

**EXAMINATION OF DISPOSITIONAL FORGIVENESS ON MENTAL HEALTH  
OUTCOMES AND EFFECTIVENESS OF A PILOT PSYCHOEDUCATIONAL GROUP  
INTERVENTION FOR FORGIVENESS IN GREEK-CYPRIO UNIVERSITY STUDENTS**

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## Abstract

The current study aimed to examine: a) the relationship between dispositional forgiveness and a variety of mental health outcomes, and b) the effectiveness of a new group psychoeducational intervention in Greek-Cypriot University students. The intervention was designed with the triple aim of: a) increasing interpersonal forgiveness for a perpetrator of a particular offense that was committed against the individual, b) increasing self-forgiveness for a specific transgression committed by the individual against another person and c) increasing dispositional (trait) forgiveness. In the first phase of the study, 288 university students were asked to complete questionnaires measuring dispositional forgiveness, affect balance, depression and quality of life. In the second phase of the study, 21 psychology postgraduate students who indicated they have experienced two unresolved interpersonal transgressions - one of which committed against them and the other committed by them - were enrolled in a psychoeducational intervention group and tested against a control group ( $n = 21$ ). Measures of state and dispositional forgiveness, affect balance and depression were obtained at pretest, posttest, and at a 4-week follow-up. Study 1 results indicate that dispositional forgiveness is a significant predictor of affect balance, depression and quality of life, and that the self-forgiveness component of dispositional forgiveness is a more robust predictor than the other-forgiveness component in predicting variance in all outcome measures. Study 2 results indicate that, compared to the control group, participation in the psychoeducational group was shown to be effective for multiple outcome measures, including increasing self-forgiveness, other-forgiveness, dispositional forgiveness, and affect balance; we did not find evidence for effects on depressive symptomatology. The implications of these findings for forgiveness research and intervention are discussed.

*Keywords:* dispositional forgiveness, self-forgiveness, other-forgiveness, intervention.

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## Chapter I. Overview

As a part of our human nature, individuals have the capacity for transgressing or retaliating, for harming and helping, and for reconciling or forgiving. Interpersonal hurts, in which the individual has been the victim of a perceived harm committed against them are part of everyday life (McCullough, Root, Tabak, & van Oyen Witvliet, 2009). Likewise, offending or hurting others is an unavoidable aspect of life, which can range from relatively minor wrongdoings such as insulting a loved one during an argument to more serious acts of harm, such as infidelity towards a marital spouse (Cornish & Wade, 2015b).

Holding on to feelings of unforgiveness, such as anger, resentment and bitterness, towards the individual who offended us has long been associated with a range of adverse physical and mental health risks, such as cortisol reactivity (Berry & Worthington, 2001), higher heart rate and blood pressure (Witvliet, Ludwig & Vander Laan, 2001) and social isolation (Harris & Thoresen, 2005). Similarly, causing harm to another person and harboring unforgiving feelings towards the self can trigger a range of negative emotions, such as self-condemnation, sadness, self-blame, self-resentment, and shame on the part of the transgressor (Cornish & Wade, 2015b). Experiencing unforgiving feelings against someone else for a transgression they have committed against us, and harboring unforgiveness against ourselves can often co-exist.

Just as interpersonal forgiveness has been found to be an effective process for victims to overcome past offenses (Baskin & Enright, 2004), self-forgiveness is shown to lead to positive changes for the transgressor. Research indicates that forgiving others can contribute to, among others, improved physical health (Harris & Thoresen, 2005) and enhanced marital relations (Fincham, Paleari, & Regalia, 2002). Similarly, individuals who are able to forgive themselves for past transgressions they have committed against another person experience a range of positive

intrapersonal and interpersonal gains, such as lower levels of depression, anger, and anxiety, greater satisfaction with life (Thompson et al., 2005) and greater prosocial behaviors, such as remorse and humility (Fisher & Exline, 2006).

Additional to offense-specific forgiveness, which refers to forgiving a specific transgression, the concept of dispositional forgiveness, which describes a personality trait, warrants research and clinical attention. At the dispositional level, forgiveness of others has been conceptualized as an individual's ability to forgive across a variety of situations and relationships, whilst forgiveness of self describes the tendency to forgive ourselves for perceived offenses (Berry, Worthington, Parrott, O'Connor, & Wade, 2001). Research indicates that, while individual scores on forgiveness measures for specific transgressions tend not to be significantly related to mental health and well-being, scores on measures of dispositional forgiveness tend to be related to such measures (McCullough & Witvliet, 2002). Thus, measuring dispositional forgiveness is particularly valuable for exploring the psychological correlates of forgiveness. The current study aims to examine the relationship between dispositional forgiveness to a number of well-being variables, such as affect balance, depressive symptomatology, and quality of life. Psychoeducational interventions designed to promote interpersonal forgiveness have been shown to be effective (for a review see Baskin & Enright, 2004). The limited research that exists on the effectiveness of the few interventions that aim to promote self-forgiveness has derived promising results (e.g., Cornish & Wade, 2015a). However, to our knowledge, there is no single intervention that aims to promote both interpersonal and self-forgiveness simultaneously. Moreover, only a handful of interventions have included or examined dispositional forgiveness as an outcome variable. Therefore, the purpose of the current study is to develop and test the effectiveness of a group psychoeducational intervention for individuals struggling to forgive others and themselves for past interpersonal offenses (i.e., transgressions

committed against them, and offenses they committed against another person). Moreover, the intervention aims at increasing dispositional forgiveness.

The new intervention is a flexible manualized intervention adapted from an empirically-supported, untargeted intervention to promote interpersonal forgiveness (REACH; Worthington, 2001a), with specific adjustments made to incorporate exercises on 3 types of forgiveness: forgiveness of others, forgiveness of self and dispositional forgiveness. The intervention employs a 16-hour group psychoeducational format and utilizes a variety of individual, dyadic and group exercises designed to help participants accomplish interpersonal and self-forgiveness for specific transgressions, and to possibly increase their level of dispositional forgiveness. Exercises follow the REACH (Worthington, 2001a) protocol and aim, among other, at helping individuals recall he hurt in an objective way, empathize with themselves and their transgressors, offer the altruistic gift of forgiveness and self-forgiveness, and commit to becoming more forgiving and self-forgiving persons.

The current pilot study is designed to examine the effectiveness of the intervention on 3 types of forgiveness: offense-specific forgiveness of another person, offense-specific forgiveness of self, and dispositional (trait) forgiveness. In addition, the ability of the intervention to reduce depression and increase positive affect balance from baseline to post intervention and against a control group will be tested to examine the effects of the intervention on general well-being.

## Chapter II. Literature Review

The rise of the positive psychology movement brought about a wave of research on beneficial personality traits, human strengths and virtues, and psychological processes that have traditionally been considered as morally desirable or psychologically or socially constructive (Lopez & Snyder, 2009). Moving away from the traditional focus on psychopathology and mental illness, positive psychology researchers and clinicians are now focusing on identifying and fostering the psychological substrates of mental health, personal growth, positive human development and positive personality traits (Seligman & Csikszentmihalyi, 2000).

Research in the field of positive psychology has been focusing on the values and assets of individuals along with the ways that these can be promoted by social systems and structures (Peterson, 2006). The concepts of flow (Csikszentmihályi, 1990; Nakamura & Csikszentmihalyi, 2014), flourishing (Keyes, 2002), thriving (Carver, 1998; Bundick, Yeager, King, & Damon, 2010), and psychological resilience (Masten, 1994; Southwick & Charney, 2018), have been introduced and extensively studied for their roles in optimal human functioning and successful adaptation following adverse life events. In recent years, there has been a growing interest in the psychological processes and traits that promote enhanced well-being and life satisfaction such as optimism (Conversano et al., 2010), hope, zest and gratitude (Park, Peterson & Seligman, 2004), modesty, humility and kindness (Peterson & Seligman, 2004), and altruism (Batson, 2014). Forgiveness represents an important human process related to physical, psychological and social well-being (e.g., Webb, Colburn, Heisler, Call, & Chickering, 2008).

Humans seem to have a distinctive tendency to reciprocate perceived harmful interpersonal acts with more harmful behavior. When insulted, hurt, cheated on or attacked, most individuals are prompt to either avoid or seek retaliation against the offender. The proclivity to avoid our

transgressors or seek revenge after been mistreated or offended appears to be deep-rooted in the biopsychological and cultural aspects of the human nature (McCullough & Witvliet, 2002). From a psychological perspective, the human inclination to seek retribution can be explained by the norm of reciprocity and by individual differences in the proclivity to seek vengeance (Eisenberger, Lynch, Aselage, & Rohdieck, 2004). Individuals are motivated to react to grievances and offenses by committing further transgressions. When a person who has been hurt retaliates, the primary perpetrator might consider that retribution to be excessive and may seek retaliation to even the score, thus propagating a vicious cycle of revenge. One of the processes that can end the cyclical nature of avoidance and retribution is forgiveness (McCullough & Witvliet, 2002).

The notion of forgiveness dates back to the ancient times. The world's prominent monotheistic religions (Judaism, Christianity, Islam, Hinduism) all speak to the importance of forgiving others for their transgressions and consider forgiveness to be one of the greatest human virtues (Scarre, 2004). The idea that individuals should forgive their own offenders as they themselves have been forgiven by God is common to all major monotheistic traditions (McCullough & Worthington, 1999). Inscriptions of acts of forgiveness can be found in the holy books of Christianity, Judaism, Islam and Hinduism. The Old Testament of the Hebrew Bible contains perhaps the oldest preserved written account of person to person forgiveness. In Genesis 37-45, Joseph's jealous brothers, convinced that he is dead, abandon him in the desert. Rising to power in Egypt years later, Joseph refuses to punish them, and instead offers unconditional forgiveness. The same paradigm for forgiveness is found in Islam's Holy Quran (Quran 12, the Noble Qur'an). In Hinduism, forgiveness is considered to be one of the six cardinal virtues; Hindus are not only encouraged to forgive others but to also to seek forgiveness themselves if they have wronged someone else (McCullough, Pargament & Thoresen, 2001). The idea of forgiveness is also found in the writings of distinguished ancient philosophers

and social theorists such as Plato, Socrates, and Emanuel Kant, albeit not in the form we know it today but rather in the form of moral ideas and ethics (Konstan, 2010).

Currently, forgiveness is being studied by several fields including pastoral care and counselling (Patton, 2001), criminal law (Ammar, 1999), philosophy (Griswold, 2007), sociology (Exline, Worthington, Hill, & McCullough, 2003) and psychology (McCullough, Pedersen, Tabak, & Carter, 2014). Pastoral care looks at forgiveness as a significant feature of a life lived in rapport with one's God and fellow human-beings (Patton, 2001). Philosophical perspectives consider forgiveness to be a virtue, and discuss the moral and ethical implications of forgiving or seeking revenge (Scarre, 2004). Sociological and legal viewpoints emphasize the social or legal implications of forgiveness in the wider context of society and the judicial system, respectively (Exline et al., 2003). Psychological studies on forgiveness differ from other disciplines in that they concentrate primarily on the cognitive (Maltby, Macaskill & Gillett, 2007), emotional (Worthington & Scherer, 2004; Greenberg, Warwar, & Malcolm, 2008), motivational (McCullough, Fincham, & Tsang 2003), behaviour analysis (Cordova, Cautilli, Simon, & Sabag, 2006), and decisional and attitudinal (DiBlasio, 1998) aspects of forgiveness.

For most of psychology's brief history, the concept of forgiveness received little systematic attention (McCullough et al., 2000). The neglect of forgiveness in the early decades of psychological research can be attributed to a number of reasons. Firstly, forgiveness has been relatively neglected throughout the entirety of academia (Enright & North, 1998). Secondly, up until the 1990's, the concept of forgiveness had been predominantly studied by theologians and philosophers. This resulted in forgiveness being theorized primarily as a philosophical or a religious concept. In addition, issues associated with reliable data collection on forgiveness, might have played a role,

particularly during a period where psychological inquiry pressed for the analysis of observable behaviors (McCullough et al., 2000).

In the 1930's, psychologists occasionally addressed the concept of forgiveness, albeit sporadically. Early forgiveness inquiries include Piaget's (1932) and Behn's (1932) papers suggesting that an individual's capacity to forgive stems from the development of moral judgment. Up until 1997, forgiveness research comprised a mere 58 empirical studies (McCullough, Exline, & Baumeister, 1998). In the last decades, however, social scientists have turned their attention to the scientific study of forgiveness, producing an impressive amount of publications (for a review see Fehr, Gelfand, & Nag, 2010). Over the past 20 years, theoreticians and researchers within the psychology field have documented the increasing interest, and subsequent growth of the psychological study of forgiveness. Since the late 1990s the amount of published studies rose almost fivefold. Forgiveness research has also flourished in response to catastrophic national and international events and issues, such as the Rwandan genocide (Staub, Pearlman, & Miller, 2003) and terrorism (Strelan & Lawani, 2010). This exponential growth in forgiveness studies brought about the need for a more accurate and universal definition of forgiveness and its components and correlates.

### **Defining and Conceptualizing Forgiveness**

For years, definitional disagreements permeated the field of forgiveness research, with ample disputes regarding how to conceptualize forgiveness in a more comprehensive manner (Enright & Coyle, 1998). In 1997, the Hope College Conference on Forgiveness prompted a debate on developing a consensual definition of forgiveness (Worthington, 1998). Forgiveness scholars generally agree on what forgiveness is not rather than what it is. Forgiveness is not forgetting, pardoning, excusing, justifying, exonerating, condoning, denying or reconciling, and it does not

require releasing the transgressor from the consequences of his actions; rather, it involves accepting the offense and relinquishing resentment and the desire for retaliation or avoidance (Enright & North, 1998). Distinguishing between forgiveness and pseudoforgiveness is of vital importance; the former includes letting go of the negative, unforgiving emotions and motivations to take revenge or avoid the perpetrator, whilst the latter describes “an outward expression of forgiveness, but an inward harboring of resentment and revenge” (Enright & Zell, 1989, p. 58).

Forgiveness has been defined as a prosocial change regarding a perceived offender which includes a reduction of negative - or even the increase of positive - cognitions, emotions, and motivations toward the transgressor that might result in changed behavior (Fehr et al., 2010). Forgiving is seen as a deliberate and voluntary process, driven by a conscious decision to forgive the offender (Worthington, 2005). Worthington (2001) discusses that, due to the complexity that the term entails, and despite notable attempts by theoreticians, there currently exists no consensual definition of forgiveness. This disagreement seems to stem from the differential emphasis that theoreticians have placed on different aspects of forgiveness (Worthington, 2005). In light of the propagation of psychological research studies on forgiveness, it is essential to briefly review the numerous aspects and complexities of forgiveness, with the intention of exemplifying the focus of the present study.

First, it seems essential to define the target of the forgiveness process, the transgression. Forgiveness involves the acknowledgment that a transgression has occurred. A transgression, also known as an offense, is defined as a moral and interpersonal injustice that violates an individual's physical, mental, interpersonal, or spiritual boundaries (Worthington et al., 2014). Thompson and her colleagues (2005) suggest that transgressions transpire when an individual's perceptions and expectations about themselves, others and the world are violated. For instance, an individual who

engages in self-mutilation may experience this as a transgression against themselves, prompting feelings of embarrassment and blame, and challenging their view of themselves as good. In the same way, a person who feels betrayed by a close friend challenges their fundamental belief in others as being trustworthy. An individual may have numerous targets to forgive for the same offense. For instance, in the case of an illness, individuals might forgive their parents for passing on the genetic predisposition for the disease (forgiveness of others) and forgive themselves for engaging in behaviors that accelerated the onset (forgiveness of self) (Thompson et al., 2005).

Miller, Worthington and McDaniel (2008) propose that, traditionally, the majority of forgiveness definitions fell into two camps: forgiveness involving: a) the reduction of negative experience (e.g., cognitions, emotions, revenge or avoidance motivations, and behavior) or b) both a reduction of negative experience and an increase of positive experience toward the offender. In the first category, forgiveness merely suggests a decrease in negative emotions, cognitions and motivations toward a transgressor (Ashton, Paunonen, Helmes, & Jackson, 1998); conceptualizing forgiveness in this manner carries the implication of forgiveness seen as synonymous with the absence of negative feelings and vindictive motivations towards a transgressor. Hence, the cessation of negative emotionality and the desire to retaliate is seen as the terminal outcome of forgiveness. The second camp conceptualizes forgiveness as a two-step process, which involves both a decrease of negative thoughts, emotions, and motivations towards a transgressor, and a successive substitution of these with affiliative motivations towards the transgressor. Within this conceptualization, the terminal result of forgiving is the acquisition or reconstitution of neutral or positive feelings towards one's transgressor (Fincham, Beach, & Davila, 2004). The current study adopts the latter definition of forgiveness.

It is important to note that the degree to which forgiveness encompasses positive emotions toward the transgressor may be contingent on the nature of the relationship between the victim and the offender. Worthington (2005) suggests that researchers who examine forgiveness in relationships: a) with strangers (e.g., a criminal perpetrator); b) with individuals in non-valued relationships (e.g., an intimidating supervisor, or a former hostile landlord), or c) in cases that the relationship is condemned (e.g., a former lover or an ex-partner with whom the person is no longer in touch with) consider forgiveness to merely be a reduction of negative responses toward the transgressor. Therefore, in such relationships, forgiveness involves an elimination of revengeful or avoidant motives, a cessation of hostile, angry, resentful, anxious, or depressive ruminations regarding the offense, and having made a definite decision that the victim's behavioral intentions do not include retribution. Nevertheless, when relationships are both valued and ongoing (i.e., feeling hurt by a spouse, a family member or a valued acquaintance), participants might not be content with solely eliminating negative emotions, motives, ruminations and revenge intentions. Instead, they might be more willing to attempt to achieve a more positive emotional balance (Paleari, Regalia, & Fincham, 2009).

Forgiveness has been described as both an interpersonal and an intrapersonal process. A number of authors suggest that forgiveness is interpersonal and social in nature: it arises as a result of an interpersonal violation, and the individual forgives in relation to someone else. Thus, forgiveness is an interpersonal phenomenon in that it has another individual as a point of reference (McCullough et al., 2000). Similarly, Exline and Baumeister (2000) suggest that, since transgressions occur in between people, in established relationships (e.g., family members, friends, romantic partners), it is crucial to attempt to understand forgiveness in the context of ongoing relationships.

Conversely, forgiveness can be considered as an intrapersonal process, in that it involves the modification of an individual's cognitions, emotions, attitudes and motivations in relation to a transgression (Strelan & Covic, 2006). Field, Zander and Hall (2013) suggest that, for some populations, such as victims of violent crimes, forgiveness is an intrapersonal construct that involves intraindividual processes such as self-awareness, relinquishing of the desire to retaliate, perspective-taking and moving on. Owing to the intrapersonal nature of forgiveness, it can unfold even if the individual is no longer engaged in a relationship with the offender, or if the offender is not alive (McCullough et al., 2000).

The longstanding disagreement regarding the intrapersonal and interpersonal nature of forgiveness seems to stem from the mix-up between reconciliation and forgiveness (Thompson et al., 2005). It is of great importance to distinguish the two concepts. Worthington and Drinkard (2000), emphasizing the willingness of both parties to come together, defined reconciliation as "the restoration of trust in an interpersonal relationship through mutual trustworthy behaviors" (p. 4). Forgiveness, on the other hand, can occur without reconciliation because it occurs exclusively within the offended individual (Worthington, 2006). Hence, reconciliation seems to be an interpersonal process, as it encompasses a restoration of the ruptured relationship, whilst forgiveness is an intrapersonal process that takes place within the individual that has been wronged and does not necessarily entail relationship restoration (Thompson et al., 2005). Worthington and Drinkard (2000) add that the processes of forgiveness and reconciliation can occur independently from one another: forgiving an offender can occur without reconciliation, meaning that an individual can forgive their transgressor without rekindling their relationship, and reconciliation can occur without forgiveness on the part of the individual who has been offended. McCullough, Pargament, and Thoresen (2000), adopting both aspects of forgiveness, concluded that forgiveness is "an intraindividual, prosocial

change toward a perceived transgressor, that is situated within a specific interpersonal context” (p. 9).

Another important clarification on the construct of forgiveness was made by Worthington (2003), who distinguished between decisional and emotional forgiveness. According to this classification, decisional forgiveness refers to the behavioral intention statement that an individual will release the transgressor from the debt, and that they will try to behave toward the offender like they did before the transgression occurred (DiBlasio, 1998; Worthington, 2003). Decisional forgiveness is founded in one’s beliefs about future interactions with an offender. Granting decisional forgiveness does not necessarily suggest letting go of negative emotionality; an individual might grant decisional forgiveness and still be emotionally distressed or engage in anxious, depressive or angry rumination. In some cases, decisional forgiveness could prompt emotional forgiveness. For emotional forgiveness to occur, a shift of emotions from negative to positive must occur. This modification subsequently affects the victim’s motivations towards the offender, changing them from avoidant or revengeful to benevolent (Worthington et al., 2001). Emotional forgiveness is defined as the emotional collocation of positive, other-oriented emotions against negative unforgiveness, which can ultimately result in the neutralization or replacement of all or part of those negative emotions with positive emotions, such as empathy, sympathy and compassion towards the transgressor (Worthington et al., 2001; Wade & Worthington, 2002).

Forgiveness has also been defined and evaluated at three points of reference: as an offense-specific response, as a tendency toward a specific relationship partner, and as a trait (McCullough, Hoyt, & Rachal, 2000). McCullough and his colleagues (2000) categorized forgiveness research as either: a) offense-specific, b) dyadic, or c) dispositional. Offense specific forgiveness refers to a single act of forgiveness for a specific transgression (e.g., adultery, insult, dishonesty) within a

specific interpersonal context (Paleari et al., 2009). This type of forgiveness does not imply forgiving the totality of a transgressor's hurtful actions; rather forgiveness is offered for a particular hurtful behavior in a particular context (McCullough et al., 2000). Dyadic forgiveness refers to the tendency to forgive a particular transgressor (e.g., parent, romantic partner, friend) across multiple offenses (Fincham, Hall, & Beach, 2005; Hargrave & Sells, 1997). Finally, dispositional forgiveness, also known as forgivingness, refers to the tendency of an individual to forgive across a variety of transgressions occurring in multiple relationships and interpersonal contexts (Roberts, 1995).

Individuals who are the victims of interpersonal offenses typically develop negative cognitions (i.e., "this has destroyed my life"), emotions (e.g., anger, resentment), or behaviors (e.g., planning to retaliate) toward the perceived source of transgression (Thompson et al., 2005). Such experiences compel individuals to assimilate information that is dissonant with their beliefs about themselves, others, or the world (Janoff-Bulman & Frantz, 1997). Due to the distressing and discomforting nature of cognitive dissonance, individuals are motivated to resolve the dissonance caused by the transgressions and their reactions to it. Forgiveness is conceptualized as a means of responding to transgressions that is manifested in the individual's efforts to transform the negative responses that accompany the transgression with neutral or even positive ones (Thompson et al., 2005).

The majority of previous research has attempted to map the processes of transformation leading to forgiveness, in which forgiveness has been considered to be a situation-specific dependent variable (Worthington & Wade, 1999). The social, experimental and applied research fields have emphasized forgiveness in the context of a single transgression or specific offender. Research on the processes leading to forgiveness comprises of experimental studies (e.g., Zheng, Fehr, Tai,

Narayanan, & Gelfand, 2014) and intervention studies intended to promote forgiveness (e.g., Lin, Mack, Enright, Krahn, & Baskin, 2004). Berry and his colleagues (2001) suggest that this focus on dyadic and offense-specific acts of forgiveness is partly due to forgiveness's effect on reducing emotional distress. Focusing on forgiveness as a state-like variable has inevitably resulted in research and practice focusing on the acts of forgiving a single transgression or a specific person.

Nevertheless, the emphasis on state forgiveness has caused individual differences in the propensity to forgive to have gone largely understudied. In recent years, researchers have begun to examine the factors that contribute to an individual's ability to forgive others. Berry and his colleagues (2001) suggest that understanding the processes of forgiveness from the perspective of specific transgressions (e.g., deceit, unfaithfulness) requires researchers to understand the reasons behind why some individuals are more prone to forgive than others. Researchers and scholars (Toussaint & Webb, 2005; Berry, Worthington, O'Connor, Parrott, & Wade, 2005) have called for the need to focus more on the general tendency to forgive rather than on forgiving others for specific offenses.

### **Dispositional Forgiveness**

Dispositional forgiveness, or forgivingness, refers to the tendency to forgive transgressions that is stable across situations and over time (Berry et al., 2001). As a personality characteristic, forgivingness can be understood as the tendency to forgive others across a wide array of interpersonal situations. First coined by Roberts (1995), forgivingness describes an enduring personality trait; it differs from forgiveness in that the latter better describes acts of forgiving. Roberts (1995) defines forgivingness as "an enduring disposition to the act or process of forgiveness" (p.289). Thompson and her colleagues (2005) define forgiveness as "the framing of a perceived transgression such that one's responses to the transgressor, transgression, and sequelae of

the transgression are transformed from negative to neutral or positive. The source of a transgression, and therefore the object of forgiveness, may be oneself, another person or persons, or a situation that one views as being beyond anyone's control" (p. 318).

Dispositional forgiveness represents a higher-order characteristic (Thompson et al. 2005) and, depending on the context, it can include an individual's tendency to extend forgiveness to others, themselves and situations. Dispositional forgiveness of others refers to the tendency to forgive other people, whilst dispositional forgiveness of self refers to an individual's tendency to forgive him or herself for perceived offenses. Forgiveness of situations refers to an individual's acceptance of specific adverse situations that are beyond one's control (e.g., physical illnesses, natural disasters) (Thompson et al., 2005). The latter aspect of dispositional forgiveness is controversial; Enright & Rique (2004) argue that a construct like dispositional forgiveness of situations might not be meaningful. Candido and Romney (1990) argue that individuals tend to blame either other people or themselves for a perceived wrongdoing, according to their attributional style. Hence, the focus of the current study will be on dispositional forgiveness of self and others.

Notably, while individuals' scores on measures of forgiveness of specific transgressions tend not to be significantly related to mental health and well-being, research shows that scores on measures of dispositional forgiveness tend to be related to such measures (see McCullough & Witvliet, 2002). Hence, measuring dispositional forgiveness might be particularly valuable for examining the psychological correlates of forgiveness.

### **Forgiveness of Others**

Forgiveness of others, also referred to as interpersonal forgiveness, represents a well-known concept in the field of forgiveness research, with the majority of forgiveness studies and interventions featuring this specific type of forgiveness (i.e., Witvliet et al., 2001; Freedman &

Enright, 1996; McCullough et al., 1998). Worthington (2001) defined interpersonal forgiveness as a prosocial, positive endeavor that takes place after an individual has been hurt by another person. Interpersonal forgiveness reflects a motivational transformation that prompts individuals to constrain relationship-destructive responses and to behave constructively toward a person who has behaved destructively toward them (McCullough, Worthington & Rachal, 1997). Forgiving another person does not suggest that the individual who forgives excuses or pardons the offender or the offense. Rather, individuals synthesize their prior assumptions and the reality of the transgression into a new understanding of the transgression, transgressor, transgression sequelae, and, potentially, of themselves, other people, or the world (Thompson et al., 2005).

A variety of different factors seem to affect a person's willingness to forgive an offender. Research into forgiveness of an offender suggests that the process of forgiving may be influenced by several demographic factors, including the victim's age and gender. In particular, research indicates that the propensity to forgive increases with age, with older and the middle-aged adults more willing to forgive than children, adolescents and young adults (Allemand, 2008; Steiner, Allemand, & McCullough, 2011). Gender is also an important predictor of forgiveness of others (Franklin, 2016), with women reporting higher levels of forgiveness than men (Toussaint & Webb, 2005). Other demographic variables that might affect forgiveness include ethnicity (Worthington, Sandage, & Berry, 2000) and financial resources (Konstam, Holmes, & Levine 2003). Moreover, forgiveness seems to be associated with the big five personality factors. Specifically, forgiveness is positively related to agreeableness, conscientiousness, extroversion and openness, and negatively related to neuroticism (Abid, Shafiq Naz & Riaz, 2015).

The process of forgiveness may also be affected by a number of offense-specific characteristics. These include the perceived severity of the transgression (Fincham, Jackson, &

Beach, 2005; McCullough et al., 2000), the time that has elapsed since the offense took place (Worthington et al., 2000; Baskin & Enright, 2004), whether the offender apologized or not, and the impact that the offense had on the individual who has been wronged (McCullough et al., 1998). Worthington et al. (2014) suggest that the nature, process and outcomes of forgiveness might also depend on whether one's forgiveness is based on a decisional commitment or a change of heart. Finally, research indicates that the process of forgiveness may be affected by the nature of the relationship between the victim and offender (McCullough et al., 1998) and the offended's predisposition to forgive (McCullough & Hoyt, 2002; Thompson et al, 2005).

A significant factor that may influence an individual's tendency to forgive is their levels of religiosity, spirituality, or both. (Konstam, Holmes, & Levine 2003; Davis, Worthington, Hook, & Hill, 2013). McCullough and Worthington's (1999) meta-analytic review on forgiveness in relation to religiosity and spirituality suggests that individuals who consider themselves to be highly religious or spiritual tend to value forgiveness more highly and see themselves as more forgiving than do individuals who consider themselves less religious or spiritual. Religiosity and spirituality are found to be positively related to a variety of distinct measures of forgiveness (e.g., trait forgiveness, state forgiveness and self-forgiveness) (Davis et al., 2013). Similarly, in a study examining the roles of forgiveness and the importance of religion and spirituality in posttraumatic growth after a significant interpersonal transgression, Schultz, Tallman and Altmaier (2010) found a positive correlation between religion, spirituality and forgiveness, and suggested that religious and spiritual variables may influence how individuals respond to significant interpersonal transgressions through positive processes.

While researchers and scholars have generally consider interpersonal forgiveness to be a valuable human strength, invoking the term 'forgiveness' in a psychological intervention is not

without its perils. Offering forgiveness can be misinterpreted as something that can possibly further harm the forgiver by leading them to overlook or repudiate justified anger, thus opening them to recurring hurts (Lamb, 2002). Katz, Street, and Arias (1997) postulate that forgiving an offender may make the forgiver vulnerable to further victimization by keeping them stuck in repeated cycles of emotional and physical abuse. Others (Bass & Davis, 1994) have suggested that forgiving may subject the individual in victim blaming in abusive relationships. However, these contradictory ideas arise, at least partly, from differences in how forgiveness is operationally defined (Thompson et al., 2005). For instance, Enright (1996) notes that a number of authors who have deterred their readers from forgiving their abusive parents have done so largely because those authors have associated forgiveness with reconciliation, pseudoforgiveness, pardoning or excusing.

Researchers have long called for the focus of forgiveness literature to expand to include other aspects of forgiveness. Enright and the Human Development Study Group (1996), in what they referred to as the forgiveness triad, emphasized the value of assessing multiple aspects of forgiveness by proposing that, in addition to forgiveness of others, forgiveness of self and receiving forgiveness should be explored in the therapeutic context. Similarly, Thompson and her colleagues (2005) suggest that rather than concentrating exclusively on interpersonal forgiveness, measuring multiple aspects of forgiveness is of critical importance.

### **Forgiveness of Self**

Offending or hurting others is an unavoidable aspect of life that can range from relatively minor wrongdoings such as lying to a friend to get out of dinner plans to more severe acts of harm, like infidelity towards a marital spouse, instigating a car accident, or committing war crimes (Cornish, 2014). Causing harm to another person - be it a friend, a colleague, a romantic partner or even a stranger - can trigger a range of negative emotions, such as self-condemnation, sadness, self-

blame, self-resentment and shame on the part of the transgressor (Cornish & Wade, 2015a). While such reactions can be warranted following the instigation of an interpersonal offense, holding on to those negative feelings can potentially be harmful to the person bearing them. Research indicates that the perpetuation of shame and self-condemnation is associated with a decreased capacity to effectively relate to other people and with negative psychological outcomes (Ingersoll-Dayton & Krause, 2005; Friedman et al., 2007).

Compared to interpersonal forgiveness, the study of forgiveness of self has lagged behind in the forgiveness literature (Hall & Fincham, 2008). The vast majority of forgiveness research has centered on how those who have been hurt forgive their transgressors, with much less attention directed to how the transgressors forgive themselves after hurting others. This may have been due to a number of issues pertaining to self-forgiveness. Webb, Bumgarner, Conway-Williams, Dangel and Hall (2017) note that the progression of research on self-forgiveness has likely slowed by definition and resultant measurement-related limitations. Moreover, Davis and his colleagues (2015) draw attention to the fear that some scholars have that self-forgiveness may potentially cause harm by enabling transgressors to discharge feelings of shame and guilt without making the appropriate amends. The limited amount of research into self-forgiveness led Hall and Fincham (2005) to characterize forgiveness of self as the “stepchild of forgiveness research” (p. 621). Even though research into self-forgiveness has developed over the past decade - both in quality and methodological rigor- much is still to be discovered about the development, promotion, and clinical implications of self-forgiveness.

Philosophically, self-forgiveness has been conceptualized as the liberation from negative feelings toward the self following an objective offense or wrongdoing, and the restoration of self-acceptance, self-respect and benevolence (Horsbrugh, 1974; Holmgren, 1998). In much of the same

way, Enright and the Human Development Study Group (1996) defined forgiveness of self as “a willingness to abandon self-resentment in the face of one’s own acknowledged objective wrong, while fostering compassion, generosity, and love toward oneself” (p. 116). Noting an apparent failure of existing definitions to incorporate both the interpersonal and intrapersonal processes involved in forgiveness, Hall and Fincham (2005) offered a comprehensive conceptualization of self-forgiveness that builds on interpersonal forgiveness theory. Paralleling McCullough and colleagues’ (1997) conceptualization of interpersonal forgiveness, Hall and Fincham (2005) defined forgiveness of self as “a set of motivational changes whereby one becomes decreasingly motivated to avoid stimuli associated with the offense, decreasingly motivated to retaliate against the self (e.g., punish the self, engage in self-destructive behaviors, etc.), and increasingly motivated to act benevolently toward the self” (p. 622). Thompson and her colleagues (2005) note that self-forgiveness involves a reframing: a novel understanding of oneself and of the transgression committed that enables the restoration of a positive self-image.

It is important here to distinguish between the two different types of self-forgiveness. The construct can be divided into self-forgiveness for intrapersonal or interpersonal offenses. Self-forgiveness for intrapersonal offenses involves forgiving the self for causing harm to the self (e.g., forgetting to take one’s medication, cheating on one’s dietary restrictions). On the other hand, self-forgiveness for interpersonal offenses involves forgiving the self for causing harm to another individual (e.g., lying to a parent, cheating on a romantic partner) (Terzino, 2010). The current study focuses on self-forgiveness for interpersonal transgressions.

Similar to interpersonal forgiveness, it is also critical to differentiate between “true” self-forgiveness and “pseudo”, or false self-forgiveness (Hall & Fincham, 2005). For true self-forgiveness to occur, one must either implicitly or explicitly acknowledge the wrongdoing and

accept responsibility or blame for said behavior (Holmgren, 1998). In pseudo self-forgiveness, the transgression and its costs are minimized, condoned, or blamed on others, and the transgressor essentially lets themselves off the hook (Tangney, Boone, & Dearing, 2005; Hall & Fincham, 2005). Pseudo self-forgiveness may give the impression that it results in a similar end state as forgiveness: a state of being at peace with oneself. In essence, however, pseudo self-forgiveness is achieved by a moral, cognitive, and affective shortcut - sidestepping acceptance of responsibility, and bypassing acknowledgement of hurtful consequences and negative self-conscious emotions (Tangney, Boone, & Dearing, 2005). Similar to descriptions of interpersonal forgiveness, true self forgiveness is a process that occurs over time, and involves releasing negative emotions, cognitions, motivations and behaviors whilst fostering positive or benevolent emotions, cognitions, motivations, and behaviors directed at oneself, and in which the individuals accepts responsibility for a perceived transgression (Woodyatt, Worthington, Wenzel, & Griffin, 2017).

Interpersonal and self-forgiveness have been linked to a range of positive short- and long-term positive outcomes in physical and mental health; similarly, holding on to unforgiving feelings has been associated with a range of adverse somatic and psychological outcomes. Unforgiveness, defined as an amalgamation of delayed negative emotions (i.e., anger, resentment, hostility, hatred, bitterness, fear) directed towards an offender (Worthington & Wade, 1999) has been described as a chronic stress response to a significant stressor (Worthington & Scherer, 2004). Scientific research has evidenced associations between unforgiveness and a variety of health risks (Harris & Thoresen, 2005). McEwen (2003) suggests that the enduring experience of stress and negative emotionality that accompanies unforgiveness prompts a chronic sympathetic nervous system hyperarousal and increases in allostatic load; this, in turn, gives rise to a range of negative health outcomes (McEwen, 2003). Unforgiveness has been shown to incite more aversive emotion and a number of

physiological reactions consistent with stress responses, such as significantly increased measures on corrugator electromyogram, skin conductance, heart rate and blood pressure (Witvliet et al., 2001). Moreover, Kiecolt-Glaser (1999) found individuals' adverse reactions to stressful situations to contribute to various health risks via changes in endocrine and immune system function. In two recent studies Stackhouse, Ross, and Boon (2016) found a positive relationship between emotional-ruminative forms of unforgiveness and adverse psychological health, whereas Akhtar, Dolan and Barlow (2017) found the unforgiveness to be associated with increases in negative affect, reduction in cognitive abilities and barriers to psychological and social growth.

On the other end, forgiving perpetrators of hurt has been associated with social adjustment and improved interpersonal relationships (Thoresen, Harris, & Luskin, 2000; McCullough et al.; Baskin & Enright, 2004; Worthington & Scherer, 2004). Research indicates that forgiveness can contribute to improved physical health (Harris & Thoresen, 2005), more optimal sleep quality (Stoia-Caraballo et al., 2008), enhanced marital relations (Fincham et al., 2002), and interpersonal adjustment (Tse & Yip, 2009).

Forgiveness has also been associated with a variety of positive psychological characteristics and outcomes, such as subjective well-being (Toussaint & Friedman, 2009), positive affect, life satisfaction and optimism (Allemand, Hill, Ghaemmaghami, & Martin, 2012). Results from longitudinal studies indicate that intra-individual increases in forgiveness are positively associated with increases in psychosocial adjustment (Orth, Berking, Walker, Meier, & Znoj, 2008), improved satisfaction with life, enhanced positive mood, reduced negative mood, and less physical symptoms (Bono, McCullough, & Root 2008). Furthermore, research indicates that forgiving others is inversely associated with a range of negative outcomes, such as state-trait anxiety and depression (Freedman & Enright, 1996), alcohol use and number of chronic conditions (McFarland, Smith,

Toussaint, & Thomas, 2012), unproductivity at the workplace and mental and physical health problems (Toussaint et al., 2016).

Despite the relative neglect of self-forgiveness in the forgiveness literature, a number of associations between self-forgiveness and psychological well-being has been empirically established. Forgiveness of self is found to be related to greater levels of general mental health and life satisfaction/meaning (Davis et al., 2015) and lower levels of disordered eating behavior (Peterson et al., 2017). Self-forgiveness was also found to be related to lower levels of internal psychological distress (Tangney et al., 2005; Thompson et al., 2005), including decreased levels of shame (Fisher & Exline, 2006; Davis et al., 2015), self-blame (Wohl, DeShea, & Wahkinney, 2008), hostility (Snyder & Heinze, 2005), remorse and self-condemnation (Peterson et al., 2017), anxiety and depression (Davis et al., 2015; Maltby, Macaskill, & Day, 2001) and rumination (Thompson et al., 2005). Increases in forgiveness of self were also found to be associated with decreases in perceived transgression severity, guilt, and appeasing behavior in relation to a higher power (Hall & Fincham, 2008). Importantly, self-forgiveness seems to be negatively associated with suicide ideation, lifetime history of suicide attempt, and likelihood of making a future suicide attempt (Hirsch, Webb & Toussaint, 2017).

Over and above the intrapersonal well-being gains, self-forgiveness for a particular transgression is associated with increased empathy for one's victim and a greater desire for reconciliation toward the person hurt (Hall & Fincham, 2008; Woodyatt & Wenzel, 2013). Moreover, self-forgiveness has been associated with increased prosocial behaviors, such as humility and repentance (Fisher & Exline, 2006), and relationship satisfaction (Pelucchi, Paleari, Regalia, & Fincham, 2013). Finally, those who are more self-forgiving in general (i.e., have greater

dispositional self-forgiveness) are also more likely to have positive relationships and interactions with other people (Hill & Allemand, 2010).

Similarly, dispositional self-forgiveness carries important clinical implications. The tendency to forgive oneself for past transgressions has been associated with a number of wellbeing variables. For instance, self-forgiveness was found to be associated with increased levels of perceived quality of life in women with breast cancer (Romero et al., 2006), self-reported physical health (Davis et al., 2015) and life-satisfaction among college students (Thompson et al., 2005). Additionally, individuals who have a tendency to be more self-forgiving report less anxiety, negative affect and depression (Thompson et al., 2005) and less mood disturbance (Friedman et al., 2007). Studies have shown that individuals with a strong tendency to forgive experience a range of positive well-being outcomes, including having a reduced risk for nicotine dependence disorders, substance abuse disorders, depressive disorders, and numerous anxiety disorders compared to individuals with a weak propensity to forgive (Kendler et al., 2003).

### **Comparing Other and Self -Forgiveness**

Hall and Fincham (2005) delineated a number of parallels and commonalities between forgiveness of self and forgiveness of others. First, both self and interpersonal forgiveness are processes that unfold over time. Secondly, they require the presence of an objective moral wrongdoing for which the transgressor is not entitled to but is nevertheless granted forgiveness (Enright, 1996). Moreover, neither concept implies that the offenses that transpired should be excused, condoned, or forgotten. For self or other forgiveness to occur, the individual must change their thoughts, emotions and behaviors towards themselves and the individual(s) who have offended them from negative to neutral or positive. Individuals who forgive – either others or themselves - acknowledge the occurrence of the transgression and commit to the cognitive, emotional, or

behavioral work needed in order to reframe the offense in a way that their responses to the offender or themselves are no longer negative (Thompson et al., 2005).

In spite of these similarities, forgiving oneself and forgiving another person present with a number of differences. To begin with, while interpersonal and intrapersonal forgiveness both involve overcoming a range of negative emotions, these emotions are distinct from one another. Forgiving the self is more likely to involve overcoming feelings of guilt, regret, repentance and remorse over the offense (Fisher & Exline, 2006), whereas forgiving an offender typically involves dealing with feelings of hostility, bitterness, resentment, anger, hatred and fear (Enright & Fitzgibbons, 2000). In addition, the avoidance motivation has a different foci: for interpersonal forgiveness, it involves the victim avoiding the offender, while for self-forgiveness it involves the motivation to avoid the victim and the cognitions, emotions, and situations associated with the offense (Hall & Fincham, 2005).

Another significant difference between forgiveness of other and forgiveness of self concerns the conditional nature of these processes. Interpersonal forgiveness is usually considered to be unconditional, whereas forgiveness of self may be depended on a number of factors, such as making continuous reparations to the victim of one's transgression or resolving to never again commit such a transgression (Enright, 1996; Horsbrugh, 1974). Furthermore, self-forgiveness and interpersonal forgiveness vary in their implications for reconciliation. Enright (1996) suggests that whilst an individual does not need to reconcile with a transgressor in order to engage in interpersonal forgiveness, reconciliation with the self is considered to be an essential aspect of forgiving the self. Finally, Hall and Fincham (2005) suggest that not forgiving the self may carry more severe implications than not forgiving the other.

### **Measuring Forgiveness**

In the beginnings of forgiveness research in the 1980s and early 1990s, only a handful of instruments were available to measure the construct, which were typically in the form of nonstandardized questionnaires (Worthington, 2005). The focus of forgiveness literature on interpersonal forgiveness is reflected by the development of several corresponding measures that assess the degree to which an individual forgives their transgressors (e.g., Hebl & Enright, 1993; Subkoviak et al., 1995; McCullough et al., 1998; Hargrave & Sells, 1997).

Inevitably, conceptualizing forgiveness and its components in multiple ways led to the development of a multitude of self-report measures that attempted to capture the different aspects of forgiveness. For example, to address the distinction between decisional and emotional forgiveness, Worthington and his colleagues (2008) have developed the Decisional Forgiveness Scale and Emotional Forgiveness Scale. Similarly, to address whether forgiveness is understood as intrapersonal or interpersonal process, the interpersonal subscale of the Forgiveness Understanding Scale (FUS; Hook, Worthington, Utsey, Davis, & Burnette, 2012), was developed, which measures the extent to which an individual believes that forgiveness requires interpersonal interactions. Measures of interpersonal forgiveness for specific offenses (e.g., Subkoviak et al., 1995; McCullough et al., 1998) were some of the first forgiveness measures to be developed. The Enright Forgiveness Inventory (EFI; Subkoviak et al., 1995) and the Transgression-Related Inventory of Motivations (TRIM-12; McCullough et al., 1998), are currently the two most widely used forgiveness measures. The EFI is a 60-item measure of forgiveness that evaluates cognitive, affective, and behavioral components of forgiveness, while the TRIM is 12-item measure of avoidance (TRIM-A) and revenge (TRIM-R) motivations, which has and been complemented with an additional 7 items measuring benevolence (TRIM-B) motivations (McCullough, Fincham, & Tsang, 2003). Measures to assess individual differences in the disposition to forgive have also been

developed, reflecting the differentiation from state to trait forgiveness. Such scales include the Transgression Narrative Test of Forgivingness (TNTF; Berry et al., 2001), the Tendency to Forgive Scale (Brown, 2003) and the Heartland Forgiveness Scale (HFS; Thompson et al., 2005).

The last decades witnessed a number of notable changes in measuring forgiveness. This included the introduction of a multilevel modelling to describe the typically longitudinal course of an individual's responses to a specific offender over time. McCullough and his colleagues (2003) suggest that rather than using a single measurement period, forgiving a transgression can be assessed as a time-bound process. Measurements that comprise implicit and behavioral indices have also been introduced. For instance, Karremans, Van Lange, and Holland (2005) investigated whether forgiveness may extend beyond the relationship with the offender to promote generalized prosocial orientation, by examining charitable donations, word stem tasks and pronoun choices as correlates of forgiveness. Additional methods of measuring forgiveness include games such as the "prisoner's dilemma", a situation in which two participants each have two options whose outcome depends on the simultaneous choice made by the other, often formulated in terms of two "prisoners" separately deciding whether to confess to a crime (Axelrod, 1984). Another laboratory method includes requesting participants to anonymously give feedback about an offender and to state their inclination to do the offender a favor after a laboratory transgression (Zechmeister, Garcia, Romero, & Vas, 2004).

The limited research interest on self-forgiveness is reflected by the scarcity of measures that capture the process and disposition of forgiving oneself. In fact, only three dispositional measures exist that measure forgiveness of self in addition to assessing forgiveness of others: the Forgiveness of Self and Forgiveness of Others scales (Mauger et al., 1992), the Multidimensional Forgiveness Inventory (Tangney, Fee, Reinsmith, Boone, & Lee, 1999) and the more recent Heartland

Forgiveness Scale (Thompson et al., 2005), that assesses the general tendency of an individual to forgive themselves.

### **Affect Balance**

Subjective well-being (SWB) is a construct that has gained substantial research support in recent decades, in part due to the rise of the positive psychology movement, that shifted emphasis from psychopathology to positive attributes and outcomes (Seligman & Csikszentmihalyi, 2000). SWB is defined as “a person’s cognitive and affective evaluations of his or her life” (Diener, Oishi, & Lucas, 2002, p. 63). Subjective well-being tends to be stable over time (Diener, Suh, Lucas, & Smith, 1999) and consistent across situations (Diener & Larsen, 1984). Evaluations of SWB comprise dimensions of cognitive and affective well-being. The cognitive component refers to the global and domain-specific evaluations of one’s life, and includes measures of overall life satisfaction and satisfaction with specific domains (e.g., professional life, finances, relationships) (Diener, 2000). The affective component of SWB includes measures of positive affectivity, negative affectivity and the overall equilibrium between the two, termed affect balance (Diener et al., 1999).

Affect balance - also called overall affect or hedonic balance - refers to the relative frequency of positive affect (PA) and negative affect (NA) (Schimmack, 2008), and is calculated by the difference score of positive affect minus negative affect. Negative affect refers to the extent to which an individual subjectively experiences a cluster of negative emotional states such as sadness, anxiety, stress, depression, worry, guilt, shame, anger, and envy (Leung & Lee, 2014). Positive affect refers to the subjective experiences of a group of positive affects such as joy, interest, and alertness (Miller, 2011).

Put forward by Bradburn in the late 1960’s, affect balance is based on the premise that well-being is a global judgement individuals make by evaluating the incidence of experiencing negative

versus positive affect. Bradburn (1969) postulated that the absence of negative affect does not imply the presence of positive affect. Supporting Bradburn's assertions, research suggests that PA and NA are almost independent of one another, and exhibit null or low correlations (Pettit, Kline, Gencoz, Gencoz, & Joiner, 2001; Naragon & Watson, 2009). Corroborating findings suggest that PA and NA are associated with different variables (Russell & Carroll, 1999). For instance, Schlauch, Gwynn-Shapiro, Stasiewicz, Molnar and Lang (2013) found positive and negative affect to be differentially associated with approach and avoidance inclinations toward cigarette and alcohol cue-elicited cravings.

Researchers have long suggested that employing a single ratio to indicate the balance of positive and negative components can offer theoretically significant information that goes above and beyond reporting each construct independently (Bradburn, 1969). Harding's (1982) findings concur with Bradburn's (1969) hypothesis in that the balance resulting from summing the scores on the positive and negative affect scales is a stronger predictor of psychological well-being than either of the affect scales considered separately. In a recent study, Rego, Sousa, Marques and Pina e Cunha (2012) emphasized the importance of examining both PA and NA when studying affectivity, and warned of the dangers in terms of decreasing the predictive value of the construct under examination for researchers who only examine one of the affects in an isolated fashion.

A number of demographic variables might be associated with the experience of positive and negative affect, such as religion and spirituality, age and gender. Van Cappellen, Toth-Gauthier, Saroglou and Fredrickson (2016), found the relationship between religion, spirituality and well-being to be mediated by positive emotions. Moreover, religiosity is found to moderate the relationship between negative affect and life satisfaction (Joshnloo, 2016). Age also seems to play a part in experiencing positive and negative emotions, with older adults frequently reporting higher

levels of positive and lower levels of negative affect than younger adults (Stone, Schwartz, Broderick, & Deaton, 2010). When it comes to gender differences, the relationship between gender and affect seems to depend more on the intensity of the reported affect rather than the frequency of experiencing positive and negative affectivity, with women reporting more intense positive and negative emotions (Fujita, Diener, & Sandvik, 1991).

### **Affect Balance and Health Correlates**

The relationship between emotions and health or adjustment has been the subject of rigorous research. The fields of clinical, occupational, social, health psychology and behavioral medicine are increasingly recognizing the role of emotions in well-being (e.g., Davidson, Mostofsky, & Whang, 2010; Green, Decourville, & Sadava, 2012). The effects of negative affect on health are well documented in psychological research and they have been linked to lower levels of psychosocial functioning (e.g., social integration; Kawachi & Berkman, 2001) and physical health (e.g., Watson & Pennebaker, 1989). In recent decades, research has moved away from focusing on negative emotionality and has begun to examine the benefits of positive affect. A growing amount of studies suggest that positive affect plays a significant and beneficial role in health, including lower morbidity, increased longevity, fewer and less severe symptoms of pain, and better self-reported health (Ostir, Markides, Black, & Goodwin, 2000; Cohen, Doyle, Turner, Alper, & Skoner, 2003; Roysamb, Tambs, Reichborn-Kjennerud, Neale & Harris, 2003).

In the past years, researchers are turning their attention to the overall affective balance between PA and NA and its contributions to health and well-being outcomes (e.g., Yamasaki & Uchida, 2016). The balance of pleasant to unpleasant emotions seems to be playing an important role to well-being and adjustment (Bradburn, 1969; Cheng, 2006). Interactions between positive and negative affectivity are found to impact a variety of areas, from job performance (Van Yperen,

2003) to breast cancer concerns (Han et al., 2008). Diener (2000) suggests that the ratio of an individual's experiences of positive to negative affect in everyday life can predict their global levels of subjective well-being.

The balance of positive to negative affect (also known as the positivity ratio) has been proposed as an indicator of flourishing (Fredrickson & Losada, 2005). In addition, high ratios of positive to negative affect are associated with optimal mental health (Schwartz et al., 2002; Diehl, Hay, & Berg, 2011), life satisfaction (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002; Koydemir, Şimşek, Schütz, & Tipandjan, 2013; Zhu, 2015) and lasting marriages (Gottman, 1994). In a study of nursing home residents with dementia, Kolanowski, Van Haitisma, Meeks and Litaker (2014) found a positive correlation between residents' positive affect balance, high well-being and greater engagement in activity.

The effects of affect balance have also been examined in cross-cultural research. Experiencing more positive than negative affect seems to be a universally desirable characteristic in almost every culture (Koydemir et al., 2013). Affect balance appears to be a stronger predictor of life satisfaction in individualistic rather than collectivistic cultures (Schimmack et al., 2002). Suh, Diener, Oishi, and Triandis (1998) found that, while the relationship of affect balance and life satisfaction is significantly positive in all cases, correlations of affect balance with life satisfaction vary across nations. Hence, it is likely that PA and NA not only have main effects on health, well-being, and adjustment but interactive effects as well.

A number of researchers have attempted to calculate the ratio of positive to negative affect that best correlates with positive outcomes. Schwartz & Garamoni (1986) suggested that a balance of 62% positive cognition or affect was associated to overall psychological adjustment. Baumeister, Bratslavsky, Finkenauer and Vohs (2001) argued that negative life events, such as divorce or

unemployment, exert a stronger impact on the individual than positive ones, due to negativity bias. Therefore, in order to achieve well-being, a ratio of experiencing approximately 3:1 positive to negative emotions is required. Supporting this hypothesis, Larsen and Prizmic (2008) reviewed studies by several researchers (e.g., Fredrickson & Losada, 2005; Schwartz et al., 2002), and proposed that individuals need to experience approximately three times more positive than negative affect in order to sustain an optimal level of affective well-being and positive mental health.

However, the positivity ratio of 3:1 of positive feelings and affects to unpleasant ones is contested. Brown, Sokal and Friedman (2013) questioned Fredrickson & Losada's (2005) mathematical approach for establishing this critical minimum, claiming it was based on unsound mathematical models. In addition, different positive to negative affect ratios have been found in other contexts, ranging from remission from depression (Schwartz et al., 2002), to stable and content marriages (Gottman, 1994) and profitable and effective business teams (Losada, 1999). Fredrickson (2008) proposed that, for each of these contexts, higher positivity to negativity ratios of approximately 5:1 are associated with doing well, while ratios under 1:1 are associated with doing poorly. Current research computes affect balance by subtracting the negative affect score from the positive affect score (e. g., Koydemir et al., 2013).

### **Affect Balance and Forgiveness**

Affect balance represents a relatively neglected construct, with the overwhelming majority of studies measuring either positive emotion, negative emotion, or both, separately. Research suggests that forgiveness is associated with both positive and negative affect. In particular, forgiveness was found to be negatively associated with negative affect, in that individuals who scored higher on forgiveness measures scored lower on measures of negative affect (Lawler-Row, & Piferi, 2006). Unforgiving thoughts have also been shown to prompt more aversive emotion (Witvliet, Ludwig &

Vander Laan, 2001), whilst negative affect was found to be a robust mediator between forgiveness and physical health (Lawler et al. 2005; Carson et al., 2005).

On the other end, forgiveness is shown to correlate positively with positive affect. Karremans, Van Lange, Ouwerkerk and Kluwer (2003) using an experimental research design to examine college students' forgiveness, found that individuals who choose to forgive their transgressors experienced greater positive affect, among other well-being measures. Walker and Gorsuch (2002) examined the relationship between four dimensions of forgiveness (forgiveness of others, receiving others' forgiveness, forgiveness of self, and receiving God's forgiveness) and personality traits among students from religious and public universities. Their results indicated positive associations between general emotionality and emotional stability, and forgiveness.

Worthington and Scherer (2004) suggest that forgiveness represents an emotion-focused coping strategy, which entails the transformation of the negative emotions associated with unforgiveness (e.g., bitterness, hostility, resentment) to positive emotions (e.g., compassion, empathy). Worthington and Scherer (2004) suggest that, it is via this replacement of emotional states from positive to negative that forgiveness affects physical and mental health and well-being. The affective component of forgiveness enables the transformation of the negative emotions associated with unforgiveness to neutral or even positive ones (Worthington & Scherer, 2004).

Whilst the function between forgiveness and positive and negative emotion separately has been examined, very limited research exists that has considered the relationship of affect balance to dispositional forgiveness. In the only study to our knowledge, Toussaint and Friedman (2009) examined affect balance and beliefs as a mediator in forgiveness, gratitude and well-being, and found affect balance to largely –but not completely- mediate the relationship between forgiveness and well-being. Moreover, prior research has largely focused on the cognitive component of

subjective well-being in relation to forgiveness and has partially neglected the affective component (e.g., Sastre, Vinsonneau, Neto, Girard & Mullet, 2003; Macaskill, 2012).

Finally, to our knowledge, affect balance has not been examined as an outcome variable in existing forgiveness interventions. Based on the premise that individuals who can more easily forgive others and themselves can turn their attention to, comprehend, and deal with their negative emotionality, we hypothesize that one's level of dispositional forgiveness will predict their level of affect balance, in that individuals with higher levels of dispositional forgiveness will report more positive levels of affect balance.

## **Depression**

### **Diagnostic Criteria and Features**

Major depressive disorder (MDD) is a mood disorder characterized by discrete episodes that last for at least 2 consecutive weeks and include fluctuations in affect, cognition, and neurovegetative functions, as well as remissions between the episodes. For a diagnosis of MDD to be made, depressed mood or loss of interest or pleasure should be present for most of the day, nearly every day, and be accompanied by five or more other symptoms that reflect a change from previous functioning. These symptoms include significant weight loss or gain, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue and loss of energy, feelings of worthlessness or excessive or inappropriate guilt, difficulty thinking, concentrating or making decisions, and recurrent thoughts of death or suicidal ideation or suicide plans or attempts (American Psychiatric Association, 2013).

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) specifies that for a MDD diagnosis to be made, the episode must be accompanied by clinically significant distress in at least one important areas of functioning (e.g.,

social, occupational), and that the episode is not attributable to the physiological effects of a substance or to another medical condition (APA, 2013). The DSM-5 specifies that, reactions to significant losses, such as the loss of a job or the death of a loved one, even though might resemble a depressive episode, can be considered appropriate to the loss, and therefore require thorough clinical judgment in assigning a diagnosis.

Depression is one of the most common mental disorders worldwide, with an estimated 300 million individuals affected (World Health Organization, 2018). National epidemiological surveys found lifetime prevalence of MDD to be between 13% and 16.6%, (Kessler, Berglund, Demler, Jin, & Walters, 2005), and 12-month prevalence to be around 5.28% (Hasin, Goodwin, Stinson, & Grant, 2005). In the United States, an estimated 16.1 million adults over the age of 18 have had at least one major depressive episode in the past year (National Institute of Mental Health, 2015). Major depression is estimated to be twice as common in women as in men (Kuehner, 2003). The mean age of onset for depression MDD is 30 years of age (Hasin et al., 2005), and if left untreated, can run a recurrent and chronic course (Dunner et al., 2007)

MDD has been associated with impaired functioning in significant life areas, such as relationships, parenting, and career (Kessler, 2012). In more acute forms, depression can result in the individual becoming completely homebound and entirely dependent on others to provide for their needs. High levels of disability and impairment attributable to depressive symptomatology often result in reduced work performance and absenteeism from work (Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). Moreover, the long-lasting and debilitating nature of depression, which often requires repeated cycles of treatment, poses a substantial economic burden on the health care system, with mean depression-specific costs per person estimated to be around €458.9 per year (Kleine-Budde et al., 2013).

Hasin, Goodwin, Stinson and Grant (2005) found MDD to be significantly associated with other psychiatric disorders; depression has a high comorbidity with substance dependence, panic and generalized anxiety disorder, and a number of personality disorders. Depressive symptomatology is also associated with poorer physical health, and can negatively affect risk and outcomes in several chronic diseases, including diabetes, obesity, cardiovascular disease and cancer (Centers for Disease Control and Prevention, 2010). Perhaps most importantly, depression presents one of the most significant risk factors for suicidal behavior in the general population regardless of gender and age (Li & Cao, 2012; Yi, Yi & Jung, 2011).

Even if symptoms do not meet criteria for a MDD diagnosis to be made, even mild or moderate depressive symptomatology can adversely affect the sufferer. It is generally accepted that depressive symptomatology can exist on a continuum of severity. This includes Persistent Depressive Disorder (PDD) or subthreshold depression. PDD (formerly known as dysthymic disorder or dysthymia) is a diagnosis in DSM-5 under the umbrella of depressive disorders. PDD is characterized by depressed mood for most of the day, for more days than not, that lasts for least 2 years (American Psychiatric Association, 2013). Subthreshold depression is a condition defined as a clinically relevant level of depressive symptoms without meeting full diagnostic criteria for a MDD according to DSM or ICD criteria (Pietrzak et al., 2013). Studies have suggested that even moderate depressive symptoms are associated with dysfunction and disability (Rapaport & Judd, 1998; Barry, Allore, Bruce & Gill, 2009), resulting in an increased utilization of medical services, and posing a considerable economic burden (Cuijpers et al., 2007).

Depressive symptoms have been found to be significantly related with a number of factors, including age, gender, spirituality and religion (Luna & McMillan, 2015; Blazer, Burchett, Service, & George, 1991). Spirituality is considered to be an important protective factor buffering against the

development and severity of depressive symptoms (Brown, Carney, Parrish, & Klem, 2013). Similarly, individuals who report high levels of general and organizational religious involvement, religious salience, and intrinsic religious motivation are at reduced risk for developing depressive symptomatology and depressive disorders (McCullough & Larson, 1999). Additionally, gender seems to play a significant factor in depression. The prevalence of major depression is higher in women than in men (Cyranowski, Frank, Young, & Shear, 2000; Ford & Erlinger, 2004). Luna and MacMillan's (2015) study found female gender to be significantly related to psychosocial functioning impairment related to depression. Depressive symptoms are also associated with increased age (Blazer et al., 1991). Prevalence rates of depression are found to increase continuously with age in both genders (Stordal et al., 2001).

### **Depression in University Students**

Research shows that depression rates among University students are on the rise. In a 2005 national survey of college counseling centers directors, 86% of colleges reported an increase in severe psychological problems including depression (Gallagher, 2007). In a prevalence study of depression, anxiety and suicidality among University students, Eisenberg, Gollust, Golberstein, and Hefner (2007) found the prevalence of depression and anxiety to be 16% among University undergraduates. According to the American College Health Association (ACHA) National College Health Assessment (NCHA), the rates of students reported having been diagnosed with depression has increased from 10% in 2000 to 18% in 2008 (2000, 2008). The 2008 survey of the ACHA also reported that 9% of college students have seriously contemplated taking their own lives during the previous 12 months.

Several factors contribute to the onset of depression during university years. The transition from the family home to college represents a significant life stressor on young adults as they set to

explore their identity and master new life skills whilst away from their established social support network (Beck, Taylor, & Robbins, 2003). The unfamiliarity of university life as the young adult makes the transition from adolescence to adulthood can challenge an individual's personal security, need for acceptance and need for comfort (Blimling & Miltenberg, 1981). Moreover, individuals between 18 and 25 years of age may assume a multitude of different roles (e.g., college education, part-time or full-time employment) that can result in increased time demands (Dyson & Renk, 2006). Financial concerns regarding university tuition fees and student debt represent additional stressors among students that can result in increased tension and anxiety as well as sleep disturbances (Cooke, Barkham, Audin, Bradley, & Davy, 2004).

Depression symptomatology presents a significant public health and educational risk factor for college students. High depression rates in University students are associated with increased anxiety, intrusive thoughts and sleep disturbances (Field, Diego, Pelaez, Deeds, & Delgado, 2012), increased alcohol use (Geisner, Mallett, & Kilmer, 2012) and poorer academic performance (Hysenbegasi, Hass, & Rowland, 2005). Depression is also found to be associated with tobacco use, emotional abuse, unwanted sexual encounters (Mackenzie et al., 2011) and suicidal ideation among college students (Furr, Westefeld, McConnell, & Jenkins, 2001). Depression, suicide attempts, and completed suicide do not only impact the affected students, but also their friends and family, university faculty members and the campus community (Chung et al., 2011).

### **Depression and Forgiveness**

Several studies have looked into the association between forgiveness dimensions (self, other and dispositional forgiveness) and depression, both correlationally and via forgiveness interventions. Hong, Jin, Hyun, Bae and Lee (2009) examined the relationship between forgiveness and depression, and found lack of forgiveness to be associated with depressive symptomatology. Results

from a nationwide survey of older adults showed negative associations between 2 types of forgiveness (forgiveness of others and feeling forgiven by God) and depression (Krause & Ellison, 2003). In particular, the results indicated that older people who forgive others and feel forgiven by God report that they experience fewer symptoms associated with depressed affect than older people who are unable or unwilling to forgive other people for things they have done, or who do not feel forgiven by God. Findings also suggest that forgiving others is associated with fewer somatic symptoms of depression (Krause & Ellison, 2003). In a recent large scale study of community-dwelling elderly individuals ( $n = 280$ ) and residential elderly individuals ( $n = 205$ ) in Belgium, Dezutter, Toussaint, and Leijssen (2016) found forgivingness and depression to be inversely associated in both samples. Toussaint and Webb's (2005) meta-analysis supports the link between lack of forgiveness and poor mental health in general, and depressive symptomatology in particular.

Lack of forgiveness towards the self is also associated with depressive symptomatology. In a study of 213 self-seeking veterans with post-traumatic stress disorder (PTSD), Witvliet, Phipps, Feldman, and Beckham (2004) found unforgiveness of oneself to be positively related to PTSD, depression and anxiety, and unforgiveness of others to be positively to be related to PTSD and depression. Wohl and his colleagues' (2008) study results indicated a negative correlation between situational self-forgiveness and symptoms of depression.

Similarly, Maltby and his colleagues (2001) examined the relationship between forgiveness of others, forgiveness of self and scores on the Revised Eysenck Personality Questionnaire and the General Health Questionnaire in a large ( $n = 324$ ) sample of undergraduate students. Results indicated that a failure to forgive oneself was associated with greater depression and higher neuroticism and anxiety, while failure to forgive others was associated with higher depression scores. Toussaint, Williams, Musick, and Everson-Rose (2008), examined associations between

multiple dimensions of forgiveness with hopelessness and depression, using data from a nationally representative probability sample of 11423 adults. Results indicated that forgiveness of oneself and others was inversely correlated to, and seeking forgiveness was positively correlated with depression, even after controlling for religiousness, spirituality and demographic factors.

Low levels of dispositional forgiveness are also related to the presence of depressive symptomatology. Webb and his colleagues (2008) found dispositional forgiveness to be negatively related to depression, shame, and psychological maltreatment. A study of 311 Korean teachers (Chung, 2016) found lack of trait forgiveness to be related to depressive symptoms. Furthermore, in a study examining individual differences in the propensity to forgive in romantic relationships, Brown (2003) found that higher scores on the Tendency to Forgive (TTF) scale were related to lower scores on depression, especially for individuals with positive attitudes toward forgiveness or individuals who scored low in dispositional vengeance. Similarly, in a study of college undergraduates ( $n = 183$ ), Ysseldyk, Matheson & Anisman (2007) found higher dispositional forgiveness to be positively associated with greater psychological health; in particular, higher scores on dispositional forgiveness were associated with decreased depressive affect and higher life satisfaction.

However, the relationship between forgiveness and depression might not be as clear cut. Chung (2016) points out that the magnitude of the relationship between depression and lack of forgiveness varies considerably in different studies. Other studies have failed to find a correlation between forgiveness and depression. For instance, in a study measuring interpersonal forgiveness in late adolescence and middle adulthood, Subkobiak and his colleagues (1995) found no relationship between forgiveness and depression. Corroborating data from a study of 100 outpatients being

treated for affective and anxiety disorders suggest no correlation between participants' willingness to forgive and their depression scores (Ryan & Kumar, 2005).

The link between forgiveness and depression has also been supported through research on forgiveness interventions. A number of studies have found forgiveness interventions to significantly improve depression compared to no-treatment controls or alternative treatments. Freedman and Enright (1996) conducted an intervention with 12 female incest survivors, which aimed on participants forgiving their abusers. Upon the completion of the forgiveness intervention, the intervention group gained more than the control group in forgiveness and hope and decreased significantly more than the control group in scores of depression and anxiety.

Reed and Enright (2006) implemented a forgiveness intervention with women who had experienced spousal emotional abuse. Participants were randomly assigned to either a forgiveness therapy group or an alternative treatment group (anger validation, assertiveness, interpersonal skill building). Women in the forgiveness therapy group experienced significantly greater improvements in depression, trait anxiety, posttraumatic stress symptoms, self-esteem, forgiveness, environmental mastery, and finding meaning in suffering, compared to women in the alternative treatment group. Treatment gains were maintained at a follow-up assessment.

In a study by Lin, Mack, Enright, Krahn and Baskin (2004), patients with substance dependence in a residential treatment facility for alcohol dependence were treated with either forgiveness therapy or an alternative individual treatment based on routine drug and alcohol therapy topics. Compared to the alternative treatment group, recipients of forgiveness therapy experienced significantly greater improvements in depression, anger, anxiety, self-esteem, forgiveness, and vulnerability to drug use, most of which were maintained at 4-month follow-up.

Despite the commonalities between self - and other- forgiveness noted above, clinical literature challenges the postulation of common underlying mechanisms in forgiveness of self and interpersonal forgiveness. Beck (1962) proposes that cognitive biases regarding the self become even more evident in depressed individuals. Cognitive theory postulates that people often use double standards when judging themselves and others; they often use rigid standards to criticize their own perceived mistakes and inadequacies and are often more understanding of the misconducts of others. This cognitive bias often results in more harsh judgments of the self and less strict judgments of others, even when the transgressions are identical (Beck, 1962). Ellis's (1962) rational emotive therapy supports this notion, and adds that this double standard is a frequently observed phenomenon in both non-clinical and clinical populations. Both Beck (1995) and Ellis (Ellis & Harper, 1975) developed a number of cognitive techniques to address this cognitive bias. Ellis (Ellis & Harper, 1975) reports that lack of self-forgiveness might result in increased anxiety, as individuals who have committed a perceived transgression are likely to worry about others discovering their disgraceful acts and fear about the judgments that would then be made about them. Distraction from this anxiety might be less easy when the emphasis is the self, suggesting that more anxiety prone individuals are likely to find it harder to forgive themselves.

Strelan (2006) suggests that narcissistic individuals are exceptions to this rule; perhaps as a result of the self-serving bias they might be more likely to forgive themselves than they are to forgive others. This cognitive bias might carry an important clinical implication for forgiveness, since suggests that self-forgiveness might be more arduous to achieve than other-forgiveness. As mentioned above, absence of self-forgiveness, or increased self-unforgiveness can potentially be distressing and harmful to health.

Owing to the non-conclusive results on the relationship between depression and forgiveness, the current study aims to examine the relationship between dispositional forgiveness and depressive symptomatology. We hypothesize that dispositional forgiveness will countereffect depressive symptomatology, in that individuals who report higher levels of dispositional forgiveness will report lower levels of depressive symptomatology. Furthermore, we suggested that forgiveness of self would be more predictive of levels of depression than forgiveness of others, in that individuals who find it more difficult to forgive themselves than others will score higher in depression than individuals who find it more difficult to forgive others. Examining depression in the context of dispositional forgiveness of self and others represents a new development in forgiveness research.

### **Quality of Life**

Across time and cultures, philosophers and theoreticians have pondered on the desirable qualities and characteristics of a good society and a good life (Diener & Suh, 1997). In the Aristotelian concept of 'eudaimonia', a term used to describe the highest human good, individuals were invited to realize their full potential in an attempt to attain a "good life" (Robinson, 1989). In the 18<sup>th</sup> century, Kantian ethics suggested that individuals can achieve building a good and worthwhile society provided they are acting morally and abiding to moral laws (Atwell, 1986). For the majority of the 19<sup>th</sup> and 20<sup>th</sup> century the clinical and medical fields focused their attention on psychopathology, mortality and morbidity, and on extending life expectancy. This led to their patients' quality of life to be largely overlooked (Pennacchini, Bertolaso, Elvira, & De Marinis, 2011).

In the 1960s and 1970s the emergence of new medical technologies, such as transplantation, prenatal diagnosis, and chronic dialysis, brought about novel queries for clinicians, who began considering quality of life as a parameter for decision-making regarding

health issues (Pennacchini et al., 2011). In 1966, Elkington was the first to publish on the concept of quality of life in the medical field. During the same period of time, the term “Quality of Life” became increasingly popular and draw international interest following a number of changes in the health and the demographic profiles of late modern’ societies, such as the increasingly aging population, the extended survival rate of patients, the increase in chronic conditions, and the increasing costs of health care (Pennacchini et al., 2011; Kalfoss, 2016). In the philosophical arena, philosophers used the term quality of life to formulate moral judgments on matters of bioethics during the 1980’s and 1990’s (Reich, 1982). These included issues such as infanticide for severely handicapped children, suspension of life-sustaining treatment and euthanasia (Reich, 1982). In the past four decades, the term has been increasingly used in the clinical, biomedical and nursing literature (Pennacchini et al., 2011), with researchers and scholars producing numerous approaches to defining and measuring quality of life and its indicators (e.g., Diener & Suh, 1997).

Consistent with the of rise of humanistic and positive psychology movements, more and more health care professionals come to acknowledge that measures of illness alone are unsatisfactory determinants of health status (Skevington, Lotfy, & O’Connell, 2004). This led to an increasing need to measure health beyond traditional health indicators, such as mortality and morbidity, the effect of illness and impairment on the individual’s daily life, and measures of disability or functioning (Thacker et al., 2006). Whilst these instruments provided an evaluation of the impact of disease, they did not measure quality of life per se, which Fallowfield (1990) had aptly labeled as “the missing measurement in health care”. The last decades have seen a shift from focusing on quantity to focusing on quality of life, with the emergence of two complementary groups of multidimensional health status measures: the subjective measures of health and well-

being, and the objective measures of functional health status (for reviews see Wood-Dauphine, 1999; Muldoon, Barger, Flory, & Manuck, 1998).

Similar to many psychological constructs, no consensual definition exists on the concept of quality of life. Rather, definitions vary depending on the societal or individualistic well-being perspectives and the theoretical orientation that each author abides by (Felce & Perry, 1995). The World Health Organization (WHO, 1995) defines quality of life as “an individual’s perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns” (p. 1403). The WHO definition underlines the idea that quality of life signifies a broad-ranging, subjective assessment. Evaluating quality of life entails assessing both its positive and negative facets, and is entrenched in cultural, social, and environmental contexts (Yao, Chung, Yu, & Wang, 2002).

The notion of quality of life incorporates a number of well-being features, such as an individual’s physical health, psychological state, social relationships, degree of independence, personal worldviews, and relationship to main features of the environment (The WHOQOL Group, 1995, 1998). Moreover, quality of life represents a multidimensional concept that includes both objective and subjective factors (Lindström, 1992). A multitude of quality of life indicators have been proposed, including work status, material resources, economic indices, health, crime levels, living conditions, nutrition, education, security, social, leisure/recreation and the subjective perception that the individual has of them ( Papageorgiou, 1976; Diener & Suh, 1997). The subjective component of quality of life is largely contingent on each individual’s needs and priorities.

The acknowledgement of the multi-dimensional and multi-level nature of quality of life is further reflected in the World Health Organization Quality of Life Assessment’s structure (The

WHOQOL Group, 1995). The WHOQOL -BREF, which is currently one of the most widespread measures of quality of life, is organized into four broad areas of quality of life. These include the following domains: a) physical, b) psychological, d) social relationships, and e) environment. Each of these domains contains a number of sub-domains that recapitulate that specific area of quality of life. For example, the physical domain includes, among others, the sub-domain pain, medication and energy, the psychological domain includes the facets self-esteem and body image, the social relationships domain includes the sub-domain personal relationships, social support and sex, and the environment domain contains questions regarding leisure, and safety and security (Skevington, Lotfy, & O'Connell, 2004).

A number of variables seem to be associated with quality of life, such as religion and spirituality, gender and age. Hamren, Chungkham, and Hyde's (2015) study found religiosity and spirituality to be positively associated with quality of life. In a study with domestic and international tertiary students, religion and spirituality was found to be significantly correlated with psychological quality of life in both groups, and social quality of life in international students (Hsien-Chuan, Krägeloh, Shepherd, & Billington, 2009). The relationship between gender and quality of life is complex, with a number of factors at play, such as education, age, living status, social support, economic level, and physical activity. In a study examining patients with chronic obstructive lung disease (COLD), Kim and Kim (2015) found that the Health-Related Quality of Life of patients with COLD was better for females than for males. In a study with "healthy aged" and "old-aged" Austrians, women aged less than 70 years rated their health and quality of life higher, but not statistically significant, than did men in the same age group. Moreover, women aged more than 70 years rated their quality of life lower than their male counterparts did, although not significantly so (Kirchengast & Haslinger, 2008). Age seems to be associated with quality of life, particularly in

older adults. Often a result of declining health, increasing disability and limiting individual autonomy, self-reported quality of life tends to decrease in older age (Chappell & Cooke, 2010).

### **Quality of Life and Forgiveness**

Despite the well-researched relationship between forgiveness and well-being measures (e.g., Ysseldyk et al., 2007; Thompson et al., 2005), only a handful of studies have examined the relationship between forgiveness and quality of life. In a qualitative study examining the importance of the manifestation of forgiveness, subjective well-being and quality of life, Gull and Rana (2013) conducted in-depth interviews with 20 participants (10 men, 10 women). The results revealed that the majority of the participants recognized and understood the significance of forgiveness and acknowledged that practicing forgiveness on a daily basis had contributed to their subjective wellbeing, which, in turn had enhanced their quality of life.

In a positive psychology intervention study designed to increase quality of life in elderly individuals, Ramirez Ortega, Chamorro and Colmenero (2014) utilized a training program focusing on autobiographical memory, forgiveness and gratitude on a sample of 46 participants aged between 60 and 93 years. Results indicated that, compared to the placebo group, participants in the training program showed a significant decrease in state anxiety and depression as well as an increase in specific memories, life satisfaction and subjective happiness. Similarly, in a study testing the effectiveness of a four-week forgiveness therapy in improving the quality of life of elderly terminally ill cancer patients, Hansen, Enright, Baskin and Klatt (2009), found that, compared to a wait-list control group, patients receiving forgiveness therapy showed greater improvements in quality of life, forgiveness, hope, and anger at post-test.

Currier, Drescher, Holland, Lisman and Foy's (2016) study tested the direct and indirect associations between spirituality, forgiveness, and quality of life among 678 military veterans

diagnosed with post-traumatic stress disorder (PTSD). Structural equation modeling results, controlling for demographic risk factors, PTSD symptom severity and combat exposure, indicated an overall positive effect for spirituality on quality of life, for which forgiveness was a full mediator. The authors suggest that forgiveness can potentially be a key pathway for promoting quality of life in veterans with PTSD (Currier et al., 2016)

Finally, Martin, Vosvick, and Riggs (2012) examined the main and interactive effects of attachment style and forgiveness on physical health quality of life among HIV-positive individuals. Adult participants ( $n = 288$ ) were asked to complete medical and demographic questionnaires, measures assessing forgiveness of self and others, attachment anxiety and avoidance, and five quality of life scales (pain, physical functioning, role functioning, social functioning, and health perceptions). Forgiveness of self was found to be associated with greater physical health quality of life. Hierarchical multiple regression analyses indicated that, forgiveness of self and others, as well as interactions between attachment style and forgiveness, were associated with physical health quality of life in HIV-positive individuals.

Quality of life reflects an important individual well-being measure that has been neglected in the scientific study of forgiveness correlates. The limited studies that do exist focus on special populations, such as HIV-positive individuals (Martin et al., 2012) veterans with PTSD, (Currier et al., 2016) and palliative care patients (Hansen et al., 2009); to our knowledge, the association between dispositional self and other forgiveness and quality of life in healthy individuals has not been examined. Based on the positive relationships between forgiveness and a variety of well-being variables, we hypothesized that dispositional forgiveness would predict quality of life, in that individuals who report higher dispositional forgiveness will also report higher levels of quality of life.

## **Forgiveness Interventions**

### **Interpersonal Forgiveness Interventions**

As a result of the growing interest in forgiveness and its health correlates, a number of interventions have been developed with the aim of fostering forgiveness of an offender. Lundahl, Taylor, Stevenson, and Roberts (2008) define forgiveness therapy as “an intervention in which a structured treatment protocol is used to enable a client to forgive a past hurtful event or injustice” (p. 465). With the explicit purpose of promoting interpersonal forgiveness, a number of interventions have been developed and evaluated in various modalities, including marriage and couples therapy (Ripley & Worthington, 2002), counseling, and individual interventions (Baskin & Enright, 2004). Forgiveness interventions have been designed for diverse populations, such as college students (Lampton, Oliver, Worthington, & Berry 2005), parents of adolescent suicide victims (Al-Mabuk & Downs, 1996), incest survivors (Freedman & Enright, 1996), men whose partners had abortions against their wishes (Coyle & Enright, 1997) and inpatients struggling with alcohol and drug addiction (Lin, Mack, Enright, Krahn, & Baskin, 2004). Two main forgiveness intervention models have emerged as the predominant models for promoting interpersonal forgiveness in therapy: Enright’s Forgiveness Model (Enright & the Human Development Study Group, 1991; Enright 2001; Enright & Fitzgibbons, 2000), and Worthington’s Model to REACH Forgiveness (Worthington, 2001a).

The first intervention model was developed by Enright (Enright & the Human Development Group, 1991; Enright, 2001; Enright & Fitzgibbons, 2000). Enright’s treatment model encompasses 20 units or processes, summarized in four broad stages of treatment: a) uncovering, b) decision, c) work and d) deepening. The uncovering phase consists of 8 units and aims, among other, to aid the individual in examining the unfairness she or he has experienced, evaluate the amount of anger they

are harboring, and understand the ways in which sustaining angry emotionality can adversely affect them. During this stage clients are encouraged to explore how the transgression has impacted their worldview. In the decision phase, the individual reconsiders previous efforts to regulate their emotions and resolve the issue, examines the meaning of forgiving and the possibility of forgiveness in dealing with the transgression. In this phase the client is assisted in making a commitment to work toward forgiveness. The work phase covers four units, and includes a series of cognitive exercises that enable the client to see the wrongdoer in a new light or reframe who the offender is, and consider the offenders' viewpoints, which can result in developing compassion and empathy for the wrongdoer. Finally, the deepening phase encompasses units such as finding meaning in what was suffered, acknowledging that the individual is themselves flawed and in need for forgiveness, gathering support for the purposes of forgiving, and experiencing emotional relief (Enright & the Human Development Group, 1991; Enright, 2001, Enright & Fitzgibbons, 2000).

Worthington's (2001a) model to REACH forgiveness is the other leading model in forgiveness intervention research. The REACH model is an empathy-focused program that was developed for use in untargeted populations. It encompasses five interconnected steps, which aim to enable the individual to move towards achieving and maintaining forgiveness. Each letter in the acronym REACH represents a key factor in the forgiveness process. In the first step of the REACH model, clients recall (R) the transgression they experienced and express the distressing emotions associated with it. Then, clients work to empathize (E) with the transgressor, examine the wrongdoer's perspective and motivations, and reflect on possible factors that may have influenced the transgressor's actions and behaviors. In the next step, clients explore the notion of offering forgiveness as an altruistic (A) gift to the transgressor. Following that, clients make a commitment (C) to forgive, which includes not only committing to maintaining the forgiveness that one has

already achieved, but also committing to work toward more forgiveness. Finally, clients are encouraged to hold (H) onto or maintain their forgiveness over time (Worthington, 2001a). During the intervention, each step is applied to the specific transgression that the participant has identified prior to the beginning of the group.

Worthington's (2001a) model includes a mixture of psychoeducational (e.g., didactic material on the definitions and conceptual differences between forgiveness and reconciliation) and cognitive-behavioral techniques (e.g., cognitive restructuring) that aim to assist individuals in overcoming unsolicited anger and bitterness and reach emotional peace in relation to the transgression. The exercises are mainly conducted in dyads, and then discussed with the whole group.

In addition to the two main forgiveness intervention models, a number of researchers have designed and tested models that are distinct from either Enright's or Worthington's approaches. For instance, Luskin, Ginzburg, and Thoresen (2005) developed and evaluated the efficacy of a combination of rational emotive group therapy and emotional refocusing techniques in promoting forgiveness. Greenberg, Warwar, and Malcolm (2008, 2010) used an emotion-focused couples therapy intervention aiming to resolve emotional injuries resulting from unsettled anger and hurt from a betrayal, abandonment, or identity insult, while DiBlasio and Benda (2008) used an explicitly decision-based model to investigate the efficacy of a forgiveness treatment group with marital couples.

Increasing meta-analytic findings support the efficacy of explicit interpersonal forgiveness interventions, indicating that interventions of this nature can effectively promote participants' degree of forgiving their transgressors (e.g., Baskin & Enright, 2004; Wade, Hoyt, Kidwell, & Worthington, 2014). Forgiveness interventions have been shown to be effective with a variety of diverse

populations, such as substance use disorder inpatients (Lin, Mack, Enright, Krahn, & Baskin, 2004), adult incest survivors (Freedman & Enright, 1996) and couples who have adopted children with special needs (Baskin, Rhody, Schoolmeesters, & Ellingson, 2011).

Baskin and Enright (2004) conducted one of the first meta-analytic studies on the efficacy of interpersonal forgiveness interventions. Their meta-analysis, which included nine studies of individual and group forgiveness therapy ( $n = 330$  participants), found explicit forgiveness interventions to be associated with increases in forgiveness. The meta-analysis also showed that decision-based interventions, in which forgiveness was understood as a conscious choice made by the individual who was hurt, were less effective than process-based interventions, in which forgiveness was understood as a process that evolves over time through a sequence of developmental stages (Baskin & Enright, 2004).

In a more recent meta-analysis, Wade and his colleagues (2014) examined a total of 54 published and unpublished research reports. The meta-analysis included studies focusing on interventions designed explicitly to promote forgiveness. Results indicated that, compared to participants receiving alternative treatment and participants not receiving treatment, participants receiving explicit forgiveness treatments reported significantly greater forgiveness. Similarly, results of a meta-analysis of 21 group forgiveness interventions published between 1993-2006 and involving 1,060 clients, indicated that forgiveness interventions with highly educated, Caucasian, adult females experiencing severe offenses and lasting six or more hours in duration had a moderate effect size of 0.625 (Rainey, Readdick, & Thyer, 2012).

Over and above increasing forgiveness, interventions of this sort are shown to have additional benefits for a variety of mental health outcomes, including decreasing depression, anxiety,

and anger and increasing hope, self-esteem and psychological well-being (Baskin & Enright, 2004; Wade, Worthington, & Meyer, 2005; Wade et al., 2014).

### **Self-Forgiveness Interventions**

Forgiveness interventions have primarily focused on interpersonal forgiveness and its associated health benefits among victims who forgive their transgressors. Studies of offenders have lagged behind studies of victims in both quantity and methodological rigor. In recent years, a number of forgiveness researchers have begun to examine perpetrators of offense who either seek forgiveness (Chiaromello, Muñoz-Sastre, & Mullet, 2008) or attempt to forgive themselves for a perceived wrongdoing they committed against another person (Hall & Fincham, 2005, 2008).

Owing to the considerable gap in self-forgiveness literature, only a handful of interventions have been conducted with the explicit aim of promoting forgiveness of self. In an unpublished doctoral dissertation, Fisher (2009) tested the effectiveness of a web-based intervention in a group of 179 undergraduate students. The intervention was designed to foster emotional resolution and prosocial behaviors following an interpersonal offense. Fisher's (2009) intervention was based on an online workbook, and included exercises regarding taking responsibility for the offense, distinguishing between acting bad and being a bad person, evaluating ways to make peace with the self and others regarding the transgression, undertaking amend-making behaviors etc. Compared to a waitlist control group, individuals in the intervention group reported significantly lower defensiveness regarding their role in the offense. Fisher (2009) also found that, among those individuals who reported high negative emotion before the intervention, there was a significant decrease in feelings of remorse among those who received the intervention compared to those who did not. Furthermore, Fisher's (2009) results indicate reduction in shame, and an increase in self-forgiveness for individuals in the intervention group compared to those in the wait-list group.

In another unpublished doctoral dissertation, Campana (2010) designed and examined an online self-help workbook to foster forgiveness of self for women who had experienced a recent romantic relationship break-up. Campana's (2010) intervention included a series of exercises, including learning and practicing relaxation techniques, defining self-forgiveness, reflecting about their role in the break-up, identifying any core values that might have been violated through their offense, describing who was affected by their transgression and in what way, committing to self-forgiveness and writing a letter of self-forgiveness to themselves. The intervention was effective in increasing participants' levels of forgiveness of self compared to the waitlist group; however, they did not indicate any effects of the intervention on reducing self-judgment, self-retributive motivations, self-directed anger or forgiveness of one's ex-partner. Treatment gains in self-forgiveness were maintained at two-week follow-up.

Scherer, Worthington, Hook and Campana (2011) examined the efficacy of a 4-hour self-forgiveness intervention among individuals diagnosed with alcohol abuse or dependence. The intervention, which was adapted from Worthington's (2006) five-step model to REACH forgiveness, was developed to increase forgiveness of self and drinking refusal self-efficacy. Participants in the intervention condition reported significantly lower shame and guilt over alcohol-related transgressions, and significantly greater self-forgiveness and drinking-refusal self-efficacy than participants in the treatment as usual condition, which included a standard alcohol treatment program.

In a recent self-forgiveness intervention, Griffin and his colleagues (2015) tested the efficacy of a 6-hour self-directed workbook developed to promote self-forgiveness and reduce self-condemnation among perpetrators of interpersonal transgressors. 204 University students, randomly assigned to either an immediate intervention or a wait-list control condition, completed assessments

on 3 different occasions. Participants in the treatment condition reported increases in self-forgiveness and decreases in self-condemnation compared to the control condition. Finally, Cornish & Wade (2015) tested the effectiveness of an individual counseling intervention. The intervention was developed with the aim of increasing self-forgiveness for specific regretted behaviours committed against another person. Compared to participants on a waiting list, participants in the treatment condition reported significantly reduced self-condemnation and general psychological distress and significantly increased self-forgiveness and trait self-compassion at the end of treatment. Treatment gains were maintained at 2-month follow-up.

On the whole, the interventions that do exist present with several limitations. Cornish (2014) suggests that the few self-forgiveness interventions in existence suffer from high drop-out rates, low adherence to the intervention protocol or both. Moreover, two of the aforementioned self-forgiveness interventions were designed for specific populations: women who experienced a recent romantic relationship end (Campana, 2010) and individuals with alcohol abuse problems (Scherer et al., 2011). Finally, Cornish & Wade's (2015) study examined the effectiveness of a counseling intervention on a one-to-one basis; however, due to the costs of individual therapy, a group setting might often be the preferred format of treatment.

Delineating the effective components of any intervention is an important task for mental health counselors and applied researchers. In a meta-analysis of published forgiveness interventions, Wade and Worthington (2005) pointed towards five specific elements that forgiveness interventions have in common. The first shared component was defining forgiveness. The majority of the interventions included attempts to assist clients in understanding the concept of forgiveness and explaining the differentiation between forgiveness and similar notions, such as condoning or reconciliation. The second commonality factor was evoking the offense and offense-specific emotions, which is

employed to enable individuals to share their stories in a safe therapeutic context. The third core element, which was found in almost all of the reviewed interventions, involved assisting the clients in building empathy for their offenders. The fourth factor was acknowledging ones' own wrongdoings; a process that is intended to humanize the transgressor. The final common factor was committing to forgiveness. This element aims to enable clients to set forgiveness as a therapeutic goal and to reinforce the effort to attain and maintain forgiveness over time (Wade & Worthington, 2005).

### **Rationale for Developing the New Intervention**

In the course of daily life individuals routinely err and fail. The majority of people often face the dilemma of an alienated, condemned and guilt-ridden self and the need to move toward self-forgiveness (Cornish, 2014). Chronic feelings of unforgiveness towards the self can prove to be detrimental for health, and might require immediate attention and intervention. Likewise, interpersonal transgressions are an indispensable part of the human life; individuals often find themselves being the victims of perceived hurts committed against them (McCullough et al., 2009).

Owing to the complexity of the human nature, we are often tainted with both having to forgive others for offenses they have committed against us and ourselves for offenses we have committed against others. Individuals often struggle with feelings of unforgiveness, which can be directed both at others and themselves. Despite the relative abundance of interpersonal forgiveness interventions, and the few self-forgiveness interventions that exist, there is currently no single intervention to our knowledge that aims to simultaneously increase forgiveness of others and forgiveness of self. Moreover, the characteristics of the existing forgiveness interventions make it challenging to translate the results to a more general setting in which individuals may be battling with the adverse and often chronic effects of not forgiving others and themselves.

Taking into account the amount of interventions that aim to foster interpersonal forgiveness and the accumulating findings of their effectiveness in increasing levels of forgiveness of others and psychological well-being (e.g., Baskin & Enright, 2004), and the limited but consistent findings on the effectiveness of self-forgiveness interventions (e.g., Cornish & Wade, 2015), it is surprising that researchers and theoreticians have not yet designed an intervention to promote both interpersonal and self-forgiveness. Therefore, the development and examination of an intervention that aims to promote both self-and-other- forgiveness simultaneously is sorely needed.

In addition, the majority of psychoeducational interventions have focused on forgiveness of a specific transgression, with dispositional forgivingness not often been an outcome measure in intervention studies (Worthington et al., 2010). When it has been considered, it has not been found to change to a significant degree (Lampton, et al., 2005). This lack of change has been credited to the brevity of the interventions (Lampton et al., 2005). Nonetheless, the hope is that interventions of this sort will enable participants to become more forgiving in general, by transferring the skills used to forgive a specific transgression to forgiving past and future transgressions. Initiating changes in the disposition to forgive is a goal for the current forgiveness intervention. To our knowledge, no study currently exists that aims to promote three types of forgiveness (self, others, dispositional) in a single intervention.

A particular student group that might benefit from a forgiveness intervention is psychology trainees. A number of studies suggests that psychology trainees are susceptible to experiencing increased levels of stress during their clinical training (Pica, 1998; Cushway, 1992). A number of diverse stressors are at play that might challenge a psychology trainee's wellness. These include an overwhelming workload, the financial strains often associated with increased student fees and student debt, feelings of inadequacy due to inexperience, personal issues that may be stirred in

therapy sessions with clients and preexisting personality traits that, if unexamined, may result in trainee impairment (Skovholt & Ronnestad, 2003; Lawson & Venart, 2005; El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012).

As mentioned above, sustained feelings of unforgiveness towards others and the self represent chronic stressors (Worthington & Scherer, 2004), that can potentially elevate the risk of stress and impair a trainee's well-being. The adverse outcomes of chronic stress have been widely documented in qualified mental health professionals, and include reduced effectiveness, reduced job satisfaction, emotional exhaustion, high levels of depersonalization, and burnout (Moore & Cooper, 1996; Rohland, 2000; Oddie & Ousley, 2007). This warrants specific attention because of the potential resultant negative effects on physical and mental health (Acker, 2010), as well as to personal and professional development and competence (Hoge et al., 2007).

While studies on forgiveness in psychology trainees are lacking, the few studies that do exist suggest that the ability to forgive others and the self for perceived transgressions might be of particular importance in this population. Hartwig-Moorhead, Gill, Barrio-Minton, and Myers (2012) examined the effects of forgiveness on counseling students' overall wellness. 115 students from counsellor education programs in 5 universities completed measures of forgiveness, wellness, and personality. Results indicated that forgiveness contributed a significant proportion of approximately 10% of the variance in wellness for counseling students. Hartwig-Moorhead and his colleagues (2012) suggest that trainee counsellors who have been hurt can use forgiveness to prevent becoming what Nouwen (1972) named "wounded healers". Ikiz, Mete-Otlu and Asici (2015) add that if a counselor is forgiving, they are more likely to be psychologically healthy, and in turn, they can be more helpful to their clients. They also note that a forgiving counselor can be a good model for clients who are struggling with forgiveness (Ikiz et al., 2015).

Since interpersonal hurts are a part of daily life, the need for forgiveness often arises in therapy (Macaskill, 2004). In their current and future roles as therapists, psychology trainees should be able to help clients forgive others and themselves for perceived transgressions. According to Ikiz and his colleagues (2015), a counselor who wants to use forgiveness in their work must first understand the definition and importance of forgiveness, what forgiveness is not, identify unforgiveness and recognize the factors that affect the forgiveness process. The therapist's role includes psychoeducating the client regarding forgiveness, encouraging them to discuss the costs and benefits of forgiveness and unforgiveness, and model forgiveness (Ikiz et al., 2015). Therefore, psychology trainees represent a group that might particularly benefit from the current intervention.

### **The Current Study**

The purpose of the current study was threefold. The first phase of the research was aimed to explore the associations between dispositional forgiveness of self and others to three clinically relevant mental-health variables: affect balance, depressive symptomatology and quality of life in a sample of Greek-Cypriot university students. Whilst other well-being measures, such as satisfaction with life, and positive and negative affect have been extensively studied in relation to forgiveness, examining the associations between quality of life, affect balance and dispositional forgiveness represents a new development in forgiveness research. Moreover, examining the relationship of depression to dispositional forgiveness in general and to its self and other components on the possible variances in the relationship between the two constructs is of particular importance for forgiveness research.

To begin examining whether state and dispositional forgiveness of others and self can be effectively promoted, the second phase of the current research involved designing a novel psychoeducational forgiveness intervention group. The third phase of the research aimed to evaluate

the effectiveness of the new intervention from baseline to post-intervention and at 1- month follow-up, and against a control group. The intervention was administered to postgraduate psychology students and was evaluated in relation to a number of outcomes: a) state forgiveness of self for a specific transgression that the individual committed b) state forgiveness of other for a specific transgression that was committed against the individual, c) dispositional forgiveness of self and other and d) changes in affect balance and depressive symptomatology.

For the purposes of designing a forgiveness intervention, employing a particular approach to therapy can be beneficial. Because of the many advantages that a group format entails (cost-effectiveness, reduction of isolation and alienation, normalization of experiences, mutual support between the members, strengthening of relationship skills etc.) (Yalom & Leszcz, 2005), this format of intervention was chosen over the individual one. Based on Wade and Worthington's (2005) analysis of the elements of effective forgiveness interventions, an information-based, structured group was preferred for the purposes of this study. The current group intervention utilized a psychoeducational format. Psychoeducational groups have been successfully used across ages, conditions and illnesses in a variety of different settings (Brown, 2011). The REACH (Worthington, 2001a) model for interpersonal forgiveness was adapted for the needs of the current intervention.

The current study and the hypotheses examined below were developed to examine the associations between dispositional forgiveness and a number of significant well-being variables and to lay the groundwork for further other and self-forgiveness intervention research. The intervention was developed with the aim of providing Greek-speaking mental health professionals with a detailed approach for working with individuals experiencing the adverse residual costs of unforgiveness toward others and the self. Insights provided by the present study could be used to further adapt and

modify the psychoeducational intervention and to spur further research projects on how to effectively assist individuals forgive others and themselves.

### **Hypotheses**

For study 1, the first of hypothesis (H1) was that dispositional forgiveness would predict levels of affect balance. Specifically, it was expected that participants who would report higher levels of dispositional forgiveness would also report higher positive affect balance. Our second hypothesis (H2) was that dispositional forgiveness of self and others would predict levels of depressive symptomatology. Specifically, it was expected that participants who would report higher levels of dispositional forgiveness would also report lower levels of depressive symptomatology. We also hypothesized (H3) that the variance in Hypothesis 2 would be attributed to a greater extent to the self-forgiveness component of dispositional forgiveness, whereas forgiveness of others would contribute to a lesser extent. The final hypothesis for study 1 (H4) was that dispositional forgiveness would predict quality of life. Specifically, it was expected that participants who would report higher levels of dispositional forgiveness would also report higher quality of life scores

For study 2, our first set of hypotheses was that the intervention would increase state self and other forgiveness. We hypothesized that participants would report significantly greater self-forgiveness (H5) and other-forgiveness (H6) for the particular offenses they chose to work on at the end of four weeks, from baseline to post intervention. We did not expect participants in the control group to report any changes in their levels of state self and other forgiveness.

The second set of hypotheses for Study 2 is included to examine whether the intervention would produce changes in two general wellbeing variables. It was expected that the intervention would increase participants' levels of affect balance (H7), in that participants would report more positive affect balance at the end of the intervention compared to baseline measures. Moreover, we

hypothesized that participants would report significantly lower levels of depression (H8) at the end of four weeks. We did not expect participants in the control group to report any changes in their levels of affect balance or depression.

The final set of hypotheses for Study 2 was that the intervention would increase levels of dispositional forgiveness (H9). We hypothesized that participants would report significantly greater dispositional self – and other forgiveness at the end of four weeks from baseline to post-intervention. We did not expect participants in the control group to report any changes in their levels of dispositional forgiveness. Finally, we hypothesized (H10) that positive changes in all outcome measures would be maintained at a one-month follow up.



### Chapter III. Method

#### Study 1

##### Participants

Two hundred and ninety-one participants were recruited from undergraduate and postgraduate courses at a private University in Cyprus. Data collection took place during a 5-month period, from June 2017 to October 2017, during the Summer and Fall academic semesters. Inclusion criteria for study 1 were: a) aged 18 and above, b) Greek-speaking, and c) ability to provide informed consent. There were no exclusion criteria.

Participants' age ranged from 18 to 54 years ( $M = 22.7$ ,  $SD = 4.8$ ). The sample consisted of 194 women (67.4%) and 93 men (32.3%). One person did not specify their gender. With respect to educational level, 56.6 % of participants reported graduating from lyceum as the highest level of education, 29.5% reported having a university degree as the highest level of education, 3.5% have completed college and/or partial studies, and 10.1% had completed a postgraduate degree. One person did not specify their education status. Regarding marital status, 155 (53.8%) participants reported being single, 113 (39.2%) were in a relationship, 11 (3.8%) were married, 3 (1.0%) were divorced, 5 (1.7%) reported that they would "rather not say", and one person did not specify their marital status. Participants rated their socioeconomic status (SES) on a 1-10 Likert scale (1 = *lowest* and 10 = *highest*), ranging from 4 to 10 ( $M = 6.42$ ,  $SD = 1.14$ ). With respect to religion and spirituality, 69.1% of participants reported that were Christian Orthodox, 19.1% reported that they were spiritual but not religious, 4.5 % reported that they were Atheists, 2.8% reported that were Agnostic, 1% reported that were Maronites, 1% reported "Other", and the remaining 1.2% reported belonging to the Anglican Church, Jehovah's Witness, Judaism, or Islam.

##### Procedures

Participants were recruited via class announcements. Prospective participants were informed about the purpose and nature of the study, and students who expressed interest in participating were provided with the consent form (see Appendix C for the consent forms) Prospective participants were given the opportunity to ask any questions about the procedure prior to signing the consent. After signing the consent form, participants were provided with the questionnaire package. Data collection took place during classes, with the prior consent of the course leader.

Although verbal and written instructions indicated that prospective participants should be at least 18 years of age to participate in the study, three participants aged 17 completed and submitted the questionnaires. Their data were not included in the data analysis and were destroyed. After eliminating participants who did not satisfy the age criterion, 288 participants remained in the final sample.

Participants completed a series of questionnaires (see Appendix E for the scales) that assessed dispositional forgiveness, depression, affect balance, and quality of life. The questionnaire package contained the Greek versions of the following scales: the Forgiveness of Other and Forgiveness of Self subscales of the Heartland Forgiveness Scale (HFS; Thompson et al., 2005), the Positive and Negative Affect Schedule (PANAS; Watson et al. 1988), the World Health Organization's Quality of Life - BREF (WHOQOL-BREF; Skevington, Lotfy & O'Connell, 2004) and the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977).

## Measures

**Demographic information.** Participants were asked to complete a demographic questionnaire which contained descriptive information about themselves. The questionnaire consisted of questions pertaining to participants': a) age, b) gender, c) marital status, d) educational level (completed), e) socioeconomic status, f) religious denomination they adhere to (if any), g) the degree to which they

engage or participate in religious practices, h) the strength of their religious beliefs (if any), i) the degree to which they engage or participate in spiritual practices, and j) the strength of their spiritual beliefs (if any).

**Heartland Forgiveness Scale.** (HFS; Thompspon et al., 2005). Dispositional forgiveness of self and others was measured using the Greek version of the Heartland Forgiveness Scale (Lampropoullou & Chatzichristou, 2012). This 18-item, self-report measure assesses an individual's general tendency to forgive others, themselves and situations. The HFS consists of three subscales, with six items on each subscale. The subscales measure: a) forgiveness of self, b) forgiveness of others, and c) forgiveness of situations. For the purposes of this study, we used the first subscale (HFS Self) that assesses the tendency to forgive oneself and the second subscale (HFS Other) that assesses the tendency to forgive other people (Thompspon et al., 2005).

Participants were asked to rate their typical responses on a seven-point Likert-type scale (1 = *almost always false of me* and 7 = *almost always true of me*). Examples of items include "I hold grudges against myself for negative things that I've done" (forgiveness of self) and "I continue to punish a person who has done something that I think is wrong" (forgiveness of others) (Thompson et al., 2005, p. 358). Higher scores on the HFS Self and HFS Other reflect higher dispositional forgiveness of self and others, respectively (Thompspon et al., 2005). For the current study, scores of the two subscales were scored and assessed both together and separately.

The Heartland Forgiveness Scale was evaluated for internal consistency, test-retest reliability, and convergent and discriminant validity. Internal consistency reliabilities were satisfactory, with Cronbach's alphas ranging between  $\alpha = .72$  to  $.76$  for the HFS Self subscale and  $\alpha = .78$  to  $.81$  for the HFS Other subscale. Three-week temporal stability estimates were  $r = .72$  for

HFS Self and  $r = .73$  for HFS Other. The nine-month temporal stability estimates were  $r = .69$  for both HFS Self and HFS Other subscales (Thompson et al., 2005).

Convergent validity of the HFS Self subscale was demonstrated by positive correlations with other measures of the propensity to forgive the self, such as the Self subscale of the Multidimensional Forgiveness Inventory (MFI- Self; Tangney, Boone, Fee, & Reinsmith, 1999) with  $r = .33$  and with Mauger et al.'s (1992) Forgiveness of Self scale with  $r = .61$ . Scores on the HFS Other subscale correlated with the MFI-Other scale,  $r = .47$  and Mauger et al.'s (1992) Forgiveness of Others scale,  $r = .53$ . Moreover, The HFS Self and HFS Other subscale scores were moderately related to satisfaction with life ( $r = .39$  for HFS Self,  $r = .31$  for HFS Other).

Discriminant validity of the HFS Self and Other subscales was demonstrated by significant negative correlations with measures of hostility (the Hostile Automatic Thoughts Scale; Snyder, Crowson, Houston, Kurylo, & Poirier, 1997), negative affect (the Negative Affect scale of the Positive and Negative Affect Schedule; Watson, Clark, & Tellegen, 1988), vengeance (the Vengeance Scale; Stuckless & Goranson, 1992) and rumination (the Rumination scale of the Response Styles Questionnaire; Nolen-Hoeksema & Morrow, 1991). The HFS subscale scores correlated negatively with mental health variables such as depression ( $r = -.44$  for HFS Self,  $r = -.27$  for HFS Other), and trait anger ( $r = -.32$  for HFS Self,  $r = -.51$  for HFS Other). Finally, the HFS was related to the Marlowe-Crowne Social Desirability Scale ( $r = .27$  for HFS Self,  $r = .34$  for HFS Other).

Lampropoullou and Chatzichristou (2012) adapted the HFS using forward-backward translation, and then administered the scale to 714 adolescent students in the area of Athens. The Greek adaptation has satisfactory psychometric properties. Factor reliability ranged between  $\alpha = .7$  and  $.83$ . For the current study, Cronbach's alpha for the Forgiveness of Self subscale was  $\alpha = .71$ ,

whereas Cronbach's alpha for the Forgiveness of Other subscale was  $\alpha = .73$ . The total scale reliability was  $\alpha = .79$ .

**Positive and Negative Affect Scales.** (PANAS; Watson, Clark, & Tellegen 1988). The Greek version of the Positive and Negative Affect Scales (Daskalou & Sigkollitou, 2012) was used to assess affect balance. PANAS is a 20 item, self-report measure intended to assess the positive and negative affect components of subjective well-being. It consists of a word list describing two different affect states, positive and negative, with 10 words for each affect state. Items include words such as "inspired", "excited", "distressed" and "scared" (Watson, Clark, & Tellegen, 1988, p. 1067). Participants are asked to indicate the extent they generally or usually feel each affect using a Likert scale ranging from 1 (*very slightly or not at all*) to 5 (*almost always or always*). Higher scores on the positive and negative scales indicate higher positive and negative emotion, respectively (Watson, Clark, & Tellegen, 1988).

The PANAS shows good levels of reliability and validity (Watson, Clark, & Tellegen, 1988). For the Negative Affect Scale (NAS) the Cronbach alpha coefficient was .84 to .87 whilst for the Positive Affect Scale (PAS), the Cronbach alpha coefficient was .86 to .90. Test-retest reliability was established by administering the PANAS twice over an 8 -week time period. Test-retest correlations ranged from .39 to .71 for the NAS and .47 to .68 for the PAS. The subscales are shown to be largely uncorrelated, and stable at appropriate levels over a 2-month time period (Watson, Clark, & Tellegen, 1988).

For the Greek adaptation of the scale, Daskalou and Sigkollitou (2012) administered the scale to 857 adolescents and young adults, aged from 12 to 25 years. Confirmatory factor analysis yielded satisfactory loadings for the 20 items of the questionnaire, indicating satisfactory reliability construct and confirming the existence of two separate scales of positive and negative affect. The

internal reliability of the two scales was shown to be satisfactory and close enough to the internal reliability values of the scale manufacturers. The internal reliability index indicated a value of .71 and .79. for positive and negative affect, respectively (Daskalou & Sigkollitou, 2012).

For the purposes of the present study, affect balance score was calculated by using a variation of Koydemir and colleagues' (2013) method, by subtracting the negative affect score from the positive affect score. Higher scores indicate a more positive affect balance, whilst lower scores indicate more negative affect balance. For the current study, Cronbach's alpha for the Negative Affect Scale was  $\alpha = .85$  whereas Cronbach's alpha for the Positive Affect Scale was  $\alpha = .76$ . Cronbach's alpha for the total scale was  $\alpha = .74$ .

**World Health Organization's Quality of Life Scale – BREF.** (WHOQOL– BREF; The WHOQOL Group, 1998). The Greek adaptation of the brief version of the World Health Organization's Quality of Life (Ginieri-Coccosis, Triantafillou, Tomaras, Soldatos, Mavreas, & Christodoulou, 2012) was used to evaluate perceptions of health and quality of life amongst participants. The WHOQOL– BREF is an international cross-culturally comparable quality of life assessment instrument that assesses an individual's perceptions in the context of their culture, value systems, personal goals, standards and concerns (World Health Organization, 2016). The WHOQOL– BREF is a 26 item, self-reported measure derived from the larger WHOQOL-100 questionnaire. The WHOQOL– BREF assesses quality of life across four domains: physical health (seven items; e.g., dependence on medicinal substances and medical aids, energy and fatigue, work capacity), psychological health (six items; e.g., thinking, learning, memory and concentration, self-esteem, body image and appearance), social relationships (three items; personal relationships, social support, sexual activity) and environmental (eight items; e.g., financial resources, freedom, physical safety and security, home environment) (World Health Organization, 1996). Each item is rated on a

5-point scale, with higher scores reflecting higher quality of life across the domains. Examples of items include: “How much do you enjoy life?” “How healthy is your physical environment?” and “How satisfied are you with your personal relationships?” (WHO, 1996, p. 17-18). The WHOQOL-BREF has demonstrated good to excellent internal consistency and discriminant validity in differentiating between psychiatrically distressed and non-distressed persons (Skevington et al., 2004).

For the Greek adaptation, the WHOQOL-BREF questionnaire was validated and adapted in the general population to local conditions according to the criteria of the WHOQOL Group (Ginieri-Coccosis et al., 2012). Greek participants were initially administered the WHOQOL-BREF and 23 national items. Confirmatory factor analysis results produced acceptable fit values for the original model of 26 items and 4 national items. Thus, the 4 items with the most satisfactory fit indices were added to the original 26 forming a 30-items version. The national items refer to: a) nutrition, b) satisfaction with work, c) home life, and d) social life (Ginieri-Coccosis et al., 2012)

The 30-items adapted Greek version demonstrated good psychometric properties. Internal consistency was found to be satisfactory, with alpha values ranging from  $\alpha = .67$  to  $.81$ . The inclusion of the 4 new national items produced higher alpha values in the physical health and the social relationship domains. In addition, the questionnaire demonstrated good item-domain correlations and strong correlations between domain scores, supporting construct validity. Convergent validity was also found to be satisfactory, showing good correlations with other measures of perceived health and quality of life such as the General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) and the Life Satisfaction Index (LSI; Neugarten, Havighurst, & Tobin, 1961). The instrument demonstrated the ability to detect quality of life differences between healthy and unhealthy participants, and between patients with physical disorders and patients with

psychiatric disorders, suggesting good discriminant validity. Test-retest reliability was also satisfactory, with Intraclass Correlation Coefficient (ICC) scores in excess of .80 for all domains (Ginieri-Coccosis et al., 2012).

For the current study, Cronbach's alpha for the physical health subscale was  $\alpha = .69$ , for psychological health was  $\alpha = .78$ , for social relationships was  $\alpha = .65$  and for environmental was  $\alpha = .57$ . Cronbach's alpha for the total scale was  $\alpha = .88$

**Center for Epidemiologic Studies Depression Scale.** (CES-D; Radloff, 1977). Depressive symptomatology was assessed using the Greek version of the Center for Epidemiologic Studies Depression Scale (Fountoulakis et al., 2001). The CES-D is a self-report questionnaire developed as a screening measure for depression in the general population. Components of depression symptoms assessed by the CES-D include depressed mood, loss of appetite, psychomotor retardation, sleep disturbance and feelings of guilt, hopelessness, helplessness and worthlessness (Radloff, 1977). CES-D consists of 20 items that cover affective, psychological, and somatic symptoms. Participants are asked to specify the frequency with which the symptom is experienced within the past week on a Likert-type scale ranging from 0 (*rarely or none of the time [less than 1 day]*) to 3 (*most or all of the time [5–7 days]*). Higher scores reflect higher depressive symptomatology across the domains. Examples of items include “I did not feel like eating; my appetite was poor”, “My sleep was restless” and “I thought my life had been a failure”. Of the 20 items four are worded in the positive direction in order to disallow for tendencies toward response set as well as to evaluate positive affect (or its absence) (Radloff, 1977).

In a systematic evaluation of the CES-D psychometric properties Radloff (1977) tested the measure in household interview surveys and in psychiatric settings. Principal component factor analyses supported the four proposed subscales (depressed affect, positive affect, somatic and

retarded activity and interpersonal). The scale was found to have: a) high internal consistency coefficients ranging from  $\alpha = .85$  to  $.90$  in the nonclinical and clinical sample and b) moderate test-retest reliability coefficients ranging from  $r = .51$  to  $.32$  for time intervals varying between 2 weeks and 12 months. Validity was established by moderate correlations with several other self-report measures of depressive symptoms, positive and negative affect, general psychopathology, social desirability, use of medication, etc. (Radloff, 1977). Furthermore, the CES-D has demonstrated good reliability and validity across diverse ethnic groups (Perreira, Deeb-Sossa, Harris, & Bollen, 2005), clinical and non-clinical samples (Morin et al., 2011), age groups (Knight, Williams, McGee, & Olaman, 1997) and language versions (Masten, Caldwell-Colbert, Alcalá, & Mijares, 1986; Zhang, Sun, Kong, & Wang, 2012).

For the psychometric evaluation of the Greek Translation of the CES-D Fountoulakis and his colleagues (2001) administered the scale to 40 patients diagnosed with depression and 120 normal controls. The CES-D demonstrated satisfactory properties. In particular, Chronbach's alpha for the total scale was equal to  $.95$ , and Pearson's  $r$  for test-retest reliability was between  $.45$  and  $.95$  for individual items and  $.71$  for the total score. Factor analysis of cases yield three factors: positive affect, irritability and interpersonal relationships, depressed affect and somatic complains. In the current study, Cronbach's alpha for the total scale was  $\alpha = .91$ .

### **Power Analysis**

The model will include (A)7 covariates (age, gender, marital status, educational status, socioeconomic status, religion, spirituality) which will yield an R-squared of  $.100$ . It will include (B) 1 variables in the set of interest (dispositional forgiveness) which will yield an increment of  $.050$ . The total R-squared for the 8 variables in the model is  $.150$ . The power analysis focuses on the increment for the set of interest (B) over and above any prior variables (i.e. 1 variables yielding an

increment of 0.05). With the given sample size of 280 and alpha set at .01 the study will have power of 0.92

The test is based on Model 2 error, which means that variables entered into the regression subsequent to the set of interest will serve to reduce the error term in the significance test, and therefore are included in the power analysis. This effect was selected as the smallest effect that would be important to detect, in the sense that any smaller effect would not be of clinical or substantive significance. It is also assumed that this effect size is reasonable, in the sense that an effect of this magnitude could be anticipated in this field of research.

### **Statistical Analysis**

Data for study 1 were analyzed using IBM SPSS Statistics software (SPSS Inc., Chicago, IL). Dispositional forgiveness was considered to be the predictor variable, whereas affect balance, depression and quality of life and were used as dependent (outcome) variables. We first run descriptive statistics to check the range, means and standard deviations of our variables of interest. Following these, Pearson's correlations were run to check the strength and direction of the association between our predictor variable and its two subscales (self-forgiveness, other forgiveness) and the outcome variables

Analysis of variance (ANOVA) was used to test the relationships between marital status and educational status. Pearson's correlation analysis was run to test the relationships between dispositional forgiveness and religiosity, spirituality, age and socioeconomic status. T-test analysis was used to test the relationships between dispositional forgiveness and gender. Step-wise regression analyses were carried out to investigate whether the level of dispositional forgiveness would predict the level of affect balance (H1), depression (H2), and quality of life (H4), even after controlling for the demographics that appeared to be correlated with dispositional forgiveness (age and gender).

To test the final hypothesis that any variance in levels of depression will be attributed to a higher extent to self-forgiveness, whereas forgiveness of others will contribute to a lesser extent (H3), we conducted a multiple regression analysis. Finally, further multiple regression analyses were conducted to test the contribution of each component of dispositional forgiveness (self- forgiveness, other-forgiveness) to affect balance and quality of life.

### **Ethical Considerations**

**Risks.** The risks in this study were minimal. There was a possible risk of discomfort from answering some of the questions. Participants were given the contact details of the research supervisor, a licensed psychologist, and were advised to contact her if they felt any discomfort during or after questionnaire completion.

**Benefits.** Participation in the study did not benefit the participants directly. However, there was a general benefit to society by the advancement of scientific knowledge on the relationships between dispositional forgiveness and quality of life, affect balance and depression.

**Confidentiality.** All records were kept confidential and participants were not identified in any written or verbal report. To maintain participant confidentiality, all completed questionnaires and other records were identified only by a random number. The records were kept in a secured area and locked in a file cabinet in the office of the principal investigator. After study completion, all records will be destroyed by shredding. No monetary compensation was awarded for this study. Participation was on a voluntary basis, and participants were made aware that they could withdraw from the study at any time

Prior to data collection, both study 1 and study 2 were approved by the Cyprus National Bioethics Committee in June 2017. The study was partly funded by the Cyprus Youth Council's 'Students in Action' initiative in January 2018.

## Study 2

### Participants

Forty-five Greek Cypriot participants were recruited during the first 3 weeks of October 2017 at a private University in Cyprus. Participants included 1<sup>st</sup> and 2<sup>nd</sup> year Greek-Cypriot students from clinical, counselling, and school psychology MSc programs. At the time of recruitment and intervention, none of the participants was enrolled in clinical practicum. All participants were unpaid volunteers.

The intervention group consisted of 21 participants between the ages of 22 and 47 years ( $M = 26.33$ ,  $SD = 6.63$ ). The sample consisted of 17 females and 4 males. 61.9% reported completing a university degree as the highest level of education, whilst 38.1% completed another postgraduate degree. Regarding marital status, 11 participants indicated that they were single, 8 were in a relationship and 2 were married. Participants rated their socioeconomic status (SES) on a 1-10 Likert scale, from 1 (*lowest*) to 10 (*highest*) ranging from 5 to 8 ( $M = 6.90$ ,  $SD = .91$ ). Participants' religious/spiritual affiliations included Christian Orthodox (61.9%), being spiritual but not religious (19.0%), Agnostic (4.8%) and Atheist (9.5%). One person did not indicate their religion/spirituality.

Similarly, the control group included 21 participants between the ages of 23 and 35 years ( $M = 26.7$ ,  $SD = 3.58$ ). The sample was made up of 16 women and 5 men. With respect to educational attainment, 38.1 % participants reported having a university degree as the highest level of education and 61.9% had already completed another postgraduate degree. Regarding marital status, 47.6% of the participants were single, 42.9 % were in a relationship, and 9.5% were married. Participants rated their socioeconomic status (SES) on a 1-10 Likert scale, from 1 (*lowest*) to 10 (*highest*), ranging from 4 to 9 ( $M = 6.65$ ,  $SD = 1.18$ ). With respect to religion and spirituality, 33% of

participants reported that they were spiritual but not religious, 52.4% were Christian Orthodox, 9.5% were Agnostic and 4.8% were Atheists.

### **Transgressions Characteristics**

Participants reported a number of offense-specific characteristics, including: a) the relationship they have/had with the perpetrator of their chosen transgression (e.g., spouse, parent, sibling, friend), b) the perceived relationship closeness to the perpetrator at the time of the transgression, c) the time elapsed since the transgression was committed against them, and d) the perceived severity of the transgression. Similarly, participants were asked to report: e) the relationship they have/had with the victim of their chosen transgression, f) the perceived relationship closeness to the victim, g) the time elapsed since they committed the transgression, and h) the perceived severity of the transgression. Relationship closeness and perceived severity of offense were measured on a scale of 1-10, with 10 indicating a very close relationship, and a very serious offense, respectively. Time elapsed was measured in months.

**Intervention group.** Regarding the type of relationship that participants have/had with the perpetrator, participants reported that the transgressions had been committed by a spouse/partner (14.3%), a parent (9.5%), a sibling (4.8%), a friend (38.1%), a supervisor or boss (9.5%), an unknown person (4.8%), or an unspecified/other person (19.0%). On a Likert-type scale ranging from 1 (*not at all close*) to 10 (*very close*) participants indicated their perceived closeness with the transgressor ( $M = 7.24$ ,  $SD = 2.47$ ). The mean time (in months) since the transgression against the participant had occurred was 51.4 ( $SD = 57.67$ ). Participants indicated the mean severity of the transgression to be 6.29 ( $SD = 1.93$ )

Regarding the type of relationship that participants have/had with the victim of their offense, participants reported that the transgressions have been committed against a spouse/partner (33.3%),

a parent (14.3%), a friend (42.9%) or an unspecified/other person (9.5%). On a Likert-type scale ranging from 1 (*not at all close*) to 10 (*very close*) participants indicated their perceived closeness with the victim ( $M = 7.48$ ,  $SD = 2.21$ ). The mean time (in months) since the transgression against the victim had occurred was 47.10 ( $SD = 38.49$ ). Participants indicated the mean severity of the transgression to be 6.86 ( $SD = 2.10$ )

**Control group.** Regarding the type of relationship involved with the perpetrator, participants reported that the transgressions had been committed by a spouse/partner (28.6%), a parent (23.8%), an extended family member (4.8%), a friend (23.8%), a supervisor or boss (14.3%), or an unspecified/other person (4.8%). On a Likert-type scale ranging from 1 (*not at all close*) to 10 (*very close*) participants indicated their perceived closeness with the transgressor ( $M = 6.86$   $SD = 2.46$ ). The mean time (in months) since the transgression against the participant had occurred was 18.10 ( $SD = 23.77$ ). Participants indicated the mean severity of the transgression to be 6.71 ( $SD = 1.85$ )

Regarding the type of relationship involved with the victim, participants reported that the transgressions have been committed against a spouse/partner (23.8%), a parent (9.5%), a sibling (4.8%), a friend (42.9%), an unknown person (9.5%) or an unspecified/other person (9.5 %). On a Likert-type scale ranging from 1 (*not at all close*) to 10 (*very close*) participants indicated their perceived closeness with the victim ( $M = 6.52$ ,  $SD = 3.09$ ). The mean time (in months) since the transgression against the victim had occurred was 12.33 ( $SD = 14.64$ ). Participants indicated the mean severity of the transgression to be 5.24 ( $SD = 2.05$ ).

### **Procedures**

Participants were recruited via class announcements and by the use of electronic mail. Similar to study 1, the criteria for participating in the intervention study were: a) being age 18 and above, b) Greek-speaking and c) ability to provide informed consent. Additional criteria for participating in

study 2 were: d) to have experienced two unresolved interpersonal transgressions - one committed by the individual towards another person, and one committed against the individual by another person - and e) to be interested in learning skills that enable a person to deal with these transgressions. Both during class announcements and via electronic mail, participants were informed about the purpose, nature and duration of the intervention study, and were given the opportunity to ask any questions regarding the procedure.

For this initial evaluation of the forgiveness intervention, we were primarily interested in comparing the effects of the treatment relative to non-treatment. Therefore, we decided to use a simple, low-cost, and passive control condition instead of an active control condition such as a social activity group or an alternative treatment group.

To evaluate the effectiveness of our forgiveness intervention, we used a design with one pretest and two posttests. A questionnaire package that included quantitative questions was completed by participants before the first session, at the end of the final session, and at 1-month follow-up. By including two posttests, we aimed to assess whether changes associated with the intervention were sustained over an extended period of time. In addition, by including a comparison group, we were able to control threats to internal validity, such as history, maturation, and testing effects.

Students who expressed interest in participating in the study gave their email to the primary investigator, who contacted the individuals for further information and for scheduling purposes. Participants who indicated that they had unresolved issues regarding interpersonal transgressions but were not interested in participating in the intervention group, were placed in the control group.

After assignment to conditions, participants in the intervention group were placed in one of two intervention groups based on their schedules and availability. After eliminating intervention

participants who did not return for the second session, ( $n = 2$ ) and control group participants who did not complete surveys ( $n = 1$ ), 21 participants remained in each of the two conditions. Thus, analyses were based on “study completers” as opposed to all “intention-to-treat” participants. The first intervention group consisted of 14 participants, whereas the second group was comprised of 7 participants. The discrepancy in the size of the two intervention groups was due to the limited schedule availability of participants.

During questionnaire administration, students who expressed interest in participating in the control group were informed about the purpose, nature and procedures, and were provided with the consent form. Participants were given the opportunity to ask any questions about the procedure prior to signing the consent. Following signing the consent form, participants were given and the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> questionnaire packages, each with a random unique number, and were instructed to fill in the questionnaires in three different time periods, with a gap of 4 weeks for each completion.

Similarly, during the first session, students who expressed interest in participating in the intervention group were informed about the purpose, nature and procedures and were provided with the consent form. Participants were given the opportunity to ask any questions about the procedure prior to signing the consent. After signing the consent form, participants were given the 1<sup>st</sup> questionnaire package to complete and return to the group facilitator. Moreover, for each session, participants received a workbook containing the exercises and activities of that given session.

At pretest, participants in both conditions were instructed to recall a serious interpersonal transgression that was still unresolved and to briefly describe it. Subsequently, participants were asked to answer questions related to: a) the type of relationship between them and the transgressor, b) their perceived closeness to the transgressor, c) the perceived transgression severity, and d) the

transgression recency. Participants were also asked to fill in the same questions related to the transgression that they have committed against another person.

Upon completing the demographics and transgression characteristics, participants in both conditions completed measures of state self-forgiveness, state other forgiveness, dispositional forgiveness, affect balance and depression at three different time periods: a) at the beginning of the intervention (pretest), b) 4 weeks later, immediately after the completion of the intervention (posttest), and c) 4 weeks after the post-test (follow-up). For both conditions, the first questionnaire package was completed in mid-November 2017, the second in mid-December 2017, and the final one in mid-January 2018.

The first intervention group was conducted at a conference room at the same private university in Cyprus, whereas the second group run in a conference room of the university's Research and Counselling center. Sessions run twice a week, for 4 consecutive weeks. The sessions were running on the same dates for both intervention groups, at different times. The place and times of the intervention groups remained unchanged throughout the duration of the intervention. Participants in the intervention group received a participation certificate upon the completion of the 7 sessions. The intervention run from the 14<sup>th</sup> of November to the 12<sup>th</sup> of December. The follow-up questionnaire package was individually completed and returned 4 weeks after the completion of the intervention.

The questionnaire packages for the control and intervention groups included the Greek adaptations of the following scales: Heartland Forgiveness subscales of Forgiveness of Other and Forgiveness of Self (Thompson et al., 2005), the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), the Positive and Negative Affect Schedule (Watson et al. 1988), the

Transgression-Related Interpersonal Motivations Inventory (McCullough, Root, & Cohen, 2006) and the State Self-Forgiveness Scale (SSFS; Wohl et al., 2008).

### **Group Facilitator**

The psychoeducation was provided to participants by one female group facilitator. The group facilitator is an advanced doctoral student in clinical psychology who has a Master's degree, and has completed at least 1500 hours of supervised clinical practice, as a part of the PhD in Clinical Psychology programme she is enrolled at. In developing the intervention, the group facilitator completed readings about the REACH forgiveness intervention and has watched videos and lectures on the REACH model, delivered by Dr. Everett Worthington. For the duration of the intervention, the group leader was receiving bi-weekly clinical supervision from the research supervisor, who is a licensed counselling psychologist. During supervision, the facilitator received feedback and instruction on her facilitation skills. Supervision also served as a means to promote adherence to the intervention manual.

### **The Intervention**

The intervention tested in this study is a flexible manualized intervention adapted from two distinct, empirically-supported interventions to promote interpersonal forgiveness (Worthington, 2001, 2006) and self-forgiveness (Worthington, 2013). Specific adjustments were made to incorporate both forgiveness of others and forgiveness of self in a single intervention. The structure of the current intervention was based on Worthington's (2001a) five-step model to REACH (interpersonal) forgiveness and focused on 3 primary targets: a) forgiving a transgressor for an interpersonal offense committed against the participant, b) forgiving the self for a transgression the participant has committed against another person, and (c) increasing dispositional self and other forgiveness.

Adapted material was derived from Worthington's (2001, 2006, 2011, 2013) workbooks on forgiveness of others and self-forgiveness. The first set of workbooks "The Path to Forgiveness: Six Practical Sessions for Becoming a More Forgiving Person" (Worthington, 2006, 2011) includes a leader's manual, a participant's manual and guide, and a self-directed learning workbook. The original workbooks are designed to facilitate a 6-session psychoeducational intervention program that aims to promote interpersonal forgiveness for a specific transgression that the person has experienced. The workbooks lead participants in groups of 4 to 10 through structured exercises for six 1-hour sessions, and can be expanded to 12 or 18 hours based on the needs of the particular group and the time availability. The second workbook, "Moving Forward: Six Steps to Forgiving Yourself and Breaking Free from the Past" (Worthington, 2013) is self-directed learning workbook designed to increase forgiveness of self and reduce self-condemnation among perpetrators of an interpersonal offense.

The current intervention is an adaptation of the aforementioned workbooks into a single comprehensive workbook that contains a selection of exercises that aim to simultaneously foster self and other forgiveness, as well as dispositional forgiveness. Exercises are selected based on how vital they are considered to be in producing beneficial outcome (Worthington, 2006, 2011), and in promoting the goals of the current intervention. The selected exercises from the workbooks were translated in the Greek language using Forward Backward translation, and then adapted to adhere to the needs of the current intervention. The intervention groups were conducted in Greek, which is the first language of the participants and the group leader.

Akin to the REACH intervention for interpersonal forgiveness, the current intervention followed a series of 5 sequential steps. The first step focused on recalling (R): a) the offense that was committed against the participant and b) the transgression the participant has committed against

another person. Step two (E) aimed at encouraging participants to empathize with: a) their transgressors and b) themselves, by exploring the transgressor's and their own motivations surrounding the respective offenses. In step three (A), participants were asked to offer: a) the transgressor and b) themselves the altruistic gift of forgiveness and self-forgiveness, respectively. In Step four (C) participants were encouraged to commit to interpersonal and self-forgiveness, while step five (H) focused on holding on to and maintaining self-and-other forgiveness. Each step of the intervention was applied to the two target transgressions that each participant had identified prior to the beginning of the group.

The intervention employed a group psychoeducational format. Sessions were structured to include a number of individual, dyadic and group exercises that aimed to promote forgiveness of others, forgiveness of self and dispositional forgiveness. The intervention was designed to facilitate a 16-hour intervention program that would run over the course of eight 2-hour sessions. Due to scheduling conflicts, however, the intervention run in five-2 hour sessions, and two-3 hours sessions, totaling to a sum of 16-hours of sessions. Notwithstanding the scheduling change, the structure and allocated time for each exercise has remained unchanged.

### **Sessions Outline**

The current intervention consisted of 7 sessions. The main body of each session included a variety of individual, dyadic and group exercises designed to help participants accomplish interpersonal and self-forgiveness for the two specific transgressions that they had identified at the beginning of the intervention. Beginning from session 1, the final five to ten minutes of each session were spent discussing the outcomes of that given session. Similarly, beginning from session 2, the first five to ten minutes of each session were spent recapping material from the previous week.

The goal of the first session was to introduce participants to the specifics of the intervention group and for the group members to complete the pre-intervention assessments. The session's objectives were for participants to distinguish between the different types of forgiveness, to explore forgiveness in the literature, and to make a conscious decision to try to work on forgiving themselves and their transgressors.

In session 1, the leader introduced themselves, briefly discussed the aim of the group intervention, and set a number of ground rules pertaining to privacy, confidentiality and commitment to the program. Participants were then asked to complete the demographic questionnaire, the offense-specific questions and the assessments (dispositional forgiveness of self and others, state forgiveness, transgression-related interpersonal motivations, affect balance, depression). Following the personal introductions of each group member, participants read out and discussed a number of literature quotes relating to forgiving. The group discussed the concepts of, and distinguished between, decisional and emotional forgiveness. Group members were then encouraged to make a conscious decision to decide to try to forgive themselves and the other person by signing the 'Intent to Forgive' contract. For the final exercise, participants were invited to find their own examples of forgiveness and self-forgiveness. The session ended with participants discussing the outcomes of the first session, and with debriefing.

The objectives of the second session were for participants to appreciate the numerous reasons to forgive, to identify the benefits of forgiveness and to decide upon a working definition of forgiveness, which was to be used throughout the intervention. Moreover, session 2 aimed to encourage participants to assess the transgressions they chose to work on, and to enable them to realize the role that rumination plays in sustaining unforgiveness.

In Session 2, participants briefly discussed what they got out of the first session. Then, participants were asked to think of a time they had successfully forgiven someone in the past, and identify, list and discuss the benefits of forgiving others and themselves. Group members were then asked to define the characteristics of forgiveness and choose from a list of possible negative emotions the ones they felt when the person hurt them. Following this, each individual was asked to identify a list of people who were possibly hurt from their actions and assess the severity of the damage they have caused as a consequence of their transgression(s). The group was then asked to answer questions regarding and discuss possible ways that they use to 'nurture' and relive the hurt they experienced and inflicted. Session ended with group member discussing the outcomes of the session, and with debriefing.

The third session focused on identifying the implications of forgiving and on recalling the chosen transgressions. Furthermore, the session intended to enable participants rethink their chosen transgressions in an objective way, and to consider the multitude of possible reasons behind wrongdoing.

Session 3 began with group members briefly discussing what they got out of the previous session. Participants discussed whether they have made a decision to forgive others and themselves for the hurts they have identified as target transgressions, and what the implications of these decisions were. Next, group members are asked to recall the identified hurts in helpful ways through imagination, and then to discuss the events in dyads. Participants were encouraged to try to discuss the events as objectively as they could, and were instructed to imagine releasing the hurt. Group members were then encouraged to think of a time when they hurt someone, and to consider the reasons behind their hurtful actions. Finally, the group discussed the burden associated with unforgiveness, and summarized the outcomes of the session.

The goal of the fourth session, which focused on interpersonal forgiveness, was for participants to try to figure out the possible reasons behind their transgressor's wrongdoing, to attempt to empathize and sympathize with them, to motivate an altruistic attitude towards their transgressor and to realize the human capacity for wrongdoing.

Session 4 began with participants discussing what they got out of the previous session. The group recapped on the reasons behind hurtful actions, and participants were encouraged to try to understand why the perpetrator hurt them. Participants were advised to consider the person's history, pressures, reasoning, motives and possible feelings at the time of the offense. Group members were then encouraged to attempt to sympathize with their offender, and discussed the implications of offering compassion to him or her. Following this, members were invited to think of a time when they did something altruistic for another person and discussed several examples regarding the human capacity to commit atrocities. The session ended with the group discussing the outcomes of the session.

The fifth session, which focused on self-forgiveness, aimed at encouraging participants to take responsibility for their transgression, and to empathize and sympathize with both themselves and their victims. Furthermore, the session's objectives included inspiring participants to help out other individuals that might be in need, realizing their self-worth despite their wrongdoings, motivating an altruistic attitude towards themselves, and thinking of the possible obstacles on the way to complete self-forgiveness.

Session 5 began with group members discussing what they got out of the session 4. Participants were encouraged to take responsibility for the harm they have caused, and empathize with both themselves and the victim of their target offense. The group recapped on the reasons behind hurtful actions, and participants were encouraged to try to understand why they hurt the other

person. Group members discussed their reasons for committing the transgression and the reasons their victims had for responding the way that they did. Participants discussed the implications of offering compassion to themselves and their victims. Finally, participants discussed the possibility of finding ways to ‘pay it forward’ by helping people who were not harmed directly by their offense (in cases it was not possible to make amends to the victim). Each group member thought and listed a number of reasons why they were worthy as a person, and were asked to consider offering self-forgiveness as an altruistic gift to themselves. Group members discussed what percent of the negative feelings they originally felt toward themselves had been replaced with neutral or more positive emotions. Finally, participants discussed the possible obstacles to complete self-forgiveness and the outcomes of the session.

The sixth session was intended to create a sense of gratitude for the forgiveness that participants have received in the past, and for them to identify the possible barriers on the way to complete interpersonal forgiveness. The session’s objectives also included summarizing the knowledge and outcomes that were acquired in previous sessions, working through the feelings and thoughts of residual unforgiveness and promoting a commitment to hold on to any forgiveness that has been experienced. The final aim of the session was for participants to commit to becoming more forgiving individuals towards others.

Session 6 began with the group discussing what they got out of the previous session, and with participants recalling a time when they needed forgiveness in the past. Group members were asked to focus on the positive feelings and the gratitude they felt for receiving forgiveness. The group discussed the feelings associated with being forgiven. Next, each member drew a gift that they would have liked to give to their transgressor as a sign of their forgiveness and explained the meaning and significance of what they made. Members discussed what percent of the negative

feelings they originally felt towards their offender has been replaced with neutral or more positive emotions. Participants discussed the possible obstacles to complete interpersonal forgiveness. The facilitator summarized the five steps to REACH forgiveness and reviewed with the group the two types of forgiveness and the working definitions of ‘granting decisional forgiveness’ and ‘experiencing emotional forgiveness’. Next, the group discussed scenarios that might have made them doubt whether they really forgave, and were invited to imagine how they would feel and react if or when seeing the perpetrator. The group discussed ways that they could use to avoid getting back into resentment or hatred, and they exercised attempting to control their transgression-related thoughts and rumination. The facilitator and the group summarized a number of ways to hold on to forgiveness in the midst of a ‘reminder’ experience, and in cases where participants continued to worry or ruminate about the transgression. Then, the group went through a series of 12 steps that were intended to make participants dedicate themselves to being more forgiving individuals. In the final exercise, group members were asked to compare their lives with the life of a pencil, and discover the similarities between the two. The session ended with group members discussing what they got out of the day’s session.

The goals of the final session included discussing the learning outcomes that have transpired from participants’ transgressions and committing to becoming more self-forgiving individuals. In addition the last session aimed at participants’ completing the post-intervention questionnaires and reflecting on the whole group experience.

Session 7 began with participants discussing the outcomes of the previous session. Group members discussed the learning outcomes and positive consequences that have derived from their wrongdoing, and discussed the €100bill metaphor exercise, which was aimed to enable them to realize their and their transgressor’s worth. Following this, the group went through a series of 12

steps intended to make participants dedicate themselves to being more self-forgiving individuals. Following this, each member drew a gift that they would have liked to give to themselves as a sign of their self-forgiveness, and explained the meaning and significance of what they made. For the next exercise, each person received a hand mirror, and each participant was invited to look at themselves twice: as the face of a person who has been hurt and has hurt others, and as the face of a person who is trying to forgive themselves and others. The last exercise included participants discussing what they have gotten out of the session. Session 7 ended with group members completing the post-intervention assessments and processing the whole forgiveness group experience (see Appendix F for the sessions outline and Appendix G for the intervention manual).

### **Measures**

In addition to the demographics questionnaires (see Appendix D for demographic questionnaires), the following questionnaires were administered to participants in the intervention and the control group: a) Heartland Forgiveness Scale (HFS; Thompson et al., 2005), b) Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988), c) Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) (see instrument descriptions on pages 72-79). In addition to the aforementioned scales (discussed in above in study 1), two additional forgiveness scales were administered to test transgression-specific interpersonal and self-forgiveness: d) the Transgression-Related Interpersonal Motivations Inventory (TRIM-18; McCullough et al., 2006) and e) the State Self-Forgiveness Scale (SSFS; Wohl et al., 2008).

#### **Transgression-Related Interpersonal Motivations Inventory.** (McCullough et al., 2006).

The TRIM-18 is an 18-item measure of unforgiving and benevolence motivations that is completed in relationship to an index transgression. The TRIM-18 is comprised of three subscales; revenge against (TRIM-R; 5 items), avoidance of (TRIM-A; 7 items) and benevolence towards (TRIM-B; 6

items) a transgressor (McCullough et al., 1998; McCullough, Root, & Cohen, 2006). The latter subscale (benevolence) was added later, as an addition to the original scale (TRIM-12; McCullough et al. 1998), which only included the revenge and the avoidance subscales, and was hence measuring unforgiveness. The third subscale was added as a measure of benevolent motives toward the offender to provide more assurance that the TRIM is indeed assessing forgiveness (Worthington et al., 2014). Examples include “I’d keep as much distance between us as possible” (TRIM-A), “I’m going to get even” (TRIM-R) and “Despite what he/she did, I want us to have a positive relation again” (TRIM-B). Each of the items is rated on a 5- point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The TRIM- A and TRIM- R subscales were shown to have good psychometric properties. In a study with 239 college participants, McCullough et al. (1998) found the mean score of the revenge subscale TRIM-R to be 8.7 ( $SD = 4.5$ ) and the mean of the avoidance subscale to be 18.1 ( $SD = 8.4$ ). McCullough and his colleagues (1998) reported that for the 5-item TRIM-R the Cronbach’s alpha coefficient was .90 and for the 7-item TRIM-A was  $\alpha = .86$ . McCullough, Fincham and Tsang (2003), found Cronbach’s alpha for the TRIM-B5 (benevolence subscale) to be between  $\alpha = .91$  and .93. McCullough, Luna, Berry, Tabak and Bono (2010) subjected the TRIM-18 to item response analysis. The fit of the 18 items to the Rasch model, using an unweighted least-squares fit statistics, was between .73 and 1.55; the expected value is 1.0. Therefore, for the sample of 372 undergraduates, the TRIM-18 measured forgiveness well according to IRT (McCullough et al., 2010).

TRIM-12 scores over three weeks were correlated  $r = .86$  (TRIM-R) and  $r = .79$  (TRIM-A), over eight weeks  $r = .53$  (TRIM-R) and  $r = .44$  (TRIM-A) and over nine weeks  $r = .64$  (TRIM-R) and  $r = .65$  (TRIM-A) (McCullough, Exline, & Baumeister, 1998). For the benevolence subscale (TRIM-

B) temporal stability correlations weekly for four weeks ranged from .87 (one week) to .52 (four weeks) (McCullough et al., 2003). Construct validity of the TRIM scale has been supported by inverse correlations with a number of relationship-specific variables (relationship satisfaction and closeness), offense-specific variables (degree of apology of an offender), and social-cognitive variables (empathy for a transgressor). TRIM scores have also been positively correlated to rumination about a transgression.

The TRIM-18 is translated in Greek according to the forward-backward translation method. The original English question set version was given to a translator who translated the module in Greek (forward translation). Then, a native (English) speaker has translated the Greek version back into English (back translation). A third bilingual person compared the two English versions and mediated a discussion between the two translators to develop one version of the survey. Discrepancies indicative of ambiguous wording were discussed and a consensus version was constructed.

For the present study, participants were instructed to complete the TRIM-18 with reference to the offender involved in the index transgression they chose to work on (i.e., the transgression that was committed against them by another person). Using a variation of McCullough, Luna, Berry, Tabak and Bono's (2010) model measuring the TRIM-18 as a unidimensional construct, the five revenge items and the seven avoidance items were reversed-scored so that high scores on those subscales indicated more forgiveness. Then, the scale scores were calculated by adding the three subscales (Revenge-Reverse, Avoidance-Reverse and Benevolence). Therefore, higher scores on the TRIM-18 indicated more forgiveness towards the perpetrator of offense (McCullough et al., 2010).

In the current study Cronbach's alpha was .82 for the Avoidance-R subscale, .91 for the Revenge-R subscale, and .82 for the Benevolence subscale. The whole scale reliability was  $\alpha = .92$ .

**State Self-Forgiveness Scale.** Forgiveness of self for a specific transgression was measured using the State Self-Forgiveness Scale (SSFS; Wohl et al., 2008). The SSFS is a 17-item scale, consisting of two oblique subscales: the Self-Forgiving Feelings and Actions subscale (SFFA; 8 items) and the Self-Forgiving Beliefs subscale (SFB; 9 items). Items are rated on a 4-point Likert Scale, ranging from 1 (*not at all*) to 4 (*completely*), with higher scores representing greater self-forgiveness. Participants are asked to respond to questions preceded by “As I consider what I did that was wrong I”. Examples of items include: “feel compassionate toward myself” (SFFA) and “I believe I am acceptable” (SFB). The final item provides a validity check for the measure at large (“As I consider what I did that was wrong, I have forgiven myself”) (Wohl et al., 2008, p. 4).

The State Self Forgiveness Scale’s psychometric properties were examined using 113 students at the University of Oklahoma (Study 1) and 60 undergraduates at Carleton University (Study 2) (Wohl et al., 2008). The SSFS demonstrated desirable levels of internal consistency reliabilities as well as convergent and discriminant validities. Cronbach’s alpha coefficient for the SFFA subscale were reported at  $\alpha = .74$ , while the SFB had an alpha of  $.89$ . In addition, the SFFA and SFB subscales demonstrated item reliabilities of  $.99$  and  $.95$ , respectively (Wohl et al., 2008).

Participants who reported higher self-forgiveness on the final item also scored higher on the two subscales of the SSFS. Both subscales of the SSFS correlated negatively with self-blame ( $r = -.38$  for SFFA,  $r = -.36$  for SFB,) and depression ( $r = -.42$  for SFFA,  $r = -.39$  for SFB). Moreover, neither of the two subscales of the SSFS was correlated significantly with guilt ( $r = -.08$  for SFFA,  $r = -.05$  for SFB) or life satisfaction ( $r = .23$  for SFFA,  $r = .20$  for SFB). Finally, SSFS scores were not correlated with items on the Tendency to Forgive Scale (Brown, 2003) ( $r = .03$  for SFFA,  $r = .14$  for SFB) (Wohl et al., 2008).

The SSFS is translated in Greek following the forward-backward translation method. The original English question set version was given to a translator who translated the module in Greek (forward translation). Then, a native (English) speaker has translated the Greek version back into English (back translation). A third bilingual person compared the two English versions and mediated a discussion between the two translators to develop one version of the survey. Discrepancies indicative of ambiguous wording were discussed and a consensus version was constructed.

For the present study, participants were instructed to complete the SSFS scale with reference to themselves, considering the second index transgression they chose to work on (i.e., the transgression they have committed towards another person). In the current study Cronbach's alpha for the SFB subscale was  $\alpha = .88$ , for the SFFA was  $\alpha = .88$ , and for the total scale was  $\alpha = .93$ .

**Assessment of specific offenses.** Participants were asked to write a description of a particular transgression they wanted to work on as a part of the study. They were also asked to identify the type of relationship (e.g., friend, boss or supervisor, spouse) they had/have to the person that hurt them, how long ago the transgression occurred, and how severe they considered the transgression to be. Similarly, they were instructed to identify the type of relationship they had/have to the person they hurt, how long ago the offense occurred, and how severe they considered the transgression to be. Participants were asked to think about these particular offenses when answering transgression-specific measures on the questionnaire (other-forgiveness and self-forgiveness).

### **Power Analysis**

This power analysis is for mixed design ANOVA with two levels of between-group (control group and intervention group) and two levels of within group (pre-intervention, post intervention and follow-up). The criterion for significance (alpha) has been set at .01. For an effect size of .25 a sample of 22 per between condition it will yield a power of .95

### Statistical Analysis

Data for study 2 were analyzed using IBM SPSS Statistics software (SPSS Inc., Chicago, IL). We used mixed model ANOVA to test the effects of the forgiveness intervention. The within-level data consisted of 3 repeated observations (pre, post, follow-up) of the outcome variables (dispositional forgiveness, state self- forgiveness, state-other forgiveness, affect balance, depression). The between-individual data consisted of the two treatment conditions (intervention vs. control) that may explain differences in the outcome variables between the conditions. One concern was that significant variation may exist between the intervention and the control groups. Therefore, checked for differences between the two groups in terms of demographic variables, transgression characteristics, and pre-measures of outcome variables. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity and homogeneity of variances.

Firstly, we compared participants across conditions (intervention vs. control) for demographic variables. An independent-samples t-test was conducted to compare age, religiosity and spirituality in the treatment and no treatment condition. A chi-square test was used to compare gender, marital status, and educational status differences between the two groups. Moreover, an independent-samples t-test was conducted to compare the 6 transgression- related variables in the treatment and control condition. The transgression-related characteristics included 3 variables related to the transgression that was committed against the participant by the perpetrator: a) closeness to the perpetrator, b) time elapsed since the transgression was committed and c) perceived severity of the transgression. The same 3 variables were compared in regard to the transgression that was committed by the participant against another person: a) closeness to the victim, b) time elapsed since the transgression was committed and c) perceived severity of the transgression.

Then, we compared participants across conditions (intervention vs. control) for the pre-test measures. An independent-samples t-test was conducted to compare the pre-test measures on depression, dispositional forgiveness, affect balance, state-self forgiveness and transgression related interpersonal motivations.

Time was coded as pre-test, post-test and follow-up to reflect weeks in study. We were primarily interested in the effects of the condition on the average slope of outcome variables over time. Such Condition x Time interaction effects would indicate that participants in the intervention condition changed differentially over time compared with participants in the control condition. To control for Type I error, we applied Bonferroni corrections separately for each of the analyses. The required  $p$  value for significance for all measures was set at 0.05. In addition, we reported treatment effects on the outcome slope of outcome variables over time (Cohen's  $d$ ; Cohen, 1988) for the outcomes between groups at post-test, and follow-up.

Finally, a mixed-model design ANOVA was run to test the effect of time in self-reported levels of dispositional forgiveness, self-forgiveness, other-forgiveness, affect balance and depression in the control and intervention group. All effects are reported as significant at the  $p < .05$ .

### **Ethical Considerations**

**Risks.** The risks in this study were minimal. There was a risk of discomfort from recalling the transgressions that were committed against and by the participant. For purposes of debriefing, each session began by reviewing any feelings or thoughts that may have arisen during and since the previous session, and finished with participants discussing the outcomes of the given session. Participants were advised and given the chance to contact the group leader at the end of each session if they experienced any distress during the session. Moreover, participants were given the contact

details of the research supervisor, a licensed psychologist, and were advised to contact her if they felt any discomfort.

**Benefits.** Participation in this study may have enabled group members to release the negative feelings associated with unforgiveness towards others and themselves, and experience the positive outcomes associated with interpersonal and self-forgiveness. In addition, there was a general benefit to society by the advancement of scientific knowledge on the effects of the current psychoeducational forgiveness intervention on state and dispositional forgiveness, depression and affect balance. In addition, even though it was not a study requirement, some students received extra course credit for their participation in the study.

**Confidentiality.** For scheduling and logistic purposes, the primary researcher kept a list of the names and email addresses of participants. No other party had a record of participants' personal information. To maintain participant confidentiality, at the beginning of sessions participants were given a unique random number that was only known to them and were instructed to memorize it and write it down at the front page of each of the 3 questionnaire packages they received. The list of names and the unique random number could not be linked, therefore all data remained anonymous and could not be traced back to the participant. Records were kept confidential and participants were not identified in any written or verbal report. The records were kept in a secured area and locked in a file cabinet in the office of the principal investigator. After study completion, all records will be destroyed by shred.

Similar to study 1, no monetary compensation was awarded for this study. Participation was on a voluntary basis, and participants were made aware that they could withdraw from the study at any time. After the completion of the intervention, participants in the intervention group were given a participation certificate.

## Chapter IV. Results

### Study 1

**Descriptive statistics.** Descriptive statistics were conducted to check the range, means, and standard deviations of our variables of interest. For dispositional forgiveness, scores ranged from 22 to 84 ( $M = 56.90$ ,  $SD = 11.29$ ). Depression scores ranged from 20 to 73 ( $M = 35.60$ ,  $SD = 10.87$ ), whereas for affect balance scores ranged from  $-18$  to 36 ( $M = 12.93$ ,  $SD = 9.76$ ). Finally, quality of life scores ranged from 8 to 20 ( $M = 15.88$ ,  $SD = 2.48$ ).

**Pearson's correlations.** Moreover, we run Pearson's correlations to test the relationship between dispositional forgiveness and its two components (self-forgiveness and other forgiveness) to affect balance, depression and quality of life. Results are shown below in table A1, and indicate significant linear relationships between dispositional forgiveness and its components (self-forgiveness, other forgiveness) to all of the depended variables.

Table A1.

*Summary of Correlations, Means, and Standard Deviations for Scores on the HFS, HFS (SF), HFS (OF), PANAS (AB), CES-D and WHO-QoL-BREF.*

| Measure         | 1      | 2      | 3      | 4      | 5      | 6      | <i>M</i> | <i>SD</i> |
|-----------------|--------|--------|--------|--------|--------|--------|----------|-----------|
| 1. HFS          | --     | .84**  | .85**  | .55**  | -.50** | .25**  | 56.89    | 11.35     |
| 2. HFS (SF)     | .84**  | --     | .43**  | .55**  | -.52** | .26**  | 28.48    | 6.70      |
| 3. HFS (OF)     | .85**  | .43**  | --     | .38**  | -.32** | .16**  | 28.41    | 6.72      |
| 4. PANAS (AB)   | .55**  | .55**  | .38**  | --     | -.61** | .37**  | 12.86    | 9.76      |
| 5. CES-D        | -.50** | -.52** | -.32** | -.61** | --     | -.37** | 35.64    | 10.91     |
| 6. WHO-QoL-BREF | .25**  | .26**  | .16**  | .37**  | -.37** | --     | 15.87    | 2.47      |
| <i>M</i>        | 56.89  | 28.48  | 28.41  | 12.86  | 35.64  | 15.87  |          |           |
| <i>SD</i>       | 11.35  | 6.70   | 6.72   | 9.76   | 10.91  | 2.47   |          |           |

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

Note. Intercorrelations for Study 1 participants ( $n = 288$ ). For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. HFS = Heartland Forgiveness

Scale; HFS (SF) = Heartland Forgiveness Scale, Self-Forgiveness subscale; HFS (OF)= Heartland Forgiveness Scale, Other-Forgiveness subscale, PANAS (AB) = Positive and Negative Affect Scales (Affect Balance); CES-D = Center for Epidemiologic Studies Depression Scale, WHO-QoL BREF = World Health Organization Quality of Life – BREF.

Further analyses were conducted to test the relationship between dispositional forgiveness and demographic factors. Pearson's correlations indicated a positive relationship between dispositional forgiveness and age ( $r = .184, p = .001$ ), indicating that the older the participant, the higher level of dispositional forgiveness they would report. Results from t-test analysis indicated that female participants reported statistically significant higher dispositional forgiveness ( $M = 57.86, SD = 11.38$ ) compared to male participants ( $M = 54.87, SD = 10.94$ ),  $t(284) = -2.09, p = .038$ . No other demographic variable was related to dispositional forgiveness.

**Stepwise regression analysis.** Stepwise linear regression was carried out to investigate whether the level of dispositional forgiveness would predict the level of our outcome variables after controlling for the two demographic variables that were found to be significantly correlated with dispositional forgiveness. Results are shown in table A2, and indicate that, even after controlling for age and gender, dispositional forgiveness remains a significant predictor of affect balance, depression, and quality of life. Moreover, results indicated that the assumptions of the regression analyses were met.

Table A2

*Summary of Hierarchical Regression Analysis for Variables Predicting Affect Balance, Depression and Quality of Life (N = 288)*

| <i>DV: Affect Balance</i>    | Model 1  |             |         |                | Model 2  |             |          |                |
|------------------------------|----------|-------------|---------|----------------|----------|-------------|----------|----------------|
|                              | <i>B</i> | <i>SE B</i> | $\beta$ | <i>95% CI</i>  | <i>B</i> | <i>SE B</i> | $\beta$  | <i>95% CI</i>  |
| Age                          | 0.42     | 0.12        | 0.22*   | [0.21, 0.68]   | 0.21     | 0.1         | 0.12*    | [0.03, 0.43]   |
| Gender                       | -0.61    | 1.23        | -0.04   | [-3.15, 1.68]  | -2.2     | 1.04        | -0.11*   | [-4.34, -0.24] |
| Dispositional Forgiveness    |          |             |         |                | 0.47     | 0.04        | 0.54**   | [0.38, 0.56]   |
| $R^2$                        |          |             | 0.05    |                |          |             | 0.28     |                |
| <i>F</i> for change in $R^2$ |          |             | 7.38**  |                |          |             | 116.50** |                |
| <i>DV: Depression</i>        |          |             |         |                |          |             |          |                |
| Age                          | -0.47    | 0.13        | -0.21** | [-0.75, -0.22] | -0.24    | 0.12        | -0.11*   | [-0.49, -0.03] |
| Gender                       | 3.16     | 1.36        | 0.14*   | [0.58, 5.94]   | 4.79     | 1.18        | 0.21**   | [2.54, 7.20]   |
| Dispositional Forgiveness    |          |             |         |                | -0.49    | 0.05        | -0.51**  | [-0.58, -0.39] |
| $R^2$                        |          |             | 0.07    |                |          |             | 0.31     |                |
| <i>F</i> for change in $R^2$ |          |             | 10.29** |                |          |             | 97.16**  |                |
| <i>DV: Quality of Life</i>   |          |             |         |                |          |             |          |                |
| Age                          | -0.04    | 0.03        | -0.07   | [-0.10, 0.03]  | -0.07    | 0.03        | -0.12*   | [-0.12, -0.00] |
| Gender                       | -0.17    | 0.32        | -0.03   | [-0.81, 0.44]  | -0.38    | 0.31        | -0.07    | [-1.00, 0.22]  |
| Dispositional Forgiveness    |          |             |         |                | 0.06     | 0.01        | 0.29**   | [0.04, 0.09]   |
| $R^2$                        |          |             | 0.01    |                |          |             | 0.08     |                |
| <i>F</i> for change in $R^2$ |          |             | 0.77    |                |          |             | 22.14**  |                |

\* $p < .05$ . \*\* $p < .01$ .

To investigate whether the level of dispositional forgiveness would predict the level of affect balance (H1), after controlling for age and gender, a stepwise regression equation was conducted. A significant regression equation was found where 33% of the variation in affect balance can be explained by dispositional forgiveness,  $p < .001$ ,  $\beta = .47$ .

Next, we examined whether the level of dispositional forgiveness would predict the level of depression (H2). It was found that dispositional forgiveness significantly predicted participants' level of depression, even after controlling for age and gender. Results indicate that, after accounting

for age and gender, dispositional forgiveness explained 31% of the variance in depression,  $p < .001$ ,  $\beta = -.49$ .

The hypothesis of determining the ability of dispositional forgiveness to predict levels of quality of life (H4) was also explored by performing a stepwise regression analysis, controlling for age and gender. The results of the regression indicated that after accounting for age and gender, dispositional forgiveness explained 8% of the variance of quality of life,  $p < .001$ ,  $\beta = .06$ .

**Multiple regression analysis.** Finally, to test the hypothesis that any variance in levels of depression will be attributed to a higher extent to self-forgiveness, whereas forgiveness of others will contribute to a lesser extent (H3), we conducted a multiple regression analysis. The results of the regression indicated the two predictors explained 28.7% of the variance,  $F(2, 280) = 56.23$ ,  $p < .001$ ). It was found that, even though both components of forgiveness significantly predicted participants' levels of depression, dispositional forgiveness of self significantly predicted depression ( $\beta = -.77$ ,  $p < .001$ ) to a greater extent, whereas dispositional forgiveness of others significantly predicted participants' level of depression ( $\beta = -.20$ ,  $p = .03$ ) to a lesser extent.

Based on the results of H3, which indicated that the self-forgiveness component of dispositional forgiveness accounted for the variance in depression to a larger extent than the other-forgiveness component, follow-up analyses were considered prudent to determine the extent of the contribution of each of the two components of the predictor variables to the remaining outcome variables. Therefore, we conducted a multiple regression analysis to test the effect that dispositional forgiveness of self and dispositional forgiveness of others would have on affect balance and quality of life.

The results of the multiple regression indicated the two predictors explained 32.8% of the variance in affect balance,  $F(2, 280) = 68.79, p < .001$ ). It was found that, even though both components of dispositional forgiveness significantly predicted participants' levels of affect balance, dispositional forgiveness of self significantly predicted affect balance ( $\beta = .69, p < .001$ ) to a greater extent, whereas dispositional forgiveness of others significantly predicted participants' level of affect balance ( $\beta = .26, p = .001$ ) to a lesser extent.

Similarly, we run multiple regression analysis to test the contribution of each component of dispositional forgiveness on quality of life. The results of the regression indicated the two predictors explained 7% of the variance in quality of life,  $F(2,280) = 10.58, p < .001$ . It was found that only dispositional forgiveness of self significantly predicted participants' levels of quality of life ( $\beta = .09, p < .001$ ). Dispositional forgiveness of others did not significantly predict quality of life ( $\beta = .02, p = .406$ ).

## Study 2

**Independent samples t-test.** To check for any significant variability between the intervention and the control groups, we conducted a number of independent samples t-tests, to look for differences in terms of demographic variables, transgression characteristics, and pre-measures of outcome variables. Results for demographic variables indicated that there were no statistically significant mean-level differences across conditions on all demographic variables.

For transgression characteristics, independent-samples t-test results indicated that there were significant differences in: a) the perceived severity of offense against the victim in the treatment ( $M = 6.86, SD = 2.10$ ) and control ( $M = 5.24, SD = 2.05$ ) conditions;  $t(40) = -2.53, p = .02$ , b) the time elapsed since the transgression was committed against the participant in the treatment ( $M = 51.38, SD = 57.66$ ) and control ( $M = 18.10, SD = 23.77$ ) conditions;  $t(39) = -2.39, p = .02$  and c) the time

elapsed since the transgression was committed by the participant against the victim in the treatment ( $M = 47.10$ ,  $SD = 38.49$ ) and control ( $M = 12.33$ ,  $SD = 14.63$ ) conditions;  $t(40) = -3.87$ ,  $p < .001$ . Independent samples t-test also indicated that there were no significant differences in the treatment and no treatment conditions in the means for: a) relationship closeness with the perpetrator of the offense, b) relationship closeness with the victim of the offense, and c) severity of offense that was committed against the participant.

Finally, we compared the pre-test measures on depression, dispositional forgiveness, affect balance, state-self forgiveness and transgression related interpersonal motivations using an independent-samples t-test. Results indicated that there was a statically significant difference in the pre-test means for state self-forgiveness ( $p = .012$ ). No other outcome variable was significantly different between the groups at pre-test. Table A3 presents the means, standard deviations, t and p values for the intervention ( $n = 21$ ) and the control group ( $n = 21$ ).

Table A3

*Summary of Means, Standard Deviations  $t$  and  $p$  values for Scores on CES-D, HFS, PANAS, SSFS and TRIM at pre-test in the Control ( $n = 21$ ) and Intervention Conditions ( $n = 21$ )*

|            | Control Group<br>$M$ ( $SD$ ) | Intervention<br>Group<br>$M$ ( $SD$ ) | $t$  | sig. | 95% CI       |
|------------|-------------------------------|---------------------------------------|------|------|--------------|
| CES-D      | 31.86 (9.24)                  | 31.90 (8.91)                          | -.02 | .99  | [-5.71,5.61] |
| HFS        | 59.76 (11.05)                 | 56.48 (10.15)                         | 1.00 | .32  | [-3.33,9.90] |
| PANAS (AB) | 14.10 (6.08)                  | 12.19 (9.47)                          | .78  | .44  | [-3.09,6.89] |
| SSFS       | 55.57 (7.15)                  | 48.90 (9.10)                          | 2.64 | .01  | [1.55,11.78] |
| TRIM       | 57.38 (10.44)                 | 50.14 (13.10)                         | 1.80 | .055 | [-.15,14.63] |

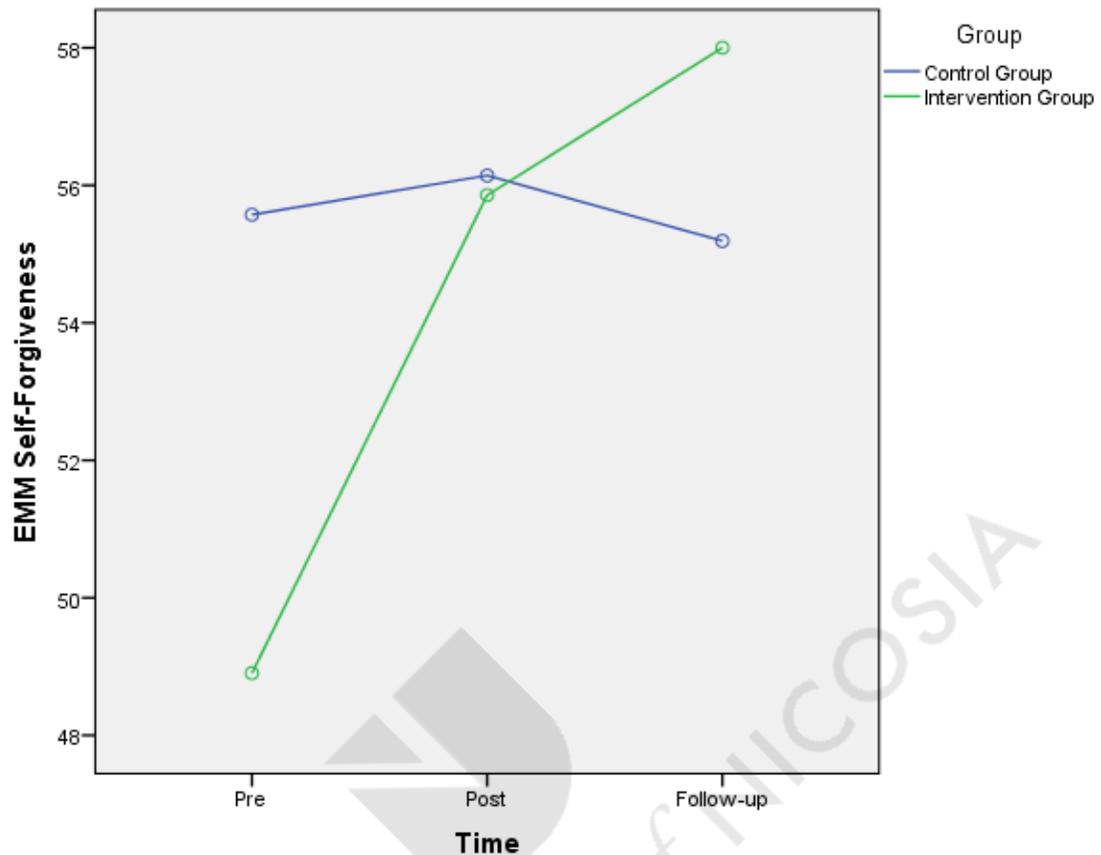
Note. Outcome measures for Study 2 participants at pre-test in the control ( $n = 21$ ) and intervention condition ( $n = 21$ ). For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. CES-D = Center for Epidemiologic Studies Depression Scale, HFS = Heartland Forgiveness Scale; PANAS (AB) = Positive and Negative Affect Scales (Affect Balance); SSFS= State Self-Forgiveness Scale; TRIM = Transgression-Related Interpersonal Motivations scale

**Mixed model ANOVA analysis.** Mixed-model design ANOVA was run to test the effect of time in self-reported levels of dispositional forgiveness, self-forgiveness, other-forgiveness, affect balance and depression in the control and intervention group. All effects are reported as significant at the  $p < .05$ .

Our first set of hypotheses assumed that participation in the intervention would increase participant's state self (H5) and other forgiveness (H6). We did not expect participants in the control group to report any changes in their levels of state self and other forgiveness. To test whether state

self-forgiveness would increase for participants in the intervention group but not in the control group (H5) we run a mixed-model ANOVA. Mauchly's test indicated that the assumption of sphericity had been violated  $\chi^2(2) = 9.20, p = .01$ , therefore degrees of freedom were corrected using the Huynh-Feldt estimates of sphericity ( $\epsilon = .88$ ). Results indicated a significant main effect of time on the self-forgiveness level reported by the participant,  $F(1.65, 66.11) = 10.87, p < .001, \eta^2 = .21$ . There was no significant effect of group, indicating that ratings of self-forgiveness from participants in the control and intervention group were generally the same,  $F(1,40) = .43, p = .52$ . There was also a significant interaction between the three different measurement times and group condition,  $F(1.65, 66.11) = 11.37, p < .001, \eta^2 = .22$ , indicating that the levels of self-forgiveness across the different measurement times differed in the intervention and control group.

Figure 1 shows the interaction between time and state-self forgiveness in the intervention and control group. Pairwise comparisons indicated that there was no statistically significant effect of time in the control group, indicating that there was no change in self-forgiveness scores between measurement times ( $p = 1.00$  across all measurement times).



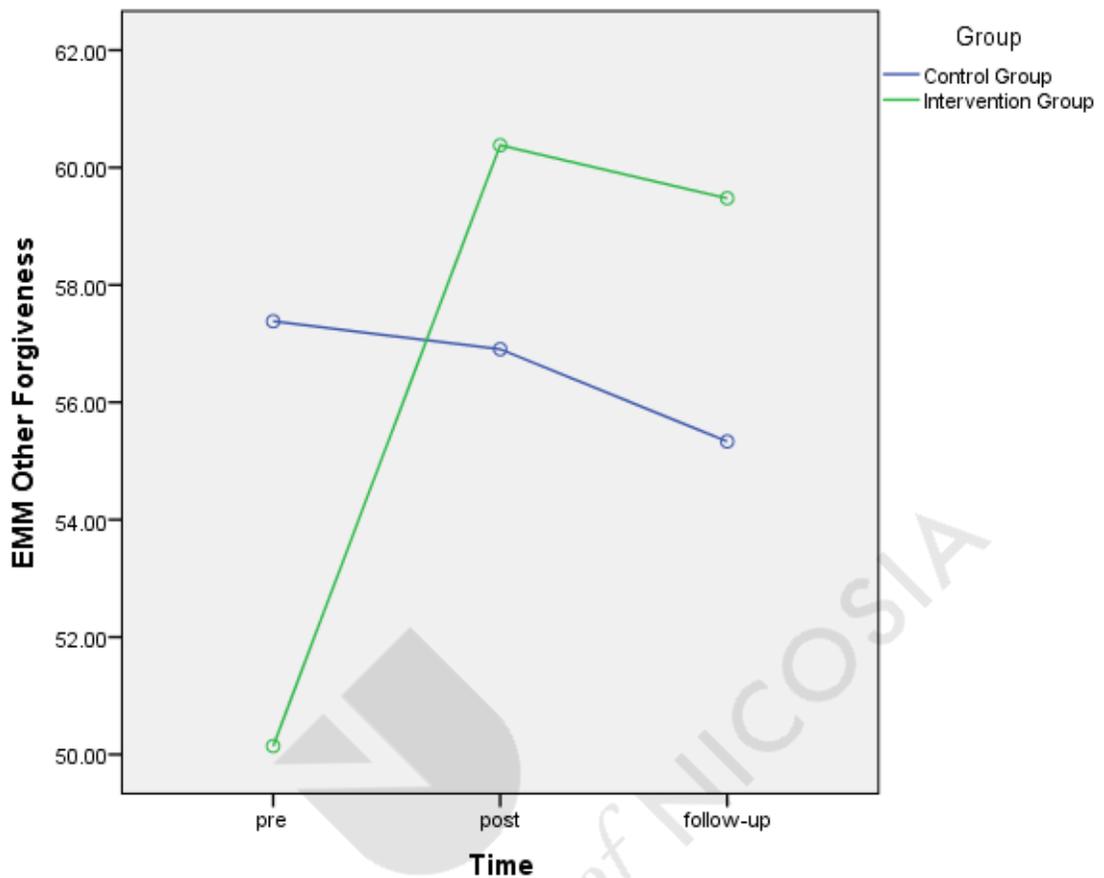
*Figure B1:* Interaction between time and Estimated Marginal Means (EMM) for state-self forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

A statistically significant effect of time was obtained when measuring self-forgiveness across measurement times in the intervention group, indicating that participants' levels of self-forgiveness differed across time. The mean difference between the three sets of observations (pre-post, pre-follow-up, post-follow-up) showed a significant increase in self-reported levels of self-forgiveness from baseline to post intervention and from baseline to follow-up. In particular, there was a significant increase in levels of self-forgiveness between pre-test ( $M = 48.90$ ,  $SD = 9.10$ ) and post-test measures ( $M = 55.86$ ,  $SD = 8.14$ ),  $p < .001$ .  $d = -0.83$ . This effect size exceeds Cohen's (1988)

convention for a large effect ( $d = 0.8$ ). Moreover, there was a significant increase in levels of self-forgiveness between pre-test ( $M = 48.90$ ,  $SD = 9.10$ ) and follow-up measures ( $M = 58.00$ ,  $SD = 8.63$ ),  $p < .001$ ,  $d = -1.05$ . This effect size was also found to exceed Cohen's (1988) convention for a large effect ( $d = .80$ ). This indicates that participants reported significantly greater self-forgiveness for the particular offense at the end of four weeks, from baseline to post intervention and follow-up.

The hypothesis that participants in the intervention group would report higher levels of other-forgiveness whereas participants in the control group would not report similar changes (H6), was also explored by performing a mixed-design ANOVA. For state other-forgiveness, Mauchly's test indicated that the assumption of sphericity had not been violated  $\chi^2(2) = 1.08$ ,  $p = .582$ . Results indicated a significant main effect of time on the other-forgiveness level reported by the participants,  $F(2,80) = 6.92$ ,  $p = .002$ ,  $\eta^2 = .15$ . There was no significant effect of group  $F(1,40) = .002$ ,  $p = .969$  in state other-forgiveness, indicating that ratings of other-forgiveness from participants in the control and intervention group were generally the same. There was also a significant interaction between time and group  $F(2,80) = 10.96$ ,  $p < .001$ ,  $\eta^2 = .22$ . This indicates that the levels of other-forgiveness across the different measurement times differed in the intervention and control group.

Figure 2 shows the interaction between time and state-other forgiveness in the intervention and control group. Mixed-design ANOVA results determined that there was no statistically significant effect of time in the control group therefore the group did not differ between measurement times. This indicates that participants' levels of affect balance in the control group did not change significantly between each questionnaire administration ( $p = 1.00$  from pre to post,  $p = 1.00$  from post to follow-up,  $p = .96$  from pre to follow up).

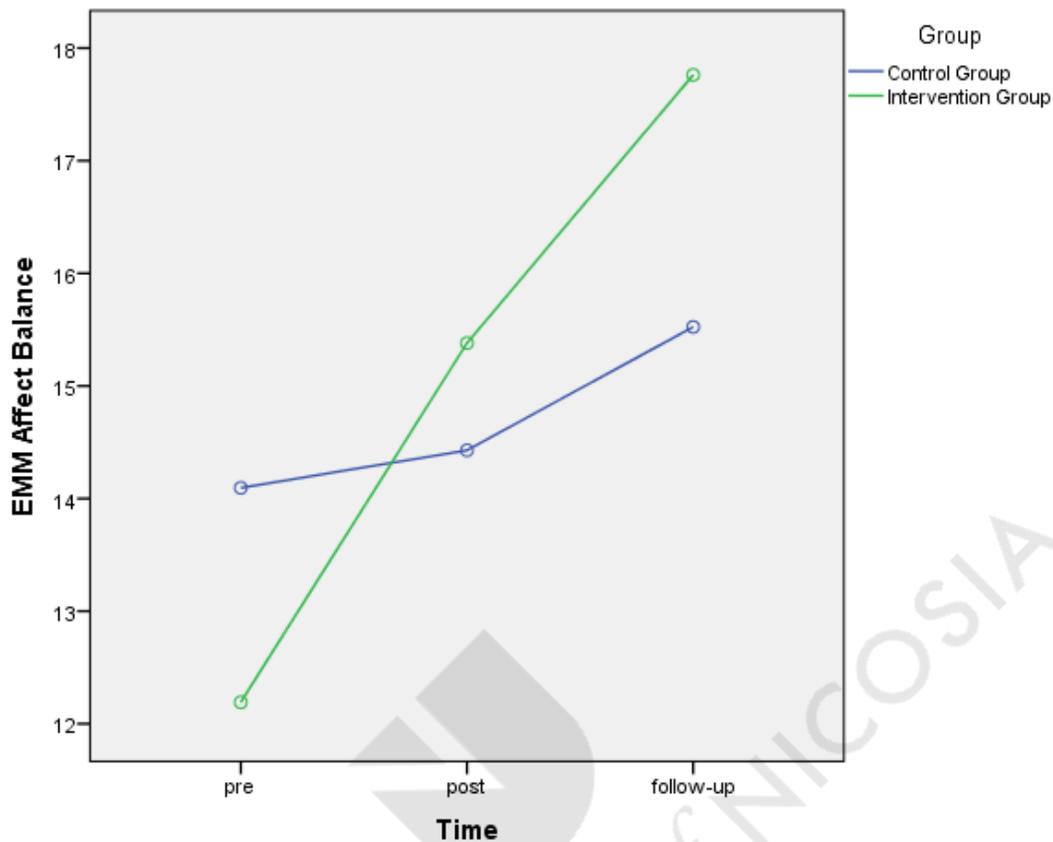


*Figure B2:* Interaction between time and Estimated Marginal Means (EMM) for state-other forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

When measuring other-forgiveness in the intervention group, results indicated a statistically significant effect of time. Pairwise comparisons to test the mean difference between the three sets of observations (pre-post, pre-follow-up, post-follow-up) in the intervention group showed a significant increase in self-reported levels of other-forgiveness between pre-test ( $M = 50.14$ ,  $SD = 13.10$ ) and post-test measures ( $M = 60.38$ ,  $SD = 11.70$ ),  $p < .001$ ,  $d = 0.84$ . The effect size for this analysis was found to exceed Cohen's (1988) convention for a large effect ( $d = 0.8$ ). Results indicate that participants reported significantly greater other-forgiveness for the particular offenses at the end of

four weeks, from baseline to post intervention. Moreover, there was also a statistically significant difference between pre-test ( $M = 50.14$ ,  $SD = 13.10$ ) and follow-up measures ( $M = 59.48$ ,  $SD = 13.54$ ),  $p < .001$ . The effect size for this analysis ( $d = -0.72$ ) was found to exceed Cohen's (1988) convention for a medium effect ( $d = .05$ ), indicating that participants also reported increases in other-forgiveness from baseline to follow-up.

The second set of hypotheses for Study 2 were set to examine whether the intervention would produce changes in two general wellbeing variables, affect balance and depression. It was expected that the intervention would increase participant's levels of affect balance (H7) and decrease their levels of depression (H8), whilst participants in the control group would not report similar changes. Mixed-model ANOVA was run to test both these hypotheses. For H7, Mauchly's test indicated that the assumption of sphericity had not been violated  $\chi^2(2) = 4.71$ ,  $p = .095$ . Levenes' test of equality of error variances indicated that the assumption of variances between the groups was unequal on all 3 measurements, from pre-test ( $p = .025$ ) to post-test ( $p = .018$ ) and follow-up ( $p = .024$ ). Multiple transformations were used (e.g. 1/square root, reciprocal, square root, square) unsuccessfully, to normalize the data. Thus, this result should be interpreted with caution. Results indicated a significant main effect of time on the affect balance level reported by the participant  $F(2,80) = 11.81$ ,  $p < .001$ ,  $\eta^2 = .23$ . There was no significant effect of group, indicating that ratings of affect balance from participants in the control and intervention group were generally the same  $F(1,40) = .03$ ,  $p = .875$ . There was also a significant interaction between time and group  $F(2,80) = 4.34$ ,  $p = .016$ ,  $\eta^2 = .10$ . This indicates that the levels of affect balance across the different measurement times differed in the intervention and control group.



*Figure B3:* Interaction between time and Estimated Marginal Means (EMM) for affect balance for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

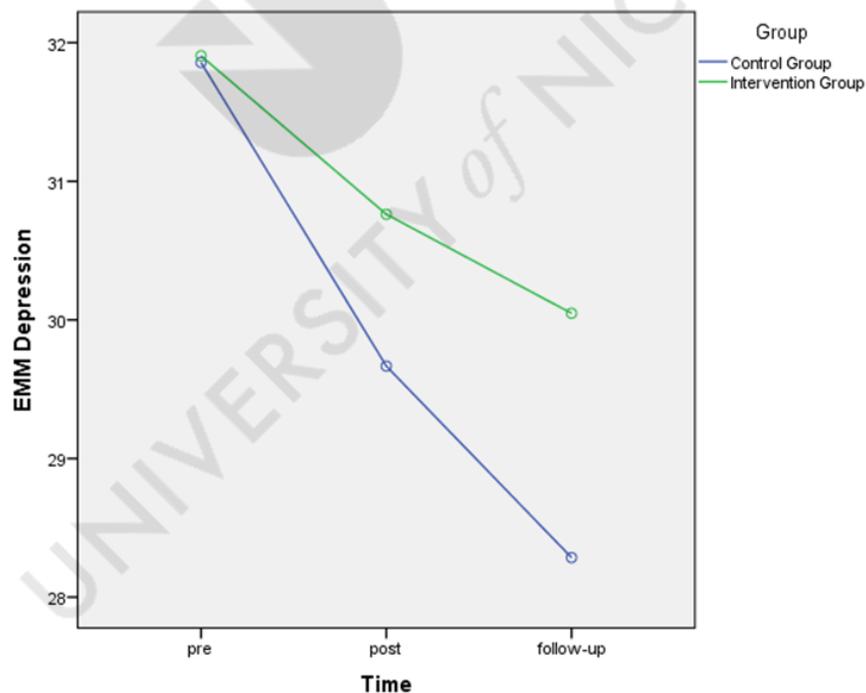
Figure 3 shows the interaction between time and affect balance in the intervention and control group. Pairwise comparisons indicated that there was no statistically significant effect of time in the control group therefore the group did not differ between measurement times. This indicates that participants' levels of affect balance in the control group did not change significantly between each questionnaire administration ( $p = 1.00$  from pre to post,  $p = .586$  from post to follow-up,  $p = .578$  from pre to follow-up).

Pairwise comparisons indicated significant increases in self-reported levels of affect-balance between all measurement periods. In particular, there was a significant increase in affect balance between pre-test ( $M = 12.19$ ,  $SD = 9.47$ ) and post-test measures ( $M = 15.38$ ,  $SD = 12.68$ ),  $p = .021$ ,  $d = -0.29$ . There was also a statistically significant difference between post-test ( $M = 15.38$ ,  $SD = 12.68$ ), and follow-up measures ( $M = 17.76$ ,  $SD = 12.00$ ),  $p = .020$ ,  $d = -0.20$ . The effect size for this analysis was found to meet Cohen's (1988) convention for a small effect ( $d = .02$ ). Finally, there was a statistically significant increase between pre-test ( $M = 12.19$ ,  $SD = 9.47$ ) and follow-up ( $M = 17.76$ ,  $SD = 12.00$ ),  $p < .001$ . The effect size for this analysis ( $d = -0.53$ ) was found to meet Cohen's (1988) convention for a medium effect ( $d = .05$ ). This indicates that participants in the intervention group reported significantly greater levels of affect balance from pre to post intervention and follow-up.

We also run mixed-design ANOVA to test hypothesis 8, which indicated that participants in the intervention group would report decreased levels of depressive symptomatology, whereas participants in the control group would not report similar changes. Mauchly's test indicated that the assumption of sphericity had not been violated  $\chi^2(2) = 1.41$ ,  $p = .495$ . Results indicated a significant main effect of time on the depression level reported by the participant  $F(2,80) = 4.88$ ,  $p = .010$ ,  $\eta^2 = .11$ . There was no significant effect of group, indicating that ratings for depression from participants in the control and intervention group were generally the same between groups  $F(1,40) = .14$ ,  $p = .71$ . There was also no significant interaction between time and group  $F(2,80) = .49$ ,  $p = .617$ . This indicates that the levels of depression across the different measurement times did not differ significantly in the intervention and control group.

Figure 4 shows the interaction between time and depression in the intervention and control group. Results of mixed-design indicated a statistically significant effect of time in the control

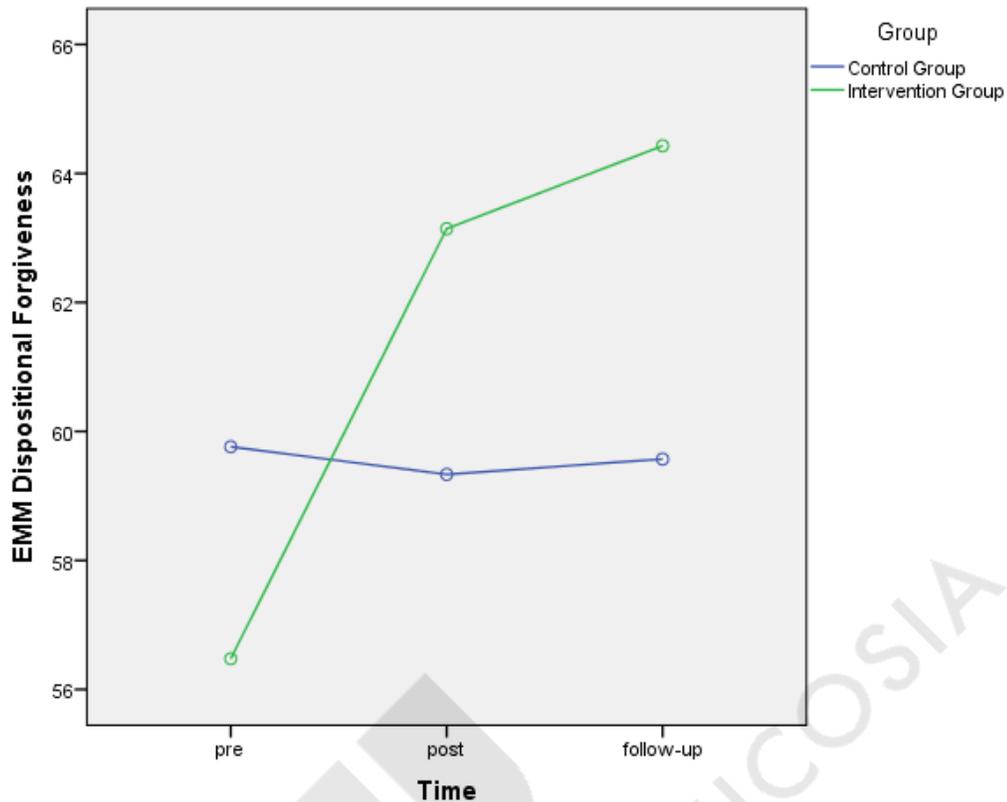
group, so the group differed in at least one measurement time. Pairwise comparisons between measurement periods (pre-post, pre-follow-up, and post-follow-up) showed a significant decrease in self-reported depression scores between pre-test ( $M = 31.86$ ,  $SD = 9.24$ ) and follow up measures ( $M = 28.29$ ,  $SD = 6.76$ ),  $p = .013$ , indicating that participants in the control group reported significantly lesser levels of depression from post intervention to follow-up. The effect size for this analysis ( $d = .19$ ) was found to meet Cohen's (1988) convention for a small effect ( $d = .02$ ). Pairwise comparisons indicated that the intervention group did not differ significantly across measurement periods indicating that participants' levels of depression did not differ from pre to post intervention and follow-up ( $p = 1.00$  from pre to post,  $p = 1.00$  from post to follow-up,  $p = .374$  from pre to follow-up).



*Figure B4:* Interaction between time and Estimated Marginal Means (EMM) for depression for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

Our final set of hypotheses was that participants in the intervention group would report increased levels of dispositional forgiveness from pre to post intervention, whereas participants in the control group would not report significant changes in their levels of dispositional forgiveness (H9). Mixed-model ANOVA was run to test this hypothesis. Mauchly's test indicated that the assumption of sphericity had been violated  $\chi^2(2) = 15.92, p < .001$ , therefore degrees of freedom were corrected using the Greenhouse-Geisser estimates of sphericity ( $\epsilon = .75$ ). Results indicated a significant main effect of time on the dispositional forgiveness level reported by the participant  $F(1.50, 59.92) = 7.17, p = .004, \eta^2 = .15$ . There was no significant effect of group, indicating that ratings for dispositional forgiveness from participants in the control and intervention group were generally the same,  $F(1,40) = .32, p = .574$ . There was also a significant interaction between time and group  $F(1.50, 59.92) = 8.32, p = .002, \eta^2 = .17$ , indicating that the levels of dispositional forgiveness across the different measurement times differed in the intervention and control group.

Figure 5 shows the interaction between time and dispositional forgiveness in the intervention and control group. Pairwise comparisons showed that there was no statistically significant effect of time in the control group, indicating that there was no change in dispositional forgiveness scores between measurement times ( $p = 1.00$  across all measurement periods).



*Figure B5:* Interaction between time and Estimated Marginal Means (EMM) for dispositional forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ )

Pairwise comparisons in the intervention group showed significant increases in levels of dispositional forgiveness from baseline to post-intervention. In particular, there was a significant increase in dispositional forgiveness between pre-test ( $M = 56.48$ ,  $SD = 10.15$ ) and post-test measures ( $M = 63.14$ ,  $SD = 10.37$ ),  $p < .001$ , indicating that participants in the intervention group reported significantly greater levels of dispositional forgiveness from baseline to post intervention. The effect size for this analysis ( $d = -0.67$ ) was found to exceed Cohen's (1988) convention for a medium effect ( $d = .05$ ). Moreover, there was a statistically significant difference between pre-test ( $M = 56.48$ ,  $SD = 10.15$ ) and follow-up measures ( $M = 64.43$ ,  $SD = 12.49$ ),  $p = .001$ ,  $d = -0.72$

suggesting that participant's levels of dispositional forgiveness increased from baseline to follow-up. Similarly, the effect size for this analysis was found to exceed Cohen's (1988) convention for a medium effect ( $d = .05$ ). Table A4 shows the means and standard deviations for the depended variables across measurement times.

Table A4

*Means and Standard Deviations for the Outcome Variables in Intervention and Control Conditions*

| Outcome       | Intervention condition ( $n = 21$ ) |              |              | Control condition ( $n = 21$ ) |              |              |
|---------------|-------------------------------------|--------------|--------------|--------------------------------|--------------|--------------|
|               | Pre-test                            | Post-Test    | Follow-up    | Pre-test                       | Post-Test    | Follow-up    |
| HFS           | 56.48(10.15)                        | 63.14(10.37) | 64.43(12.49) | 59.76(11.05)                   | 59.33(10.69) | 59.57(11.28) |
| SSFS          | 48.90(9.10)                         | 55.86(8.14)  | 58.00(8.63)  | 55.57(7.15)                    | 56.14(6.51)  | 55.19(6.92)  |
| TRIM          | 50.14(13.10)                        | 60.38(11.70) | 59.48(13.54) | 57.38(10.44)                   | 56.90(10.88) | 55.33(9.27)  |
| CES-D         | 31.90(8.91)                         | 30.76(9.93)  | 30.05(9.99)  | 31.86(9.24)                    | 29.67(8.18)  | 28.29(6.76)  |
| PANAS<br>(AB) | 12.19(9.47)                         | 15.38(12.68) | 17.76(12.00) | 14.10(6.08)                    | 14.43(6.09)  | 15.52(6.02)  |

Note. Outcome measures for Study 2 participants at pre-test, post-test and follow-up in the control ( $n = 21$ ) and intervention condition ( $n = 21$ ). For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. CES-D = Center for Epidemiologic Studies Depression Scale, HFS = Heartland Forgiveness Scale; PANAS (AB) = Positive and Negative Affect Scales (affect balance); SSFS= State Self-Forgiveness Scale; TRIM = Transgression-Related Interpersonal Motivations scale

## Chapter V. Discussion

Study 1 sought to investigate the relationship between dispositional forgiveness and a number of mental health outcomes. We hypothesized that an individual's tendency to forgive across time, situations and relationships would predict their level of affect balance, depressive symptomatology and quality of life. Our results indicated that dispositional forgiveness was a significant predictor of all outcome measures. Importantly, when we examined each component of dispositional forgiveness (dispositional self-forgiveness, dispositional other forgiveness) separately, the self-forgiveness component appeared to be a more robust predictor than the other-forgiveness component in predicting variance in all outcome measures.

Confirming our first hypothesis, we found dispositional forgiveness to predict participants' levels of affect balance, a component of subjective well-being. This result indicates that participants who reported higher levels of dispositional forgiveness also reported more positive levels of affect balance, meaning that those participants experienced an increased frequency of positive over negative affect. However, this result should be interpreted with caution, as data on affect balance failed to meet the equality of variances assumption.

Though it has been previously theorized that forgiveness correlates with positive and negative emotionality separately (Karremans et al., 2003; Lawler-Row & Piferi, 2006), this is one of the only two studies to our knowledge to examine the relationship between dispositional forgiveness and affect balance. Unforgiveness – be it towards another or towards the self- includes a cluster of negative emotional states, such as guilt, remorse, shame, anger, and sadness, and is shown to prompt more aversive emotion (Witvliet et al., 2001). Forgiveness, on the other end, works to counteract those aversive emotions, and involves the reduction of negative responses towards the offender, while in some cases also increasing positive affect (Worthington, 2006; Enright & Fitzgibbons,

2014). We therefore assume that individuals who tend to forgive themselves and others, are better able to let go of negative emotionality and achieve more positive affect balance.

Understanding the relationship between dispositional forgiveness and affect balance, offers a unique insight into both forgiveness and subjective well-being literatures, since it suggests that process of forgiveness does not simply relate to negative or positive affectivity separately, but also to the equilibrium between the two. Rego and his colleagues (2012) emphasized the importance of examining both positive and negative affect when studying affectivity, and warned of the dangers in terms of decreasing the predictive value of the construct under examination for researchers who only examine one of the affects in an isolated fashion. Based on literature suggesting that the balance resulting from summing the scores on the positive and negative affect scales presents a stronger predictor of psychological well-being than either of the affect scales considered separately (Harding, 1982; Bradburn, 1969), the current results indicate the importance of measuring affect balance when it comes to forgiveness, rather than positive or negative affect independently.

In addition, despite prior research focusing largely on the cognitive component of subjective well-being in relation to forgiveness (e.g., Macaskill, 2012; Sastre et al., 2003), the current study examines the more neglected affective component of subjective well-being, thus offering an insight into the affective constituents that relate to the tendency to forgive ourselves and others. As the cognitive aspects of subjective well-being (e.g., satisfaction with life) do not tend to relate to dispositional forgiveness (e.g., Krause & Ellison, 2003; Sastre et al., 2003), measuring the affective component of subjective well-being might be of particular importance.

Breaking down dispositional forgiveness to its components (dispositional forgiveness of self, dispositional forgiveness of others), indicated that the self-forgiveness component significantly predicted affect balance to a higher extent than the other-forgiveness component. This indicates that

individuals who tend to forgive themselves might experience more positive than negative emotions than individuals who tend to forgive others. Whilst both forgiveness of self and others are associated with experiencing positive emotionality, forgiving an offender typically involves dealing with feelings of hostility, bitterness, resentment, anger, hatred and fear (Enright & Fitzgibbons, 2000), whereas forgiving the self is more likely to involve overcoming feelings of guilt, regret, repentance and remorse over the offense (Fisher & Exline, 2006). Enright and the Human Development Group (1996) note that people often find the latter more challenging to achieve (Enright & the Human Development Group, 1996), and thus the inability to forgive oneself might be related with more negative emotionality.

In study 2, we hypothesized that participants in the intervention group would report increased levels of affect balance from pre to post intervention and follow-up, whereas participants in the control group would not report significant changes in their levels affect balance. Our results confirmed our hypothesis and indicated that participants in the intervention group reported significantly more positive affect balance from pre to post intervention and follow-up, whereas participants in the control group did not report similar changes. This result might reflect the affective change taking place in the process of forgiving oneself and another person. According to Worthington and Scherer (2004), forgiveness represents an emotion-focused coping strategy, which involves a transformation of the negative emotions associated with unforgiveness (e.g., bitterness, hostility, resentment, shame) to neutral or even positive emotions (e.g., compassion, empathy). This transformation of negative emotions to neutral or positive ones might help explain the observed difference in levels of affect balance in our sample. The current finding extends current knowledge on empirical research on forgiveness interventions, as it is the first empirical examination of forgiveness that we are aware of to incorporate affect balance as an outcome variable.

Our second hypothesis explored the predictive relationship between dispositional forgiveness and depression. Corroborating our hypothesis, we found dispositional forgiveness to predict participants' levels of depressive symptomatology, indicating that individuals who reported higher levels of dispositional forgiveness also reported decreased levels of depressive symptomatology. Our results agree with those of a number of researchers, who found low levels or lack of forgiveness to be associated with more depressive symptomatology in a variety of samples (Toussain & Webb, 2005; Webb et al., 2008; Dezutter et al., 2016; Chung, 2016). Similarly, it supports findings that higher levels of dispositional forgiveness are associated with greater psychological health, including lower depressive affect (Ysseldyk et al., 2007).

The mechanisms behind this association are manifold. Forgiving others might relate to decreased depressive symptomatology by providing a means to go about mending the hurt created by harmful interpersonal acts, and perhaps repairing important social relationships. Granting forgiveness to others might help individuals maintain social ties (Ermer & Proulx, 2016), which may help alleviate depressive symptoms associated with feelings of loneliness and social isolation (Matthews et al., 2016). In addition, granting forgiveness to others may help decrease a number of negative states (e.g., anger, resentment, bitterness, distrust) that are associated with and may exacerbate depressive symptomatology. Similarly, forgiving oneself can alleviate any self-destructive feelings of guilt, self-resentment and shame arising from one's own conduct, thus helping individuals focus on the more positive aspects of themselves and their lives.

Our fourth hypothesis that forgiveness of self would be more predictive of levels of depression than forgiveness of others was also confirmed. Results indicated that individuals who found it more difficult to forgive themselves reported higher levels of depression than individuals who found it more difficult to forgive others. Furthering the work of a number of investigators that

indicated an association between forgiveness or unforgiveness of self and depressive symptomatology (Offenbaecher et al., 2017; Wohl et al.,; Witvliet et al., 2004), our research indicates that the self-forgiveness component of dispositional forgiveness accounts for depressive symptomatology to a much greater extent than the other-forgiveness component. This might be explained by the existence of cognitive biases in individuals suffering from depression; Beck (1962) suggests that cognitive biases about the self become even more evident in depressed individuals. People frequently use stricter, more punitive and rigid criteria to criticize their own perceived errors and shortfalls, whilst they might be more sympathetic and considerate to the shortcomings of others. This cognitive bias might result in less strict judgments of others and more strict judgments of self, even when the offenses are identical (Beck, 1962). This might help explain why the repercussions of failing to forgive oneself for a previously committed transgression might be more severe than failing to forgive another person. Corroborating research findings suggest that the perpetuation of shame and self-condemnation associated with unforgiveness of self is associated with a decreased capacity to effectively relate to other people and with negative psychological outcomes (Ingersoll-Dayton & Krause, 2005; Friedman et al., 2007). On the other end, forgiving oneself for a past offense may allow individuals to cope with any residual negative emotions and motivations associated with the transgression they have committed. Individuals can use self-forgiveness as a mechanism to avoid negative outcomes, including depression and poor health. Moreover, forgiving oneself allows for more positive, adaptive behaviours to manifest (Ermer & Proulx, 2016), which can help buffer against or alleviate depressive symptomatology.

Our hypothesis for study 2 that participants in the intervention group would report decreased levels of depressive symptomatology from pre to post intervention, whereas participants in the control group would not report significant changes in their levels of depression was not met.

Participants in the intervention group did not report any significant differences in their levels of depressive symptomatology from pre to post intervention and follow-up, whereas participants in the control group reported lesser depressive symptomatology from pre-intervention to follow-up. This findings may be explained, in part, by the sharp decrease in depressive symptomatology experienced by two participants in the control group (from 51 to 31 and from 40 to 27 respectively, from pre to post intervention). The rest of the sample did not report any significant reductions in depression levels. With small sample sizes, two outliers like these ones can have a larger impact on results than they would have if the sample was larger.

Moreover, contrary to our hypothesis, the intervention group did not report any significant decreases in depressive symptomatology. This might be due to a number of reasons. First, the intervention focused on reducing negative emotionality associated with unforgiveness, but was not designed to reduce depressive symptomatology, and therefore did not focus on altering specific cognitive and affective components related to it. Hence, it is unclear whether depressive symptomatology was an appropriate measure of intervention effectiveness. Moreover, the current intervention might have been too brief to account for any differences in levels of depression. Boerema, Cuijpers, Beekman, Hellenthal, Voorrips, and van Straten, (2016) indicate that a longer duration of treatment might be more beneficial to individuals suffering from depression than a shorter duration of treatment.

Additionally, our findings supported our fifth hypothesis that one's tendency to forgive predicts their levels of quality of life. In particular, we found that participants who reported higher levels of dispositional forgiveness also reported higher levels of quality of life. Similar findings have been reported by other researchers, who found an association between forgiveness and quality of life (e.g., Martin et al., 2012; Currier et al., 2016).

We hypothesize that forgiveness can affect quality of life in a number of possible pathways. First, the absence of forgiveness can contribute to substantial psychological tension and turmoil, which might explain the decreased levels of psychological well-being. The psychological discomfort arising from experiencing the negative state of unforgiveness can elicit increased levels of negative affect and decreased levels of life satisfaction (Karremans et al., 2003), which can, in turn, affect how we perceive and evaluate our quality of life. An additional pathway via which forgiveness and quality of life might be related is by the use of adaptive cognitive emotion regulation strategies. According to Rey and Extremera (2015), an adaptive cognitive coping style might function as a potential mediator between dispositional forgiveness and mental and physical health outcomes. The process of coping refers to the thoughts and behaviours that individuals use to manage the internal and external demands of particular situations that they appraise as being personally relevant and stressful (Lazarus & Folkman, 1984), such as interpersonal transgressions. The biopsychosocial model of health psychology (Sarafino, 2008) postulates that coping strategies could mediate the relationship between dispositional characteristics, such as forgiveness, and health-related quality outcomes.

Importantly, when conducting post-hoc analyses to examine the association between each component of dispositional forgiveness and quality of life, only dispositional forgiveness of self significantly predicted participants' levels of quality of life, whereas dispositional forgiveness of others exhibited no association. Similar findings have been reported by Offenbaecher and his colleagues (2017), who found associations between forgiveness of self and quality of life to be stronger than associations between forgiveness of others and quality of life. This finding may reflect the particularly challenging and chronic nature of not forgiving oneself. Essentially, when an individual is considered one's own offender, it may be difficult to escape enduring feelings of

remorse, self-condemnation and regret and this may be associated with poor health and well-being (Wilson, Milosevic, Carroll, Hart, & Hibbard, 2008). Self-forgiveness may, more so than forgiveness of others, offer the relief needed from the negative cognitive and emotional burden of unforgiveness and contribute to higher health outcomes.

Whilst previous research in the area has focused on special populations, such as HIV-positive individuals (Martin et al., 2012) veterans with PTSD, (Currier et al., 2016), patients with fibromyalgia (Offenbaecher et al., 2017), palliative care patients (Hansen et al., 2009), and older individuals (Rey & Extremera, 2015), our study expands current literature by examining the relationship between forgiveness and quality of life in a healthy sample of young adults.

The second part of our study sought to examine the effects of a brief forgiveness intervention in Greek-Cypriot psychology post-graduate students. As noted above, participation in the psychoeducational group was shown to be effective for increasing affect balance, but has shown no effect in decreasing depressive symptomatology. Study 2 also set to examine the effects of the intervention in 3 different types of forgiveness: self-forgiveness, other-forgiveness, and dispositional forgiveness. Results indicate significant increases in all three forgiveness outcomes.

Consistent with our hypotheses, participants reported significantly greater levels of interpersonal forgiveness for the particular offense they chose to focus on, from baseline to post intervention and follow-up. Participants in the control group did not report similar changes. The findings on interpersonal forgiveness suggest that the intervention might have helped participants decrease their unforgiving emotions and motivations towards their offender and may have also facilitated positive changes in increasing benevolence towards the transgressor. Compared to participants in the control group, participants in the intervention condition seemed more able to reduce the negative motivations associated with unforgiveness and to let go of their hurt towards

their transgressor at the end of four weeks and in follow-up. This suggests that the intervention has utility for affecting emotions directly related to a particular offense committed against the individual. Our results are in line with a number of interpersonal forgiveness interventions, who found that focusing on one index interpersonal transgression produces favorable results (e.g., Lampton et al., 2005).

This finding extends current literature in a number of important ways. First, a considerable number of interpersonal forgiveness interventions were conducted with older adults (e.g. Ingersoll-Dayton, Campbell & Ha, 2008; Allemand, Steiner & Hill, 2013; Ramírez, Ortega, Chamorro, & Colmenero, 2014). In contrast, the current study focuses on a population of young adults, whose forgiveness trajectories might differ from those of older adults. Moreover, a number of interpersonal forgiveness interventions present with the limitation of not been tested against a control group (e.g., Lampton et al., 2005; Ingersoll-Dayton et al., 2008). Our study included a control group, enabling us to control for threats to internal validity, such as maturation, history, and testing effects.

Furthermore, our findings supported our hypothesis that participants in the intervention group would report higher levels of self-forgiveness from baseline to post-intervention, whereas participants in the control group would not report similar changes. Results indicated that intervention participants reported significantly greater levels of self-forgiveness for the particular offense they chose to focus on at the end of four weeks and at follow-up. This result suggests that participants in the intervention condition were more able to let go of their unforgiving emotions towards themselves and experience self-forgiveness than participants in the control group. The finding that the intervention appeared to be successful in increasing self-forgiveness for a specific offense demonstrates that it has utility for affecting emotions directly related to a particular transgression.

Our results corroborate those of the few self-forgiveness interventions that exist, that found self-forgiveness interventions to produce beneficial outcomes (e.g. Cornish & Wade, 2015)

Our findings contribute to and expand on existing research on self-forgiveness interventions. First, our study adds knowledge to an area of forgiveness that is considerably lacking. Whilst interpersonal forgiveness has been examined, both correlationally and empirically, research on self-forgiveness is still in its infancy. Our study adds to the handful of interventions that have been conducted with the explicit aim of promoting forgiveness of self. Furthermore, the majority of the self-forgiveness interventions were designed for specific populations, such as women who experienced a recent romantic relationship break-up (Campana, 2010), couples who experienced discords in romantic relationships (Pelucchi et al., 2013), and individuals with alcohol abuse problems (Scherer et al., 2011). Instead, our intervention focuses on a more general set of issues, with participants exploring and working on a number of diverse transgressions.

Finally, study 2 examined changes in levels of dispositional forgiveness. Confirming our hypothesis, intervention participants reported significantly greater dispositional forgiveness at the end of the intervention than did individuals in the control group. Results indicate that the intervention resulted in participants having higher levels dispositional forgiveness from pre to post intervention and follow-up, whereas participants in the control group experienced no change on this trait-level variable.

This finding is particularly significant for a number of reasons. First, dispositional forgiveness has not often been measured in intervention studies (Worthington et al., 2010). Indeed, most psychoeducational interventions have focused on forgiving a specific transgression; however, as Worthington and his colleagues (2010) have pointed out, the hope is that forgiveness interventions will assist individuals to become more forgiving in general—that is, that the skills used

to forgive a specific transgression will be transferred to past and future transgressions. Secondly, only a very few studies have assessed dispositional forgivingness at follow-up (Lampton et al., 2005), therefore the current study offers a rare insight into the trajectory of dispositional forgiveness over a one-month, post-intervention period. Finally, contrary to Lampton and his colleagues (2005), who found no change in levels of dispositional forgiveness, participants in our study reported increased levels of dispositional forgiveness from pre to post intervention. The lack of change in previous interventions has been attributed to their brevity (Lampton et al., 2005). Worthington and his colleagues (2010) suggest that, since dispositions do not normally change quickly, it may take time for the learning that occurred during a psychoeducational group to permeate and affect an individual's dispositional forgivingness. Our intervention of 16 hours was substantially longer than previous interventions, suggesting that perhaps lengthier interventions can introduce positive changes in the disposition to forgive.

### **Limitations and Directions for Future Research**

There are several limitations to this study that need to be acknowledged. First, the measures used (the Heartland Forgiveness Scale; Thompson et al., 2005; the Positive and Negative Affect Scales; Watson et al., 1988; the Center for Epidemiologic Studies Depression Scale; Radloff, 1977; the World Health Organization's Quality of Life – BREF; Skevington et al., 2004; the Transgression- Related Interpersonal Motivations Inventory; McCullough et al., 2006; the State Self Forgiveness Scale; Wohl et al., 2008) are all self-report instruments of forgiveness, which could have produced a social desirability response bias. Participants may have wanted to present themselves in a more favourable, socially desirable light or may have wanted to please the researcher (Gall et al., 2007). Moreover, the proposed study was retrospective. Participants may have encountered difficulties in accurately recalling information solicited from the instruments,

which may have resulted in inaccurate information being presented to the researcher. Wade and his colleagues (2014) note that, while forgiveness represents a subjective and internal experience, innovative methodology to evaluate forgiveness in ways other than self-report might be beneficial.

One way of minimizing the effect of self-report bias in future forgiveness interventions is to administer assessment tools that do not rely on self-report, such as an observer report (e.g., friends, family members, partners; Rye et al., 2005) on accounts of possible changes in the individual's forgiveness levels. Measurements of behaviours associated with forgiveness might also be beneficial to validate self-reported forgiveness and enhance future outcome studies with additional dimensions. Future research utilizing diverse methods to measure forgiveness would facilitate the advancement of forgiveness research (Wade et al., 2014).

In addition, the current study is cross-sectional in nature and hence contains the limitations of studies employing this type of design. Therefore, even though we have tended to discuss dispositional forgiveness as a causal factor in affect balance, depression and quality of life, it is plausible that individuals with higher levels of positive over negative affectivity, lower levels of depression and higher levels of quality of life may be more inclined to show forgiveness to others or themselves. In this sense, forgiveness might simply be a by-product of well-being, as described by the experience more positive than negative emotion, less depressive symptomatology and better quality of life. We believe that this is not likely given initial clinical (Friedman & Toussaint, 2006) and experimental work (e.g., Seligman, Steen, Park, & Peterson, 2005). Further clinical and experimental work should substantiate the causal actions of forgiveness in contributing to improved mental health.

Furthermore, the sample characteristics in the second phase of our study may limit the applicability of our findings to different populations. First, with 23 participants who enrolled in the

intervention group and 21 participants completing the intervention, the sample size is fairly small. It is possible that, with such a small sample size, individual participants may have had a larger effect on the overall results than they would if the sample size was larger; this may have either inflated or deflated the intervention effects. Nonetheless, this sample size is on par with similar initial examinations of interventions developed to increase interpersonal forgiveness (e.g., Freedman & Enright, 1996; Coyle & Enright, 1997). Still, in spite of the limitations inherent in a small sample, the current study provided a good initial test of the intervention, which should be explored further in future research.

Secondly, our sample had an overrepresentation of female participants. This limitation might be attributed to the overrepresentation of women in psychology postgraduate courses. Statistical data from the National Centre for Educational Statistics (2014) indicate that more women are pursuing graduate education in psychology than men, across domains. Nevertheless, difficulties in recruiting men for forgiveness intervention studies are a common problem that warrants more attention in future intervention studies. Furthermore, our sample was relatively homogenous in nature in that it consisted of Greek-Cypriot University post-graduate students, who held at least a Bachelor's level degree in Psychology. In addition, the participants were healthy and motivated individuals. It is possible that these resources, coupled with the participants' knowledge of psychological concepts and the importance of forgiveness in personal development and therapy may have enhanced their capacity and willingness to forgive. Future studies may include a more heterogeneous sample of adults in terms of motivation and educational and professional background.

The lack of an alternative treatment group represents an additional limitation to be addressed in future research. The current intervention was only tested against a control group. This represents a common practice for initial examinations of interventions (e.g., Freedman & Enright, 1996), and the

estimated effect sizes found on most outcome variables provide initial evidence that the current intervention would likely be comparable to more established interventions. It is recommended that future researchers include an alternative treatment group -rather than a control group- to allow for more direct comparisons between the interventions (Cornish & Wade, 2015). If the current intervention is found to be as effective as—or even more effective than— any alternative treatments, it would merit more widespread utilization.

In the present study, a cut-off point of four weeks had elapsed between each assessment occasion (pre-intervention to post-intervention and follow-up). Evidence is needed to determine whether the effects of treatment persist longer than four weeks after completion of the intervention. Future investigations should therefore determine whether the gains achieved by participants following the administration of treatment are maintained at a follow-up occasion that is assessed after an extended period of time following the cessation of treatment. Moreover, the effect of treatment may vary as a function of the amount of time over which treatment is administered, and the delivery of the intervention in the present study was very concentrated (16 hours within a four-week period). Future researchers could also examine if changing the delivery of treatment over a shorter or longer period of time might influence benefits reported by participants.

Finally, even though the current forgiveness intervention lasted a total of 16-hours, a few participants have indicated that they would have liked an additional session in the future to assess and reinforce any gains that they might have achieved. Future forgiveness interventions can might include an optional third “booster session” to further work on the forgiveness process, with the possibility of deepening the forgiveness relevant strategies. Understanding the ideal length of such interventions is an important goal for future research.

### **Clinical and Research Implications**

Our findings present with a number of important implications. First, in line with previous findings (Maltby, Day, & Barber, 2004; Griffin et al., 2015), our results add to the body of research exploring the beneficial role that forgiveness may play in mental health. Study 1 findings indicate the importance of dispositional forgiveness as a predictor in a number of important mental health outcomes, including variables who have received little or no research attention in the past, such as quality of life and affect balance. Akhtar and his colleagues (2017) suggest that developing an understanding of the relationship between forgiveness and wellbeing is of relevance to a variety of professionals with an interest in improving public health, including healthcare workers, researchers and policy makers.

Study 1 also expands current research in forgiveness in examining the role that each component of dispositional forgiveness may play in predicting mental health outcomes. Notably, when examining dispositional self-forgiveness and dispositional other-forgiveness separately, the self-forgiveness component appeared to be a more robust predictor than the other-forgiveness component in predicting variance in depression, affect balance and quality of life.

This is an important issue because it appears that forgiving oneself has a strongest connection to a variety of mental health outcomes than forgiving another person (Macaskill, 2012). It seems that lack of self-forgiveness may present with a dramatic obstacle for wellbeing in general, and may negatively affect symptoms of depressive symptomatology, affect balance and quality of life. On the other end, however, for those who achieve it, the well-being payoffs are equally prominent.

Moreover, despite the relative abundance of interpersonal forgiveness interventions, and the few self-forgiveness interventions that exist, there is currently no single intervention that aims to promote forgiveness of others, forgiveness of self and dispositional forgiveness simultaneously. This is the first empirical study, to our knowledge, to combine three different aspects of forgiveness in a

single intervention. The current intervention was successful for increasing all forgiveness-related measures, including forgiveness of others and forgiveness of self for the two specific offenses that participants chose to work on, as well as dispositional forgiveness. Participation in the intervention brought about significant increases in forgiveness toward two focal transgressions, as well as increases in participants' tendency to become more forgiving individuals. This demonstrates that this intervention has utility above and beyond affecting emotions directly related to particular transgressions to altering the disposition to forgive. Several of the participants in the intervention study had been holding on to feelings of anger, bitterness, remorse, shame and self-condemnation for a number of months –or even years- before being able to release the negative feelings and reach self-and-other forgiveness through the current intervention.

Based on the substantial improvements demonstrated through this pilot study, it is hoped that more researchers and clinicians will design and test interventions to promote interpersonal, intrapersonal and dispositional forgiveness. Such interventions can provide mental health professionals with additional tools for helping clients forgive themselves and others, and to become more forgiving. The current intervention can be used as an adjunct to therapy to promote self and other forgiveness for clients who express therapeutic goals that include forgiving. Furthermore, clinicians and counsellors can also utilize such intervention groups for community members not in therapy, but seeking to deal with difficulties around perceived offenses (Worthington et al., 2010).

Furthermore, besides increases in forgiveness variables, participation in the current intervention produced improvement in levels of affect balance. The present finding indicates that emphasis on forgiveness can be expected to provide not only an experience of increased forgiveness, but also a psychotherapeutic benefit in decreasing negative affect and increasing positive affect. This

is an important implication, since it illustrates that forgiveness interventions might not only help to remediate unforgiveness, but enhance mental health and human functioning as well.

The present study also demonstrates the effectiveness of the forgiveness intervention for psychology postgraduate students. To our knowledge, this is the first study to empirically examine the role of forgiveness as an intervention for psychology trainees and the first to empirically identify a relationship between forgiving and improved psychological health in this population. Given that issues of unforgiveness and the need for forgiveness often arise during therapy (Macaskill, 2004), it is important that current and future therapists gain theoretical and practical knowledge on forgiveness-related issues. Participants in our intervention group practised a variety of clinically significant exercises including, among others, defining forgiveness and looking into its psychological and physical benefits, identifying emotions related to unforgiveness, working on cultivating empathy and cognitively reframing the transgressions. The exercises included in this intervention might be of particular importance to a group of mental health professionals who are either currently practicing, or are about to start their clinical practice, since they provide psychoeducation and practise in a set of important clinical skills that they themselves can apply to current or future clients. Based on the salubrious effects of the current intervention, psychology training programs should examine the value of introducing forgiveness as an educational objective in the training of applied psychologists.

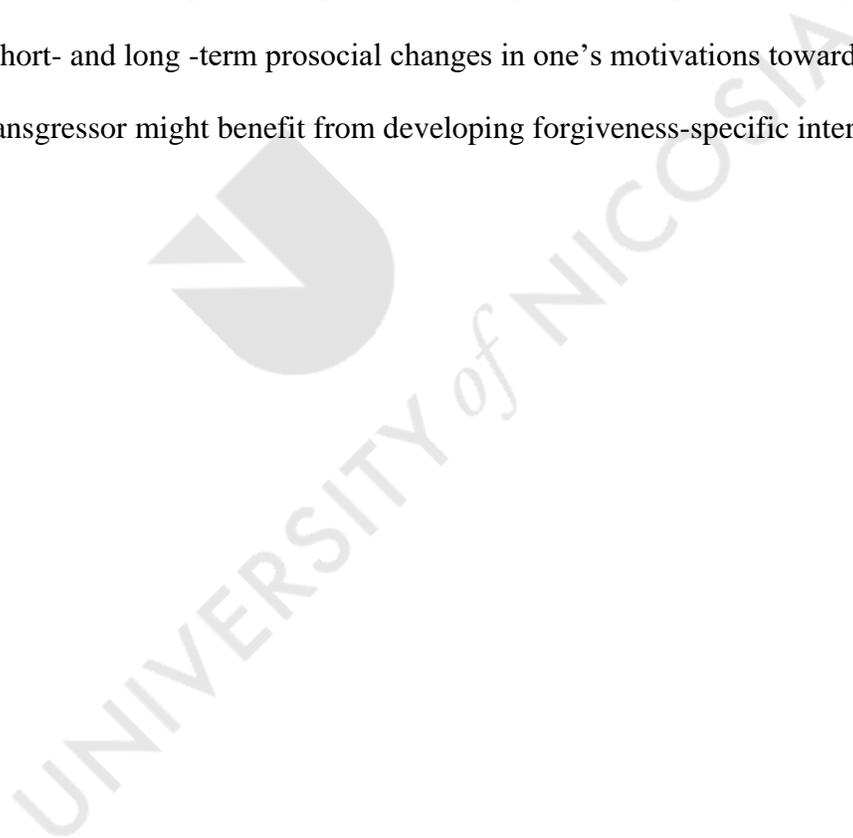
Furthermore, forgiveness in this population should be considered in terms of personal development. As previously described, unforgiveness presents a chronic stressor (Worthington & Scherer, 2004) that can potentially exacerbate the risk of stress and impair the trainees' well-being. Corroborating research suggests that forgiveness contributes to a significant proportion of the variance in wellness for counselling students (Hartwig- Moorhead et al., 2012). Findings suggest

that if a counsellor is forgiving, they are more likely to be psychologically healthy, and in turn, they can be more helpful to their clients, and that a forgiving counsellor can be a good model for clients who are struggling with forgiveness (Ikiz et al., 2015).

Thus, promoting the notion and encouraging the practice of forgiving oneself and others may prove valuable in the education and training of future therapists. While the small sample size of this pilot study limits the generalizability of the findings, there were positive effects for forgiveness and well-being variables in participants over time, indicating possible benefits of implementing a forgiveness intervention to psychology trainees. Replication of the current intervention and additional research with a larger sample size is needed to further evaluate the validity and reliability of our findings and to address how psychology trainees might further benefit from forgiveness interventions to improve personal and professional well-being.

Finally, the current study expands upon previous research by applying a variation of Worthington's (1998, 2001, 2006) REACH model of forgiveness to a diverse population of adults and by evaluating changes in outcomes in two different time periods post-intervention. Furthermore, by manualizing this novel forgiveness intervention exercise-by-exercise, we provide mental health professionals with step-by-step practice guidelines for facilitating forgiveness groups. The benefits of creating and using a manual on forgiveness should be noted as well. Having a concrete set of exercises to take home and revisit was reported to be useful by the participants. They would frequently take notes in their individual manual and some have refer to them during the week. As Beutler (1993) pointed out, benefits of treatment manuals include allowing the content and structure of the intervention to be assessed, as well as assisting in the education of psychotherapists. Researchers and clinicians who develop future forgiveness interventions would be wise to develop a comprehensive manual that fits their population.

Notwithstanding the above-mentioned limitations, the current study yielded a number of significant results. Our findings indicated that dispositional forgiveness is a significant predictor of a number of important mental health outcomes and highlighted the significance of the self-forgiveness component as a more robust predictor than the other-forgiveness component in predicting variance in depression, affect balance, and quality of life. The study also demonstrated the effectiveness of a new forgiveness intervention in increasing levels of state self and other forgiveness, dispositional forgiveness, and affect balance in Greek-Cypriot university students and discussed the research and clinical implications of the findings. Although these findings warrant replication, they suggest that efforts that target short- and long-term prosocial changes in one's motivations toward the self and an interpersonal transgressor might benefit from developing forgiveness-specific intervention models.



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## Appendix A

Table A1

*Summary of Correlations, Means, and Standard Deviations for Scores on the HFS, HFS(SF), HFS (OF), PANAS (AB), CES-D and WHO-QoL-BREF*

| Measure         | 1      | 2      | 3      | 4      | 5      | 6      | M     | SD    |
|-----------------|--------|--------|--------|--------|--------|--------|-------|-------|
| 1. HFS          | --     | .84**  | .85**  | .55**  | -.50** | .25**  | 56.89 | 11.35 |
| 2. HFS (SF)     | .84**  | --     | .43**  | .55**  | -.52** | .26**  | 28.48 | 6.70  |
| 3. HFS (OF)     | .85**  | .43**  | --     | .38**  | -.32** | .16**  | 28.41 | 6.72  |
| 4. PANAS (AB)   | .55**  | .55**  | .38**  | --     | -.61** | .37**  | 12.86 | 9.76  |
| 5. CES-D        | -.50** | -.52** | -.32** | -.61** | --     | -.37** | 35.64 | 10.91 |
| 6. WHO-QoL-BREF | .25**  | .26**  | .16**  | .37**  | -.37** | --     | 15.87 | 2.47  |
| M               | 56.89  | 28.48  | 28.41  | 12.86  | 35.64  | 15.87  |       |       |
| SD              | 11.35  | 6.70   | 6.72   | 9.76   | 10.91  | 2.47   |       |       |

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

Note. Intercorrelations for Study 1 participants ( $n=288$ ). For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. HFS = Heartland Forgiveness Scale; HFS (SF) = Heartland Forgiveness Scale, Self-Forgiveness subscale; HFS(OF)= Heartland Forgiveness Scale, Other-Forgiveness subscale, PANAS (AB) = Positive and Negative Affect Scales (affect balance); CES-D = Center for Epidemiologic Studies Depression Scale, WHO-QoL BREF = World Health Organization Quality of Life – BREF.

Table A2

*Summary of Hierarchical Regression Analysis for Variables Predicting Affect Balance, Depression and Quality of Life (N = 288)*

| <i>DV: Affect Balance</i>  | Model 1  |             |         |                | Model 2  |             |          |                |
|----------------------------|----------|-------------|---------|----------------|----------|-------------|----------|----------------|
|                            | <i>B</i> | <i>SE B</i> | $\beta$ | 95% <i>CI</i>  | <i>B</i> | <i>SE B</i> | $\beta$  | 95% <i>CI</i>  |
| Age                        | 0.42     | 0.12        | 0.22*   | [0.21, 0.68]   | 0.21     | 0.1         | 0.12*    | [0.03, 0.43]   |
| Gender                     | -0.61    | 1.23        | -0.04   | [-3.15, 1.68]  | -2.2     | 1.04        | -0.11*   | [-4.34, -0.24] |
| Dispositional Forgiveness  |          |             |         |                | 0.47     | 0.04        | 0.54**   | [0.38, 0.56]   |
| $R^2$                      |          |             | 0.05    |                |          |             | 0.28     |                |
| $F$ for change in $R^2$    |          |             | 7.38**  |                |          |             | 116.50** |                |
| <i>DV: Depression</i>      |          |             |         |                |          |             |          |                |
| Age                        | -0.47    | 0.13        | -0.21** | [-0.75, -0.22] | -0.24    | 0.12        | -0.11*   | [-0.49, -0.03] |
| Gender                     | 3.16     | 1.36        | 0.14*   | [0.58, 5.94]   | 4.79     | 1.18        | 0.21**   | [2.54, 7.20]   |
| Dispositional Forgiveness  |          |             |         |                | -0.49    | 0.05        | -0.51**  | [-0.58, -0.39] |
| $R^2$                      |          |             | 0.07    |                |          |             | 0.31     |                |
| $F$ for change in $R^2$    |          |             | 10.29** |                |          |             | 97.16**  |                |
| <i>DV: Quality of Life</i> |          |             |         |                |          |             |          |                |
| Age                        | -0.04    | 0.03        | -0.07   | [-0.10, 0.03]  | -0.07    | 0.03        | -0.12*   | [-0.12, -0.00] |
| Gender                     | -0.17    | 0.32        | -0.03   | [-0.81, 0.44]  | -0.38    | 0.31        | -0.07    | [-1.00, 0.22]  |
| Dispositional Forgiveness  |          |             |         |                | 0.06     | 0.01        | 0.29**   | [0.04, 0.09]   |
| $R^2$                      |          |             | 0.01    |                |          |             | 0.08     |                |
| $F$ for change in $R^2$    |          |             | 0.77    |                |          |             | 22.14**  |                |

\* $p < .05$ . \*\* $p < .01$ .

Table A3

*Summary of Means, Standard Deviations for Scores on CES-D, HFS, PANAS, SSFS and TRIM at Pre-test in the Control (n = 21) and Intervention Conditions (n = 21)*

|            | Control Group<br><i>M (SD)</i> | Intervention<br>Group<br><i>M (SD)</i> | <i>t</i> | sig. | 95% CI       |
|------------|--------------------------------|--|----------|------|--------------|
| CES-D      | 31.86 (9.24)                   | 31.90 (8.91)                           | -.02     | .99  | [-5.71,5.61] |
| HFS        | 59.76 (11.05)                  | 56.48 (10.15)                          | 1.00     | .32  | [-3.33,9.90] |
| PANAS (AB) | 14.10 (6.08)                   | 12.19 (9.47)                           | .78      | .44  | [-3.09,6.89] |
| SSFS       | 55.57 (7.15)                   | 48.90 (9.10)                           | 2.64     | .01  | [1.55,11.78] |
| TRIM       | 57.38 (10.44)                  | 50.14 (13.10)                          | 1.80     | .055 | [-.15,14.63] |

Note. Outcome measures for Study 2 participants at pre-test in the control ( $n = 21$ ) and intervention condition ( $n = 21$ ) For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. CES-D = Center for Epidemiologic Studies Depression Scale, HFS = Heartland Forgiveness Scale; PANAS (AB) = Positive and Negative Affect Scales (affect balance); SSFS= State Self-Forgiveness Scale; TRIM = Transgression-Related Interpersonal Motivations scale

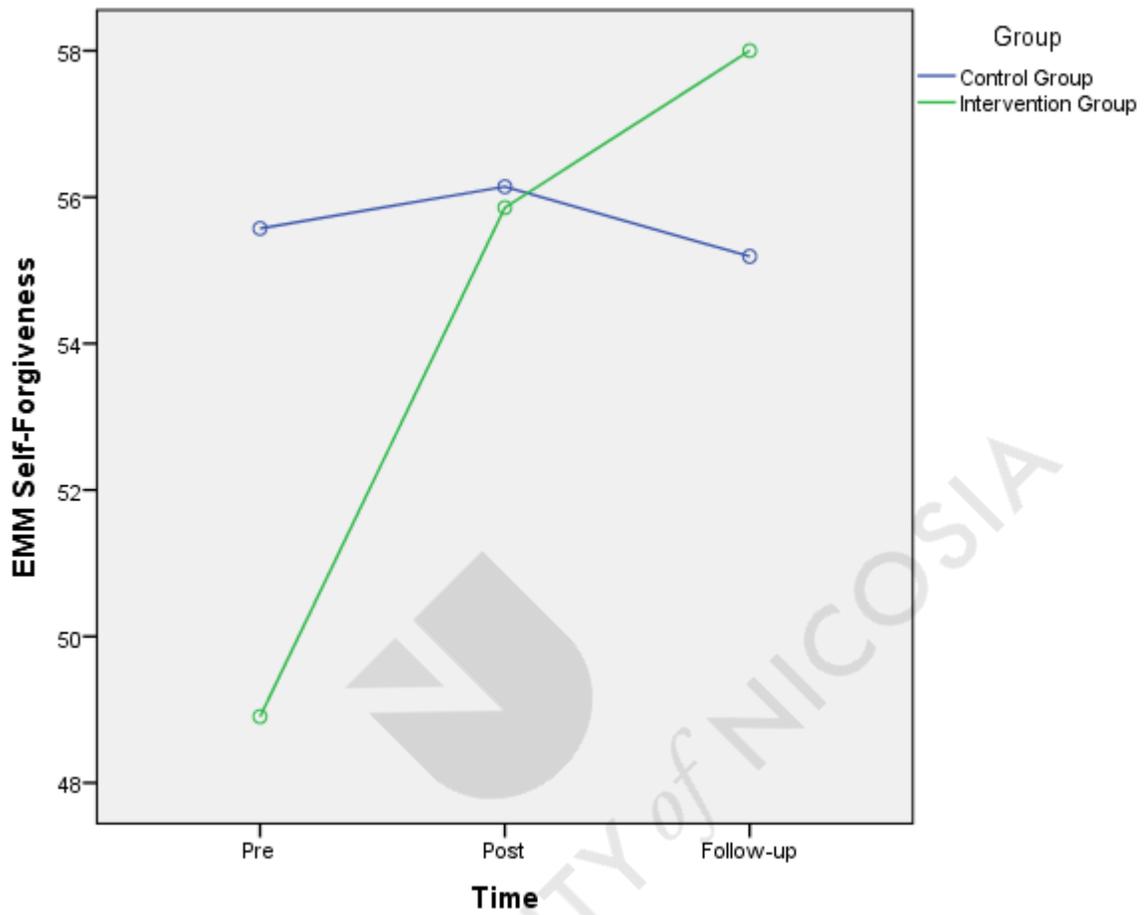
Table A4

*Means and Standard Deviations for the Outcome Variables in Intervention and Control Conditions.*

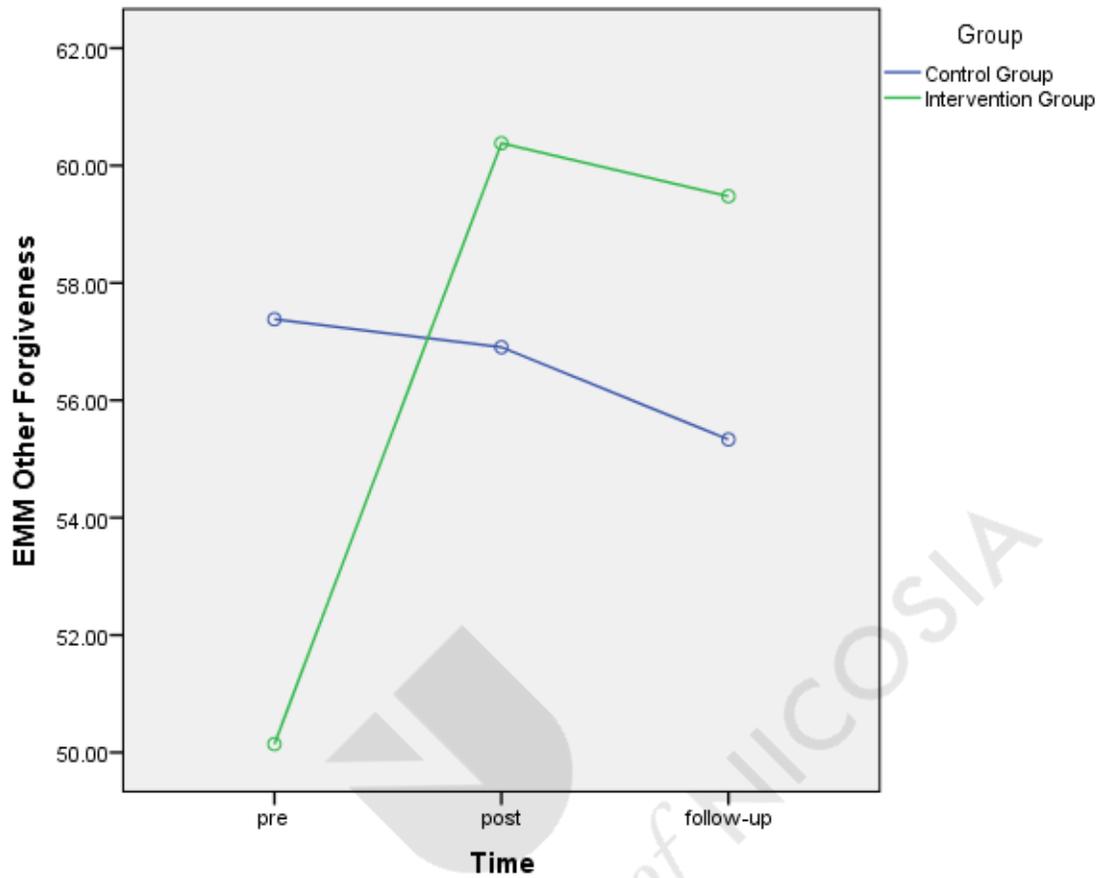
| Outcome       | Intervention condition ( $n = 21$ ) |              |              | Control condition ( $n = 21$ ) |              |              |
|---------------|-------------------------------------|--------------|--------------|--------------------------------|--------------|--------------|
|               | Pretest                             | Post-Test    | Follow-up    | Pre-test                       | Post-Test    | Follow-up    |
| HFS           | 56.48(10.15)                        | 63.14(10.37) | 64.43(12.49) | 59.76(11.05)                   | 59.33(10.69) | 59.57(11.28) |
| SSFS          | 48.90(9.10)                         | 55.86(8.14)  | 58.00(8.63)  | 55.57(7.15)                    | 56.14(6.51)  | 55.19(6.92)  |
| TRIM          | 50.14(13.10)                        | 60.38(11.70) | 59.48(13.54) | 57.38(10.44)                   | 56.90(10.88) | 55.33(9.27)  |
| CES-D         | 31.90(8.91)                         | 30.76(9.93)  | 30.05(9.99)  | 31.86(9.24)                    | 29.67(8.18)  | 28.29(6.76)  |
| PANAS<br>(AB) | 12.19(9.47)                         | 15.38(12.68) | 17.76(12.00) | 14.10(6.08)                    | 14.43(6.09)  | 15.52(6.02)  |

Note. Outcome measures for Study 2 participants at pre-test, post-test and follow-up in the control ( $n = 21$ ) and intervention condition ( $n = 21$ ). For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. CES-D = Center for Epidemiologic Studies Depression Scale, HFS = Heartland Forgiveness Scale; PANAS (AB) = Positive and Negative Affect Scales (affect balance); SSFS= State Self-Forgiveness Scale; TRIM = Transgression-Related Interpersonal Motivations scale

## Appendix B



*Figure B1:* Interaction between time and Estimated Marginal Means (EMM) for state-self forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).



*Figure B2:* Interaction between time and Estimated Marginal Means (EMM) for state-other forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

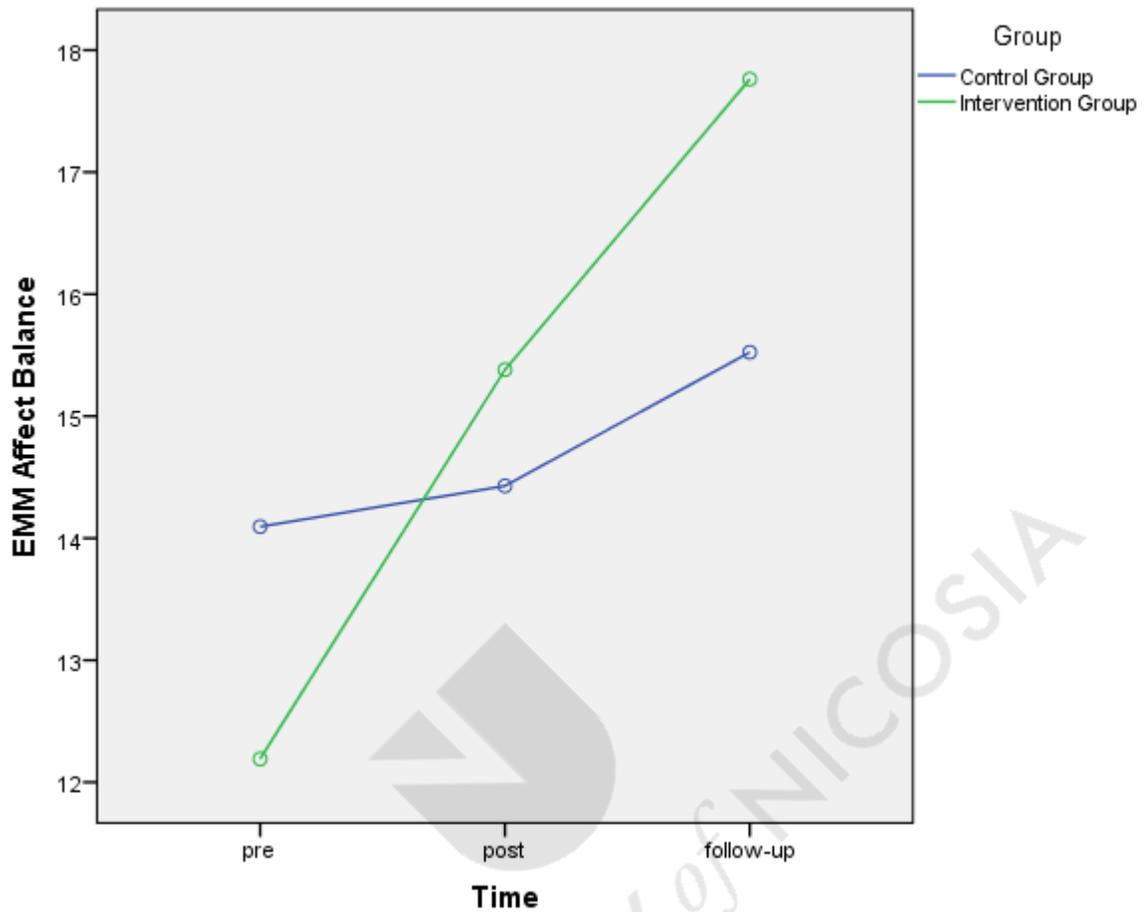
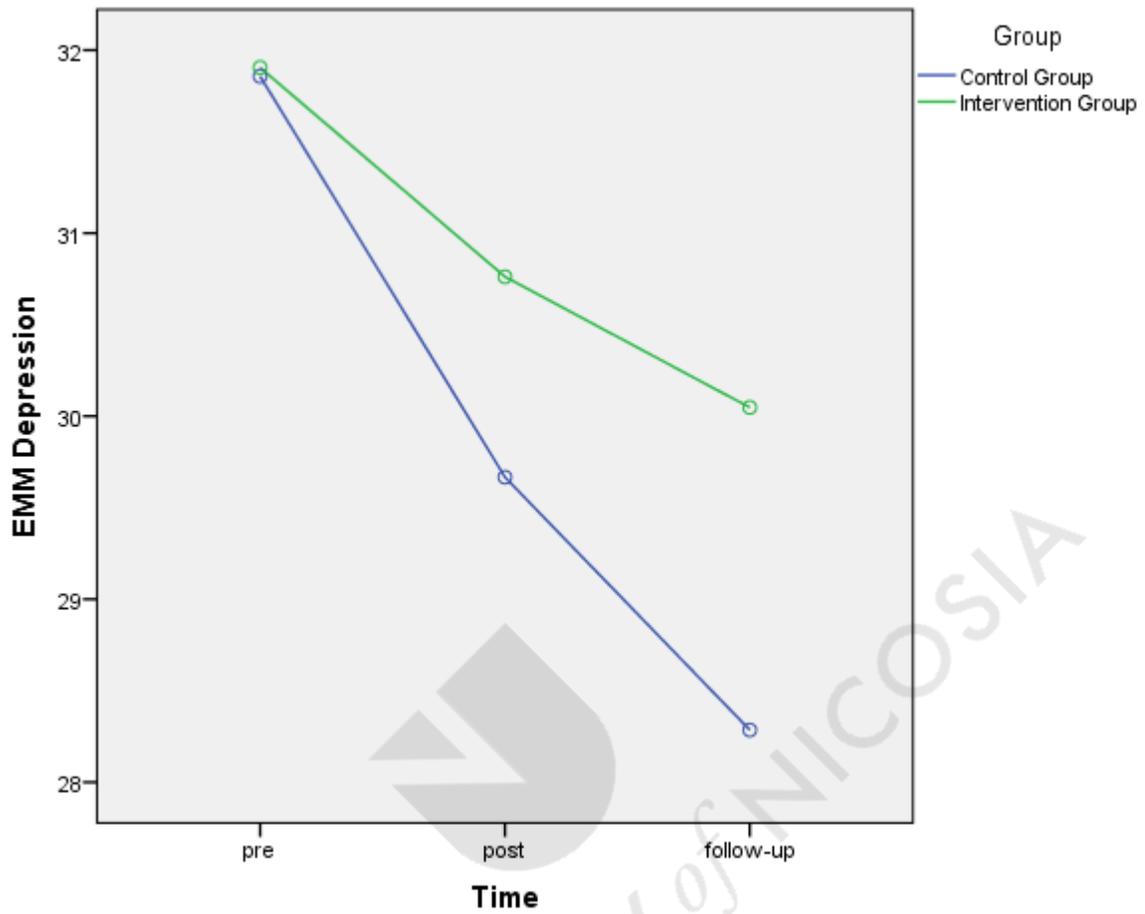
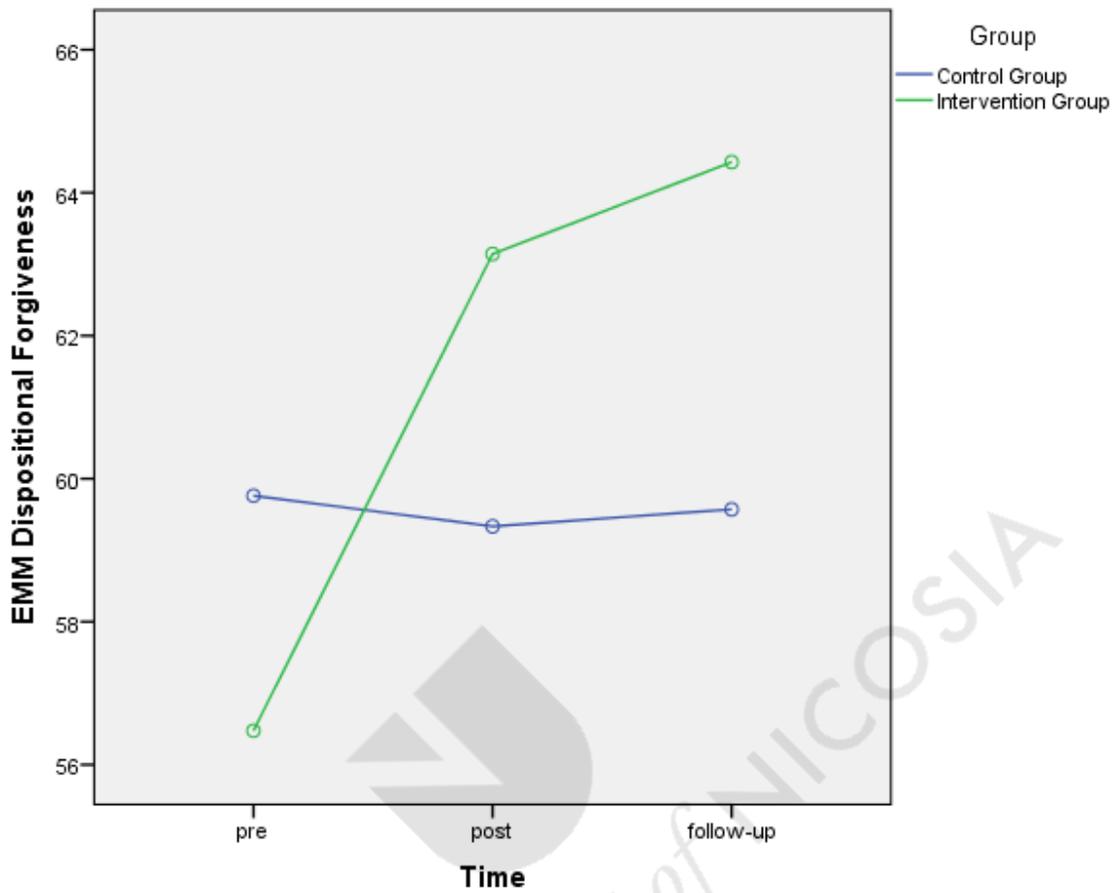


Figure B3: Interaction between time and estimated marginal means (EMM) for affect balance for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).



*Figure B4:* Interaction between time and Estimated Marginal Means (EMM) for depression for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).



*Figure B5:* Interaction between time and Estimated Marginal Means (EMM) for dispositional forgiveness for the intervention ( $n = 21$ ) and control group ( $n = 21$ ).

