irritable”, and “I found it difficult to tolerate interruptions to what I was doing”.

Evidence supports the measure’s validity and reliability. Concurrent validity is supported by subscales’ associations with measures of the same constructs (Antony et al., 1998), including the Beck Depression Inventory (Beck, 1979) and the Beck Anxiety Inventory (Beck et al., 1988). Validity is further supported by the subscales’ divergent associations with other measures being as expected (e.g., the Beck Depression Inventory had a larger correlation with the DASS-21’s Depression subscale than Anxiety subscale). The DASS-21’s predictive validity is also supported by subscales’ ability to differentially identify common mental disorders—the expected subscales were positively correlated with DSM-4 criteria for disorders, including panic disorder, obsessive-compulsive disorder, social phobia, specific phobia, and major depressive disorder (Antony et al., 1998)**.** Adequate internal consistency estimates have been found in community and clinical samples for the Depression subscale (a = .88 to .94), Anxiety subscale (a = .79 to .87), and Stress subscale (a = .89 to .91; Antony et al., 1998; Crawford et al., 2011; Henry & Crawford, 2005). Internal consistency estimates in the present sample are similar to those found in past literature and are as such: Depression subscale (a = .94), Anxiety subscale (a = .88), Stress subscale (a = .90), and the total scale (a = .96).

Data preparation and analysis plan

A total of 316 responses to Session Two were collected—two observations were immediately removed for being incomplete, leaving 314 observations. Participants’ Session Two

data were matched with their Session One responses by matching their Mturk IDs, combining the matched data into one dataset. The combined dataset was de-identified by deleting and replacing Mturk IDs with new arbitrary participant IDs. Email addresses were also removed. A Little's MCAR test (Little, 1988), yielded non-significant results, indicating that the data were missing completely at random (MCAR). This test also revealed that less than 5% of the overall data were missing, with no items exceeding 4.1% missing observations. An additional 3 observations were removed because they were missing more than 10% of data. Missing items were imputed using participant scale mean substitution for observations containing at least 80% of each key variable scale. The only exception was for scales or subscales comprised of 5 items, for which means were still imputed if participants had responded to at least 3 items (i.e., 60% of the scale/subscale). This resulted in an additional 16 observations being removed for having an insufficient amount of scale data. *Z* scores were computed to identify univariate outliers outside the *z* score range +/- 3.29 ($p < .001$; Tabachnick & Fidell, 2013). Structural equation modeling (SEM) is highly sensitive to outliers (Yuan & Zhong, 2013), thus univariate outliers were addressed by altering the raw score to be one point bigger or smaller than the next extreme score to prevent univariate outliers from distorting SEM model results. The Mahalanobis Distance (Mahalanobis, 1936)was used to identify 1 multivariate outlier. This observation was removed, resulting in a final sample of 294.

Power Analysis

A simulation approach was used to calculate the number of participants required for adequate statistical power by following the procedure outlined by Wang and Rhemtulla (2021). This procedure was conducted by using Wang and Rhemtulla's (2021) Shiny app, pwrSEM, which is designed for performing power analyses in structural equation models. A simulation for

each proposed mediation model was run 1000 times using correlation estimates informed by past literature (Agbaje et al., 2021; Carson et al., 2005; Cornish & Wade, 2015; Davis et al., 2015b; Fehr et al., 2010; Hayward et al., 2020; Messay et al., 2012; Min et al., 2017; Orcutt et al., 2005; Roubinov & Luecken, 2013; Snyder & Heinze, 2005; Song et al., 2020; Thompson et al., 2005; Wadsworth & Compas, 2002; Weinberg et al., 2014); the simulation resulting in the largest suggested sample size indicated that a sample of 275 participants will result in statistical power of .80.

Quantifying Forgiveness as Change

While most researchers generally agree that forgiveness involves *changes* in emotions, thoughts, motivations, or behaviours (Worthington, 2020), no investigations in which researchers employed indices of *change* to quantify forgiveness were identified, and this is the first study to do so. It is important to examine indices of change because traditional measures of forgiveness are limited to capturing *current* emotions, thoughts, motivations, or behaviours. Two people might equally endorse a forgiveness question but have experienced different initial levels of unforgiveness—for instance, two people might respond to, "I have let go of my anger", with "strongly disagree", even if one individual felt rage while the other felt only mildly annoyed in response to the transgression. This raises the question: Is the item equally adept at quantifying "forgiveness" for these two individuals with different lived experiences? I argue, no, because these two respondents would be considered equally forgiving, even though one participant actually saw more emotional/cognitive/behavioural change than the other.

The difference between present responses (collected in Session Two) and past responses (collected in Session One) were computed for each forgiveness target (i.e., forgiveness of others, self, and situation) to quantify the amount of change experienced by each participant. This

created a new "net-forgiveness" item corresponding to each forgiveness measure item. These items were computed prior to univariate outlier transformations and multivariate outlier deletion. Cronbach's alpha scores for each new "net-forgiveness" scales are as such: Forgiveness of Others (a = .82), Forgiveness of Self (a = .94), and Forgiveness of Situation (a = .78). The total Cronbach's alpha for all net-forgiveness items together is .93, suggesting excellent internal consistency. Evidence from the present study also supports the convergent and discriminant validity of these new net-forgiveness scales, with associations between related and unrelated constructs being roughly as expected (see Table 2a and Table 2b in Appendix S).

Since this is a novel approach being adopted for this study, an exploratory factor analysis was conducted in IBM SPSS (Version 31) on the net-forgiveness scales to explore their underlying factor structure. The common factor analysis' output suggests that a one factor model is suitable for these items—Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy revealed a KMO value of 0.72, which exceeds the recommended threshold of 0.6 (Kaiser, 1970). Bartlett's Test of Sphericity was significant ($x^2[10] = 447.74$, $p < .001$). Principal axis factoring (PAF) was used to determine common variance, and a Direct Oblimin rotation was applied. The results indicated that a one-factor model was a better fit than a two-factor model—the scree plot displays a sharp elbow in which the eigenvalue drops to 1 on the second factor. Thus, a one-factor solution was adopted in the present study for net-forgiveness.

Statistical Analyses

Data cleaning and descriptive analyses were completed via IBM SPSS (Version 31). Structural equation modeling (SEM) was conducted via MPLUS (Version 9) to (a) create latent variables, (b) estimate the mediation and moderation models associated with my hypotheses, and (c) compute goodness of fit indices to compare models (i.e., the Log-Likelihood test, the Akaike

Information Criterion [AIC], and the Bayesian Information Criterion [BIC]). First, the Childhood Trauma Questionnaire (Bernstein et al., 2003; Bernstein & Fink, 1998; Appendix C) and the Adverse Childhood Experiences Questionnaire (Felitti et al., 1998; Frewen et al., 2019; Appendix D) created one latent variable to address each measure's limitations and create a more comprehensive index of childhood adversity. The Self Reporting Questionnaire (Beusenberg et al., 1994; Appendix K), the Distress Questionnaire-5 (Beusenberg et al., 1994; Appendix K), and the Depression Anxiety Stress Scales – Short Form (Lovibond & Lovibond, 1995; Appendix Q) were also combined into a latent variable to create one index of psychological distress. Finally, the three net-forgiveness scores associated with the three targets of forgiveness (i.e., forgiveness of others, self, and situation) were combined to create one latent variable to represent the total amount of change (i.e., forgiveness) experienced by each participant. Analyses associated with latent variables and hypotheses are outlined below.

Results

Descriptive Statistics

The present sample reported higher levels of childhood adversity—i.e., CTQ and ACEq means are larger than that found in past community samples (Bernstein et al., 2003; Felitti et al., 1998; Frewen et al., 2019). This is likely due to the present study's recruitment process in which participants were only invited to complete Session Two if they reported childhood adversity during Session One (see section "Participants and Procedures" above for information regarding inclusion criteria). The present sample also reported a higher degree of psychological distress than that found in past community samples, as evidenced by larger means on the SRQ, DQ5, and DASS-21 subscales (Batterham et al., 2016; Beusenberg et al., 1994; Lovibond & Lovibond, 1995; Sinclair et al., 2012).This is likely explained by the present sample's elevated childhood

adversity, as past research suggests that childhood adversity is associated with increased mental health difficulties in adulthood (Bellis et al., 2014; Hughes et al., 2017; Manyema et al., 2018; Mersky et al., 2013; Morton et al., 2019). Although the forgiveness measures adapted for the present study (i.e., net-forgiveness scores, Session One's past unforgiveness measures, and Session Two's state-forgiveness of situation measure) cannot be compared to past literature, the present sample evidenced lower means on the Rye Forgiveness Scale (RFS) and State Self-Forgiveness Scale (SSFS) administered in Session Two (Rye et al., 2001; Wohl et al., 2008). This suggests that the sample experienced less self-reported forgiveness than previous samples—this may be because the present sample reported elevated childhood adversity and research suggests that this population may struggle to forgive more than the general community (Freedman & Knupp, 2003; Freedman & Enright, 1996; Taylor, 2020). All scale means and standard deviations associated with each self-report measure are presented in Table 3.

Table 3

Descriptive Statistics for Observed Variables

Observed Variable	M	SD	Min	Max	Skew	Kurtosis
CTQ_PhysAb	9.968	4.530	5.000	22.670	0.884	-0.058
CTQ_SexualAb	9.707	6.225	5.000	25.000	1.103	-0.048
CTQ_EmoNeg	15.119	5.243	5.000	25.000	0.056	-0.775
CTQ_PhysNeg	10.003	4.282	5.000	24.000	0.789	-0.156
CTQ_EmoAb	16.092	5.381	5.000	25.000	-0.106	-0.907
ACEq	9.253	4.688	1.000	22.000	0.392	-0.518
SRQ	9.538	5.897	0.000	20.000	-0.023	-1.186
DQ5	14.368	5.300	5.000	25.000	-0.038	-0.866

Observed Variable	M	SD	Min	Max	Skew	Kurtosis
DASS_Dep	17.609	13.956	0.000	42.000	0.286	-1.298
DASS_Anx	12.815	11.259	0.000	42.000	0.711	-0.473
DASS_Stress	17.860	11.487	0.000	42.000	0.274	-0.980
NetFS_Feelings	10.528	12.290	-28.400	48.000	0.437	0.551
NetFS_Beliefs	13.340	14.265	-34.000	54.000	0.187	0.038
NetFO_Positive	2.681	4.367	-10.200	17.000	0.235	0.622
NetFO_AbNeg	10.375	7.290	-13.670	34.000	0.624	0.715
NetF_Situation	10.268	9.083	-14.000	38.000	0.310	-0.026
T1FO_Positive	11.144	4.543	5.000	24.000	0.469	-0.558
T1FO_AbNeg	20.643	6.242	10.000	46.000	0.845	1.125
T1FS_Feelings	27.592	12.768	8.000	56.000	0.329	-0.774
T1FS_Beliefs	35.680	14.828	9.000	63.000	-0.009	-0.985
T1F_Situation	17.606	6.092	7.000	43.000	0.641	0.521
T2FO_Positive	13.800	5.624	5.000	25.000	0.044	-0.932
T2FO_AbNeg	30.999	8.926	10.000	50.000	0.078	-0.541
T2FS_Feelings	38.065	12.411	8.000	56.000	-0.449	-0.548
T2FS_Beliefs	48.994	12.407	9.000	63.000	-1.171	1.139
T2F_Situation	27.876	9.108	7.000	49.000	0.078	-0.260

Note. N = 294. M = Mean. SD = Standard Deviation. FS_Feelings = Self-Forgiving Feelings and Actions subscale. FS_Beliefs = Self-Forgiving Beliefs subscale. FO_Positive = Forgiveness of Others Presence of Positive subscale. FO_AbNeg = Forgiveness of Others Absence of Negative subscale. F_Situation = Forgiveness of situations. T1 = Session One. T2 = Session Two.

Creating Latent Variables

A confirmatory factor analysis was conducted to evaluate the factor suitability of the observed variables' subscale scores. The model was estimated using Maximum Likelihood Robust (MLR), to accommodate the non-normally distributed observed variables. The hypothesized factor model initially displayed poor overall fit: x^2 (101) = 439.75, $p < .001$, CFI = .87, TLI = .84, RMSEA = .11 (90% CI [.10, .12]), SRMR = .08). It was hypothesized to be because of conceptual overlap between certain subscales sharing residual covariance. The SEM model was updated to define correlational relationships among each latent variable's observed subscales, informed by theoretical and correlational information. This updated factor model displayed good overall fit: x^2 (95) = 231.93, $p < .001$, CFI = .95, TLI = .94, RMSEA = .07 (90% CI [.06, .08]), and SRMR = .07). The convergent validity of these scales is adequately supported by each latent variables' standardized factor loadings, which all reach statistical significance ($p <$ .001). The standardized factor loadings ranged from .42 to .86 for childhood adversity, from .38 to.85 for forgiveness, and .79 to .92 for psychological distress. See Table 4 for all standardized factor loadings.

Table 4

Standardized Factor Loading from Confirmatory Factor Analysis

Latent Variable	Observed Variable	Standardized Loading	SE	p
Childhood Adversity	CTQ_PhysAb	0.723	0.036	< 0.001
	CTQ_SexualAb	0.422	0.059	< 0.001
	CTQ_EmoNeg	0.615	0.055	< 0.001
	CTQ_PhysNeg	0.772	0.036	< 0.001

Latent Variable	Observed Variable	Standardized Loading	SE	p
	CTQ_EmoAb	0.726	0.031	< 0.001
	ACEq	0.862	0.027	< 0.001
Net-Forgiveness	FS_Feelings	0.499	0.058	< 0.001
	FS_Beliefs	0.375	0.061	< 0.001
	FO_Positive	0.543	0.047	< 0.001
	FO_AbNeg	0.740	0.044	< 0.001
	F_Situation	0.848	0.038	< 0.001
Psychological Distress	SRQ	0.897	0.016	< 0.001
	DQ5	0.921	0.013	< 0.001
	DASS_Dep	0.886	0.016	< 0.001
	DASS_Anx	0.789	0.024	< 0.001
	DASS_Stress	0.836	0.021	< 0.001

Note. ACEq collected in Session Two used. FS_Feelings = Self-Forgiving Feelings and Actions subscale. FS_Beliefs = Self-Forgiving Beliefs subscale. FO_Positive = Forgiveness of Others Presence of Positive subscale. FO_AbNeg = Forgiveness of Others Absence of Negative subscale. F_Situation = Forgiveness of situations.

Mediation analyses

The first hypothesis was tested using SEM to estimate a path model using MLR to examine if forgiveness explains (or mediates) the relationship between childhood adversity and psychological distress (see Figure 1 in Appendix T). All path coefficients reached statistical significance. The total effect of childhood adversity on psychological distress was significant (β

= .502, *SE* = .121, $p < .001$). The direct effect remained significant after controlling for forgiveness ($\beta = .20$, *SE* = .064, $p = .002$). Childhood adversity significantly predicted lower levels of forgiveness ($\beta = -.263$, *SE* = .074, $p < .001$), and lower levels of forgiveness significantly predicted higher levels of psychological distress ($\beta = -.419$, *SE* = .063, $p < .001$). The indirect effect was also significant, evidencing a mediation effect ($\beta = .178$, *SE* = .055, 95% CI [.04, .32], $p = .001$). The model accounted for 26% of the total variance in psychological distress ($R^2 = .260$, $p < .001$), and 7% of the variance in forgiveness ($R^2 = .069$, $p = .075$).

Moderation analyses

A moderation path model was estimated using MLR to test the hypothesis that forgiveness will diminish the relationship between childhood adversity and psychological distress (see Figure 2 in Appendix T). Childhood adversity significantly predicted psychological distress ($\beta = .193$, *SE* = .064, 95% CI [.027, .359], $p = .003$). Forgiveness also significantly, and negatively, predicted psychological distress ($\beta = -.409$, *SE* = .065, 95% CI [-.577, -.241], $p < .001$). In contrast, the interaction between childhood adversity and forgiveness did not significantly predict psychological distress ($\beta = -.027$, *SE* = .068, 95% CI [-.202, .149], $p = .697$), suggesting that forgiveness did not significantly attenuate nor augment the relationship between childhood adversity and psychological distress. Thus, forgiveness did not moderate the association between childhood adversity and psychological distress in the present sample. The model explained 25% of the variance in psychological distress ($R^2 = .25$, *SE* = .055, $p < .001$). This moderation model had larger AIC and BIC than the mediation model, and a smaller log-likelihood suggesting inferior model fit (see Table 5).

Table 5

Model Fit Indices for Competing Models

Model	Log-Likelihood	AIC	BIC
Mediation	-14,592.625	29,299.251	29,509.215
Moderation	-14,616.614	29,347.228	29,557.192

Discussion

In the present study, mediation and moderation models were estimated and compared to assess the extent to which forgiveness of childhood adversities explains or influences the relationship between childhood adversity and psychological distress. While the estimated mediation model was statistically significant, no moderating effect emerged. Goodness of fit indices further suggest that the mediation model better explained the relationships between childhood adversity, forgiveness, and psychological distress than the moderation model. These results suggest that childhood adversity may undermine individuals' ability to forgive their childhood adversities, which in turn may contribute to increased psychological distress.

A large body of research has evidenced that childhood adversity is associated with undesirable physical and mental health difficulties in adulthood (Bellis et al., 2014; Burczycka & Conroy, 2017; Hughes et al., 2017; Manyema et al., 2018; Mersky et al., 2013; Mondi et al., 2017; Morton et al., 2019). This includes elevated day-to-day psychological distress—encompassing depression, anxiety, and stress—which was the outcome variable examined in the present study. Given that childhood adversity is a widespread issue, understanding the pathways in which childhood adversity leads to adulthood outcomes may be useful for informing treatment plans and prevention initiatives. While there is considerable evidence connecting childhood adversity with health consequences later in life, there may be factors that protect against and/or reduce these adverse outcomes. For instance, research suggests that childhood adversity may

undermine the development of learning adaptive coping responses, which in turn may lead to adulthood difficulties (Min et al., 2017; Roubinov & Luecken, 2013; Sheffler et al., 2019; Song et al., 2020). The present study focused on forgiveness which has been identified as a coping response that may affect the outcomes associated with early life adversity (Banyard et al., 2017; Morton et al., 2019; Ramsey, 2019; Taylor, 2020; Wallace, 2020).

Forgiveness is an elusive construct for which researchers have yet to reach a consensus on how best to define and operationalize it. The stress-and-coping model was adopted in the present study, which conceptualizes forgiveness as a coping response one may employ in reaction to the stress that follows a transgression (Strelan, 2020). Despite research suggesting that forgiveness may lead to desirable physical and mental health outcomes (Bell et al., 2017; Cornish & Wade, 2015; Fincham et al., 2005; Freedman & Knupp, 2003; Greenberg et al., 2008; Griffin et al., 2015b; Hansen et al., 2009; Ingersoll-Dayton et al., 2008; Lin et al., 2004; Seawell et al., 2014; Waltman et al., 2009; Woldarsky et al., 2014), there is limited literature focusing on forgiveness in the context of childhood adversity. Most of this limited literature focuses on interpersonal forgiveness while excluding forgiveness towards the self and abstract situation, making it unclear how forgiving these additional targets affect those who experienced childhood adversity. Furthermore, while trait forgiveness (i.e., an individual's tendency to forgive across time and situation) has been examined in moderation and mediation models (Morton et al., 2019; Rahmandani et al., 2022; Ramsey, 2019), such investigations have not occurred with state forgiveness (i.e., an individual's forgiveness towards a specific transgression or transgressor), thus limiting our understanding of the pathways in which forgiveness may lead to desirable adulthood health outcomes for those who experienced childhood adversity. The present study sought to address these literature gaps by investigating the theoretical foundation of this

relationship. More specifically, a mediation model and moderation model were estimated and compared to explore how forgiveness may benefit adults who experienced childhood adversity. The results associated with each hypothesis are discussed below.

Does Forgiveness Mediate the Relationship between Childhood Adversity and Psychological Distress? (Hypothesis One)

As expected, childhood adversity significantly predicted adulthood psychological distress both before and after controlling for forgiveness. The positive direction and moderate size of this relationship are similar to that found in past literature (Hughes et al., 2017; Manyema et al., 2018; Yeo et al., 2024), further suggesting that early-life adversity leads to long-term vulnerability to anxiety, depression, and other forms of emotional distress in adulthood. It was hypothesized that forgiveness of childhood adversities would explain (or mediate) this relationship between childhood adversity and psychological distress. State forgiveness of childhood adversities was operationalized as the amount of change between individuals' past peak unforgiveness and present unforgiveness towards all three forgiveness targets (i.e., the person identified by respondents as being the most responsible for their childhood adversity, themselves, and the overall situation of their childhood adversity).

In support of this hypothesis, forgiveness partially explained the association between childhood adversity and psychological distress, such that higher childhood adversity predicted lower forgiveness, which in turn predicted higher adulthood psychological distress. Moreover, the indirect effect of childhood adversity on psychological distress through forgiveness was significant, suggesting that forgiveness partially explains how early life adversity contributes to later life psychological distress. The estimated mediation model explained 26% of the variance in psychological distress; this indicates that, together, childhood adversity and forgiveness account

for a meaningful portion of the differences in psychological distress among the present sample. However, childhood adversity explained a smaller proportion of the variance in forgiveness—only 6.9%—implying that additional factors excluded from the present study may also predict the amount an individual has forgiven their childhood adversities. Insight into what these factors are may be found in past forgiveness literature—for instance, researchers have established reliable associations between the Big Five personality traits and forgiveness behaviours. For example, research suggests that those who score low on neuroticism may be less likely to forgive, while those scoring high in agreeableness may be *more* likely to forgive (Hodge et al., 2020). Additional factors that may also influence individual's forgiveness behaviours include, transgression characteristics (e.g., severity of offense; Fincham et al., 2005), relationship characteristics (relational closeness between transgressor and transgressed; Koutsos et al., 2008), and individuals' cognitive factors (e.g., rumination; Stoia-Caraballo et al., 2008). Future studies may benefit from including such factors in future mediation models to further explore the pathway in which childhood adversity may lead to a lack of forgiveness.

This is the first study to examine the mediating effects of state-forgiveness in the relationship between early life adversity and psychological distress, however, *trait*-forgiveness has been recently been examined. Rahmandani et al. (2022) found that overall trait-forgiveness mediated the relationship between ACEs and adulthood depression, in that ACEs predicted less trait-forgiveness which in turn predicted heightened depression in adulthood. Interestingly, the direct and indirect effect sizes were similar to that of the present study. Additionally, Rahmandani et al. (2022) found that ACEs and trait-forgiveness accounted for 25.5% of the variance in depression, which is similar to the present study's finding that childhood adversity and state-forgiveness accounted for 26% of the variance in psychological distress. Thus, it may

be that both trait- and state-forgiveness affect adulthood psychological distress in a similar fashion. Alternatively, perhaps the present study conflates trait- and state-forgiveness since research suggests that these constructs are predictive of each other (Stackhouse, 2019); thus it could be that individuals who have a general tendency to forgive (i.e., trait-forgiveness) are more likely to independently (a) experience less day-to-day psychological distress and (b) forgive their childhood adversities. However, the present study found that childhood adversity accounted for 7% of the variance in state-forgiveness, while Rahmandani et al. (2022) found ACEs accounted for only 2% of the variance in trait-forgiveness. This suggests that childhood adversity may impede not only the forgiveness of those childhood adversities, but also, to a lesser extent, an individual's tendency to forgive across time and situation. Future studies could disentangle these constructs by controlling for trait-forgiveness to further clarify the ways in which forgiveness may benefit this population.

Although Rahmandani et al. (2022) found that overall trait-forgiveness mediated the relationship between ACEs and adulthood depression, this pattern did not emerge for all targets of forgiveness when examined separately. While self-forgiveness and forgiveness of situations were both mediators, forgiveness of others was not; furthermore, ACEs did not predict forgiveness of others, nor did forgiveness of others predict depression. This suggests that (a) childhood adversity may affect the development of trait-forgiveness of the self and abstract situations but not interpersonal forgiveness, and (b) that the tendency to forgive the self and situations may be more important in promoting day-to-day psychological well-being than the tendency to forgive other individuals. It is unclear how these results relate to the present study, which only examines overall *state*-forgiveness towards childhood adversities, and future

investigations are required to expand on the present study to explore and compare the mediating effects of the three forgiveness targets.

Does Forgiveness Moderate the Relationship between Childhood Adversity and Psychological Distress? (Hypothesis Two)

It was hypothesized that forgiveness would influence (or moderate) the association between childhood and adulthood psychological adjustment, such that as values of forgiveness increase, the relationship between childhood adversity and psychological distress would decrease. In other words, it was expected that the association between childhood adversity and adulthood psychological distress would be diminished for those who were able to forgive their childhood adversities. Contrary to this hypothesis, the interaction between childhood adversity and forgiveness was non-significant. Thus, while forgiveness independently predicted less psychological distress, forgiveness did not attenuate or augment the relationship between childhood adversity and psychological distress in the present sample. These findings suggest that a moderation framework may not fully capture the nature of the relationships among childhood adversity, forgiveness, and later adulthood distress.

This outcome is not entirely unexpected because the evidence and reasoning to support a moderation model is mixed and limited. This is also the first study to examine the *moderating* effects of state-forgiveness in the relationship between early life adversity and psychological distress, however, there are some investigations of trait-forgiveness that have produced mixed results. While Ramsey (2019) found that dispositional self-forgiveness moderated the relationships between three indices of childhood adversity (i.e., physical abuse, emotional abuse, and total trauma) and adulthood depression symptoms, dispositional forgiveness of others did *not* moderate any of these relationships. Rahmandani et al. (2022) also examined adulthood

depression but found results inverse to Ramsey's (2019)—this time interpersonal trait-forgiveness moderated the relationship between ACEs and adulthood depression, while self-forgiveness and forgiveness of situations did not. In another study, neither self-forgiveness *nor* interpersonal forgiveness acted as a moderator between childhood sexual abuse and adulthood life satisfaction (Morton, 2019).

It is unclear why these results contradict each other. It may be that distinct forms of childhood adversity are associated with different causal pathways given these studies' different focuses—e.g., focusing solely on sexual abuse (Morton, 2019) vs. more comprehensive ACEs (Rahmandani et al. 2022). Alternatively, it may be methodological differences between these studies causing inconsistencies in results, such as differences between samples (e.g., an adult Seventh-day Adventist cohort [Morton, 2019] vs. university students [Rahmandani et al. 2022]) or operational definitions of adversity (e.g., Morton [2019] examined participants who experienced sexual abuse during 0-8 *or* 8-18 years of age, while excluding participants who reported sexual abuse during *both* age categories and/or during adulthood). Recall that these studies examine *trait* forgiveness, while the present study examines *state* forgiveness. As such, additional investigations are required to test the replicability of the present results and expand our understanding of how forgiving one's childhood adversities may influence the relationships between specific forms of adversity and psychological outcomes in adulthood.

Comparing Theoretical Models (Hypothesis 3)

The results of testing hypotheses one and two suggest that forgiveness operates as a psychological mechanism rather than a buffer in the association between childhood adversity and adulthood psychological distress. This suggests that forgiveness may help explain *how* childhood adversity contributes to later adulthood distress, rather than forgiveness functioning as a

protective factor that weakens the impacts of childhood adversity. Hypothesis three was tested to garner further evidence for this interpretation via model comparison statistics—it was hypothesized that the way in which forgiveness relates to the relationship between childhood adversity and psychological distress would be better explained by a mediation model than moderation model, such that the mediation model examined to address hypothesis one would have superior goodness of fit when compared to the moderation models examined to address hypothesis two. As expected, the mediation model displayed superior model fit—sporting smaller AIC and BIC values, and a larger log-likelihood value—further supporting that the estimated mediation model was a more accurate representation of the relationships among childhood adversity, forgiveness, and psychological distress in the present sample, while the estimated moderation model does not fully capture the nature of how these variables relate to one another.

Implications

Although causality cannot be assessed given the cross-sectional nature of the present study, these results imply that forgiveness may function as a psychological mechanism that links childhood adversity to subsequent adulthood psychological distress experienced years later. In other words, those who experience greater amounts of childhood adversity are more likely to experience elevated day-to-day psychological distress (i.e., depression, anxiety, stress), and this relationship may be partially accounted for by the individual's lack of emotional change (i.e., lack of forgiveness). Such an interpretation of the present results may support the stress and coping model of forgiveness, in which forgiveness is conceptualized as a coping response. Within this theoretical model, a transgression is considered a stressor that leads to unforgiveness; in turn, individuals attempt to cope with the unpleasant state of unforgiveness by employing

coping responses. Forgiveness is one of many coping responses an individual may use (Strelan, 2020; Worthington, 2020), meanwhile, research suggests that the stress of childhood adversity may impede the development of adaptive coping skills (Min et al., 2017; Sheffler et al., 2019).

Thus, it may be that childhood adversity leads to less forgiveness because this population struggles to employ adaptive coping responses, like forgiveness, which in turn impedes psychological adjustment. Congruent with this interpretation, Sheffler et al. (2019) used a 20-year longitudinal study and found that the association between ACEs and adult health was mediated by coping responses, such that those who experienced ACEs were more likely to engage in maladaptive coping behaviours, which in turn predicted poor health outcomes. Similarly, evidence suggests that both family conflict before the age of 16 and childhood maltreatment are predictive of elevated depression symptoms during emerging adulthood, and that this relationship is mediated by the use of maladaptive coping responses (Roubinov & Luecken, 2013; Song et al., 2020).

Alternatively, perhaps forgiveness is distinct from coping responses and is better conceptualized as an index of healing, a behavioural outcome resulting from underdeveloped psychological coping skills, or a by-product of mental-health status. It could be that childhood adversity undermines the development of adaptive coping responses and that in turn prevents an individual from moving on from their past childhood adversities (i.e., prevents them from forgiving). Future investigations will benefit by investigating coping responses alongside state-forgiveness to further clarify the pathways in which childhood adversities lead to forgiveness. Such studies are required to further clarify how forgiveness is best conceptualized and, ultimately, how to best promote psychological adjustment in this population.

The present study's results may alternatively be explained outside of the stress-and-coping model of forgiveness, as causality cannot be assumed in the present study's cross-sectional design. It may be that experiencing greater degrees of adversity during childhood increases an individual's chance of developing mental health difficulties, creating a cumulative effect that makes it more difficult to heal and move on from childhood wounds. Furthermore, severe levels of childhood adversity may lead to PTSD symptoms that actively prevent individuals from moving on from their painful childhood experiences as they are forced to re-live their traumatic experiences via flashbacks, intrusive memories, and nightmares. Additionally, cognitive distortions and an avoidance of engaging with reminders of their trauma might further obstruct these individuals from being able to engage in emotionally and/or cognitively processing their childhood adversities.

Such an interpretation might explain why the present study's relationship between forgiveness and day-to-day psychological distress is a little larger than that reported in previous studies focusing on state-forgiveness (Messay et al., 2012; Stoia-Caraballo et al., 2008; Carson et al., 2005). However, these studies only examined interpersonal forgiveness, thus the present study's larger association between forgiveness of childhood adversities might be simply because the present study examined three forgiveness targets (i.e., others, self, situation). Similarly, it may be that childhood adversity is a foundational transgression that permeates everyday life more than the recent day-to-day interpersonal transgressions examined in past literature. Future studies are required to test replicability of the present results and elucidate the causal mechanisms involved.

As previously mentioned, childhood adversity explained a relatively small proportion of the variance in forgiveness (7%), implying that there are other factors not represented in the

present study that contribute to how much an individual forgave their childhood adversities. Most of the literature investigating forgiveness within this population examines *trait*-forgiveness (i.e., an individual's tendency to forgive across time and situation). As such, it is important for future researchers to identify causal factors that may hinder or promote forgiveness specifically related to childhood adversities. Such efforts may clarify the pathways in which early life adversity lead to day-to-day psychological distress, and further elucidate how forgiveness may be most accurately conceptualized. Past research has identified predictors of state-forgiveness that researchers may wish to include in future studies, including the Big Five personality traits, trait-forgiveness, and transgression characteristics (Brose et al., 2005; Stackhouse, 2019; Webster et al., 2020). Additional constructs of interest include post-traumatic growth (Ye et al., 2022), health behaviours (Long et al., 2020), adulthood life stressors (Manyema et al., 2018), and adult strengths (e.g., self-regulatory, meaning-making, interpersonal support; Banyard et al., 2017). Including such constructs in future research may clarify how and why this population experiences elevated psychological distress.

Forgiveness operationalized as a function of change

Recall that in the present study forgiveness was operationalized as the amount of change between individuals' past unforgiveness and present unforgiveness towards all three forgiveness targets (i.e., the person identified by respondents as being the most responsible for their childhood adversity, themselves, and the abstract situation of their childhood adversity). That is, during session one of data collection, participants were asked to think about a period of time in which they were the most resentful towards each forgiveness target and respond to traditional state-forgiveness measures while thinking about how they felt, thought, and behaved during that period of time. During session two of data collection, participants completed the same state-

forgiveness measures but were asked to do so while thinking about how they *currently* feel, think, and behave towards each forgiveness target. Forgiveness was then operationalized as the difference between an individual's peak response towards their childhood adversity targets (i.e., state-forgiveness measures in session one) and present response towards their childhood adversity targets (i.e., state-forgiveness measures in session two). Even though forgiveness refers to *changes* in negative emotions, thoughts, or motivations (Worthington, 2020), researchers have yet to operationalize forgiveness as a function of change in this manner.

In the present study, participants who experienced an increase in forgiving attitudes/feelings/behaviours between session one and session two reported experiencing less day-to-day psychological distress in adulthood. This operationalization teased apart individual's *amount of change* from their current feelings towards their childhood adversities; in contrast, traditional self-report measures of forgiveness are administered once to capture current attitudes/feelings/behaviours and are limited in that they may be influenced or distorted by individuals' current attitudes/feelings/behaviours. Thus, although causality cannot be determined in the present study, the relationship between forgiveness and psychological distress cannot merely be explained by (a) individuals currently feeling alright towards their childhood adversity being protected against psychological distress in adulthood, nor (b) that individuals experiencing less day-to-day psychological distress simply remember their childhood adversity more favourably. This suggests that forgiveness may actually promote psychological adjustment in this population and that individuals may benefit from transforming their response towards their childhood adversities.

Furthermore, it may be that forgiveness as operationalized in the present study represents the amount of healing experienced by an individual; it may be that more severe levels of

childhood adversity could be harder to emotionally heal from and thus result in less change in attitudes/feelings/behaviours. Perhaps in attempting to capture "forgiveness" the present study measured "psychological healing", although it is unclear how the two constructs relate/differ and future investigations are required to further clarify how forgiveness is most accurately conceptualized and measured. That said, the present results suggest that forgiveness as a function of "change" is distinct from current attitudes/emotions/behaviours, suggesting that this concept of "change" leads to desirable outcomes.

Limitations

The present study has several limitations that should be considered and may limit the conclusions that may be drawn from its findings. As previously discussed throughout, causality cannot be inferred in the present study given the cross-sectional design and future research will benefit from adopting longitudinal designs to examine the replicability of present findings and further clarify the direction of these relationships. The present study also exclusively used self-report measures, potentially introducing subjective respondent biases into the data—for instance, childhood adversity was subject to recall bias as it was assessed retrospectively. Future investigations can address this by incorporating more objective measures of childhood adversity, forgiveness, and psychological distress, such as informant reports, physiological measures, and behavioural observations.

The present sample is comprised predominantly of USA residents, and it is unclear how the findings may be generalized to the Canadian population. Additionally, it is important to note that data collection took place prior to the USA's recent large-scale geopolitical climate shifts that have been escalating since 2025. Thus, the extent to which these findings are generalizable to the present USA population requires clarification as it is unclear how the present geopolitical

unrest affects those who experienced childhood adversities and their day-to-day psychological distress. Subsequent research focusing on the Canadian context is required to elucidate how the present findings may replicate in a Canadian sample.

In the present study, childhood adversities encompassed an array of experiences in one overall adversity factor. While this allows for a comprehensive exploration of the theoretical constructs and models being investigated, it simultaneously limits the extent to which the present finding apply to each "category" or "type" of childhood adversity. Similarly, forgiveness of childhood adversities was examined as one global index of change in the present study, thus limiting the extent to which the present findings apply to each target of forgiveness (i.e., others, self, situation). Thus, future investigations seeking to replicate or build on this study ought to further explore subtypes of childhood adversities and forgiveness targets independently. Additionally, the present study's conceptualization of forgiveness is unique, thus limiting the extent to which present findings may be directly compared to past forgiveness literature. Furthermore, although the present study offers initial support for the validity of this novel approach, the evidence is limited to this study and additional research is required to further establish its validity. However, the present findings also illustrate the importance of "change" in the concept of forgiveness and suggest that future researchers employ this and additional creative approaches to further explore the theoretical underpinnings of forgiveness and clarify how it may benefit this population.

Conclusion

A large body of literature evidences that individuals who experience childhood adversities, such as abuse and neglect, are more likely to face physical and mental health challenges in adulthood (Hughes et al., 2017). Consistent with this, childhood adversity predicted

day-to-day psychological distress in the present adult community sample. This illustrates the importance of understanding the pathways in which childhood adversity leads to poor outcomes. Research suggests that the stress of childhood adversity may impede the development of adaptive coping skills (Min et al., 2017; Roubinov & Luecken, 2013; Sheffler et al., 2019; Song et al., 2020); thus, the health consequences of childhood adversity may be partially due to the use of maladaptive coping responses. This suggests that the negative impacts of childhood adversity may be diminishable if individuals learn to increase their reliance on adaptive coping strategies and reduce their reliance on maladaptive coping strategies. Forgiveness has been proposed as one coping mechanism that may benefit this population (Morton et al., 2019; Taylor, 2020; Wallace, 2020). The present study found that the estimated mediation model better explained the relationships between childhood adversity, forgiveness, and psychological distress than the estimated moderation model. This suggests that childhood adversity may undermine ones' ability to forgive their childhood adversities, which in turn may contribute to increased day-to-day psychological distress in adulthood. Thus, given the moderation model was non-significant, it may be more important to further understand the causal pathway in which childhood adversity undermines individuals' forgiveness towards targets associated with their childhood, rather than solely focusing on promoting forgiveness within this population. Future research is required to further expand this limited line of literature and drawing conclusions from the present study should be done so with caution.

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Appendices

Appendix A: Recruitment Documents

A.1 – Study Flyer for Lakehead University

A.2 – Study Flyer for Community

A.3 – Class Email

The following email will be sent to students in post-secondary courses (following approval from course instructors).

Subject Line:

Research Opportunity – Study on Childhood Adversity and Psychological Distress

Email Body:

Hello,

My name is Karin and I am part of Dr. Aislin Mushquash's research team in the Department of Psychology. This email is to invite you to participate in a research study we are conducting on responses to childhood adversity and psychological distress.

Study Title:

- Childhood Adversity and Psychological Distress

To qualify for the study, you must:

- Be 18+ years old
- Have Internet access
- Speak/read fluently in English

Participation will involve:

- Completing self-report surveys over two sessions
    - Session 1 should take up 20 minutes
    - Session 2 should take up to 30 minutes

- Some questions ask about difficult, personal experiences and may be hard for some people to think about (e.g., childhood abuse/neglect). Participants are free to skip questions they do not feel comfortable answering. If participants feel upset during the study, we have information available on relevant supports.

For participating, you would receive:

- Up to 1.5 bonus points towards an eligible psychology course offering bonus points
  - .5 bonus points for Session 1 participation
  - 1 bonus point for Session 2 participation

Your participation in this study is entirely voluntary. Whether you choose to participate or not will not impact your academic standing in this or any other course.

If you are interested, you can sign up via SONA systems at http://lupsych.sona-systems.com/ or email the research team at LU.coping.research.alc@gmail.com.

Thank you for your time.

A.4 – Recruitment Ad

Upon study approval, the study ad will be created based on information contained in the Information Letter (see Appendix M). It will be used to recruit participants from SONA and online communities (e.g., CloudResearch).

Appendix B: Demographics Questionnaire

1. Your age: _____ years
2. Your biological sex: _____
3. Your gender_____
4. Your ethnicity: _____
5. Country of residence: _____
6. What is your current employment status? *(Select all that apply.)*
   - ☐ Employed full-time
   - ☐ Employed part-time
   - ☐ Unemployed and currently looking for work
   - ☐ Unemployed and not currently looking for work
   - ☐ Full-time student
   - ☐ Part-time student
   - ☐ Volunteer
   - ☐ Retired
   - ☐ Unable to work
   - ☐ Other (please specify): _____
7. Your occupation/job title: _____ (optional)
8. This question does not ask about your annual personal income. Instead, it asks about your annual family income. In other words, indicate how much money was earned last year in your household. Check the option that best describes your annual family income in Canadian dollars (before taxes, deductions, etc.):
   a. $0.00 - $19 999
   b. $20 000 - $39 999
   c. $40 000 - $59 999
   d. $60 000 - $79 999
   e. $80 000 - $99 999
   f. $100 000 - $119 999
   g. $120 000 - $139 999
   h. $140 000 - $159 999
   i. $160 000 - $179 999
   j. $180 000 - $199 999
   k. Greater than $200 000
9. How many people are supported by your total annual family income (listed in question 16)?

10. Which of the following describes your level of education? (If more than one apply,

    choose the highest degree or level of education that applies to you.)

- ○ No Secondary School/High School
- ○ Some Secondary School/High School
- ○ Completed Secondary School/High School
- ○ Some post-secondary (college or university courses)
- ○ Completed a college certificate or diploma
- ○ Completed a university degree
- ○ Some graduate school
- ○ Completed a Master's degree
- ○ Completed a Doctoral degree

11. Are you currently receiving treatment from a mental health professional (e.g., social worker, psychologist, counsellor)?

- ○ Yes
- ○ No
- ○ Prefer not to answer

12. Have you ever received treatment from a mental health professional (e.g., social worker, psychologist, counsellor)?

- ○ Yes
- ○ No
- ○ Prefer not to answer

13. Have you ever been prescribed any medications for emotional or psychiatric problems?

- ○ Yes
- ○ No
- ○ Prefer not to answer

14. Are you currently taking any medications for emotional or psychiatric problems?

- ○ Yes
- ○ No
- ○ Prefer not to answer

Appendix C: Childhood Trauma Questionnaire—Short Form (CTQ-SF)

These questions ask about some of your experiences growing up as a child. Although these questions are of a personal nature, please try to answer as honestly as you can. For each question, fill in the box that best describes how you feel.

When I was growing up…

Response Scale:

Never True	Rarely True	Sometimes True	Often True	Very Often True
1	2	3	4	5

Items:

1. I didn't have enough to eat.
2. I knew that there was someone to take care of me and protect me.
3. People in my family called me things like "stupid," "lazy," or "ugly."
4. My parents were too drunk or high to take care of the family.
5. There was someone in my family who helped me feel that I was important.
6. I had to wear dirty clothes.
7. I felt loved.
8. I thought that my parents wished I had never been born.
9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.
10. There was nothing I wanted to change about my family.
11. People in my family hit me so hard that it left me with bruises or marks.

12. I was punished with a belt, a board, a cord, or some other hard object.

13. People in my family looked out for each other.

14. People in my family said hurtful or insulting things.

15. I believe that I was physically abused.

16. I had the perfect childhood.

17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbour, or doctor.

18. I felt that someone in my family hated me.

19. People in my family felt close to each other.

20. Someone tried to touch me in a sexual way, or tried to make me touch them.

21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.

22. I had the best family in the world.

23. Someone tried to make me do sexual things or watch sexual things.

24. Someone molested me.

25. I believe that I was emotionally abused.

26. There was someone to take me to the doctor if I needed it.

27. I believe that I was sexually abused.

28. My family was a source of strength and support.

29. I believe that I was neglected.

Appendix D: Adverse Childhood Experiences Questionnaire (ACEq)

While you were growing up, during your first 18 years of life…

	Never	At least once	Many times
1. Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? OR Act in a way that made you afraid that you might be physically hurt?			
2. Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? OR Ever hit you so hard that you had marks or were injured?			
3. Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? OR Attempt or actually have oral, anal, or vaginal intercourse with you?			
4. Did you often or very often feel that … No one in your family loved you or thought you were important or special? OR Your family didn't look out for each other, feel close to each other, or support each other?			
5. Did you often or very often feel that … You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? OR Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?			
6. Were your parents ever separated or divorced?			
7. Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? OR			

Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?			
8. Was your father or stepfather: Often or very often pushed, grabbed, slapped, or had something thrown at him? OR Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?			
9. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?			
10. Was a household member depressed or mentally ill, or did a household member attempt suicide?			
11. Did a household member go to prison?			

Participants who responded “at least once” or “many times” to at least one of the above items are asked this follow-up question:

12. Think of your experiences and the people who did this to you. Which was *most* significant? (Choose One)

a. Mother
b. Father
c. Stepmother
d. Stepfather
e. Boyfriend or Girlfriend of my parent
f. Other Family Member
g. Acquaintance, describe _____
h. Other, describe _____

Appendix E: Rye Forgiveness Scale (RFS)

Think of the person you chose as being most significant and how you currently feel towards them. Indicate the degree to which you agree or disagree with the following statements.

Response Scale:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

Items:

____1. I can't stop thinking about how I was wronged by this person. (R)

____2. I wish for good things to happen to the person who wronged me.

____3. I spend time thinking about ways to get back at the person who wronged me. (R)

____4. I feel resentful toward the person who wronged me. (R)

____5. I avoid certain people and/or places because they remind me of the person who wronged me. (R)

____6. I pray for the person who wronged me.

____7. If I encountered the person who wronged me I would feel at peace.

____8. This person's wrongful actions have kept me from enjoying life. (R)

____9. I have been able to let go of my anger toward the person who wronged me.

____10. I become depressed when I think of how I was mistreated by this person. (R)

____11. I think that many of the emotional wounds related to this person's wrongful actions have healed.

____12. I feel hatred whenever I think about the person who wronged me. (R)

____13. I have compassion for the person who wronged me.

____14. I think my life is ruined because of this person's wrongful actions. (R)

____15. I hope the person who wronged me is treated fairly by others in the future.

Absence of Negative subscale items: 1, 3, 4, 5, 8, 9, 10, 11, 12, 14

Presence of Positive subscale items: 2, 6, 7, 13, 15

Validity item:

16. Who did you think about while completing these questions? (Choose One)
    a. Mother
    b. Father
    c. Stepmother
    d. Stepfather
    e. Boyfriend or Girlfriend of my parent
    f. Other Family Member
    g. Acquaintance, describe _____
    h. Other, describe _____

Appendix F: Past Response Towards a Transgressor (RFS Past Tense)

Think of the person you chose as being most significant. Recall how you responded to this person in the **past**. Your response to this person may have changed over time—think about the period of time when you were the most resentful of them for the struggles you faced during your childhood. Please respond to the following items while thinking about how you felt, thought, and acted during this period of time.

Response Scale:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

Items:

____1. I couldn't stop thinking about how I was wronged by this person. (R)

____2. I wished for good things to happen to the person who wronged me.

____3. I spent time thinking about ways to get back at the person who wronged me. (R)

____4. I felt resentful toward the person who wronged me. (R)

____5. I avoided certain people and/or places because they reminded me of the person who wronged me. (R)

____6. I prayed for the person who wronged me.

____7. When I encountered the person who wronged me I felt at peace.

____8. This person's wrongful actions kept me from enjoying life in the past. (R)

____9. I was angry toward the person who wronged me. (R)

____10. I felt depressed when I thought of how I was mistreated by this person. (R)

____11. I experienced emotional wounds related to this person's wrongful actions.

____12. I felt hatred whenever I thought about the person who wronged me. (R)

____13. I had compassion for the person who wronged me.

____14. I thought my life was ruined because of this person's wrongful actions. (R)

____15. I hoped the person who wronged me was treated fairly by others.

Absence of Negative subscale items: 1, 3, 4, 5, 8, 9, 10, 11, 12, 14

Presence of Positive subscale items: 2, 6, 7, 13, 15

Validity item:

16. Who did you think about while completing these questions? (Choose One)
    a. Mother
    b. Father
    c. Stepmother
    d. Stepfather
    e. Boyfriend or Girlfriend of my parent
    f. Other Family Member
    g. Acquaintance, describe _____
    h. Other, describe _____

Appendix G: State Self-Forgiveness (SSFS)

Sometimes people blame themselves when faced with mistreatment or life difficulties, even when what happened wasn't their fault. Think of the event(s) you reported above that happened while you were growing up, **and what your role in the event(s) were**. Think of the thoughts and feelings you currently have about yourself in response to your role in these events.

Self-Forgiving Feelings and Actions *("As I consider what happened, I...")*

1. . . .feel compassionate toward myself.
2. . . .feel rejecting of myself. (R)
3. . . .feel accepting of myself.
4. . . .feel dislike toward myself. (R)
5. . . .show myself acceptance.
6. . . .show myself compassion.
7. . . .punish myself. (R)
8. . . .put myself down. (R)

Self-Forgiving Beliefs *(As I consider what happened, I believe I am…")*

9. . . .acceptable.
10. . . .okay.
11. . . .awful. (R)
12. . . .terrible. (R)
13. . . .decent.
14. . . .rotten. (R)
15. . . .worthy of love.

16. . . .a bad person. (R)

17. . . .horrible. (R)

Appendix H: Past Response Towards the Self

Sometimes people blame themselves when faced with mistreatment or life difficulties, even when what happened wasn't their fault. Think of the event(s) you reported above that happened while you were growing up, **and what your role in the event(s) were**. Think of the thoughts and feelings you had about yourself in response to your role in these events. Your thoughts and feelings might have changed over time—think about the period of time when you were the most resentful of yourself for your role in the event(s). Please respond to the following items while thinking about how you felt, thought, and acting during this period of time.

Past Feelings and Actions Towards the Self *(In the past, when I considered what happened, I...)*

1. . . .felt compassionate toward myself.
2. . . .felt rejecting of myself. (R)
3. . . .felt accepting of myself.
4. . . .felt dislike toward myself. (R)
5. . . .showed myself acceptance.
6. . . .showed myself compassion.
7. . . .punished myself. (R)
8. . . .put myself down. (R)

Past Self Beliefs *(In the past, when I considered what happened, I believed I was…)*

9. . . .acceptable.
10. . . .okay.
11. . . .awful. (R)
12. . . .terrible. (R)
13. . . .decent.

14. . . .rotten. (R)

15. . . .worthy of love.

16. . . .a bad person. (R)

17. . . .horrible. (R)

Appendix I: State-Forgiveness of Situations

Consider the event(s) you reported above that happened while you were growing up. Do not consider your feelings or thoughts about yourself or other people involved, but rather **the event itself.** Think about how you **currently** think and feel in response to the event(s) when answering the following questions.

Response scale:

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

Items:

1. When I think about what went wrong, I get stuck in negative thoughts about it. (R)
2. When I think back to what happened, I am understanding of the bad circumstances I faced.
3. I continue to think negatively about the circumstances. (R)
4. I am now at peace with the bad situation.
5. I have not accepted the negative situation. (R)
6. I have let go of negative thoughts about the bad circumstances.
7. I avoid certain activities or places because they remind me of the bad circumstances I faced. (R)

Appendix J: Past Response to Situations

Consider the event(s) you reported above that happened while you were growing up. Think of the thoughts and feelings you had about the event(s) in response **in the past**. Do not consider feelings or thoughts about yourself or other people involved, but rather **the event itself.**

Your response to these events may have changed over time—think about the period of time when you were the most resentful of the event(s). Please respond to the following items while thinking about how you felt, thought, and acting during this period of time.

Response scale:

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

Items:

1. When I thought about what went wrong, I got stuck in negative thoughts about it. (R)
2. I was understanding of the bad circumstances I faced.
3. I thought negatively about the circumstances. (R)
4. I was at peace with the bad situation.
5. I was not accepting of the negative situation. (R)
6. I did not have negative thoughts about the bad circumstances.
7. I avoided certain activities or places because they reminded me of the bad circumstances I faced. (R)

Appendix K: Self Reporting Questionnaire (SRQ-20)

Please read the entire introduction before you fill in the questionnaire. It is very important that everyone taking the questionnaire follows the same instructions.

The following questions are related to certain pains and problems, that may have bothered you the last 30 days. If you think the question applies to you and you had the described problem in the last 30 days, answer YES.

On the other hand, if the question does not apply to you and you did not have the problem in the last 30 days, answer NO.

Please do not discuss the questions with anyone while answering the questionnaire.

If you are unsure about how to answer a question, please give the best answer you can.

We would like to reassure that the answers you are going to provide here are confidential.

1. Do you often have headaches? Yes (1) No (0)
2. Is your appetite poor? Yes (1) No (0)
3. Do you sleep badly? Yes (1) No (0)
4. Are you easily frightened? Yes (1) No (0)
5. Do your hands shake? Yes (1) No (0)
6. Do you feel nervous, tense or worried? Yes (1) No (0)
7. Is your digestion poor? Yes (1) No (0)
8. Do you have trouble thinking clearly? Yes (1) No (0)
9. Do you feel unhappy? Yes (1) No (0)
10. Do you cry more than usual? Yes (1) No (0)
11. Do you find it difficult to enjoy your daily activities? Yes (1) No (0)

12. Do you find it difficult to make decisions? Yes (1) No (0)

13. Is your daily work suffering? Yes (1) No (0)

14. Are you unable to play a useful part in life? Yes (1) No (0)

15. Have you lost interest in things? Yes (1) No (0)

16. Do you feel that you are a worthless person? Yes (1) No (0)

17. Has the thought of ending your life been on your mind? Yes (1) No (0)

18. Do you feel tired all the time? Yes (1) No (0)

19. Do you have uncomfortable feelings in your stomach? Yes (1) No (0)

20. Are you easily tired? Yes (1) No (0)

Appendix L: The Distress Questionnaire-5 (DQ5)

Response scale:

(1) ‘‘Never’’

(2) ‘‘Rarely’’

(3) ‘‘Sometimes’’

(4) ‘‘Often’’

(5) ‘‘Always’’

Items:

In the last 30 days…

1. My worries overwhelmed me
2. I felt hopeless
3. I found social settings upsetting
4. I had trouble staying focused on tasks
5. Anxiety or fear interfered with my ability to do the things I needed to do at work or at home

Appendix M: Information Letter

M.1 – Information Letter for Participants Recruited from Lakehead University

Childhood Adversity and Psychological Distress

Dear Potential Participant:

You are invited to participate in our research study titled: **Childhood Adversity and Psychological Distress**. Your participation in this study is entirely voluntary, and whether you choose to participate or not will not impact your academic standing at Lakehead University. Before you decide whether or not you would like to take part, please read this letter carefully to understand what is involved. After you have read the letter, please ask any questions you may have.

PURPOSE

The purpose of this research is to examine the relationships between childhood adversity and psychological distress in adulthood. Psychological distress refers to unpleasant emotions and difficulties with day-to-day life that most people experience from time to time. Experiencing adversity in childhood is known to have lasting impacts across the lifespan. This project will explore the impact of these early adverse experiences on functional outcomes in adults.

The Principal Investigator of the research is Dr. Aislin Mushquash, Assistant Professor, Department of Psychology, Lakehead University. Karin Onno is a graduate student researcher in

the Department of Psychology, Lakehead University, supervised by Dr. A. Mushquash. Jaidyn Charlton is a Research Assistant under the supervision of Dr. Mushquash.

WHAT IS REQUESTED OF ME AS A PARTICIPANT? AND WHAT INFORMATION WILL BE COLLECTED?

This is a two part study. Participating in Session One should take up to 20 minutes. Session Two should take up to 30 minutes. Both sessions will be completed online.

These two sessions will take place on different days. If you consent, today you will participate in Session One.

<u>We will collect your email address in order to send you the Session Two information.</u>

- Once information about Session Two is emailed to you, you will have up to two weeks to participate in Session Two. During this two week period, you may participate in Session Two at any time.

<u>What will you do with my email address?</u>

- Your email address will ONLY be used to send you information related to this study:
  - You will receive information about Session Two and one follow-up reminder
  - If you desire, you will also be emailed a copy of the research results (see "HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?" below for more information)

    - Should you win the gift card draw, your email address will be used to contact you *(If you do not require or want SONA points, you have the option to be entered into a draw for a $50 Visa gift card—see "WHAT ARE THE RISKS AND BENEFITS?" for more information)*

- Your email address will NOT be associated with your study data
- Your email address will CONFIDENTIAL:
    - We will NOT share your email address with companies, other Lakehead University personnel or departments, or any other groups or individuals
    - Your email address will NOT be added to any mailing lists

As a participant, you will be asked to complete a series of self-report surveys about your adverse childhood experiences, past and current thoughts and feelings about these childhood experiences, health, and general thoughts, feelings, and actions.

Some of the questions ask about potentially difficult, personal events that may have occurred in your life (e.g., childhood abuse/neglect). You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

As a participant, you are under no obligation to participate and are free to withdraw at any time without penalty. You have the right to withdraw your data from the study up until the data collection phase of the study is complete. Beyond this point, there will be no way to connect you

to your data. Your decision to participate will not affect your academic status. To withdraw from the study, contact Dr. Mushquash at aislin.mushquash@lakeheadu.ca.

WHAT ARE THE RISKS AND BENEFITS?

There are no known harms associated with participating in the study. However, as mentioned above, some questionnaires will ask about difficult, personal experiences you may have had in your life (e.g., childhood abuse/neglect). Some of these questions may be hard for some people to think about or may cause some temporary distress. You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering. Should you feel upset during or after the study, we encourage you to contact any of the following support services:

Lakehead University	**Good2Talk**	**Crisis Services Canada**
Student Health and Counselling	24-hr Student Helpline	24-hr Suicide Helpline
(807) 343-8361	1-866-925-5454	1-833-456-4566

Thunder Bay Counselling Centre	**Thunder Bay 24-hr Crisis Response**
Walk-In Counselling	(807) 346-8282
(807) 684-1880	

The information that you provide will not be shared with anyone outside of the research team. Your name and email address will not be included on the surveys. Only a participant ID number will be included. All information will be stored on a password protected hard drive.

The primary benefits of the proposed study are for society and for the advancement of knowledge. This study will provide information on the impact of adverse childhood experiences on psychological distress and the way this relationship happens.

For participating in the study via SONA, you will receive up to 1.5 bonus points to go towards an eligible psychology course.

- Participating in Session One = .5 SONA points
- Participating in Session Two = 1 SONA point

If you do not require or want the bonus points, you have the option to be entered into a draw for a $50 Visa gift card. If you wish to be entered into the draw, please email the research team at coping.research@lakeheadu.ca instead of using SONA. The draw will occur when the study is complete.

- Participating in Session One = 1 entry into draw
- Participating in Session Two = 2 additional entries into draw (i.e., you will be entered into the draw 3 times, for increased chances of winning)

HOW WILL MY CONFIDENTIALITY BE MAINTAINED?

Confidentiality will be maintained throughout the study. All participants will be provided a participant ID number at the beginning of their participation. All data obtained through the surveys will contain only this participant ID number. Please note that the online survey tool used in the study, Survey Monkey, is hosted by a server located in the USA. The US Patriot Act permits US law enforcement officials, for the purpose of antiterrorism investigation, to seek a court order that allows access to the personal records of any person without the person's knowledge. In view of this we cannot absolutely guarantee the full confidentiality of your data. With your consent to participate in this study, you acknowledge this.

WHERE WILL MY DATA BE STORED?

The surveys will be hosted through Survey Monkey and will only be accessed by research team members. The information systems and technical infrastructure for Survey Monkey are hosted within world-class, SOC 2 accredited data centers. Physical security controls at the data centers include 24x7 monitoring, cameras, visitor logs, entry requirements, and dedicated cages for Survey Monkey hardware. Survey Monkey encrypts data in transit using secure TLS cryptographic protocols.

Data will be saved and stored on a password protected computer in the possession of either the Principal Investigator, student researcher, or research assistant. The electronic datafile containing data from the surveys will be stored on a password protected computer in the possession of either the Principal Investigator, student researcher, or research assistant. In accordance with Lakehead

University's policy, data will be retained for at least 5 years following the completion of the research.

HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?

All findings will be presented in summary. At the end of your participation in Session One, you will be asked "Would you like to receive a summary of the findings from this study?"; if you would like to receive a summary of the findings following the completion of the study, please respond "yes" to this question. Individual results (e.g., scores on specific surveys) will not be made available to participants.

RESEARCHER CONTACT INFORMATION:

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Department of Psychology

Lakehead University

(807) 343-8771

LU.coping.research.alc@gmail.com

aislin.mushquash@lakeheadu.ca

Karin Onno

Graduate Student Researcher

Department of Psychology

Lakehead University

RESEARCH ETHICS BOARD REVIEW AND APPROVAL:

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at (807) 343-8283 or research@lakeheadu.ca.

M.2 – Information Letter for Participants Recruited from CloudResearch

Childhood Adversity and Psychological Distress

Dear Potential Participant:

You are invited to participate in our research study titled: **Childhood Adversity and Psychological Distress**. Your participation in this study is entirely voluntary, and whether you choose to participate or not will not impact your academic standing at Lakehead University. Before you decide whether or not you would like to take part, please read this letter carefully to understand what is involved. After you have read the letter, please ask any questions you may have.

PURPOSE

The purpose of this research is to examine the relationships between childhood adversity and psychological distress in adulthood. Psychological distress refers to unpleasant emotions and difficulties with day-to-day life that most people experience from time to time. Experiencing adversity in childhood is known to have lasting impacts across the lifespan. This project will explore the impact of these early adverse experiences on functional outcomes in adults.

The Principal Investigator of the research is Dr. Aislin Mushquash, Assistant Professor, Department of Psychology, Lakehead University. Karin Onno is a graduate student researcher in the Department of Psychology, Lakehead University, supervised by Dr. A. Mushquash. Jaidyn Charlton is a Research Assistant under the supervision of Dr. Mushquash.

WHAT IS REQUESTED OF ME AS A PARTICIPANT? AND WHAT INFORMATION WILL BE COLLECTED?

This is a two part study. Participating in Session One should take up to 20 minutes.
Session Two should take up to 30 minutes. Both sessions will be completed online.

These two sessions will take place on different days. If you consent, today you will participate in Session One.

<u>We will collect your email address in order to send you the Session Two information.</u>

- Once information about Session Two is emailed to you, you will have up to two weeks to participate in Session Two. During this two week period, you may participate in Session Two at any time.

What will you do with my email address?

- Your email address will ONLY be used to send you information related to this study:
  - You will receive information about Session Two and one follow-up reminder
  - If you desire, you will also receive a copy of the research results (see "HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?" below for more information)
- Your email address will NOT be associated with your study data
- Your email address will CONFIDENTIAL:
  - We will NOT share your email address with companies, other Lakehead University personnel or departments, or any other groups or individuals
  - Your email address will NOT be added to any mailing lists

As a participant, you will be asked to complete a series of self-report surveys about your adverse childhood experiences, past and current thoughts and feelings about these childhood experiences, health, and general thoughts, feelings, and actions.

Some of the questions ask about potentially difficult, personal events that may have occurred in your life (e.g., childhood abuse/neglect). You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

As a participant, you are under no obligation to participate and are free to withdraw at any time without penalty. You have the right to withdraw your data from the study up until the data collection phase of the study is complete. Beyond this point, there will be no way to connect you to your data. Your decision to participate will not affect your relationships with the researchers or Lakehead University. To withdraw from the study, contact Dr. Mushquash at aislin.mushquash@lakeheadu.ca.

WHAT ARE THE RISKS AND BENEFITS?

There are no known harms associated with participating in the study. However, as mentioned above, some questionnaires will ask about difficult, personal experiences you may have had in your life (e.g., childhood abuse/neglect). Some of these questions may be hard for some people to think about or may cause some temporary distress. You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering. Should you feel upset during or after the study, we encourage you to contact any of the following support services:

Lakehead University	**Good2Talk**	**Crisis Services Canada**
Student Health and Counselling	24-hr Student Helpline	24-hr Suicide Helpline

(807) 343-8361	1-866-925-5454	1-833-456-4566

Thunder Bay Counselling Centre	**Thunder Bay 24-hr Crisis Response**
Walk-In Counselling (807) 684-1880	(807) 346-8282

The information that you provide will not be shared with anyone outside of the research team. Your name and email address will not be included on the surveys. Only a participant ID number will be included. All information will be stored on a password protected hard drive.

The primary benefits of the proposed study are for society and for the advancement of knowledge. This study will provide information on the impact of adverse childhood experiences on psychological distress and the way this relationship happens.

For participating in the study via CloudResearch (formally known as TurkPrime), you will receive up to $5.

- Participating in Session One = $1.50
- Participating in Session Two = $3.50

All payment is granted through Cloud Research. Session Two payment is granted through Cloud Research as a “bonus” payment.

HOW WILL MY CONFIDENTIALITY BE MAINTAINED?

Confidentiality will be maintained throughout the study. All participants will be provided a participant ID number at the beginning of their participation. All data obtained through the surveys will contain only this participant ID number. Please note that the online survey tool used in the study, Survey Monkey, is hosted by a server located in the USA. The US Patriot Act permits US law enforcement officials, for the purpose of antiterrorism investigation, to seek a court order that allows access to the personal records of any person without the person's knowledge. In view of this we cannot absolutely guarantee the full confidentiality of your data. With your consent to participate in this study, you acknowledge this.

WHERE WILL MY DATA BE STORED?

The surveys will be hosted through Survey Monkey and will only be accessed by research team members. The information systems and technical infrastructure for Survey Monkey are hosted within world-class, SOC 2 accredited data centers. Physical security controls at the data centers include 24x7 monitoring, cameras, visitor logs, entry requirements, and dedicated cages for Survey Monkey hardware. Survey Monkey encrypts data in transit using secure TLS cryptographic protocols.

Data will be saved and stored on a password protected computer in the possession of either the Principal Investigator, student researcher, or research assistant. The electronic datafile containing data from the surveys will be stored on a password protected computer in the possession of either

the Principal Investigator, student researcher, or research assistant. In accordance with Lakehead University's policy, data will be retained for at least 5 years following the completion of the research.

HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?

All findings will be presented in summary. At the end of your participation in Session One, you will be asked "Would you like to receive a summary of the findings from this study?"; if you would like to receive a summary of the findings following the completion of the study, please respond "yes" to this question. Individual results (e.g., scores on specific surveys) will not be made available to participants.

RESEARCHER CONTACT INFORMATION:

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Karin Onno

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RESEARCH ETHICS BOARD REVIEW AND APPROVAL:

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at (807) 343-8283 or research@lakeheadu.ca.

M.3 – Information Letter for Participants Recruited from Additional Online Communities

Childhood Adversity and Psychological Distress

Dear Potential Participant:

You are invited to participate in our research study titled: **Childhood Adversity and Psychological Distress**. Your participation in this study is entirely voluntary, and whether you choose to participate or not will not impact your academic standing at Lakehead University. Before you decide whether or not you would like to take part, please read this letter carefully to understand what is involved. After you have read the letter, please ask any questions you may have.

PURPOSE

The purpose of this research is to examine the relationships between childhood adversity and psychological distress in adulthood. Psychological distress refers to unpleasant emotions and difficulties with day-to-day life that most people experience from time to time. Experiencing adversity in childhood is known to have lasting impacts across the lifespan. This project will explore the impact of these early adverse experiences on functional outcomes in adults.

The Principal Investigator of the research is Dr. Aislin Mushquash, Assistant Professor, Department of Psychology, Lakehead University. Karin Onno is a graduate student researcher in the Department of Psychology, Lakehead University, supervised by Dr. A. Mushquash. Jaidyn Charlton is a Research Assistant under the supervision of Dr. Mushquash.

WHAT IS REQUESTED OF ME AS A PARTICIPANT? AND WHAT INFORMATION WILL BE COLLECTED?

This is a two part study. Participating in Session One should take up to 20 minutes.
Session Two should take up to 30 minutes. Both sessions will be completed online.

These two sessions will take place on different days. If you consent, today you will participate in Session One.

<u>We will collect your email address in order to send you the Session Two information.</u>

- Once information about Session Two is emailed to you, you will have up to two weeks to participate in Session Two. During this two week period, you may participate in Session Two at any time.

What will you do with my email address?

- Your email address will ONLY be used to send you information related to this study:
  - You will receive information about Session Two and one follow-up reminder
  - If you desire, you will also receive a copy of the research results (see "HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?" below for more information)
  - Should you win the gift card draw, your email address will be used to contact you
- Your email address will NOT be associated with your study data
- Your email address will CONFIDENTIAL:
  - We will NOT share your email address with companies, other Lakehead University personnel or departments, or any other groups or individuals
  - Your email address will NOT be added to any mailing lists

As a participant, you will be asked to complete a series of self-report surveys about your adverse childhood experiences, past and current thoughts and feelings about these childhood experiences, health, and general thoughts, feelings, and actions.

Some of the questions ask about potentially difficult, personal events that may have occurred in your life (e.g., childhood abuse/neglect). You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

As a participant, you are under no obligation to participate and are free to withdraw at any time without penalty. You have the right to withdraw your data from the study up until the data collection phase of the study is complete. Beyond this point, there will be no way to connect you to your data. Your decision to participate will not affect your relationships with the researchers or Lakehead University. To withdraw from the study, contact Dr. Mushquash at aislin.mushquash@lakeheadu.ca.

WHAT ARE THE RISKS AND BENEFITS?

There are no known harms associated with participating in the study. However, as mentioned above, some questionnaires will ask about difficult, personal experiences you may have had in your life (e.g., childhood abuse/neglect). Some of these questions may be hard for some people to think about or may cause some temporary distress. You are not required to answer all questions and can feel free to skip questions that you are not comfortable answering. Should you feel upset during or after the study, we encourage you to contact any of the following support services:

Lakehead University	**Good2Talk**	**Crisis Services Canada**
Student Health and Counselling	24-hr Student Helpline	24-hr Suicide Helpline
(807) 343-8361	1-866-925-5454	1-833-456-4566

Thunder Bay Counselling Centre	**Thunder Bay 24-hr Crisis Response**
Walk-In Counselling	(807) 346-8282
(807) 684-1880	

The information that you provide will not be shared with anyone outside of the research team. Your name and email address will not be included on the surveys. Only a participant ID number will be included. All information will be stored on a password protected hard drive.

The primary benefits of the proposed study are for society and for the advancement of knowledge. This study will provide information on the impact of adverse childhood experiences on psychological distress and the way this relationship happens.

For participating in the study, you will be entered into a draw for a $50 Visa gift card. The draw will occur when the study is complete.

- Participating in Session One = 1 entry into draw
- Participating in Session Two = 2 additional entries into draw (i.e., you will be entered into the draw 3 times, for increased chances of winning)

HOW WILL MY CONFIDENTIALITY BE MAINTAINED?

Confidentiality will be maintained throughout the study. All participants will be provided a participant ID number at the beginning of their participation. All data obtained through the surveys will contain only this participant ID number. Please note that the online survey tool used in the study, Survey Monkey, is hosted by a server located in the USA. The US Patriot Act permits US law enforcement officials, for the purpose of antiterrorism investigation, to seek a court order that allows access to the personal records of any person without the person's knowledge. In view of this we cannot absolutely guarantee the full confidentiality of your data. With your consent to participate in this study, you acknowledge this.

WHERE WILL MY DATA BE STORED?

The surveys will be hosted through Survey Monkey and will only be accessed by research team members. The information systems and technical infrastructure for Survey Monkey are hosted within world-class, SOC 2 accredited data centers. Physical security controls at the data centers include 24x7 monitoring, cameras, visitor logs, entry requirements, and dedicated cages for Survey Monkey hardware. Survey Monkey encrypts data in transit using secure TLS cryptographic protocols.

Data will be saved and stored on a password protected computer in the possession of either the Principal Investigator, student researcher, or research assistant. The electronic datafile containing

data from the surveys will be stored on a password protected computer in the possession of either the Principal Investigator, student researcher, or research assistant. In accordance with Lakehead University's policy, data will be retained for at least 5 years following the completion of the research.

HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?

All findings will be presented in summary. At the end of your participation in Session One, you will be asked "Would you like to receive a summary of the findings from this study?"; if you would like to receive a summary of the findings following the completion of the study, please respond "yes" to this question. Individual results (e.g., scores on specific surveys) will not be made available to participants.

RESEARCHER CONTACT INFORMATION:

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Karin Onno

Graduate Student Researcher

Department of Psychology

Lakehead University

RESEARCH ETHICS BOARD REVIEW AND APPROVAL:

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at (807) 343-8283 or research@lakeheadu.ca.

Appendix N: Consent Form

Childhood Adversity and Psychological Distress

MY CONSENT:

I agree to the following:

- ✓ I have read and understand the information contained in the Information Letter
- ✓ I agree to participate
- ✓ I understand the risks and benefits to the study
- ✓ That I am a volunteer and can withdraw from the study up until the data collection phase is complete, and may choose not to answer any question
- ✓ That the data will be securely stored on a password protected hard drive for a minimum period of 5 years following completion of the research project
- ✓ I understand that the research findings will be made available to me upon request
- ✓ That my name or email address will not be included on my questionnaire
- ✓ All of my questions have been answered and I can contact the Principal Investigator with further questions

By consenting to participate, I have not waived any rights to legal recourse in the event of research-related harm.

Please note that the online survey tool used in the study, (SurveyMonkey), is hosted by a server located in the USA. The US Patriot Act permits U.S. law enforcement officials, for the purpose of anti-terrorism investigation, to seek a court order that allows access to the personal records of any person without the person's knowledge. In view of this we cannot absolutely guarantee the full confidentiality and anonymity of your data. With your consent to participate in this study, you acknowledge this.

My consent has been given by clicking "CONSENT" below and continuing on to the survey.

- ◯ I consent
- ◯ I do not consent

Appendix O: Debriefing Letter – Individuals Not Qualified for Session Two

Childhood Adversity and Psychological Distress

Dear Participant:

Thank you for participating in our research study! Your participation in Session Two will no longer be required as participants have to meet specific criteria to participate in Session Two. Specifically, we are interested in understanding individuals who experienced adversity in childhood and responded with a certain level of negative emotions, thoughts, and behaviours.

The purpose of this study is to examine how forgiveness may influence adult psychological distress. Psychological distress refers to unpleasant emotions and difficulties with day-to-day life that most people experience from time to time. Experiencing adversity in childhood is known to have lasting impacts across the lifespan. This project will explore the impact of these early adverse experiences on psychological distress in adults and how forgiveness may change this relationship. Forgiveness of others, the self, and the events as an abstract situation will be examined.

We would appreciate if you would keep any information about the study and the nature of the questionnaires confidential, as any preexisting knowledge in future participants may bias the data. This debriefing letter includes contact information for the principal investigator in case you have any questions in the future, and contact information for mental health resources. Thank you again for your participation.

If you felt upset during or after the study, we encourage you to contact any of the following support services:

Lakehead University	**Good2Talk**	**Crisis Services Canada**
Student Health and Counselling	24-hr Student Helpline	24-hr Suicide Helpline
(807) 343-8361	1-866-925-5454	1-833-456-4566

Thunder Bay Counselling Centre	**Thunder Bay 24-hr Crisis Response**
Walk-In Counselling	(807) 346-8282
(807) 684-1880	

The Principal Investigator of the research is Dr. Aislin Mushquash, Assistant Professor, Department of Psychology, Lakehead University. Karin Onno is a graduate student researcher in the Department of Psychology, Lakehead University, supervised by Dr. A. Mushquash. Jaidyn Charlton is a Research Assistant under the supervision of Dr. Mushquash.

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Appendix P: Debriefing Letter – After Session Two

Childhood Adversity and Psychological Distress

Dear Participant:

Thank you for participating in our research study! The purpose of this study is to examine how forgiveness may influence adult psychological distress. Psychological distress refers to unpleasant emotions and difficulties with day-to-day life that most people experience from time to time. Experiencing adversity in childhood is known to have lasting impacts across the lifespan. This project will explore the impact of these early adverse experiences on psychological distress in adults and how forgiveness may change this relationship. Forgiveness of others, the self, and the events as an abstract situation will be examined.

We would appreciate if you would keep any information about the study and the nature of the questionnaires confidential, as any preexisting knowledge in future participants may bias the data. This debriefing letter includes contact information for the principal investigator in case you have any questions in the future, and contact information for mental health resources. Thank you again for your participation.

If you felt upset during or after the study, we encourage you to contact any of the following support services:

Lakehead University	**Good2Talk**	**Crisis Services Canada**

Student Health and Counselling (807) 343-8361	24-hr Student Helpline 1-866-925-5454	24-hr Suicide Helpline 1-833-456-4566

Thunder Bay Counselling Centre Walk-In Counselling (807) 684-1880	**Thunder Bay 24-hr Crisis Response** (807) 346-8282

The Principal Investigator of the research is Dr. Aislin Mushquash, Assistant Professor, Department of Psychology, Lakehead University. Karin Onno is a graduate student researcher in the Department of Psychology, Lakehead University, supervised by Dr. A. Mushquash. Jaidyn Charlton is a Research Assistant under the supervision of Dr. Mushquash.

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Appendix Q: Depression Anxiety Stress Scales – Short Form (DASS-21)

Please read each statement and select a number (0, 1, 2 or 3) which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

(0) Did not apply to me at all

(1) Applied to me to some degree, or some of the time

(2) Applied to me to a considerable degree, or a good part of time

(3) Applied to me very much, or most of the time

1. I found it hard to wind down
2. I was aware of dryness of my mouth
3. I couldn't seem to experience any positive feeling at all
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
5. I found it difficult to work up the initiative to do things
6. I tended to over-react to situations
7. I experienced trembling (e.g., in the hands)
8. I felt that I was using a lot of nervous energy
9. I was worried about situations in which I might panic and make a fool of myself
10. I felt that I had nothing to look forward to
11. I found myself getting agitated

12. I found it difficult to relax
13. I felt down-hearted and blue
14. I was intolerant of anything that kept me from getting on with what I was doing
15. 15 I felt I was close to panic
16. I was unable to become enthusiastic about anything
17. I felt I wasn't worth much as a person
18. I felt that I was rather touchy
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
20. I felt scared without any good reason
21. I felt that life was meaningless

Appendix R: Invitation to Participate in Session Two Email

The following email will be sent to participants who complete Session One and are eligible to participate in Session Two. During this two week period, you may participate in Session Two at any time.

Subject Line:

Participating in Session Two (Childhood Adversity and Psychological Distress Research Study)

Email Body:

Hello [name],

Thank you for completing Session One of the Coping Research Lab's study, "Childhood Adversity and Psychological Distress"!

We now welcome you to participate in Session Two! Please follow the instructions below. Please note that you have 2 weeks to participate in this session.

Session Two Instructions:

1. Click on the URL link
2. Copy and paste your participant ID (found below) into the first question box
    - *IMPORTANT NOTE:* Entering this ID is essential for ensuring we can provide your compensation.
3. Review the information letter *(this is the same letter from the beginning of Session One)*
4. Review the consent form *(this is the same consent form from the beginning of Session One)*
5. Proceed with the survey if you choose to participate in the study.

Participant ID:

Please copy/paste this ID code into the questionnaire's first question box.

IMPORTANT NOTE: Entering this ID is essential for ensuring we can provide compensation.

Your ID code is: [ID#]

Additional Privacy Information:

The information below applies to your data from both Session One *and* Two.

Please note that your participant ID presented above is only used to:

a) group your data from Session One and Two together

b) ensure you receive compensation for participating in our study

- After you receive compensation, the above ID will be removed from your data to protect your anonymity
- Your email address will NOT be associated with your study data
- Your name will NOT be associated with your study data

The information letter (presented at the beginning of each session survey) provides additional information regarding your rights as a research participant.

Thank you for your involvement in our research!

Appendix S: Table 2a and Table 2b

Table 2a

Spearman Correlations between Net-Forgiveness Scales and Session 2 Forgiveness Scales

Variable	1	2	3	4	5	6	7	8	9	10
1. FO_Positive	-									
2. FO_AbNeg	.410**	-								
3. FS_Feelings	.269**	.369**	-							
4. FS_Beliefs	.169**	.285**	.623**	-						
5. F_Situation	.440**	.601**	.408**	.323**	-					
6. T2FO_Positive	.614**	.268**	.089	.022	.315**	-				
7. T2FO_AbNeg	.442**	.725**	.313**	.141*	.623**	.471**	-			
8. T2FS_Feelings	.211**	.397**	.441**	.145*	.448**	.145*	.503**	-		
9. T2FS_Beliefs	.215**	.435**	.405**	.304**	.475**	.077	.511**	.838**	-	
10.T2F_Situation	.391**	.579**	.278**	.158**	.775**	.447**	.793**	.475**	.457**	-

Note. N = 294. ACEq collected in Session Two used. FS_Feelings = Self-Forgiving Feelings and Actions subscale. FS_Beliefs = Self-Forgiving Beliefs subscale. FO_Positive = Forgiveness of Others Presence of Positive subscale.

FO_AbNeg = Forgiveness of Others Absence of Negative subscale. F_Situation = Forgiveness of situations. T2 = Session Two.

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Table 2b

Spearman Correlations between Net-Forgiveness scales, Childhood Adversity, and Psychological Distress

Variable	1	2	3	4	5	6	7	8	9	10
1. FO_Positive	-									
2. FO_AbNeg	.410**	-								
3. FS_Feelings	.269**	.369**	-							
4. FS_Beliefs	.169**	.285**	.623**	-						
5. F_Situation	.440**	.601**	.408**	.323**	-					
6. SRQ	-.197**	-.273**	-.189**	-.073	-.381**	-				
7. DQ5	-.174**	-.233**	-.240**	-.147*	-.384**	.833**	-			
8. DASS	-.201**	-.305**	-.264**	-.166**	-.419**	.830**	.855**	-		
9. CTQ	-.214**	-.256**	.004	.122*	-.276**	.305**	.253**	.224**	-	

10. ACEq	-.116*	-.163**	.027	.164**	-.165**	.246**	.203**	.199**	.752**	-

Note. N = 294. ACEq collected in Session Two used. FS_Feelings = Self-Forgiving Feelings and Actions subscale. FS_Beliefs = Self-Forgiving Beliefs subscale. FO_Positive = Forgiveness of Others Presence of Positive subscale. FO_AbNeg = Forgiveness of Others Absence of Negative subscale. F_Situation = Forgiveness of situations.

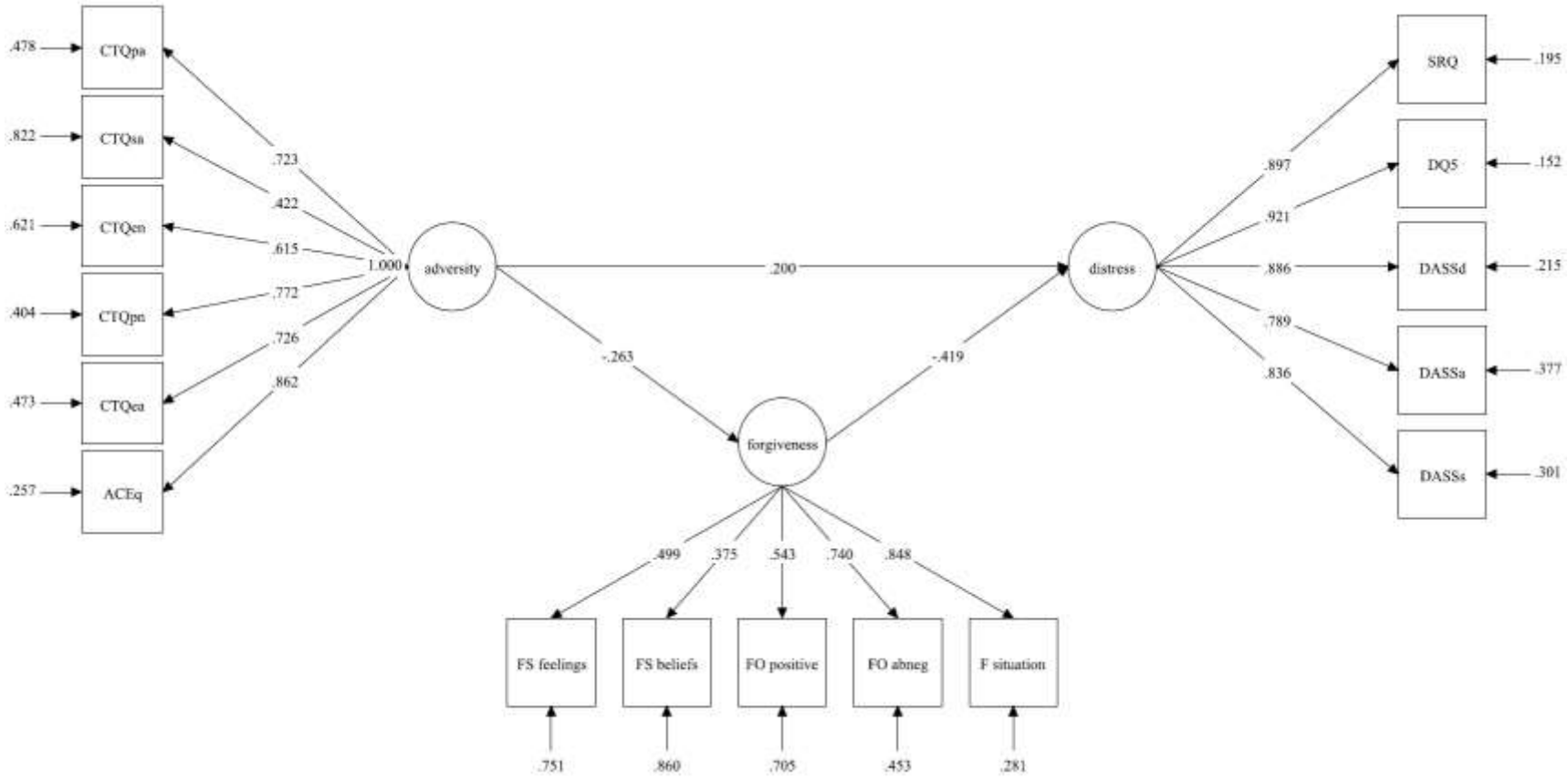
*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Appendix T: Figure 1 and Figure 2

Figure 1

Diagram of Estimated Mediation Model

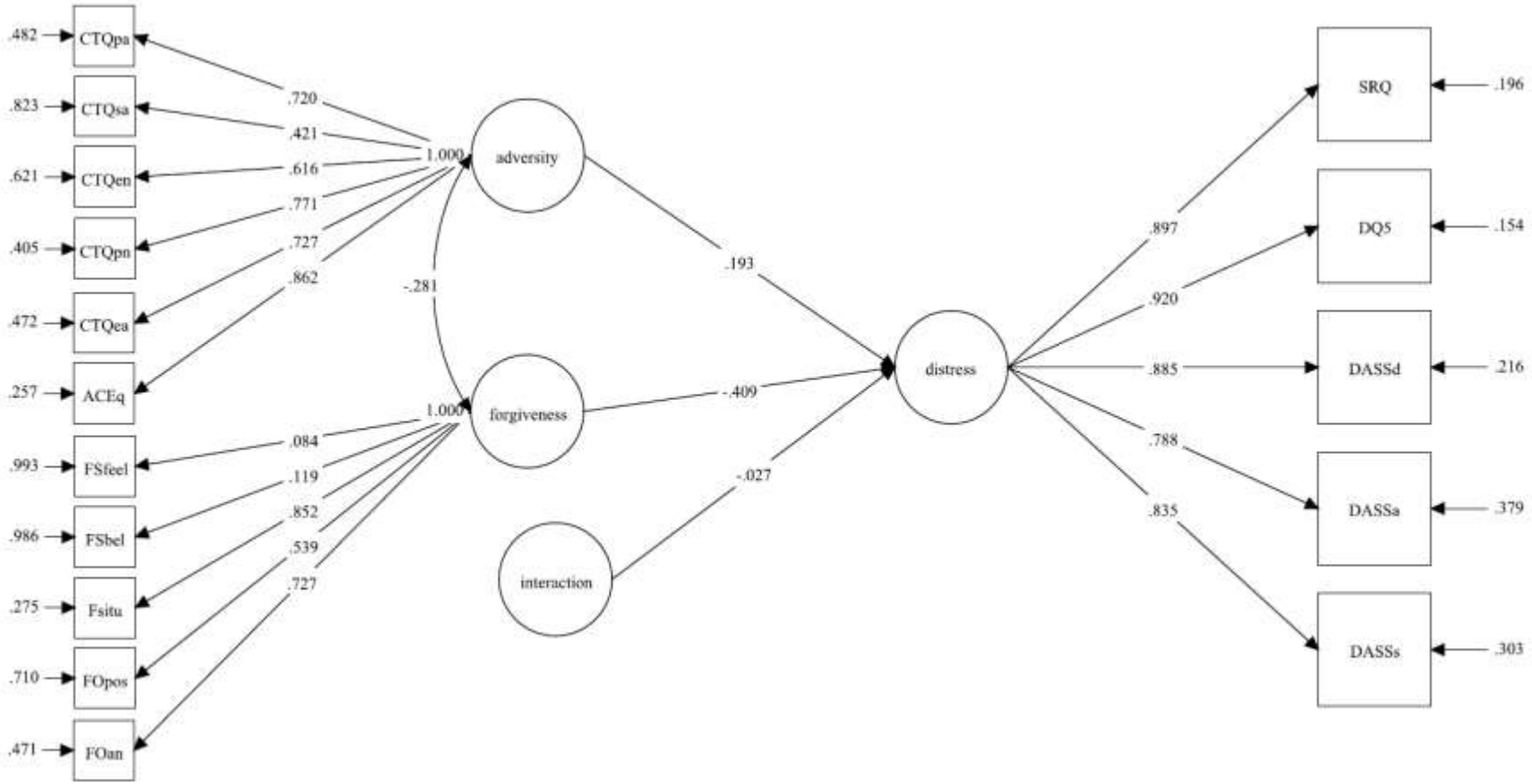


Note. ACEq collected in Session Two used. Net-Forgiveness scales used. CTQpa = Physical Abuse subscale. CTQsa = Sexual Abuse subscale. CTQen = Emotional Neglect subscale. CTQpn = Physical Neglect subscale. CTQea = Emotional

Abuse subscale. FS feelings = Self-Forgiving Feelings and Actions subscale. FS beliefs = Self-Forgiving Beliefs subscale. FO positive = Forgiveness of Others Presence of Positive subscale. FO abneg = Forgiveness of Others Absence of Negative subscale. F situ = Forgiveness of situation. DASSd = Depression subscale. DASSa = Anxiety subscale. DASSs = Stress subscale.

Figure 2

Diagram of Estimated Moderation Model



Note. ACEq collected in Session Two used. Net-Forgiveness scales used. CTQpa = Physical Abuse subscale. CTQsa = Sexual Abuse subscale. CTQen = Emotional Neglect subscale. CTQpn = Physical Neglect subscale. CTQea = Emotional

Abuse subscale. FS feelings = Self-Forgiving Feelings and Actions subscale. FS beliefs = Self-Forgiving Beliefs subscale. FO positive = Forgiveness of Others Presence of Positive subscale. FO abneg = Forgiveness of Others Absence of Negative subscale. F situ = Forgiveness of situation. DASSd = Depression subscale. DASSa = Anxiety subscale. DASSs = Stress subscale.